UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-Q

(Mark One)

☑ **QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the quarterly period ended September 30, 2020

or

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the transition period from ________ to __________

Commission File Number: 1-14267

REPUBLIC SERVICES, INC.
(Exact name of registrant as specified in its charter)

Delaware	**65-0716904**
(State or other jurisdiction of incorporation or organization)	**(I.R.S. Employer Identification No.)**
18500 North Allied Way	
Phoenix, Arizona	**85054**
(Address of principal executive offices)	**(Zip Code)**

Registrant's telephone number, including area code: (480) 627-2700

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock, par value $0.01 per share	RSG	New York Stock Exchange

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☑ No ☐

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes ☑ No ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer	☑	Accelerated filer	☐	Smaller reporting company	☐
Non-accelerated filer	☐			Emerging growth company	☐

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ☐ No ☑

As of October 31, 2020, the registrant had outstanding 318,724,685 shares of Common Stock, par value $0.01 per share (excluding treasury shares of 35,790,051).

REPUBLIC SERVICES, INC.

INDEX

PART I - FINANCIAL INFORMATION

ITEM 1. FINANCIAL STATEMENTS.

REPUBLIC SERVICES, INC.
CONSOLIDATED BALANCE SHEETS
(in millions, except per share data)

	September 30, 2020	December 31, 2019
	(Unaudited)	
ASSETS		
Current assets:		
Cash and cash equivalents	$ 406.4	$ 47.1
Accounts receivable, less allowance for doubtful accounts and other of $33.6 and $34.0, respectively	1,097.2	1,125.9
Prepaid expenses and other current assets	270.7	433.0
Total current assets	1,774.3	1,606.0
Restricted cash and marketable securities	145.2	179.4
Property and equipment, net	8,527.5	8,383.5
Goodwill	11,712.1	11,633.4
Other intangible assets, net	127.5	133.9
Other assets	823.5	747.6
Total assets	$ 23,110.1	$ 22,683.8
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	$ 646.3	$ 777.9
Notes payable and current maturities of long-term debt	184.3	929.9
Deferred revenue	341.6	336.0
Accrued landfill and environmental costs, current portion	123.4	132.6
Accrued interest	65.2	74.0
Other accrued liabilities	830.0	814.2
Total current liabilities	2,190.8	3,064.6
Long-term debt, net of current maturities	8,594.5	7,758.6
Accrued landfill and environmental costs, net of current portion	1,715.3	1,703.2
Deferred income taxes and other long-term tax liabilities, net	1,222.4	1,180.6
Insurance reserves, net of current portion	278.9	276.5
Other long-term liabilities	734.1	579.4
Commitments and contingencies		
Stockholders' equity:		
Preferred stock, par value $0.01 per share; 50 shares authorized; none issued	—	—
Common stock, par value $0.01 per share; 750 shares authorized; 354.4 and 353.3 issued including shares held in treasury, respectively	3.5	3.5
Additional paid-in capital	5,045.1	4,994.8
Retained earnings	5,652.8	5,317.3
Treasury stock, at cost; 35.9 and 34.5 shares, respectively	(2,315.8)	(2,199.6)
Accumulated other comprehensive (loss) income, net of tax	(15.5)	2.2
Total Republic Services, Inc. stockholders' equity	8,370.1	8,118.2
Non-controlling interests in consolidated subsidiary	4.0	2.7
Total stockholders' equity	8,374.1	8,120.9
Total liabilities and stockholders' equity	$ 23,110.1	$ 22,683.8

The accompanying notes are an integral part of these statements.

REPUBLIC SERVICES, INC.
UNAUDITED CONSOLIDATED STATEMENTS OF INCOME
(in millions, except per share data)

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2020	2019	2020	2019
Revenue	$ 2,572.1	$ 2,646.9	$ 7,580.4	$ 7,722.7
Expenses:				
Cost of operations	1,535.4	1,631.4	4,553.3	4,754.4
Depreciation, amortization and depletion	270.7	267.3	808.4	783.1
Accretion	20.7	20.5	62.4	61.4
Selling, general and administrative	256.1	275.4	795.3	806.3
Withdrawal costs - multiemployer pension funds	—	—	35.9	—
Loss (gain) on business divestitures and impairments, net	31.5	(24.0)	32.9	(23.5)
Restructuring charges	9.8	8.5	15.8	13.0
Operating income	447.9	467.8	1,276.4	1,328.0
Interest expense	(88.9)	(98.0)	(277.4)	(296.9)
Loss from unconsolidated equity method investments	(8.2)	(4.0)	(30.8)	(27.2)
Loss on extinguishment of debt	(34.5)	—	(34.5)	—
Interest income	0.5	2.0	4.0	5.4
Other income, net	1.9	1.7	3.7	1.6
Income before income taxes	318.7	369.5	941.4	1,010.9
Provision for income taxes	58.5	71.5	208.1	227.1
Net income	260.2	298.0	733.3	783.8
Net (income) loss attributable to non-controlling interests in consolidated subsidiary	(0.2)	0.3	(1.5)	0.2
Net income attributable to Republic Services, Inc.	$ 260.0	$ 298.3	$ 731.8	$ 784.0
Basic earnings per share attributable to Republic Services, Inc. stockholders:				
Basic earnings per share	$ 0.81	$ 0.93	$ 2.29	$ 2.44
Weighted average common shares outstanding	319.2	320.6	319.3	321.5
Diluted earnings per share attributable to Republic Services, Inc. stockholders:				
Diluted earnings per share	$ 0.81	$ 0.93	$ 2.29	$ 2.43
Weighted average common and common equivalent shares outstanding	319.7	321.7	319.8	322.6
Cash dividends per common share	$ 0.425	$ 0.405	$ 1.235	$ 1.155

The accompanying notes are an integral part of these statements.

REPUBLIC SERVICES, INC.
UNAUDITED CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
(in millions)

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2020	2019	2020	2019
Net income	$ 260.2	$ 298.0	$ 733.3	$ 783.8
Other comprehensive income (loss), net of tax				
Hedging activity:				
Realized loss (gain) reclassified into earnings	1.2	(0.5)	3.2	(0.9)
Unrealized loss	(0.2)	(11.9)	(22.5)	(43.0)
Pension activity:				
Change in funded status of pension plan obligations	—	—	1.6	(0.8)
Other comprehensive income (loss), net of tax	1.0	(12.4)	(17.7)	(44.7)
Comprehensive income	261.2	285.6	715.6	739.1
Comprehensive (income) loss attributable to non-controlling interests	(0.2)	0.3	(1.5)	0.2
Comprehensive income attributable to Republic Services, Inc.	$ 261.0	$ 285.9	$ 714.1	$ 739.3

The accompanying notes are an integral part of these statements.

REPUBLIC SERVICES, INC.
UNAUDITED CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY
(in millions)

	Republic Services, Inc. Stockholders' Equity								
	Common Stock		Additional Paid-In Capital	Retained Earnings	Treasury Stock		Accumulated Other Comprehensive (Loss) Income, Net of Tax	Non-controlling Interests In Consolidated Subsidiary	Total
	Shares	Amount			Shares	Amount			
Balance as of December 31, 2019	353.3	$ 3.5	$ 4,994.8	$ 5,317.3	(34.5)	$ (2,199.6)	$ 2.2	$ 2.7	$ 8,120.9
Net income	—	—	—	246.3	—	—	—	0.5	246.8
Other comprehensive loss	—	—	—	—	—	—	(19.8)	—	(19.8)
Cash dividends declared	—	—	—	(128.9)	—	—	—	—	(128.9)
Issuances of common stock	0.7	—	7.5	—	(0.2)	(17.0)	—	—	(9.5)
Stock-based compensation	—	—	10.8	(1.1)	—	—	—	—	9.7
Purchase of common stock for treasury	—	—	—	—	(1.2)	(98.8)	—	—	(98.8)
Distributions paid	—	—	—	—	—	—	—	(0.2)	(0.2)
Balance as of March 31, 2020	354.0	3.5	5,013.1	5,433.6	(35.9)	(2,315.4)	(17.6)	3.0	8,120.2
Net income	—	—	—	225.5	—	—	—	0.8	226.3
Other comprehensive income	—	—	—	—	—	—	1.1	—	1.1
Cash dividends declared	—	—	—	(129.0)	—	—	—	—	(129.0)
Issuances of common stock	0.1	—	3.1	—	—	(0.3)	—	—	2.8
Stock-based compensation	—	—	10.4	(0.9)	—	—	—	—	9.5
Balance as of June 30, 2020	354.1	3.5	5,026.6	5,529.2	(35.9)	(2,315.7)	(16.5)	3.8	8,230.9
Net income	—	—	—	260.0	—	—	—	0.2	260.2
Other comprehensive income	—	—	—	—	—	—	1.0	—	1.0
Cash dividends declared	—	—	—	(135.4)	—	—	—	—	(135.4)
Issuances of common stock	0.3	—	8.1	—	—	(0.1)	—	—	8.0
Stock-based compensation	—	—	10.4	(1.0)	—	—	—	—	9.4
Balance as of September 30, 2020	354.4	$ 3.5	$ 5,045.1	$ 5,652.8	(35.9)	$ (2,315.8)	$ (15.5)	$ 4.0	$ 8,374.1

The accompanying notes are an integral part of these statements.

REPUBLIC SERVICES, INC.
UNAUDITED CONSOLIDATED STATEMENT OF STOCKHOLDERS' EQUITY - (CONTINUED)
(in millions)

	Republic Services, Inc. Stockholders' Equity								
	Common Stock		Additional Paid-In Capital	Retained Earnings	Treasury Stock		Accumulated Other Comprehensive Income (Loss), Net of Tax	Non-controlling Interests In Consolidated Subsidiary	Total
	Shares	Amount			Shares	Amount			
Balance as of December 31, 2018	351.9	$ 3.5	$ 4,924.9	$ 4,750.5	(29.4)	$ (1,782.6)	$ 30.8	$ 2.4	$ 7,929.5
Adoption of accounting standard, net of tax	—	—	—	(3.1)	—	—	3.1	—	—
Net income	—	—	—	234.2	—	—	—	0.7	234.9
Other comprehensive loss	—	—	—	—	—	—	(11.4)	—	(11.4)
Cash dividends declared	—	—	—	(120.7)	—	—	—	—	(120.7)
Issuances of common stock	0.9	—	7.7	—	(0.2)	(16.8)	—	—	(9.1)
Stock-based compensation	—	—	12.0	(1.1)	—	—	—	—	10.9
Purchase of common stock for treasury	—	—	—	—	(1.5)	(111.5)	—	—	(111.5)
Balance as of March 31, 2019	352.8	3.5	4,944.6	4,859.8	(31.1)	(1,910.9)	22.5	3.1	7,922.6
Net income	—	—	—	251.5	—	—	—	(0.6)	250.9
Other comprehensive loss	—	—	—	—	—	—	(20.9)	—	(20.9)
Cash dividends declared	—	—	—	(120.2)	—	—	—	—	(120.2)
Issuances of common stock	0.2	—	6.3	—	—	(0.3)	—	—	6.0
Stock-based compensation	—	—	9.8	(0.9)	—	—	—	—	8.9
Purchase of common stock for treasury	—	—	—	—	(1.1)	(91.9)	—	—	(91.9)
Distributions paid	—	—	—	—	—	—	—	(0.2)	(0.2)
Balance as of June 30, 2019	353.0	3.5	4,960.7	4,990.2	(32.2)	(2,003.1)	1.6	2.3	7,955.2
Net income	—	—	—	298.3	—	—	—	(0.3)	298.0
Other comprehensive loss	—	—	—	—	—	—	(12.4)	—	(12.4)
Cash dividends declared	—	—	—	(129.3)	—	—	—	—	(129.3)
Issuances of common stock	0.3	—	8.7	—	—	(0.3)	—	—	8.4
Stock-based compensation	—	—	10.1	(1.0)	—	—	—	—	9.1
Purchase of common stock for treasury	—	—	—	—	(1.7)	(150.5)	—	—	(150.5)
Balance as of September 30, 2019	353.3	$ 3.5	$ 4,979.5	$ 5,158.2	(33.9)	$ (2,153.9)	$ (10.8)	$ 2.0	$ 7,978.5

The accompanying notes are an integral part of these statements.

REPUBLIC SERVICES, INC.
UNAUDITED CONSOLIDATED STATEMENTS OF CASH FLOWS
(in millions)

	Nine Months Ended September 30,	
	2020	2019
Cash provided by operating activities:		
Net income	$ 733.3	$ 783.8
Adjustments to reconcile net income to cash provided by operating activities:		
Depreciation, amortization, depletion and accretion	870.8	844.5
Non-cash interest expense	47.8	34.9
Stock-based compensation	29.0	29.2
Deferred tax provision	45.7	72.9
Provision for doubtful accounts, net of adjustments	22.0	23.4
Loss on extinguishment of debt	34.5	—
Loss (gain) on disposition of assets and asset impairments, net	30.6	(22.4)
Withdrawal costs - multiemployer pension funds, net of payments	4.3	—
Environmental adjustments	(1.2)	(9.6)
Loss from unconsolidated equity method investments	30.8	27.2
Other non-cash items	(2.9)	(0.9)
Change in assets and liabilities, net of effects from business acquisitions and divestitures:		
Accounts receivable	3.4	(65.3)
Prepaid expenses and other assets	135.0	98.3
Accounts payable	(60.4)	(9.3)
Capping, closure and post-closure expenditures	(39.5)	(47.7)
Remediation expenditures	(39.8)	(29.4)
Other liabilities	77.0	57.3
Payments for retirement of certain hedging relationships	(11.4)	—
Cash provided by operating activities	1,909.0	1,786.9
Cash used in investing activities:		
Purchases of property and equipment	(889.0)	(908.3)
Proceeds from sales of property and equipment	24.8	11.7
Cash used in acquisitions and investments, net of cash and restricted cash acquired	(189.9)	(455.9)
Cash received from business divestitures	32.5	41.6
Purchases of restricted marketable securities	(16.9)	(9.1)
Sales of restricted marketable securities	5.6	8.6
Other	—	(5.2)
Cash used in investing activities	(1,032.9)	(1,316.6)
Cash used in financing activities:		
Proceeds from notes payable and long-term debt, net of fees	2,439.5	3,504.8
Proceeds from issuance of senior notes, net of discount and fees	1,626.6	891.9
Payments of notes payable and long-term debt and senior notes	(4,101.9)	(4,145.9)
Premiums paid on extinguishment of debt	(34.0)	—
Issuances of common stock, net	1.3	5.3
Purchases of common stock for treasury	(98.8)	(353.8)
Cash dividends paid	(387.1)	(361.9)
Distributions paid to non-controlling interests in consolidated subsidiary	(0.2)	(0.2)
Contingent consideration payments	(9.7)	(15.2)
Cash used in financing activities	(564.3)	(475.0)
Increase (decrease) in cash, cash equivalents, restricted cash and restricted cash equivalents	311.8	(4.7)
Cash, cash equivalents, restricted cash and restricted cash equivalents at beginning of year	177.4	133.3
Cash, cash equivalents, restricted cash and restricted cash equivalents at end of period	$ 489.2	$ 128.6

The accompanying notes are an integral part of these statements.

REPUBLIC SERVICES, INC.
NOTES TO UNAUDITED CONSOLIDATED FINANCIAL STATEMENTS

1. BASIS OF PRESENTATION

Republic Services, Inc., a Delaware corporation, and its consolidated subsidiaries (also referred to collectively as Republic, the Company, we, us, or our), is the second largest provider of non-hazardous solid waste collection, transfer, recycling, disposal and environmental services in the United States, as measured by revenue. We manage and evaluate our operations through two field groups, Group 1 and Group 2, which we have identified as our reportable segments.

The unaudited consolidated financial statements include the accounts of Republic Services, Inc. and its wholly owned and majority owned subsidiaries in accordance with accounting principles generally accepted in the United States of America (U.S. GAAP). We account for investments in entities in which we do not have a controlling financial interest under either the equity method or cost method of accounting, as appropriate. All material intercompany accounts and transactions have been eliminated in consolidation.

We have prepared these unaudited consolidated financial statements pursuant to the rules and regulations of the Securities and Exchange Commission (SEC). Certain information related to our organization, significant accounting policies and footnote disclosures normally included in financial statements prepared in accordance with U.S. GAAP has been condensed or omitted. In the opinion of management, these financial statements include all adjustments that, unless otherwise disclosed, are of a normal recurring nature and necessary for a fair presentation of the financial position, results of operations and cash flows for the periods presented. Operating results for interim periods are not necessarily indicative of the results you can expect for a full year. You should read these financial statements in conjunction with our audited consolidated financial statements and notes thereto appearing in our Annual Report on Form 10-K for the fiscal year ended December 31, 2019.

For comparative purposes, certain prior year amounts have been reclassified to conform to the current year presentation. All dollar amounts in tabular presentations are in millions, except per share amounts and unless otherwise noted.

Management's Estimates and Assumptions

In preparing our financial statements, we make numerous estimates and assumptions that affect the amounts reported in these financial statements and accompanying notes. We must make these estimates and assumptions because certain information we use is dependent on future events, cannot be calculated with a high degree of precision from data available or simply cannot be readily calculated based on generally accepted methodologies. In preparing our financial statements, the more critical and subjective areas that deal with the greatest amount of uncertainty relate to our accounting for our long-lived assets, including recoverability, landfill development costs, and final capping, closure and post-closure costs; our valuation allowances for accounts receivable and deferred tax assets; our liabilities for potential litigation, claims and assessments; our liabilities for environmental remediation, multiemployer pension funds, employee benefit plans, deferred taxes, uncertain tax positions, and insurance reserves; and our estimates of the fair values of assets acquired and liabilities assumed in any acquisition. Each of these items is discussed in more detail in our description of our significant accounting policies in Note 2, *Summary of Significant Accounting Policies*, of the Notes to Consolidated Financial Statements in our Annual Report on Form 10-K for the fiscal year ended December 31, 2019. Our actual results may differ significantly from our estimates.

In March 2020, the World Health Organization declared the outbreak of a new strain of coronavirus (COVID-19) a pandemic. The COVID-19 pandemic has negatively impacted the global economy, disrupted global supply chains and created significant volatility and disruption of financial markets. The full extent of the impact of the COVID-19 pandemic on our operations and financial performance will depend on future developments, including the duration and spread of the pandemic, all of which are uncertain and cannot be predicted at this time. An extended period of economic disruption associated with the COVID-19 pandemic could materially and adversely affect our business, results of operations, access to sources of liquidity and financial condition.

Both national and local government agencies have implemented steps with the intent to slow the spread of the virus, including shelter-in-place orders and the mandatory shutdown of certain businesses. During this time, we continued to provide essential services to our customers. In mid-March 2020, certain customers in our small- and large-container businesses began adjusting their service levels, which included a decrease in the frequency of pickups or a temporary pause in service. In addition, we experienced a decline in volumes disposed at certain of our landfills and transfer stations. As service levels decreased, we also experienced a decrease in certain costs of our operations which are variable in nature. This decline in service activity peaked in the first half of April and gradually improved thereafter as local economies began to gradually reopen and customers began to resume service. Large outbreaks and resurgences of COVID-19 in various regions may result in a reinstitution of certain restrictions.

The demand for our environmental services business depends on the continued demand for, and production of, oil and natural gas in certain shale basins located in the United States. During the nine months ended September 30, 2020, the value of crude oil and natural gas declined to historic lows, resulting in a decrease in rig counts and drilling activity that led to a year-over-year decrease in revenue from our environmental services business. Further and/or sustained declines in the level of production activity may result in an unfavorable change to the long-term strategic outlook for our environmental services business that could result in the recognition of impairment charges on intangible assets and property and equipment associated with this business. On at least a quarterly basis, we will continue to monitor the effect of the evolving COVID-19 pandemic on our business and review our estimates for recoverability of assets used in certain of our operations that are related to strategic investments.

In April 2020, we launched our Committed to Serve initiative which was intended to help our employees, customers and communities across the United States. We committed $20 million to support frontline employees and their families, as well as small business customers in the local communities we serve. In addition to this initiative, we have experienced an increase in certain costs of doing business as a direct result of the COVID-19 pandemic, including costs for additional safety equipment and hygiene products and increased facility and equipment cleaning. These costs, which we refer to as business resumption costs, are intended to assist in protecting the safety of our frontline employees as we continue to provide an essential service to our customers. We also incurred incremental costs for expanding certain aspects of our existing healthcare programs and guaranteeing certain frontline employees a minimum hourly work week regardless of service decreases. We expect to incur similar costs throughout 2020, and potentially into future years. The magnitude of the costs we expect to incur throughout the remainder of the year cannot be predicted at this time due to the various uncertainties surrounding the pandemic (e.g., its duration and spread).

New Accounting Pronouncements

Accounting Standards Adopted

Effective January 1, 2020, we adopted the following accounting standards updates (ASUs) as issued by the Financial Accounting Standards Board (FASB):

ASU		Effective Date
ASU 2016-13	Credit Losses (Topic 326)	January 1, 2020
ASU 2018-13	Disclosure Framework—Changes to the Disclosure Requirements for Fair Value Measurement (Topic 820)	January 1, 2020

Credit Losses

Effective January 1, 2020, we adopted ASU 2016-13, *Credit Losses Topic 326* (ASU 2016-13 or the new credit losses standard) using the modified retrospective approach. The comparative periods have not been restated and continue to be reported under the accounting standard in effect for those periods. The new credit losses standard amends the impairment model to use a methodology that reflects expected credit losses and requires consideration of a broader range of reasonable and supportable information to inform credit loss estimates. Our adoption of ASU 2016-13 did not have a material impact on our consolidated financial statements for the nine months ended September 30, 2020, and we did not recognize a cumulative effect adjustment to retained earnings as of January 1, 2020.

To assist in quantifying the impact on our consolidated financial statements and supplementing our existing disclosures, we identified financial assets measured at an amortized cost basis in our consolidated balance sheet and evaluated the collectability considerations based on an expected credit loss assessment. We are exposed to credit losses primarily through customer receivables generated from the collection, transfer and disposal of non-hazardous solid waste and environmental services we provide our customers as well as the recovering and sale of certain recyclable materials. We perform ongoing credit evaluations of our customers, but generally do not require collateral to support customer receivables. We establish an allowance for doubtful accounts based on various factors including the age of receivables outstanding, historical trends, economic conditions and other information. We also review outstanding balances on an account-specific basis based on the credit risk of the customer. We determined that all of our accounts receivable share similar risk characteristics. We monitor our credit exposure on an ongoing basis and assess whether assets in the pool continue to display similar risk characteristics.

The consolidated statement of income for the nine months ended September 30, 2020 reflects the measurement of credit losses for newly recognized financial assets as well as any changes to historical financial assets. The following table reflects the activity in our allowance for doubtful accounts during the nine months ended September 30, 2020.

	Allowance for Doubtful Accounts and Other
Balance as of December 31, 2019	$ 34.0
Additions charged to expense	22.0
Accounts written-off	(22.4)
Balance as of September 30, 2020	$ 33.6

We continue to apply our historical loss rate assumptions and reserve against outstanding balances on an account-specific basis as we assess the collectability of our receivables. In certain situations, we may offer credit extensions to our customers as they navigate the uncertain economic environment brought about by the COVID-19 pandemic. In accordance with our accounting policy, we are actively monitoring the credit risk of our specific customers, age of receivables outstanding, recent collection trends and general economic conditions to evaluate the risk of credit loss.

Fair Value Measurement

Effective January 1, 2020, we adopted the FASB's ASU 2018-13, *Fair Value Measurement (Topic 820) Disclosure Framework—Changes to the Disclosure Requirements for Fair Value Measurement* (ASU 2018-13). ASU 2018-13 intends to increase the consistency and comparability of fair value measurements used in financial reporting through eliminating, modifying, and adding certain disclosure requirements within Topic 820. The adoption of ASU 2018-13 did not have a material impact on our consolidated financial statements for the nine months ended September 30, 2020.

Accounting Standards Updates Issued but not yet Adopted

Changes to the Disclosure Requirements for Defined Benefit Plans

In August 2018, the FASB issued ASU 2018-14, *Compensation—Retirement Benefits—Defined Benefit Plans—General (Subtopic 715-20) Disclosure Framework—Changes to the Disclosure Requirements for Defined Benefit Plans* (ASU 2018-14). ASU 2018-14 removes disclosures that no longer are considered cost beneficial, clarifies the specific requirements of disclosures, and adds disclosure requirements identified as relevant. Although narrow in scope, the amendments are considered an important part of the FASB's efforts to improve the effectiveness of disclosures in the notes to financial statements. ASU 2018-14 is effective for public business entities for fiscal years beginning after December 15, 2020, including interim periods within that fiscal year. Early adoption is permitted for all entities. We are currently assessing the effect this guidance may have on our consolidated financial statements.

Simplifying the Accounting for Income Taxes

In December 2019, the FASB issued ASU 2019-12, Income Taxes (Topic 740): *Simplifying the Accounting for Income Taxes* (ASU 2019-12). ASU 2019-12 attempts to simplify aspects of accounting for franchise taxes and enacted changes in tax laws or rates, and clarifies the accounting for transactions that result in a step-up in the tax basis of goodwill. The amended guidance contains a model under which an entity can consider a list of factors in determining whether the step-up in tax basis of goodwill is related to the business combination that caused the initial recognition of goodwill or to a separate transaction. ASU 2019-12 is effective for public business entities for fiscal years beginning after December 15, 2020, including interim periods within that fiscal year. Early adoption is permitted for all entities. We are currently assessing the effect this guidance may have on our consolidated financial statements.

Reference Rate Reform

In March 2020, the FASB issued ASU 2020-04, Reference Rate Reform (Topic 848): *Facilitation of the Effects of Reference Rate Reform on Financial Reporting* (ASU 2020-04). ASU 2020-04 provides optional guidance for a limited period of time to ease the potential burden in accounting for (or recognizing the effects of) reference rate reform on financial reporting. The amendments in ASU 2020-04 provide optional expedients and exceptions for applying generally accepted accounting principles to contracts, hedging relationships, and other transactions affected by reference rate reform if certain criteria are met. ASU 2020-04 is effective for all entities as of March 12, 2020 through December 31, 2022. We are currently assessing the effect this guidance may have on our consolidated financial statements.

2. BUSINESS ACQUISITIONS, INVESTMENTS AND RESTRUCTURING CHARGES

Acquisitions

We acquired various waste businesses during the nine months ended September 30, 2020 and 2019. The purchase price for these business acquisitions and the allocations of the purchase price follows:

	2020	2019
Purchase price:		
Cash used in acquisitions, net of cash acquired	$ 133.8	$ 424.3
Contingent consideration	—	2.5
Holdbacks	7.5	16.0
Fair value, future minimum finance lease payments	0.3	5.8
Total	$ 141.6	$ 448.6
Allocated as follows:		
Accounts receivable	$ 4.7	$ 18.3
Property and equipment	36.9	143.0
Operating right-of-use lease assets	0.2	18.1
Other assets	0.2	2.5
Inventory	—	1.1
Accounts payable	(1.2)	(11.5)
Environmental remediation liabilities	(1.7)	(0.1)
Closure and post-closure liabilities	(0.7)	—
Operating right-of-use lease liabilities	(0.2)	(18.4)
Other liabilities	(2.1)	(2.3)
Fair value of tangible assets acquired and liabilities assumed	36.1	150.7
Excess purchase price to be allocated	$ 105.5	$ 297.9
Excess purchase price allocated as follows:		
Other intangible assets	$ 9.8	$ 31.5
Goodwill	95.7	266.4
Total allocated	$ 105.5	$ 297.9

The purchase price allocations are based on information existing at the acquisition dates. Accordingly, certain of the purchase price allocations are preliminary and subject to change. Substantially all of the goodwill and intangible assets recorded for these acquisitions are deductible for tax purposes.

These acquisitions are not material to our results of operations, individually or in the aggregate. As a result, no pro forma financial information is provided.

Investments

In 2020, we continued to acquire non-controlling equity interests in certain limited liability companies that qualified for investment tax credits under Section 48 of the Internal Revenue Code. In exchange for our non-controlling interests, we made capital contributions of $56.7 million and $14.1 million, which were recorded to other assets in our September 30, 2020 and 2019 consolidated balance sheets, respectively. During the three and nine months ended September 30, 2020, we reduced the carrying value of these investments by $8.2 million and $30.8 million, respectively, and during the three and nine months ended September 30, 2019, we reduced the carrying value of these investments by $4.0 million and $27.2 million, respectively, as a result of tax credits allocated to us, cash distributions and our share of income and loss pursuant to the terms of the limited liability company agreements.

Restructuring Charges

In 2019, we incurred costs related to the redesign of certain back-office software systems, which continued into 2020. In addition, in July 2020, we eliminated certain positions, primarily related to our back-office support functions, in response to the COVID-19 pandemic. During the three and nine months ended September 30, 2020, we incurred restructuring charges of $9.8 million and $15.8 million, respectively, that primarily related to these restructuring efforts. During the three and nine months ended September 30, 2019, we incurred restructuring charges of $8.5 million and $13.0 million, respectively, that primarily related to the redesign of certain back-office software systems. During the nine months ended September 30, 2020 and 2019, we paid $11.9 million and $7.9 million, respectively, related to these restructuring efforts.

During the remainder of 2020, we expect to incur additional restructuring charges of approximately $3 million to $5 million primarily related to the redesign of certain of our back-office software systems. Substantially all of these restructuring charges will be recorded in our corporate segment.

3. GOODWILL AND OTHER INTANGIBLE ASSETS, NET

Our senior management evaluates, oversees and manages the financial performance of our operations through two field groups, referred to as Group 1 and Group 2.

Goodwill

A summary of the activity and balances in goodwill accounts by reporting segment follows:

	Balance as of December 31, 2019	Acquisitions	Divestitures	Adjustments to Acquisitions	Balance as of September 30, 2020
Group 1	$ 6,235.6	$ 15.3	$ —	$ (2.4)	$ 6,248.5
Group 2	5,397.8	80.4	(18.6)	4.0	5,463.6
Total	$ 11,633.4	$ 95.7	$ (18.6)	$ 1.6	$ 11,712.1

Other Intangible Assets, Net

Other intangible assets, net, include values assigned to customer relationships, non-compete agreements and trade names, and are amortized over periods ranging from 1 to 17 years. A summary of the activity and balances by intangible asset type follows:

	Gross Intangible Assets				Accumulated Amortization				
	Balance as of December 31, 2019	Acquisitions	Adjustments and Other	Balance as of September 30, 2020	Balance as of December 31, 2019	Additions Charged to Expense	Adjustments and Other	Balance as of September 30, 2020	Other Intangible Assets, Net as of September 30, 2020
Customer relationships	$ 733.8	$ 7.4	$ (0.1)	$ 741.1	$ (623.0)	$ (12.4)	$ 0.1	$ (635.3)	$ 105.8
Non-compete agreements	45.3	2.4	(0.2)	47.5	(35.3)	(2.9)	0.1	(38.1)	9.4
Other intangible assets	58.2	—	(0.7)	57.5	(45.1)	(0.5)	0.4	(45.2)	12.3
Total	$ 837.3	$ 9.8	$ (1.0)	$ 846.1	$ (703.4)	$ (15.8)	$ 0.6	$ (718.6)	$ 127.5

We evaluate goodwill for impairment annually as of October 1, or when an indicator of impairment exists. In accordance with our accounting policy, we also perform a quarterly review of our long-lived and intangible assets. During the performance of our quarterly impairment reviews during the nine months ended September 30, 2020, we considered the impact of the COVID-19 pandemic on our business, noting no indicators of impairment for goodwill or other intangible assets. For more detail regarding our accounting policy over the impairment of goodwill, see Note 2, *Summary of Significant Accounting Policies*, of the Notes to Consolidated Financial Statements in our Annual Report on Form 10-K for the fiscal year ended December 31, 2019.

4. OTHER ASSETS

Prepaid Expenses and Other Current Assets

A summary of prepaid expenses and other current assets as of September 30, 2020 and December 31, 2019 follows:

	2020	2019
Prepaid expenses	$ 90.7	$ 75.5
Inventories	58.8	56.8
Other non-trade receivables	39.0	88.1
Reinsurance receivable	34.0	31.9
Income taxes receivable	29.0	156.7
Prepaid fees for cloud-based hosting arrangements, current	13.2	12.4
Interest rate swap locks	—	3.6
Other current assets	6.0	8.0
Total	$ 270.7	$ 433.0

Other Assets

A summary of other assets as of September 30, 2020 and December 31, 2019 follows:

	2020	2019
Operating right-of-use lease assets	$ 232.0	$ 243.6
Deferred compensation plan	125.1	118.0
Investments	121.4	87.8
Reinsurance receivable	85.2	78.9
Deferred contract costs and sales commissions	80.8	83.1
Other derivative assets	63.3	2.9
Amounts recoverable for capping, closure and post-closure obligations	33.1	31.8
Prepaid fees and capitalized implementation costs for cloud-based hosting arrangements	28.5	32.0
Interest rate swaps	19.9	10.7
Deferred financing costs	3.4	3.0
Other	30.8	55.8
Total	$ 823.5	$ 747.6

5. OTHER LIABILITIES

Other Accrued Liabilities

A summary of other accrued liabilities as of September 30, 2020 and December 31, 2019 follows:

	2020	2019
Accrued payroll and benefits	$ 204.3	$ 207.7
Insurance reserves, current	168.4	162.0
Accrued fees and taxes	142.4	140.8
Accrued dividends	135.4	129.2
Operating right-of-use lease liabilities, current	35.8	51.5
Payroll tax payable (CARES Act), current	33.8	—
Ceded insurance reserves, current	33.7	31.6
Accrued professional fees and legal settlement reserves	6.5	11.8
Interest rate swap locks	—	14.9
Other	69.7	64.7
Total	$ 830.0	$ 814.2

Other Long-Term Liabilities

A summary of other long-term liabilities as of September 30, 2020 and December 31, 2019 follows:

	2020	2019
Operating right-of-use lease liabilities	$ 217.2	$ 212.5
Deferred compensation plan liability	122.7	116.1
Other derivative liabilities	110.2	22.2
Ceded insurance reserves	86.8	80.6
Contingent purchase price and acquisition holdbacks	67.6	71.2
Payroll tax payable (CARES Act)	33.8	—
Withdrawal liability - multiemployer pension funds	26.3	12.0
Legal settlement reserves	19.1	10.0
Pension and other post-retirement liabilities	6.4	6.2
Interest rate swap locks	—	0.8
Other	44.0	47.8
Total	$ 734.1	$ 579.4

6. LANDFILL AND ENVIRONMENTAL COSTS

As of September 30, 2020, we owned or operated 188 active solid waste landfills with total available disposal capacity estimated to be 5.0 billion in-place cubic yards. Additionally, we had post-closure responsibility for 128 closed landfills.

Accrued Landfill and Environmental Costs

A summary of accrued landfill and environmental liabilities as of September 30, 2020 and December 31, 2019 follows:

	2020	2019
Landfill final capping, closure and post-closure liabilities	$ 1,362.7	$ 1,335.6
Environmental remediation	476.0	500.2
Total accrued landfill and environmental costs	1,838.7	1,835.8
Less: current portion	(123.4)	(132.6)
Long-term portion	$ 1,715.3	$ 1,703.2

Final Capping, Closure and Post-Closure Costs

The following table summarizes the activity in our asset retirement obligation liabilities, which includes liabilities for final capping, closure and post-closure, for the nine months ended September 30, 2020 and 2019:

	2020	2019
Asset retirement obligation liabilities, beginning of year	$ 1,335.6	$ 1,292.0
Non-cash additions	32.0	32.9
Acquisitions, net of divestitures and other adjustments	(14.3)	0.3
Asset retirement obligation adjustments	(13.5)	0.7
Payments	(39.5)	(47.7)
Accretion expense	62.4	61.4
Asset retirement obligation liabilities, end of period	1,362.7	1,339.6
Less: current portion	(65.2)	(80.9)
Long-term portion	$ 1,297.5	$ 1,258.7

We review annually, in the fourth quarter, and update as necessary, our estimates of asset retirement obligation liabilities. However, if there are significant changes in the facts and circumstances related to a site during the year, we will update our assumptions prospectively in the period that we know all the relevant facts and circumstances and make adjustments as appropriate.

Landfill Operating Expenses

In the normal course of business, we incur various operating costs associated with environmental compliance. These costs include, among other things, leachate treatment and disposal, methane gas and groundwater monitoring, systems maintenance, interim cap maintenance, costs associated with the application of daily cover materials, and the legal and administrative costs of ongoing environmental compliance. These costs are expensed as cost of operations in the periods in which they are incurred.

Environmental Remediation Liabilities

We accrue for remediation costs when they become probable and can be reasonably estimated. There can sometimes be a range of reasonable estimates of the costs associated with remediation of a site. In these cases, we use the amount within the range that constitutes our best estimate. If no amount within the range appears to be a better estimate than any other, we use the amount that is at the low end of the range. It is reasonably possible that we will need to adjust the liabilities recorded for remediation to reflect the effects of new or additional information, to the extent such information impacts the costs, timing or duration of the required actions. If we used the reasonably possible high ends of our ranges, our aggregate potential remediation liability as of September 30, 2020 would be approximately $365 million higher than the amount recorded. Future changes in our estimates of the cost, timing or duration of the required actions could have a material adverse effect on our consolidated financial position, results of operations and cash flows.

The following table summarizes the activity in our environmental remediation liabilities for the nine months ended September 30, 2020 and 2019:

	2020	2019
Environmental remediation liabilities, beginning of year	$ 500.2	$ 540.2
Net adjustments charged to expense	(1.2)	(9.6)
Payments	(39.8)	(29.4)
Accretion expense (non-cash interest expense)	13.9	14.3
Acquisitions, net of divestitures and other adjustments	2.9	0.1
Environmental remediation liabilities, end of period	476.0	515.6
Less: current portion	(58.2)	(72.3)
Long-term portion	$ 417.8	$ 443.3

Bridgeton Landfill. During the nine months ended September 30, 2020, we paid $19.8 million related to management and monitoring of the remediation area for our closed Bridgeton Landfill in Missouri. We continue to work with state and federal regulatory agencies on our remediation efforts. From time to time, this may require us to modify our future operating timeline and procedures, which could result in changes to our expected liability. As of September 30, 2020, the remediation liability recorded for this site was $124.7 million, of which approximately $4 million is expected to be paid during the remainder of 2020. We believe the remaining reasonably possible high end of our range would be approximately $163 million higher than the amount recorded as of September 30, 2020.

During the nine months ended September 30, 2020, we recognized a favorable insurance recovery of $10.8 million related to our closed Bridgeton Landfill as a reduction of remediation expenses in our consolidated statement of income for the applicable period.

West Lake Landfill Superfund Site. Our subsidiary Bridgeton Landfill, LLC is one of several currently designated Potentially Responsible Parties for the West Lake Landfill Superfund site (West Lake) in Missouri. On September 27, 2018, the U.S. Environmental Protection Agency (EPA) issued a Record of Decision Amendment for West Lake that includes a total undiscounted cost estimate of $229 million over a four- to five-year design and construction timeline. On March 11, 2019, the EPA issued special notice letters under the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA) to Bridgeton Landfill, LLC and the other currently designated Potentially Responsible Parties to initiate negotiations to implement the remedy. At this time we are neither able to predict the final design of that remedy, nor estimate how much of the future response costs of the site our subsidiary may agree or be required to pay. During any subsequent administrative proceedings or litigation, our subsidiary will vigorously contest liability for the costs of remediating radiologically-impacted materials generated on behalf of the federal government during the Manhattan Project and delivered to the site by an Atomic Energy Commission licensee and its subcontractor. Currently, we believe we are adequately reserved for our expected remediation liability. However, subsequent events related to remedy design, divisibility, or allocation may require us to modify our expected remediation liability.

7. DEBT

The carrying value of our credit facilities, finance leases and long-term debt as of September 30, 2020 and December 31, 2019 is listed in the following table, and is adjusted for the fair value of interest rate swaps, unamortized discounts, deferred issuance costs and the unamortized portion of adjustments to fair value recorded in purchase accounting. Original issue discounts and adjustments to fair value recorded in purchase accounting are amortized to interest expense over the term of the applicable instrument using the effective interest method.

		September 30, 2020			December 31, 2019		
Maturity	Interest Rate	Principal	Adjustments	Carrying Value	Principal	Adjustments	Carrying Value
Credit facilities:							
Uncommitted Credit Facility	Variable	$ —	$ —	$ —	$ 11.6	$ —	$ 11.6
$1.0 billion - August 2021	Variable	—	—	—	—	—	—
$2.25 billion - June 2023	Variable	—	—	—	184.4	—	184.4
Senior notes:							
March 2020	5.000	—	—	—	850.0	(0.1)	849.9
November 2021	5.250	—	—	—	600.0	(0.8)	599.2
June 2022	3.550	850.0	(1.8)	848.2	850.0	(2.6)	847.4
May 2023	4.750	550.0	10.5	560.5	550.0	2.6	552.6
August 2024	2.500	900.0	(7.0)	893.0	900.0	(8.3)	891.7
March 2025	3.200	500.0	(3.1)	496.9	500.0	(3.6)	496.4
July 2026	2.900	500.0	(3.5)	496.5	500.0	(3.9)	496.1
November 2027	3.375	650.0	(4.6)	645.4	650.0	(5.2)	644.8
May 2028	3.950	800.0	(14.5)	785.5	800.0	(15.7)	784.3
March 2030	2.300	600.0	(6.7)	593.3	—	—	—
February 2031	1.450	650.0	(8.9)	641.1	—	—	—
March 2035	6.086	181.9	(13.5)	168.4	181.9	(13.9)	168.0
March 2040	6.200	399.9	(3.7)	396.2	399.9	(3.7)	396.2
May 2041	5.700	385.7	(5.1)	380.6	385.7	(5.3)	380.4
March 2050	3.050	400.0	(7.3)	392.7	—	—	—
Debentures:							
May 2021	9.250	35.3	(0.2)	35.1	35.3	(0.4)	34.9
September 2035	7.400	148.1	(32.4)	115.7	148.1	(33.0)	115.1
Tax-exempt:							
2020 - 2050	0.250 - 0.875	1,126.2	(6.6)	1,119.6	1,122.4	(6.2)	1,116.2
Finance leases:							
2020 - 2063	1.882 - 12.203	210.1	—	210.1	119.3	—	119.3
Total Debt		$ 8,887.2	$ (108.4)	8,778.8	$ 8,788.6	$ (100.1)	8,688.5
Less: current portion				(184.3)			(929.9)
Long-term portion				$ 8,594.5			$ 7,758.6

Loss on Extinguishment of Debt

During the three months ended September 30, 2020, we incurred a loss on the early extinguishment of debt related to the redemption of our $600.0 million 5.250% senior notes due November 2021. We paid a cash premium of $34.0 million and incurred a non-cash charge related to the unamortized deferred issuance costs of $0.5 million.

Credit Facilities

The 364-Day Credit Facility

In August 2020, we entered into a $1.0 billion 364-day unsecured revolving credit facility (the 364-Day Credit Facility), which matures in August 2021. At our option, borrowings under the 364-Day Credit Facility bear interest at a Base Rate, or a Eurodollar Rate, plus an applicable margin based on our Debt Ratings (all as defined in the 364-Day Credit Facility agreement).

The 364-Day Credit Facility is subject to facility fees based on applicable rates defined in the 364-Day Credit Facility agreement and the aggregate commitment, regardless of usage. Availability under our 364-Day Credit Facility totaled $1.0 billion as of September 30, 2020. The 364-Day Credit Facility can be used for working capital, capital expenditures, acquisitions, and other general corporate purposes. The 364-Day Credit Facility agreement requires us to comply with financial and other covenants. We may pay dividends and repurchase common stock if we are in compliance with these covenants.

As of September 30, 2020, we had no borrowings outstanding under our 364-Day Credit Facility.

The Credit Facility

In 2018, we entered into a $2.25 billion unsecured revolving credit facility (the Credit Facility), which matures in June 2023. We may request two one-year extensions of the maturity date but none of the lenders are committed to participate in such extension. The Credit Facility also includes a feature that allows us to increase availability, at our option, by an aggregate amount of up to $1.0 billion through increased commitments from existing lenders or the addition of new lenders. At our option, borrowings under the Credit Facility bear interest at a Base Rate, or a Eurodollar Rate, plus an applicable margin based on our Debt Ratings (all as defined in the Credit Facility agreement).

The Credit Facility is subject to facility fees based on applicable rates defined in the Credit Facility agreement and the aggregate commitment, regardless of usage. Availability under our Credit Facility totaled $1,857.8 million and $1,696.9 million as of September 30, 2020 and December 31, 2019, respectively. The Credit Facility can be used for working capital, capital expenditures, acquisitions, letters of credit and other general corporate purposes. The Credit Facility agreement requires us to comply with financial and other covenants. We may pay dividends and repurchase common stock if we are in compliance with these covenants.

As of September 30, 2020, we had no borrowings under our Credit Facility, and as of December 31, 2019, we had $184.4 million of borrowings under our Credit Facility. We had $376.5 million and $351.4 million of letters of credit outstanding under our Credit Facility as of September 30, 2020 and December 31, 2019, respectively.

In July 2020, we executed an amendment to the Credit Facility agreement to increase flexibility and reduce restrictions, in particular, for future acquisitions. Effective June 30, 2020, the amendment eliminated the consolidated interest coverage ratio and revised the sole remaining financial covenant, total debt to EBITDA ratio.

Uncommitted Credit Facility

We also have an Uncommitted Credit Facility, which bears interest at LIBOR, plus an applicable margin. We can use borrowings under the Uncommitted Credit Facility for working capital and other general corporate purposes. The agreement governing our Uncommitted Credit Facility requires us to comply with certain covenants. The Uncommitted Credit Facility may be terminated by either party at any time. As of September 30, 2020, we had no borrowings outstanding under our Uncommitted Credit Facility, and as of December 31, 2019, we had $11.6 million of borrowings outstanding under our Uncommitted Credit Facility.

Senior Notes and Debentures

In August 2020, we issued $650.0 million of 1.450% senior notes due 2031 (the 1.450% Notes). We used the net proceeds to redeem all $600.0 million of the outstanding 5.250% senior notes due November 2021 plus a make-whole premium of $34.0 million. The remaining proceeds were used for general corporate purposes.

In February 2020, we issued $600.0 million of 2.300% senior notes due 2030 (the 2.300% Notes) and $400.0 million of 3.050% senior notes due 2050 (the 3.050% Notes). We used the net proceeds from the 2.300% Notes and 3.050% Notes to repay $850.0 million of 5.000% senior notes that matured in March 2020. The remaining proceeds were used to repay amounts outstanding under our unsecured credit facilities as well as for general corporate purposes.

Our senior notes and debentures are general unsecured obligations. Interest is payable semi-annually.

Interest Rate Swap and Lock Agreements

Our ability to obtain financing through the capital markets is a key component of our financial strategy. Historically, we have managed risk associated with executing this strategy, particularly as it relates to fluctuations in interest rates, by using a combination of fixed and floating rate debt. From time to time, we also have entered into interest rate swap and lock agreements to manage risk associated with interest rates, either to effectively convert specific fixed rate debt to a floating rate (fair value hedges), or to lock interest rates in anticipation of future debt issuances (cash flow hedges).

Fair Value Hedges

During the second half of 2013, we entered into various interest rate swap agreements relative to our 4.750% fixed rate senior notes due in May 2023. The goal was to reduce overall borrowing costs and rebalance our debt portfolio's ratio of fixed-to-floating interest rates. As of September 30, 2020, these swap agreements had a total notional value of $300.0 million and mature in May 2023, which is identical to the maturity of the hedged senior notes. We pay interest at floating rates based on changes in LIBOR and receive interest at a fixed rate of 4.750%. These transactions were designated as fair value hedges because the swaps hedge against the changes in fair value of the fixed rate senior notes resulting from changes in interest rates.

As of September 30, 2020 and December 31, 2019, the interest rate swap agreements are reflected at their fair value of $19.9 million and $10.7 million, respectively, and are included in other assets in our consolidated balance sheet. To the extent they are effective, these interest rate swap agreements are included as an adjustment to long-term debt in our consolidated balance sheets.

We recognized net interest income of $1.8 million and $0.3 million during the three months ended September 30, 2020 and 2019, respectively, and net interest income of $3.8 million and $0.5 million during the nine months ended September 30, 2020 and 2019, respectively, related to net settlements for these interest rate swap agreements, which is included as an offset to interest expense in our consolidated statements of income.

For the three months ended September 30, 2020 and 2019, we recognized a gain of $2.1 million and a loss of $1.1 million, respectively, on the change in fair value of the hedged senior notes with an offsetting loss of $1.8 million and an offsetting gain of $1.4 million, respectively, on the related interest rate swaps, both attributable to changes in the benchmark interest rate. For the nine months ended September 30, 2020 and 2019, we recognized losses of $7.5 million and $10.0 million, respectively, on the change in fair value of the hedged senior notes, with offsetting gains of $9.3 million and $10.5 million, respectively, on the related interest rate swaps, both attributable to changes in the benchmark interest rate. The difference of these fair value changes for the three and nine months ended September 30, 2020 and 2019 was recorded directly in earnings as an adjustment to interest expense in our consolidated statements of income.

For further detail regarding the effect of our fair value hedging on interest expense, refer to Note 11, *Financial Instruments*, of the notes to our unaudited consolidated financial statements in Part I, Item 1 of this Quarterly Report on Form 10-Q.

Cash Flow Hedges

We have historically entered into multiple swap agreements designated as cash flow hedges to manage exposure to fluctuations in interest rates in anticipation of planned future issuances of senior notes. Upon the expected issuance of senior notes, we terminate the interest rate locks and settle with our counterparties. These transactions were accounted for as cash flow hedges. All of our cash flow hedges settled on or before September 30, 2020, thus there is no related asset or liability as of September 30, 2020. As of December 31, 2019, our interest rate lock agreements had an aggregate notional value of $575.0 million, with fixed interest rates ranging from 1.330% to 3.000%.

The fair value of our interest rate locks was determined using standard valuation models with assumptions about interest rates being based on those observed in underlying markets (Level 2 in the fair value hierarchy). The aggregate fair values of the outstanding interest rate locks as of December 31, 2019 were assets of $3.6 million, which were recorded in prepaid expenses and other current assets in our consolidated balance sheet and liabilities of $15.7 million, which were recorded in other accrued liabilities and other long-term liabilities in our consolidated balance sheet.

Total unrealized loss recognized in other comprehensive income for interest rate locks was $0.2 million and $11.9 million, net of tax, for the three months ended September 30, 2020 and 2019, respectively. Total unrealized loss recognized in other comprehensive income for interest rate locks was $22.5 million and $43.0 million, net of tax, for the nine months ended September 30, 2020 and 2019, respectively.

As of September 30, 2020 and December 31, 2019, our previously terminated interest rate locks were recorded as components of accumulated other comprehensive loss, net of tax of $33.0 million and $4.7 million, respectively. The amortization of the terminated interest rate locks is recorded as an adjustment to interest expense over the life of the issued debt using the effective interest method. Over the next 12 months, we expect to amortize approximately $5.3 million, net of tax, from accumulated other comprehensive loss to interest expense as a yield adjustment of our senior notes.

For further detail regarding the effect of our cash flow hedging on interest expense, refer to Note 11, *Financial Instruments*, of the notes to our unaudited consolidated financial statements in Part I, Item 1 of this Quarterly Report on Form 10-Q.

Derivative Contracts

Contemporaneously with the issuance of our 2.300% Notes in February 2020, we amended interest rate lock agreements with an aggregate notional value of $550.0 million, extending the mandatory maturity date from 2020 to 2030, and dedesignated them as cash flow hedges (the 2020 Extended Interest Rate Locks). Contemporaneously with the issuance of our 2.500% Notes in August 2019, we amended interest rate lock agreements with an aggregate notional value of $375.0 million, extending the mandatory maturity date from 2019 to 2024, and dedesignated them as cash flow hedges (collectively with the 2020 Extended Interest Rate Locks referred to as the Extended Interest Rate Locks). There was no ineffectiveness recognized in the dedesignation of these cash flow hedges. In addition, we entered into offsetting interest rate swaps to offset future exposures to fair value fluctuations of the Extended Interest Rate Locks (the Offsetting Interest Rate Swaps). The fair value of these free-standing derivatives was determined using standard valuation models with assumptions about interest rates being based on those observed in underlying markets (Level 2 in the fair value hierarchy).

As of September 30, 2020 and December 31, 2019, the fair values of the Extended Interest Rate Locks were liabilities of $110.2 million and $22.2 million, respectively, which were included in other long-term liabilities in our consolidated balance sheets, and the fair values of the Offsetting Interest Rate Swaps were assets of $63.3 million and $2.9 million, respectively, and were included in other assets in our consolidated balance sheets. For the three and nine months ended September 30, 2020, we recognized gains of $8.6 million and losses of $(62.9) million, respectively, on the change in fair value of the Extended Interest Rate Locks, with offsetting losses of $(8.6) million and offsetting gains of $60.7 million, respectively, on the Offsetting Interest Rate Swaps. The change in fair value was recorded directly in earnings as an adjustment to interest expense in our consolidated statements of income.

Tax-Exempt Financings

As of September 30, 2020, we had $1,119.6 million of certain variable rate tax-exempt financings outstanding with maturities ranging from 2020 to 2050. As of December 31, 2019, we had $1,116.2 million of certain variable rate tax-exempt financings outstanding with maturities ranging from 2020 to 2049. During the second quarter of 2020, we issued $60.0 million of tax-exempt financings. During the second quarter of 2019, we refinanced $35.0 million of tax-exempt financings and issued $30.0 million of new tax-exempt financings.

All of our tax-exempt financings are remarketed either quarterly or semiannually by remarketing agents to effectively maintain a variable yield. The holders of the bonds can put them back to the remarketing agents at the end of each interest period. If the remarketing agent is unable to remarket our bonds, the remarketing agent can put the bonds to us. In the event of a failed remarketing, we currently have availability under our $2.25 billion unsecured revolving credit facility to fund these bonds until they are remarketed successfully. Accordingly, we have classified these borrowings as long-term in our consolidated balance sheets as of September 30, 2020 and December 31, 2019.

Finance Leases

We had finance lease liabilities of $210.1 million as of September 30, 2020 with maturities ranging from 2020 to 2063. We had finance lease liabilities of $119.3 million as of December 31, 2019 with maturities ranging from 2020 to 2049.

In September 2020, we entered into an agreement to extend the term of one of our landfill finance leases by approximately 43 years, or through the end of the landfill's site life. Accordingly, we recognized an incremental finance lease obligation of $90.4 million as of September 30, 2020.

8. INCOME TAXES

Our effective tax rate, exclusive of non-controlling interests, for the nine months ended September 30, 2020 and 2019 was 22.1% and 22.5%, respectively. Our effective tax rates reflected benefits from investments in solar energy assets qualifying for tax credits under Section 48 of the Internal Revenue Code, excess tax benefits under ASU 2016-19 and the realization of additional federal and state benefits as well as adjustments to deferred taxes due to the completion of our tax returns.

Cash paid for income taxes was $34.2 million for the nine months ended September 30, 2020 and a net refund of $4.3 million for the same period in 2019. The net refund received for the nine months ended September 30, 2019 was due to the receipt of funds from amended tax returns.

We have deferred tax assets related to state net operating loss carryforwards. We provide a partial valuation allowance due to uncertainty surrounding the future utilization of these carryforwards in the taxing jurisdictions where the loss carryforwards exist. When determining the need for a valuation allowance, we consider all positive and negative evidence, including recent financial results, scheduled reversals of deferred tax liabilities, projected future taxable income and tax planning strategies.

As a result of our ongoing efforts to evaluate, streamline and maximize the efficiency of our tax footprint, we could adjust our valuation allowance in a future period if there is sufficient evidence to support a conclusion that it is more certain than not that a portion of the state net operating loss carryforwards, on which we currently provide a valuation allowance, would be realized. During the nine months ended September 30, 2020, we began analyzing the utilization of certain of our tax attributes given recent acquisitions, divestitures and a long-term strategic review of our operations. We expect to conclude our efforts in the fourth quarter of 2020 and may reduce our valuation allowance by approximately $0 million to $20 million at December 31, 2020.

The realization of our deferred tax asset for state loss carryforwards ultimately depends upon the existence of sufficient taxable income in the appropriate state taxing jurisdictions in future periods. The weight given to the positive and negative evidence is commensurate with the extent such evidence can be objectively verified. We continue to regularly monitor both positive and negative evidence in determining the ongoing need for a valuation allowance. As of September 30, 2020, the valuation allowance associated with our state loss carryforwards was approximately $69 million.

We are subject to income tax in the United States, as well as in multiple state jurisdictions. Our compliance with income tax rules and regulations is periodically audited by taxing authorities. These authorities may challenge the positions taken in our tax filings. We are currently under examination by the Internal Revenue Service for tax years 2015 through 2017, as well as various state and local taxing authorities for tax years 2012 through 2019.

We believe our recorded liabilities for uncertain tax positions are adequate. However, a significant assessment against us in excess of the liabilities recorded could have a material adverse effect on our consolidated financial position, results of operations and cash flows. As of September 30, 2020, we are unable to estimate the resolution of our gross unrecognized benefits over the next 12 months.

We recognize interest and penalties as incurred within the provision for income taxes in the consolidated statement of income. As of September 30, 2020, we accrued a liability for penalties of $0.3 million and a liability for interest (including interest on penalties) of $12.4 million related to our uncertain tax positions.

9. STOCK REPURCHASES, DIVIDENDS AND EARNINGS PER SHARE

Available Shares

We currently have approximately 12.3 million shares of common stock reserved for future grants under the Republic Services, Inc. Amended and Restated 2007 Stock Incentive Plan.

Stock Repurchases

Stock repurchase activity during the three and nine months ended September 30, 2020 and 2019 follows (in millions, except per share amounts):

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2020	2019	2020	2019
Number of shares repurchased	—	1.7	1.2	4.3
Amount paid	$ —	$ 151.3	$ 98.8	$ 353.8
Weighted average cost per share	$ —	$ 86.87	$ 85.06	$ 81.63

As of September 30, 2020, no repurchased shares were pending settlement. As of September 30, 2019, less than 0.1 million repurchased shares were pending settlement.

In October 2017, our Board of Directors added $2.0 billion to the previous share repurchase authorization, which continues through December 31, 2020. In October 2020, our Board of Directors approved a $2.0 billion share repurchase authorization effective starting January 1, 2021 and extending through December 31, 2023. Share repurchases under the program may be made through open market purchases or privately negotiated transactions in accordance with applicable federal securities laws. While the Board of Directors has approved the program, the timing of any purchases, the prices and the number of shares of common stock to be purchased will be determined by our management, at its discretion, and will depend upon market conditions and other factors. The share repurchase program may be extended, suspended or discontinued at any time. As of

September 30, 2020, the remaining authorized purchase capacity under our October 2017 repurchase program was $605.8 million.

Dividends

In July 2020, our Board of Directors approved a quarterly dividend of $0.425 per share. Cash dividends declared were $393.3 million for the nine months ended September 30, 2020. As of September 30, 2020, we recorded a quarterly dividend payable of $135.4 million to shareholders of record at the close of business on October 1, 2020.

Earnings per Share

Basic earnings per share is computed by dividing net income attributable to Republic Services, Inc. by the weighted average number of common shares (including vested but unissued RSUs and PSUs) outstanding during the period. Diluted earnings per share is based on the combined weighted average number of common shares and common share equivalents outstanding, which include, where appropriate, the assumed exercise of employee stock options, unvested RSUs and unvested PSUs at the expected attainment levels. We use the treasury stock method in computing diluted earnings per share.

Earnings per share for the three and nine months ended September 30, 2020 and 2019 are calculated as follows (in thousands, except per share amounts):

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2020	2019	2020	2019
Basic earnings per share:				
Net income attributable to Republic Services, Inc.	$ 260,000	$ 298,300	$ 731,800	$ 784,000
Weighted average common shares outstanding	319,201	320,633	319,275	321,544
Basic earnings per share	$ 0.81	$ 0.93	$ 2.29	$ 2.44
Diluted earnings per share:				
Net income attributable to Republic Services, Inc.	$ 260,000	$ 298,300	$ 731,800	$ 784,000
Weighted average common shares outstanding	319,201	320,633	319,275	321,544
Effect of dilutive securities:				
Options to purchase common stock	41	368	68	437
Unvested RSU awards	169	276	168	248
Unvested PSU awards	323	433	313	415
Weighted average common and common equivalent shares outstanding	319,734	321,710	319,824	322,644
Diluted earnings per share	$ 0.81	$ 0.93	$ 2.29	$ 2.43

During the three months ended September 30, 2020, there were less than 0.1 million antidilutive securities outstanding, and during the nine months ended September 30, 2020, there were 0.1 million antidilutive securities outstanding. During the three and nine months ended September 30, 2019, there were no antidilutive securities outstanding.

10. CHANGES IN ACCUMULATED OTHER COMPREHENSIVE (LOSS) INCOME BY COMPONENT

A summary of changes in accumulated other comprehensive (loss) income, net of tax, by component, for the nine months ended September 30, 2020 follows:

	Cash Flow Hedges	Defined Benefit Pension Items	Total
Balance as of December 31, 2019	$ (13.7)	$ 15.9	$ 2.2
Other comprehensive (loss) income before reclassifications	(22.5)	1.6	(20.9)
Amounts reclassified from accumulated other comprehensive loss	3.2	—	3.2
Net current period other comprehensive (loss) income	(19.3)	1.6	(17.7)
Balance as of September 30, 2020	$ (33.0)	$ 17.5	$ (15.5)

A summary of reclassifications out of accumulated other comprehensive (loss) income for the three and nine months ended September 30, 2020 and 2019 follows:

	Three Months Ended September 30,		Nine Months Ended September 30,		
	2020	2019	2020	2019	
Details about Accumulated Other Comprehensive (Loss) Income Components	Amount Reclassified from Accumulated Other Comprehensive (Loss) Income		Amount Reclassified from Accumulated Other Comprehensive (Loss) Income		Affected Line Item in the Statement where Net Income is Presented
(Loss) gain on cash flow hedges:					
Terminated interest rate locks	$ (1.6)	$ 0.7	$ (4.3)	$ 1.2	Interest expense
Total before tax	(1.6)	0.7	(4.3)	1.2	
Tax benefit (expense)	0.4	(0.2)	1.1	(0.3)	
Total (loss) gain reclassified into earnings, net of tax	$ (1.2)	$ 0.5	$ (3.2)	$ 0.9	

11. FINANCIAL INSTRUMENTS

The effect of our hedging relationships and derivative instruments on the consolidated statements of income for the three and nine months ended September 30, 2020 and 2019 follows (in millions):

	Classification and amount of gain (loss) recognized in income on hedging relationships and derivative instruments			
	Three Months Ended September 30,		Nine Months Ended September 30,	
	2020	2019	2020	2019
	Interest Expense	Interest Expense	Interest Expense	Interest Expense
Total amount of expense line items presented in the consolidated statements of income in which the effects of hedging relationships and derivative instruments are recorded	$ (88.9)	$ (98.0)	$ (277.4)	$ (296.9)
The effects of fair value and cash flow hedging relationships in Subtopic 815-20:				
Gain on fair value hedging relationships:				
Interest rate swaps:				
Net swap settlements	$ 1.8	$ 0.3	$ 3.8	$ 0.5
Net periodic earnings	$ 0.3	$ 0.3	$ 1.8	$ 0.5
(Loss) gain on cash flow hedging relationships:				
Interest rate swap locks:				
Amount of (loss) gain reclassified from accumulated other comprehensive income (loss) into income, net of tax	$ (1.2)	$ 0.5	$ (3.2)	$ 0.9
The effects of derivative instruments not in Subtopic 815-20:				
Loss on free-standing derivative instruments:				
Interest rate contract:				
Net loss on change in fair value of free-standing derivative instruments	$ —	$ —	$ (2.2)	$ —

Fair Value Measurements

In measuring fair values of assets and liabilities, we use valuation techniques that maximize the use of observable inputs (Level 1) and minimize the use of unobservable inputs (Level 3). We also use market data or assumptions that we believe market participants would use in pricing an asset or liability, including assumptions about risk when appropriate.

The carrying value for certain of our financial instruments, including cash, accounts receivable, current investments, accounts payable and certain other accrued liabilities, approximates fair value because of their short-term nature. As of September 30, 2020 and December 31, 2019, our assets and liabilities that are measured at fair value on a recurring basis include the following:

	September 30, 2020				
		Fair Value			
	Carrying Amount	Total	Quoted Prices in Active Markets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Assets:					
Money market mutual funds	$ 46.2	$ 46.2	$ 46.2	$ —	$ —
Bonds - restricted cash and marketable securities and other assets	63.1	63.1	—	63.1	—
Interest rate swaps - other assets	19.9	19.9	—	19.9	—
Other derivative assets - other assets	63.3	63.3	—	63.3	—
Total assets	$ 192.5	$ 192.5	$ 46.2	$ 146.3	$ —
Liabilities:					
Other derivative liabilities - other long-term liabilities	$ 110.2	$ 110.2	$ —	$ 110.2	$ —
Contingent consideration - other accrued liabilities and other long-term liabilities	70.9	70.9	—	—	70.9
Total liabilities	$ 181.1	$ 181.1	$ —	$ 110.2	$ 70.9

	December 31, 2019				
		Fair Value			
	Carrying Amount	Total	Quoted Prices in Active Markets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Assets:					
Money market mutual funds	$ 43.0	$ 43.0	$ 43.0	$ —	$ —
Bonds - restricted cash and marketable securities and other assets	51.6	51.6	—	51.6	—
Interest rate swaps - other assets	10.7	10.7	—	10.7	—
Other derivative assets - other assets	2.9	2.9	—	2.9	—
Interest rate locks - prepaid expenses and other current assets	3.6	3.6	—	3.6	—
Total assets	$ 111.8	$ 111.8	$ 43.0	$ 68.8	$ —
Liabilities:					
Other derivative liabilities - other long-term liabilities	$ 22.2	$ 22.2	$ —	$ 22.2	$ —
Interest rate locks - other accrued liabilities and other long-term liabilities	15.7	15.7	—	15.7	—
Contingent consideration - other accrued liabilities and other long-term liabilities	72.0	72.0	—	—	72.0
Total liabilities	$ 109.9	$ 109.9	$ —	$ 37.9	$ 72.0

Total Debt

As of September 30, 2020 and December 31, 2019, the carrying value of our total debt was $8.8 billion and $8.7 billion, respectively, and the fair value of our total debt was $9.9 billion and $9.4 billion, respectively. The estimated fair value of our fixed rate senior notes and debentures is based on quoted market prices. The fair value of our remaining notes payable, tax-exempt financings and borrowings under our credit facilities approximates the carrying value because the interest rates are variable. The fair value estimates are based on Level 2 inputs of the fair value hierarchy as of September 30, 2020 and December 31, 2019. See Note 7, *Debt*, for further information related to our debt.

Contingent Consideration

In April 2015, we entered into a waste management contract with the County of Sonoma, California to operate the county's waste management facilities. As of September 30, 2020, the Sonoma contingent consideration represents the fair value of $64.5 million payable to the County of Sonoma based on the achievement of future annual tonnage targets through the expected remaining capacity of the landfill. The potential undiscounted amount of all future contingent payments that we could be required to make under the waste management contract is estimated to be between approximately $75 million and $165 million. During the nine months ended September 30, 2020, the activity in the contingent consideration liability included accretion, which was offset by concession payments made in the ordinary course of business. There were no changes to the estimate of fair value.

In 2017, we recognized additional contingent consideration associated with the acquisition of a landfill. As of September 30, 2020, the contingent consideration of $3.8 million represents the fair value of amounts payable to the seller based on annual volume of tons disposed at the landfill. During the nine months ended September 30, 2020, the activity in the contingent consideration liability included accretion, which was offset by concession payments made in the ordinary course of business. There were no changes to the estimate of fair value.

In June 2019, we recognized additional contingent consideration associated with the acquisition of a collection business. As of September 30, 2020, the contingent consideration of $2.6 million represents the fair value of amounts payable to the seller based on annual volume of tons collected from certain customers of the business. During the nine months ended September 30, 2020, the activity in the contingent consideration liability included accretion. There were no changes to the estimate of fair value.

12. SEGMENT REPORTING

Our senior management evaluates, oversees and manages the financial performance of our operations through two field groups, referred to as Group 1 and Group 2. Group 1 primarily consists of geographic areas located in the western United States, and Group 2 primarily consists of geographic areas located in the southeastern and mid-western United States, and the eastern seaboard of the United States. These two groups are presented below as our reportable segments, which provide integrated waste management services consisting of non-hazardous solid waste collection, transfer, recycling, disposal and environmental services.

Summarized financial information concerning our reportable segments for the three and nine months ended September 30, 2020 and 2019 follows:

	Gross Revenue	Intercompany Revenue	Net Revenue	Depreciation, Amortization, Depletion and Accretion	Operating Income (Loss)	Capital Expenditures	Total Assets
Three Months Ended September 30, 2020							
Group 1	$ 1,544.2	$ (254.1)	$ 1,290.1	$ 131.2	$ 348.9	$ 117.7	$ 11,531.5
Group 2	1,464.5	(220.7)	1,243.8	133.5	238.0	120.2	9,371.7
Corporate entities	44.7	(6.5)	38.2	26.7	(139.0)	(3.6)	2,206.9
Total	$ 3,053.4	$ (481.3)	$ 2,572.1	$ 291.4	$ 447.9	$ 234.3	$ 23,110.1
Three Months Ended September 30, 2019							
Group 1	$ 1,543.3	$ (258.1)	$ 1,285.2	$ 128.7	$ 316.1	$ 163.3	$ 11,341.7
Group 2	1,549.3	(225.7)	1,323.6	134.0	242.0	155.1	9,353.0
Corporate entities	43.1	(5.0)	38.1	25.1	(90.3)	1.3	1,634.4
Total	$ 3,135.7	$ (488.8)	$ 2,646.9	$ 287.8	$ 467.8	$ 319.7	$ 22,329.1

	Gross Revenue	Intercompany Revenue	Net Revenue	Depreciation, Amortization, Depletion and Accretion	Operating Income (Loss)	Capital Expenditures	Total Assets
Nine Months Ended September 30, 2020							
Group 1	$ 4,526.6	$ (751.8)	$ 3,774.8	$ 390.5	$ 981.2	$ 403.4	$ 11,531.5
Group 2	4,325.2	(638.1)	3,687.1	400.4	699.7	354.8	9,371.7
Corporate entities	135.8	(17.3)	118.5	79.9	(404.5)	130.8	2,206.9
Total	$ 8,987.6	$ (1,407.2)	$ 7,580.4	$ 870.8	$ 1,276.4	$ 889.0	$ 23,110.1
Nine Months Ended September 30, 2019							
Group 1	$ 4,502.8	$ (760.0)	$ 3,742.8	$ 377.1	$ 913.5	$ 400.4	$ 11,341.7
Group 2	4,517.0	(650.7)	3,866.3	392.5	693.3	367.5	9,353.0
Corporate entities	126.8	(13.2)	113.6	74.9	(278.8)	140.4	1,634.4
Total	$ 9,146.6	$ (1,423.9)	$ 7,722.7	$ 844.5	$ 1,328.0	$ 908.3	$ 22,329.1

Intercompany revenue reflects transactions within and between segments that generally are made on a basis intended to reflect the market value of such services. Capital expenditures for corporate entities primarily include vehicle inventory acquired but not yet assigned to operating locations and facilities. Corporate functions include legal, tax, treasury, information technology, risk management, human resources, closed landfills and other administrative functions.

13. REVENUE

Our operations primarily consist of providing collection, transfer and disposal of non-hazardous solid waste, recovering and recycling of certain materials, and environmental services. The following table disaggregates our revenue by service line for the three and nine months ended September 30, 2020 and 2019 (in millions of dollars and as a percentage of revenue):

	Three Months Ended September 30,				Nine Months Ended September 30,			
	2020		2019		2020		2019	
Collection:								
Residential	$ 581.2	22.6 %	$ 574.4	21.7 %	$ 1,723.3	22.8 %	$ 1,701.8	22.0 %
Small-container	773.7	30.1	799.1	30.2	2,321.8	30.6	2,369.0	30.7
Large-container	553.1	21.5	583.6	22.1	1,606.8	21.2	1,688.2	21.9
Other	13.1	0.5	11.7	0.4	38.0	0.5	34.2	0.4
Total collection	1,921.1	74.7	1,968.8	74.4	5,689.9	75.1	5,793.2	75.0
Transfer	352.4		348.0		1,004.8		987.6	
Less: intercompany	(190.9)		(193.1)		(556.9)		(558.6)	
Transfer, net	161.5	6.3	154.9	5.8	447.9	5.9	429.0	5.6
Landfill	597.3		604.2		1,719.6		1,747.0	
Less: intercompany	(263.4)		(264.4)		(763.9)		(773.0)	
Landfill, net	333.9	13.0	339.8	12.8	955.7	12.6	974.0	12.6
Environmental services	24.1	0.9	57.8	2.2	101.0	1.3	143.6	1.8
Other:								
Recycling processing and commodity sales	75.0	2.9	68.6	2.6	216.2	2.9	213.3	2.8
Other non-core	56.5	2.2	57.0	2.2	169.7	2.2	169.6	2.2
Total other	131.5	5.1	125.6	4.8	385.9	5.1	382.9	5.0
Total revenue	$ 2,572.1	100.0 %	$ 2,646.9	100.0 %	$ 7,580.4	100.0 %	$ 7,722.7	100.0 %

Other non-core revenue consists primarily of revenue from National Accounts, which represents the portion of revenue generated from nationwide or regional contracts in markets outside our operating areas where the associated waste handling services are subcontracted to local operators. Consequently, substantially all of this revenue is offset with related subcontract costs, which are recorded in cost of operations.

The factors that impact the timing and amount of revenue recognized for each service line may vary based on the nature of the service performed. Generally, we recognize revenue at the time we perform a service. In the event that we bill for services in advance of performance, we recognize deferred revenue for the amount billed and subsequently recognize revenue at the time the service is provided. Substantially all of the deferred revenue recognized as of December 31, 2019 was recognized as revenue during the nine months ended September 30, 2020 when the service was performed.

See Note 12, *Segment Reporting*, for additional information regarding revenue by reportable segment.

Revenue Recognition

Our service obligations of a long-term nature, e.g., certain solid waste collection service contracts, are satisfied over time, and we recognize revenue based on the value provided to the customer during the period. The amount billed to the customer is based on variable elements such as the number of residential homes or businesses for which collection services are provided, the volume of waste collected, transported and disposed, and the nature of the waste accepted. We do not disclose the value of unsatisfied performance obligations for these contracts as our right to consideration corresponds directly to the value provided to the customer for services completed to date and all future variable consideration is allocated to wholly unsatisfied performance obligations.

Additionally, certain elements of our long-term customer contracts are unknown upon entering into the contract, including the amount that will be billed in accordance with annual price escalation clauses, our fuel recovery fee program and commodity prices. The amount to be billed is often tied to changes in an underlying base index such as a consumer price index or a fuel or commodity index, and revenue can only be recognized once the index is established for the period.

Deferred Contract Costs

We incur certain upfront payments to acquire customer contracts which are recognized as other assets in our consolidated balance sheet, and we amortize the asset over the respective contract life. In addition, we recognize sales commissions that represent an incremental cost of the contract as other assets in our consolidated balance sheets, and we amortize the asset over the average life of the customer relationship. As of September 30, 2020 and December 31, 2019, we recognized $80.8 million and $83.1 million, respectively, of deferred contract costs and capitalized sales commissions. During the three and nine months ended September 30, 2020, we amortized $2.9 million and $9.1 million, respectively, of capitalized sales commissions to selling, general and administrative expenses and we amortized $1.6 million and $4.9 million, respectively, of other deferred contract costs as a reduction of revenue. During the three and nine months ended September 30, 2019, we amortized $2.9 million and $8.9 million, respectively, of capitalized sales commissions to selling, general and administrative expenses and we amortized $1.6 million and $4.6 million, respectively, of other deferred contract costs as a reduction of revenue.

Effective January 1, 2020, we adopted ASU 2016-13. In accordance with the standard, we evaluated the impairment considerations for our deferred contract cost assets based on an expected credit loss assessment. We considered the impact of the COVID-19 pandemic on our business, noting no significant changes to our expected credit loss assessment.

14. COMMITMENTS AND CONTINGENCIES

Legal Proceedings

We are subject to extensive and evolving laws and regulations and have implemented safeguards to respond to regulatory requirements. In the normal course of our business, we become involved in legal proceedings. Some may result in fines, penalties or judgments against us, or settlements, which may impact earnings and cash flows for a particular period. Although we cannot predict the ultimate outcome of any legal matter with certainty, we do not believe the outcome of any of our pending legal proceedings will have a material adverse impact on our consolidated financial position, results of operations or cash flows.

As used herein, the term *legal proceedings* refers to litigation and similar claims against us and our subsidiaries, excluding: (1) ordinary course accidents, general commercial liability and workers' compensation claims, which are covered by insurance programs, subject to customary deductibles, and which, together with insured employee health care costs, are discussed in Note 5, *Other Liabilities;* and (2) environmental remediation liabilities, which are discussed in Note 6, *Landfill and Environmental Costs.*

We accrue for legal proceedings when losses become probable and reasonably estimable. We have recorded an aggregate accrual of approximately $25 million relating to our outstanding legal proceedings as of September 30, 2020. As of the end of each applicable reporting period, we review each of our legal proceedings and, where it is probable that a liability has been incurred, we accrue for all probable and reasonably estimable losses. Where we can reasonably estimate a range of losses we may incur regarding such a matter, we record an accrual for the amount within the range that constitutes our best estimate. If we can reasonably estimate a range but no amount within the range appears to be a better estimate than any other, we use the amount that is the low end of such range. If we had used the high ends of such ranges, our aggregate potential liability would be approximately $9 million higher than the amount recorded as of September 30, 2020.

Multiemployer Pension Plans

We participate in multiemployer pension plans that generally provide retirement benefits to participants of contributing employers. We do not administer these plans.

Under current law regarding multiemployer pension plans, a plan's termination, our voluntary withdrawal (which we consider from time to time) or the mass withdrawal of all contributing employers from any under-funded multiemployer pension plan (each, a Withdrawal Event) would require us to make payments to the plan for our proportionate share of the plan's unfunded vested liabilities. During the course of operating our business, we incur Withdrawal Events regarding certain of the multiemployer pension plans in which we participate. We accrue for such events when losses become probable and reasonably estimable.

In June 2020, we entered into an agreement with a certain multiemployer pension fund through which we transitioned from one plan into another plan managed by the same fund, thus creating a withdrawal event from the original plan. As a result of the withdrawal event, we recognized $31.6 million of withdrawal costs, which we paid in July 2020.

The COVID-19 pandemic has created significant volatility and disruption of financial markets, which has negatively impacted companies across the globe. We will continue to monitor the Pension Protection Act zone status of the multiemployer pension plans in which we participate, noting that the current economic environment may impact certain contributing employers' ability to fulfill their obligations under the plans. We believe the largest risk is attributable to plans in the critical red zone, which are less than 65% funded. In the event other contributing employers default on their obligations under the plans, we could be required to adjust our estimates for these matters, which could have a material and adverse effect on our consolidated financial position, results of operations and cash flows.

Restricted Cash and Marketable Securities

Restricted cash and restricted cash equivalents are included with cash and cash equivalents when reconciling the beginning-of-period and end-of-period total amounts shown on the statement of cash flows. Beginning-of-period and end-of-period cash, cash equivalents, restricted cash and restricted cash equivalents as presented in the statement of cash flows is reconciled as follows:

	September 30, 2020	December 31, 2019	September 30, 2019	December 31, 2018
Cash and cash equivalents	$ 406.4	$ 47.1	$ 55.6	$ 70.5
Restricted cash and marketable securities	145.2	179.4	121.3	108.1
Less: restricted marketable securities	(62.4)	(49.1)	(48.3)	(45.3)
Cash, cash equivalents, restricted cash and restricted cash equivalents	$ 489.2	$ 177.4	$ 128.6	$ 133.3

Our restricted cash and marketable securities include, among other things, restricted cash and marketable securities pledged to regulatory agencies and governmental entities as financial guarantees of our performance under certain collection, landfill and transfer station contracts and permits, and relating to our final capping, closure and post-closure obligations at our landfills, restricted cash and marketable securities related to our insurance obligations, and restricted cash related to a payment for a certain maturing tax-exempt financing.

The following table summarizes our restricted cash and marketable securities:

	September 30, 2020	December 31, 2019
Capping, closure and post-closure obligations	$ 31.4	$ 30.6
Insurance	113.8	99.4
Payment for maturing tax-exempt financing	—	49.4
Total restricted cash and marketable securities	$ 145.2	$ 179.4

Off-Balance Sheet Arrangements

We have no off-balance sheet debt or similar obligations, other than short-term operating leases and financial assurances, which are not classified as debt. We have no transactions or obligations with related parties that are not disclosed, consolidated into or reflected in our reported financial position or results of operations. We have not guaranteed any third-party debt.

ITEM 2. MANAGEMENT’S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS.

You should read the following discussion in conjunction with the unaudited consolidated financial statements and notes thereto included under Part I, Item 1, and the risk factors in Part II, Item 1A of this Quarterly Report on Form 10-Q. In addition, you should refer to our audited consolidated financial statements and notes thereto and related *Management’s Discussion and Analysis of Financial Condition and Results of Operations* appearing in our Annual Report on Form 10-K for the fiscal year ended December 31, 2019.

Disclosure Regarding Forward-Looking Statements

This Quarterly Report on Form 10-Q contains certain forward-looking information about us that is intended to be covered by the safe harbor for “forward-looking statements” provided by the Private Securities Litigation Reform Act of 1995. Forward-looking statements are statements that are not historical facts. Words such as “guidance,” “expect,” “will,” “may,” “anticipate,” “plan,” “estimate,” “project,” “intend,” “should,” “can,” “likely,” “could,” “outlook” and similar expressions are intended to identify forward-looking statements. In particular, information appearing in this “Management's Discussion and Analysis of Financial Condition and Results of Operations” includes forward-looking statements. These statements include information about our plans, strategies, expectations of future financial performance and prospects. Forward-looking statements are not guarantees of performance. These statements are based upon the current beliefs and expectations of our management and are subject to significant risk and uncertainties that could cause actual results to differ materially from those expressed in, or implied or projected by, the forward-looking information and statements. Although we believe that the expectations reflected in the forward-looking statements are reasonable, we cannot assure you that the expectations will prove to be correct. Among the factors that could cause actual results to differ materially from the expectations expressed in the forward-looking statements are the effects of the COVID-19 pandemic and actions taken in response thereto, as well as acts of war, riots or terrorism, and the impact of these acts on economic, financial and social conditions in the United States as well as our dependence on large, long-term collection, transfer and disposal contracts. More information on factors that could cause actual results or events to differ materially from those anticipated is included from time to time in our reports filed with the Securities and Exchange Commission, including our Annual Report on Form 10-K for the year ended December 31, 2019, particularly under Part I, Item 1A - Risk Factors, and Part II, Item 1A of this Quarterly Report on Form 10-Q. Additionally, new risk factors emerge from time to time and it is not possible for us to predict all such risk factors, or to assess the impact such risk factors might have on our business. We undertake no obligation to update publicly any forward-looking statements whether as a result of new information, future events or otherwise, except as required by law.

Recent Developments

In March 2020, the World Health Organization declared the outbreak of a new strain of coronavirus (COVID-19) a pandemic. The COVID-19 pandemic has negatively impacted the global economy, disrupted global supply chains and created significant volatility and disruption of financial markets. The full extent of the impact of the COVID-19 pandemic on our operations and financial performance will depend on future developments, including the duration and spread of the pandemic, all of which are uncertain and cannot be predicted at this time. An extended period of economic disruption associated with the COVID-19 pandemic could materially and adversely affect our business, results of operations, access to sources of liquidity and financial condition.

Both national and local government agencies have implemented steps with the intent to slow the spread of the virus, including shelter-in-place orders and the mandatory shutdown of certain businesses. During this time, we continued to provide essential services to our customers. In mid-March 2020, certain customers in our small- and large-container businesses began adjusting their service levels, which included a decrease in the frequency of pickups or a temporary pause in service. In addition, we experienced a decline in volumes disposed at certain of our landfills and transfer stations. As service levels decreased, we also experienced a decrease in certain costs of our operations which are variable in nature. This decline in service activity peaked in the first half of April and gradually improved thereafter as local economies began to gradually reopen and customers began to resume service. Large outbreaks and resurgences of COVID-19 in various regions may result in a reinstitution of certain restrictions.

The demand for our environmental services business depends on the continued demand for, and production of, oil and natural gas in certain shale basins located in the United States. During the nine months ended September 30, 2020, the value of crude oil and natural gas declined to historic lows, resulting in a decrease in rig counts and drilling activity that led to a year-over-year decrease in revenue from our environmental services business. Further and/or sustained declines in the level of production activity may result in an unfavorable change to the long-term strategic outlook for our environmental services business that could result in the recognition of impairment charges on intangible assets and property and equipment associated with this business. On at least a quarterly basis, we will continue to monitor the effect of the evolving COVID-19 pandemic on our business and review our estimates for recoverability of assets used in certain of our operations that are related to strategic investments.

In April 2020, we launched our Committed to Serve initiative, which was intended to help our employees, customers and communities across the United States. We committed $20 million to support frontline employees and their families, as well as small business customers in the local communities where we serve. In addition to this initiative, we have experienced an increase in certain costs of doing business as a direct result of the COVID-19 pandemic, including costs for additional safety equipment and hygiene products and increased facility and equipment cleaning. These costs, which we refer to as business resumption costs, are intended to assist in protecting the safety of our frontline employees as we continue to provide an essential service to our customers. We also incurred incremental costs for guaranteeing certain frontline employees a minimum hourly work week regardless of service decreases. During the three and nine months ended September 30, 2020, we incurred costs of $11.0 million and $45.1 million, respectively, as a direct and incremental result of the COVID-19 pandemic. In addition, we incurred incremental costs associated with expanding certain aspects of our existing healthcare programs. We expect to incur similar costs throughout 2020, and potentially into future years. The magnitude of the costs we expect to incur throughout the remainder of the year cannot be predicted at this time due to the various uncertainties surrounding the pandemic (e.g., its duration and spread).

The effects of the COVID-19 pandemic on our business are described in more detail in the *Results of Operations* discussion in this *Management's Discussion and Analysis of Financial Condition and Results of Operations.*

Updated 2020 Financial Guidance

The following is a summary of anticipated adjusted diluted earnings per share for the year ending December 31, 2020, which is not a measure determined in accordance with U.S GAAP:

	(Anticipated) Year Ending December 31, 2020
Diluted earnings per share	$ 3.09 - 3.12
Loss on extinguishment of debt	0.08
Restructuring charges	0.05
Loss on business divestitures and impairments, net	0.10
Withdrawal costs - multiemployer pension funds	0.08
Bridgeton insurance recovery	(0.03)
Adjusted diluted earnings per share	$ 3.37 - 3.40

We believe that presenting adjusted diluted earnings per share provides an understanding of operational activities before the financial impact of certain items. We use this measure, and believe investors will find it helpful, in understanding the ongoing performance of our operations separate from items that have a disproportionate impact on our results for a particular period. We have incurred comparable charges, costs and recoveries in prior periods, and similar types of adjustments can reasonably be expected to be recorded in future periods. Our definition of adjusted diluted earnings per share may not be comparable to similarly titled measures presented by other companies.

Overview

Republic is the second largest provider of non-hazardous solid waste collection, transfer, disposal, recycling, and environmental services in the United States, as measured by revenue. As of September 30, 2020, we operated facilities in 41 states through 336 collection operations, 216 transfer stations, 188 active landfills, 78 recycling processing centers, 7 treatment, recovery and disposal facilities, 12 salt water disposal wells and 6 deep injection wells. We are engaged in 75 landfill gas to energy and renewable energy projects and had post-closure responsibility for 128 closed landfills as of September 30, 2020.

Revenue for the nine months ended September 30, 2020 decreased by (1.8)% to $7,580.4 million compared to $7,722.7 million for the same period in 2019. This change in revenue is due to decreases in volumes of (3.6)%, fuel recovery fees of (0.6)%, and environmental services of (0.9)%, partially offset by increases in average yield of 2.7%, acquisitions, net of divestitures of 0.5%, and recycling processing and commodity sales of 0.1%.

The following table summarizes our revenue, expenses and operating income for the three and nine months ended September 30, 2020 and 2019 (in millions of dollars and as a percentage of revenue):

	Three Months Ended September 30,				Nine Months Ended September 30,			
	2020		2019		2020		2019	
Revenue	$ 2,572.1	100.0 %	$ 2,646.9	100.0 %	$ 7,580.4	100.0 %	$ 7,722.7	100.0 %
Expenses:								
Cost of operations	1,535.4	59.7	1,631.4	61.6	4,553.3	60.1	4,754.4	61.6
Depreciation, amortization and depletion of property and equipment	255.5	9.9	253.5	9.6	763.7	10.1	743.4	9.6
Amortization of other intangible assets	5.3	0.2	4.8	0.2	15.8	0.2	14.4	0.2
Amortization of other assets	9.9	0.4	9.0	0.3	28.9	0.4	25.3	0.3
Accretion	20.7	0.8	20.5	0.8	62.4	0.8	61.4	0.8
Selling, general and administrative	256.1	10.0	275.4	10.4	795.3	10.5	806.3	10.4
Withdrawal costs - multiemployer pension funds	—	—	—	—	35.9	0.5	—	—
Loss (gain) on business divestitures and impairments, net	31.5	1.2	(24.0)	(0.9)	32.9	0.4	(23.5)	(0.3)
Restructuring charges	9.8	0.4	8.5	0.3	15.8	0.2	13.0	0.2
Operating income	$ 447.9	17.4 %	$ 467.8	17.7 %	$ 1,276.4	16.8 %	$ 1,328.0	17.2 %

Our pre-tax income was $318.7 million and $941.4 million for the three and nine months ended September 30, 2020, respectively, compared to $369.5 million and $1,010.9 million for the same periods in 2019, respectively. Our net income attributable to Republic Services, Inc. was $260.0 million and $731.8 million for the three and nine months ended September 30, 2020, or $0.81 and $2.29 per diluted share, respectively, compared to $298.3 million and $784.0 million, or $0.93 and $2.43 per diluted share, for the same periods in 2019, respectively.

During each of the three and nine months ended September 30, 2020 and 2019, we recorded a number of charges, other expenses and benefits that impacted our pre-tax income, net income attributable to Republic Services, Inc. (net income – Republic) and diluted earnings per share as noted in the following table (in millions, except per share data). Additionally, see the *Results of Operations* discussion of this *Management's Discussion and Analysis of Financial Condition and Results of Operations* for a discussion of other items that impacted our earnings during the three and nine months ended September 30, 2020 and 2019.

	Three Months Ended September 30, 2020			Three Months Ended September 30, 2019		
	Pre-tax Income	Net Income - Republic	Diluted Earnings per Share	Pre-tax Income	Net Income - Republic	Diluted Earnings per Share
As reported	$ 318.7	$ 260.0	$ 0.81	$ 369.5	$ 298.3	$ 0.93
Loss on extinguishment of debt	34.5	25.5	0.08	—	—	—
Restructuring charges	9.8	7.2	0.02	8.5	6.3	0.02
Loss (gain) on business divestitures and impairments, net	31.5	26.6	0.09	(24.0)	(14.3)	(0.05)
Total adjustments	75.8	59.3	0.19	(15.5)	(8.0)	(0.03)
As adjusted	$ 394.5	$ 319.3	$ 1.00	$ 354.0	$ 290.3	$ 0.90

	Nine Months Ended September 30, 2020			Nine Months Ended September 30, 2019		
	Pre-tax Income	Net Income - Republic	Diluted Earnings per Share	Pre-tax Income	Net Income - Republic	Diluted Earnings per Share
As reported	$ 941.4	$ 731.8	$ 2.29	$ 1,010.9	$ 784.0	$ 2.43
Loss on extinguishment of debt	34.5	25.5	0.08	—	—	—
Restructuring charges	15.8	11.7	0.04	13.0	9.6	0.03
Loss (gain) on business divestitures and impairments, net	32.9	30.1	0.10	(23.5)	(13.9)	(0.04)
Withdrawal costs - multiemployer pension funds	35.9	26.5	0.08	—	—	—
Bridgeton insurance recovery	(10.8)	(8.2)	(0.03)	—	—	—
Incremental contract startup costs - large municipal contract (1)	—	—	—	0.7	0.5	—
Total adjustments	108.3	85.6	0.27	(9.8)	(3.8)	(0.01)
As adjusted	$ 1,049.7	$ 817.4	$ 2.56	$ 1,001.1	$ 780.2	$ 2.42

(1) The aggregate impact to adjusted diluted earnings per share totals to less than $0.01 for the nine months ended September 30, 2019.

We believe that presenting adjusted pre-tax income, adjusted net income – Republic, and adjusted diluted earnings per share, which are not measures determined in accordance with U.S. GAAP, provides an understanding of operational activities before the financial impact of certain items. We use these measures, and believe investors will find them helpful, in understanding the ongoing performance of our operations separate from items that have a disproportionate impact on our results for a particular period. We have incurred comparable charges, costs and recoveries in prior periods, and similar types of adjustments can reasonably be expected to be recorded in future periods. Our definitions of adjusted pre-tax income, adjusted net income – Republic, and adjusted diluted earnings per share may not be comparable to similarly titled measures presented by other companies. Further information on each of these adjustments is included below.

Loss on extinguishment of debt. During the three months ended September 30, 2020, we incurred a $34.5 million loss on the early extinguishment of debt related to the redemption of our $600.0 million 5.250% senior notes due November 2021. We paid a cash premium of $34.0 million and incurred a non-cash charge related to the unamortized deferred issuance costs of $0.5 million.

Restructuring charges. In 2019, we incurred costs related to the redesign of certain back-office software systems, which continued into 2020. In addition, in July 2020, we eliminated certain positions, primarily related to our back-office support functions, in response to the COVID-19 pandemic. During the three and nine months ended September 30, 2020, we incurred restructuring charges of $9.8 million and $15.8 million, respectively, that primarily related to these restructuring efforts. During the three and nine months ended September 30, 2019, we incurred restructuring charges of $8.5 million and $13.0 million, respectively, that primarily related to the redesign of certain back-office software systems. During the nine months ended September 30, 2020 and 2019, we paid $11.9 million and $7.9 million, respectively, related to these restructuring efforts.

During the remainder of 2020, we expect to incur additional restructuring charges of approximately $3 million to $5 million primarily related to the redesign of certain of our back-office software systems. Substantially all of these restructuring charges will be recorded in our corporate segment.

Loss (gain) on business divestitures and impairments, net. During the three and nine months ended September 30, 2020, we recorded a net loss on business divestitures and impairments of $31.5 million and $32.9 million, respectively, including a $10.8 million liability for a withdrawal event from a certain multi-employer pension plan. During the three and nine months ended September 30, 2019, we recorded a net gain on business divestitures and impairments of $(24.0) million and $(23.5) million, respectively.

Withdrawal costs - multiemployer pension funds. During the nine months ended September 30, 2020, we recorded charges to earnings of $35.9 million for withdrawal events at multiemployer pension funds to which we contribute. As we obtain updated information regarding multiemployer pension funds, the factors used in deriving our estimated withdrawal liabilities will be subject to change, which may adversely impact our reserves for withdrawal costs.

Bridgeton insurance recovery. During the nine months ended September 30, 2020, we recognized an insurance recovery of $10.8 million related to our closed Bridgeton Landfill in Missouri as a reduction of remediation expenses in our cost of operations.

Incremental contract startup costs - large municipal contract. Although our business regularly incurs startup costs under municipal contracts, we specifically identify in the tables above the startup costs with respect to an individual municipal contract (and do not adjust for other startup costs under other contracts). We do this because of the magnitude of the costs involved with this particular municipal contract and the unusual nature for the time period in which they were incurred. During the nine months ended September 30, 2019, we incurred costs of $0.7 million related to the implementation of this large municipal contract. These costs did not meet the capitalization criteria prescribed by Accounting Standards Update 2014-09, *Revenue from Contracts with Customers (Topic 606) and Other Assets and Deferred Costs-Contracts with Customers (Subtopic 340-40)*.

Results of Operations

Revenue

We generate revenue primarily from our solid waste collection operations. Our remaining revenue is from other services, including transfer station, landfill disposal, recycling, and environmental services. Our residential, small-container and large-container collection operations in some markets are based on long-term contracts with municipalities. Certain of our municipal contracts have annual price escalation clauses that are tied to changes in an underlying base index such as a consumer price index. We generally provide small-container and large-container collection services to customers under contracts with terms up to three years. Our transfer stations and landfills generate revenue from disposal or tipping fees charged to third parties. Our recycling processing facilities generate revenue from tipping fees charged to third parties and the sale of recycled commodities. Our revenue from environmental services consists mainly of fees we charge for disposal of non-hazardous solid and liquid waste and in-plant services, such as transportation and logistics. Environmental services waste is generated from the by-product of oil and natural gas exploration and production activity. Additionally, it is generated by the daily operations of industrial, petrochemical and refining facilities, including maintenance, plant turnarounds and capital projects. Other non-core revenue consists primarily of revenue from National Accounts, which represents the portion of revenue generated from nationwide or regional contracts in markets outside our operating areas where the associated waste handling services are subcontracted to local operators. Consequently, substantially all of this revenue is offset with related subcontract costs, which are recorded in cost of operations.

The following table reflects our revenue by service line for the three and nine months ended September 30, 2020 and 2019 (in millions of dollars and as a percentage of revenue):

	Three Months Ended September 30,				Nine Months Ended September 30,			
	2020		2019		2020		2019	
Collection:								
Residential	$ 581.2	22.6 %	$ 574.4	21.7 %	$ 1,723.3	22.8 %	$ 1,701.8	22.0 %
Small-container	773.7	30.1	799.1	30.2	2,321.8	30.6	2,369.0	30.7
Large-container	553.1	21.5	583.6	22.1	1,606.8	21.2	1,688.2	21.9
Other	13.1	0.5	11.7	0.4	38.0	0.5	34.2	0.4
Total collection	1,921.1	74.7	1,968.8	74.4	5,689.9	75.1	5,793.2	75.0
Transfer	352.4		348.0		1,004.8		987.6	
Less: intercompany	(190.9)		(193.1)		(556.9)		(558.6)	
Transfer, net	161.5	6.3	154.9	5.8	447.9	5.9	429.0	5.6
Landfill	597.3		604.2		1,719.6		1,747.0	
Less: intercompany	(263.4)		(264.4)		(763.9)		(773.0)	
Landfill, net	333.9	13.0	339.8	12.8	955.7	12.6	974.0	12.6
Environmental services	24.1	0.9	57.8	2.2	101.0	1.3	143.6	1.8
Other:								
Recycling processing and commodity sales	75.0	2.9	68.6	2.6	216.2	2.9	213.3	2.8
Other non-core	56.5	2.2	57.0	2.2	169.7	2.2	169.6	2.2
Total other	131.5	5.1	125.6	4.8	385.9	5.1	382.9	5.0
Total revenue	$ 2,572.1	100.0 %	$ 2,646.9	100.0 %	$ 7,580.4	100.0 %	$ 7,722.7	100.0 %

The following table reflects changes in components of our revenue, as a percentage of total revenue, for the three and nine months ended September 30, 2020 and 2019:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2020	2019	2020	2019
Average yield	2.6 %	2.8 %	2.7 %	2.8 %
Fuel recovery fees	(0.9)	(0.2)	(0.6)	0.1
Total price	1.7	2.6	2.1	2.9
Volume [1]	(3.4)	0.1	(3.6)	(0.4)
Recycling processing and commodity sales	0.3	(0.3)	0.1	(0.1)
Environmental services	(1.3)	(0.4)	(0.9)	(0.3)
Total internal growth	(2.7)	2.0	(2.3)	2.1
Acquisitions / divestitures, net	(0.1)	1.2	0.5	0.7
Total	(2.8)%	3.2 %	(1.8)%	2.8 %
Core price	4.5 %	4.7 %	4.8 %	4.7 %

(1) The decrease in volume of (3.6)% during the nine months ended September 30, 2020 includes an offsetting increase of 0.1% due to one additional workday as compared to the same respective period in 2019. The increase in volume of 0.1% during the three months ended September 30, 2019 includes an increase of 0.5% due to one additional workday as compared to the same respective period in 2018.

Average yield is defined as revenue growth from the change in average price per unit of service, expressed as a percentage. Core price is defined as price increases to our customers and fees, excluding fuel recovery fees, net of price decreases to retain customers. We also measure changes in average yield and core price as a percentage of related-business revenue, defined as total revenue excluding recycled commodities and fuel recovery fees, to determine the effectiveness of our pricing strategies. Average yield as a percentage of related-business revenue was 2.8% for both the three and nine months ended September 30, 2020, and 2.9% and 3.0% for the same respective periods in 2019. Core price as a percentage of related-business revenue was 4.8% and 5.1% for the three and nine months ended September 30, 2020, respectively, and 5.0% for each of the same respective periods in 2019.

During the three and nine months ended September 30, 2020, we experienced the following changes in our revenue as compared to the same respective periods in 2019:

- Average yield increased revenue by 2.6% and 2.7% during the three and nine months ended September 30, 2020, respectively, due to price increases in all lines of business.
- The fuel recovery fee program, which mitigates our exposure to increases in fuel prices, decreased revenue by (0.9)% and (0.6)% during the three and nine months ended September 30, 2020, respectively, primarily due to a decrease in fuel prices compared to the same periods in 2019 combined with a decrease in the total revenue subject to the fuel recovery fees.
- Volume decreased revenue by (3.4)% and (3.6)% during the three and nine months ended September 30, 2020, respectively, primarily due to a reduction in service levels attributable to the COVID-19 pandemic. We experienced volume declines in our small- and large-container lines of business as a result of a reduction in the frequency of pickups or a temporary pause in service for certain of our customers. In addition, we experienced declines in special waste volumes disposed at certain of our landfills and transfer stations. During the nine months ended September 30, 2020, these decreases were partially offset by an increase in construction and demolition volumes in our landfill line of business along with one additional workday as compared to the same period in 2019.
- Recycling processing and commodity sales increased revenue by 0.3% and 0.1% during the three and nine months ended September 30, 2020, respectively, primarily due to an increase in overall commodity prices as compared to the same periods in 2019. The average price for recycled commodities, excluding glass and organics, for the three and nine months ended September 30, 2020 was $99 and $92 per ton, respectively, compared to $72 and $81 per ton for the same respective periods in 2019.

  Changing market demand for recycled commodities causes volatility in commodity prices. At current volumes and mix of materials, we believe a $10 per ton change in the price of recycled commodities will change both annual revenue and operating income by approximately $13 million.

- Environmental services decreased revenue by (1.3)% and (0.9)% during the three and nine months ended September 30, 2020, respectively, primarily due to a decrease in rig counts and drilling activity as a result of lower demand for crude oil.
- Acquisitions, net of divestitures, decreased revenue by (0.1)% during the three months ended September 30, 2020 due to the divestiture of certain non-strategic assets during the period. Acquisitions, net of divestitures, increased revenue by 0.5% during the nine months ended September 30, 2020 due to our continued growth strategy of acquiring privately held solid waste, recycling and environmental services companies that complement our existing business platform.

Cost of Operations

Cost of operations includes labor and related benefits, which consists of salaries and wages, health and welfare benefits, incentive compensation and payroll taxes. It also includes transfer and disposal costs representing tipping fees paid to third party disposal facilities and transfer stations; maintenance and repairs relating to our vehicles, equipment and containers, including related labor and benefit costs; transportation and subcontractor costs, which include costs for independent haulers that transport our waste to disposal facilities and costs for local operators who provide waste handling services associated with our National Accounts in markets outside our standard operating areas; fuel, which includes the direct cost of fuel used by our vehicles, net of fuel tax credits; disposal fees and taxes, consisting of landfill taxes, host community fees and royalties; landfill operating costs, which includes financial assurance, leachate disposal, remediation charges and other landfill maintenance costs; risk management costs, which include insurance premiums and claims; cost of goods sold, which includes material costs paid to suppliers; and other, which includes expenses such as facility operating costs, equipment rent and gains or losses on sale of assets used in our operations.

The following table summarizes the major components of our cost of operations for the three and nine months ended September 30, 2020 and 2019 (in millions of dollars and as a percentage of revenue):

	Three Months Ended September 30,				Nine Months Ended September 30,			
	2020		2019		2020		2019	
Labor and related benefits	$ 546.0	21.2 %	$ 558.9	21.1 %	$ 1,617.1	21.3 %	$ 1,647.7	21.3 %
Transfer and disposal costs	206.9	8.0	216.5	8.2	594.7	7.9	634.8	8.2
Maintenance and repairs	246.5	9.6	265.0	10.0	726.0	9.6	757.8	9.8
Transportation and subcontract costs	172.3	6.7	179.1	6.8	500.3	6.6	504.7	6.6
Fuel	66.1	2.6	94.2	3.6	204.4	2.7	283.1	3.7
Disposal fees and taxes	79.7	3.1	84.7	3.2	234.0	3.1	242.9	3.1
Landfill operating costs	60.4	2.4	63.5	2.4	190.8	2.5	184.4	2.4
Risk management	48.8	1.9	54.4	2.0	162.3	2.1	170.5	2.2
Other	108.7	4.2	115.1	4.3	334.5	4.4	328.5	4.3
Subtotal	1,535.4	59.7	1,631.4	61.6	4,564.1	60.2	4,754.4	61.6
Bridgeton insurance recovery	—	—	—	—	(10.8)	(0.1)	—	—
Total cost of operations	$ 1,535.4	59.7 %	$ 1,631.4	61.6 %	$ 4,553.3	60.1 %	$ 4,754.4	61.6 %

These cost categories may change from time to time and may not be comparable to similarly titled categories presented by other companies. As such, you should take care when comparing our cost of operations by component to that of other companies and of ours for prior periods.

Our cost of operations decreased for the three and nine months ended September 30, 2020 compared to the same periods in 2019 as a result of the following:

- Labor and related benefits decreased in aggregate dollars due to a decline in service levels attributable to the COVID-19 pandemic, partially offset by higher hourly and salaried wages as a result of annual merit increases and one additional workday during the nine months ended September 30, 2020 as compared to the same period in 2019.
- Transfer and disposal costs decreased as a result of lower collection volumes, partially offset by an increase in third party disposal rates.

  During both the three and nine months ended September 30, 2020 and 2019, we internalized approximately 68% of the total waste volume we collected.
- Maintenance and repairs expense decreased due to a decrease in service levels attributable to the COVID-19 pandemic.
- Transportation and subcontract costs decreased during the three and nine months ended September 30, 2020 primarily due to a decline in demand for our environmental services business as well as a decrease in transfer station volumes,

partially offset by increases due to acquisition-related activity along with one additional workday during the nine months ended September 30, 2020 as compared to the same period in 2019.

- Fuel costs decreased during the three and nine months ended September 30, 2020 due to a decline in fuel prices as well as a decline in service levels attributable to the COVID-19 pandemic. Our fuel costs were further decreased by compressed natural gas (CNG) tax credits that were enacted in December 2019 and recognized during the three and nine months ended September 30, 2020. The national average diesel fuel cost per gallon for the three and nine months ended September 30, 2020 was $2.43 and $2.58, respectively, as compared to $3.02 and $3.05 for the same respective periods in 2019.

  At current consumption levels, we believe a twenty-cent per gallon change in the price of diesel fuel would change our fuel costs by approximately $26 million per year. Offsetting these changes in fuel expense would be changes in our fuel recovery fee charged to our customers. At current participation rates, a twenty-cent per gallon change in the price of diesel fuel changes our fuel recovery fee by approximately $26 million per year.

- Disposal fees and taxes decreased due to a decrease in service levels attributable to the COVID-19 pandemic.
- Landfill operating costs remained relatively unchanged during the three months ended September 30, 2020. Landfill operating costs increased during the nine months ended September 30, 2020 due to certain favorable remediation adjustments recorded during the nine months ended September 30, 2019, which did not recur in 2020.
- Risk management expenses decreased during the three and nine months ended September 30, 2020 primarily due to favorable actuarial development in our auto liability and workers compensation prior year programs, coupled with a decline in exposure in our current year program.
- Other cost of operations decreased during the three months ended September 30, 2020 primarily due to a decline in necessary facility repairs as well as decreased third party equipment rentals as a result of a decline in service levels attributable to the COVID 19 pandemic. Other cost of operations increased during the nine months ended September 30, 2020 as a result of incremental business resumption costs incurred related to the COVID-19 pandemic, including costs for additional safety equipment and hygiene products, increased facility and equipment cleaning, and costs associated with our Committed to Serve initiative, partially offset by a decline in necessary facility repairs as well as decreased third party equipment rentals as a result of a decline in service levels attributable to the COVID-19 pandemic.
- During the nine months ended September 30, 2020, we recognized a favorable insurance recovery of $10.8 million related to our closed Bridgeton Landfill as a reduction of remediation expenses in our consolidated statement of income for the applicable period.

Depreciation, Amortization and Depletion of Property and Equipment

The following table summarizes depreciation, amortization and depletion of property and equipment for the three and nine months ended September 30, 2020 and 2019 (in millions of dollars and as a percentage of revenue):

	Three Months Ended September 30,				Nine Months Ended September 30,			
	2020		2019		2020		2019	
Depreciation and amortization of property and equipment	$ 174.9	6.8 %	$ 164.0	6.2 %	$ 518.8	6.9 %	$ 484.4	6.3 %
Landfill depletion and amortization	80.6	3.1	89.5	3.4	244.9	3.2	259.0	3.3
Depreciation, amortization and depletion expense	$ 255.5	9.9 %	$ 253.5	9.6 %	$ 763.7	10.1 %	$ 743.4	9.6 %

Depreciation and amortization of property and equipment increased for the three and nine months ended September 30, 2020 primarily due to additional assets acquired with our acquisitions.

During the three and nine months ended September 30, 2020, landfill depletion and amortization expense decreased due to lower landfill disposal volumes primarily driven by decreased special waste volumes, partially offset by an increase in our overall average depletion rate.

Amortization of Other Intangible Assets

Expenses for amortization of other intangible assets were $5.3 million and $15.8 million, or 0.2% of revenue, for the three and nine months ended September 30, 2020, respectively, compared to $4.8 million and $14.4 million, or 0.2% of revenue, for the same respective periods in 2019. Our other intangible assets primarily relate to customer relationships and, to a lesser extent, non-compete agreements. Amortization expense increased due to additional assets acquired with our acquisitions.

Amortization of Other Assets

Expenses for amortization of other assets were $9.9 million and $28.9 million, or 0.4% of revenue, for the three and nine months ended September 30, 2020, respectively, compared to $9.0 million and $25.3 million, or 0.3% of revenue, for the same respective periods in 2019. Our other assets primarily relate to the prepayment of fees and capitalized implementation costs associated with cloud-based hosting arrangements.

Accretion Expense

Accretion expense was $20.7 million and $62.4 million, or 0.8% of revenue, for the three and nine months ended September 30, 2020, respectively, compared to $20.5 million and $61.4 million, or 0.8% of revenue, for the same respective periods in 2019. Accretion expense has remained relatively unchanged as our asset retirement obligations have remained relatively consistent period over period.

Selling, General and Administrative Expenses

Selling, general and administrative expenses include salaries, health and welfare benefits, and incentive compensation for corporate and field general management, field support functions, sales force, accounting and finance, legal, management information systems, and clerical and administrative departments. Other expenses include rent and office costs, fees for professional services provided by third parties, legal settlements, marketing, investor and community relations services, directors' and officers' insurance, general employee relocation, travel, entertainment and bank charges. Restructuring charges are excluded from selling, general and administrative expenses and are discussed separately.

The following table summarizes our selling, general and administrative expenses for the three and nine months ended September 30, 2020 and 2019 (in millions of dollars and as a percentage of revenue):

	Three Months Ended September 30,				Nine Months Ended September 30,			
	2020		2019		2020		2019	
Salaries and related benefits	$ 183.4	7.1 %	$ 186.0	7.0 %	$ 555.8	7.3 %	$ 552.7	7.2 %
Provision for doubtful accounts	6.1	0.3	7.5	0.3	22.0	0.3	23.4	0.3
Other	66.6	2.6	81.9	3.1	217.5	2.9	230.2	2.9
Total selling, general and administrative expenses	$ 256.1	10.0 %	$ 275.4	10.4 %	$ 795.3	10.5 %	$ 806.3	10.4 %

These cost categories may change from time to time and may not be comparable to similarly titled categories presented by other companies. As such, you should take care when comparing our selling, general and administrative expenses by cost component to those of other companies and of ours for prior periods.

The most significant items affecting our selling, general and administrative expenses during the three and nine months ended September 30, 2020 and 2019 are summarized below:

- Salaries and related benefits decreased in aggregate dollars during the three months ended September 30, 2020 primarily due to continued efficiencies at our customer resource centers attributable to our investments in enhanced technology platforms. Salaries and related benefits increased during the nine months ended September 30, 2020 primarily due to higher wages, benefits, and other payroll related items resulting from annual merit increases, partially offset by continued efficiencies at our customer resource centers.
- Other selling, general and administrative expenses decreased for the three and nine months ended September 30, 2020, primarily due to a decrease in travel and advertising costs as a result of the COVID-19 pandemic. These decreases were partially offset by an increase in facility and equipment cleaning expenses attributable to the COVID-19 pandemic, professional fees, certain charitable donations associated with our Committed to Serve initiative, and unfavorable changes in our legal reserves recorded during the nine months ended September 30, 2020.

Withdrawal Costs - Multiemployer Pension Funds

During the nine months ended September 30, 2020, we recorded charges to earnings of $35.9 million for withdrawal events at multiemployer pension funds to which we contribute. As we obtain updated information regarding multiemployer pension funds, the factors used in deriving our estimated withdrawal liabilities will be subject to change, which may adversely impact our reserves for withdrawal costs.

Loss (Gain) on Business Divestitures and Impairments, Net

We strive to have a number one or number two market position in each of the markets we serve, or have a clear path on how we will achieve a leading market position over time. Where we cannot establish a leading market position, or where operations are

not generating acceptable returns, we may decide to divest certain assets and reallocate resources to other markets. Business divestitures could result in gains, losses or impairment charges that may be material to our results of operations
in a given period.

During the three and nine months ended September 30, 2020, we recorded a net loss on business divestitures and impairments of $31.5 million and $32.9 million, respectively, including a $10.8 million liability for a withdrawal event from a certain multi-employer pension plan. During the three and nine months ended September 30, 2019, we recorded a net gain on business divestitures and impairments of $(24.0) million and $(23.5) million, respectively.

Restructuring Charges

In 2019, we incurred costs related to the redesign of certain back-office software systems, which continued into 2020. In addition, in July 2020, we eliminated certain positions, primarily related to our back-office support functions, in response to the COVID-19 pandemic. During the three and nine months ended September 30, 2020, we incurred restructuring charges of $9.8 million and $15.8 million, respectively, that primarily related to these restructuring efforts. During the three and nine months ended September 30, 2019, we incurred restructuring charges of $8.5 million and $13.0 million, respectively, that primarily related to the redesign of certain back-office software systems. During the nine months ended September 30, 2020 and 2019, we paid $11.9 million and $7.9 million, respectively, related to these restructuring efforts.

Interest Expense

The following table provides the components of interest expense, including accretion of debt discounts and accretion of discounts primarily associated with environmental and risk insurance liabilities assumed in acquisitions, for the three and nine months ended September 30, 2020 and 2019 (in millions of dollars):

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2020	2019	2020	2019
Interest expense on debt	$ 74.2	$ 89.0	$ 233.6	$ 266.8
Non-cash interest	16.6	11.8	47.8	34.9
Less: capitalized interest	(1.9)	(2.8)	(4.0)	(4.8)
Total interest expense	$ 88.9	$ 98.0	$ 277.4	$ 296.9

Total interest expense for the three and nine months ended September 30, 2020 decreased primarily due to lower interest rates on our floating and fixed rate debt. The decrease attributable to our fixed rate debt is primarily due to the issuance of $650.0 million of 1.450% senior notes in August 2020, the issuance of $600.0 million of 2.300% senior notes and $400.0 million of 3.050% senior notes in February 2020, as well as the issuance of $900.0 million of 2.500% senior notes in August 2019, the proceeds of which were used to repay outstanding senior notes with coupons ranging from 5.000% to 5.500%. This decrease was partially offset by the change in fair value of certain derivative contracts, which was recorded as an adjustment to interest expense, as well as an increase in variable lease costs related to certain of our finance leases. For additional discussion and detail regarding our derivative contracts, see the *Financial Condition* discussion of this *Management's Discussion and Analysis of Financial Condition and Results of Operations*.

Cash paid for interest, excluding net swap settlements for our fixed-to-floating interest rate swaps, was $246.1 million and $257.1 million for the nine months ended September 30, 2020 and 2019, respectively.

Income Taxes

Our effective tax rate, exclusive of non-controlling interests, for the nine months ended September 30, 2020 and 2019 was 22.1% and 22.5%, respectively. Our effective tax rates reflected benefits from investments in solar energy assets qualifying for tax credits under Section 48 of the Internal Revenue Code, excess tax benefits under ASU 2016-19 and the realization of additional federal and state benefits as well as adjustments to deferred taxes due to the completion of our tax returns.

Cash paid for income taxes was $34.2 million for the nine months ended September 30, 2020 and a net refund of $4.3 million for the same period in 2019. The net refund received for the nine months ended September 30, 2019 was due to the receipt of funds from amended tax returns.

For additional discussion and detail regarding our income taxes, see Note 8, *Income Taxes*, to our unaudited consolidated financial statements included in Part I, Item 1 of this Quarterly Report on Form 10-Q.

Reportable Segments

Our senior management evaluates, oversees and manages the financial performance of our operations through two field groups, referred to as Group 1 and Group 2. Group 1 primarily consists of geographic areas located in the western United States, and Group 2 primarily consists of geographic areas located in the southeastern and mid-western United States, and the eastern seaboard of the United States.

The two field groups, Group 1 and Group 2, are presented below as our reportable segments, which provide integrated waste management services consisting of non-hazardous solid waste collection, transfer, recycling, disposal and environmental services. Summarized financial information concerning our reportable segments for the three and nine months ended September 30, 2020 and 2019 is shown in the following tables (in millions of dollars and as a percentage of revenue in the case of operating margin):

	Net Revenue	Depreciation, Amortization, Depletion and Accretion Before Adjustments for Asset Retirement Obligations	Adjustments to Amortization Expense for Asset Retirement Obligations	Depreciation, Amortization, Depletion and Accretion	Loss (Gain) on Business Divestitures and Impairments, Net	Operating Income (Loss)	Operating Margin
Three Months Ended September 30, 2020							
Group 1	$ 1,290.1	$ 131.6	$ (0.4)	$ 131.2	$ —	$ 348.9	27.0 %
Group 2	1,243.8	136.9	(3.4)	133.5	—	238.0	19.1 %
Corporate entities	38.2	27.4	(0.7)	26.7	31.5	(139.0)	—
Total	$ 2,572.1	$ 295.9	$ (4.5)	$ 291.4	$ 31.5	$ 447.9	17.4 %
Three Months Ended September 30, 2019							
Group 1	$ 1,285.2	$ 128.7	$ —	$ 128.7	$ —	$ 316.1	24.6 %
Group 2	1,323.6	134.0	—	134.0	—	242.0	18.3 %
Corporate entities	38.1	25.1	—	25.1	(24.0)	(90.3)	—
Total	$ 2,646.9	$ 287.8	$ —	$ 287.8	$ (24.0)	$ 467.8	17.7 %

	Net Revenue	Depreciation, Amortization, Depletion and Accretion Before Adjustments for Asset Retirement Obligations	Adjustments to Amortization Expense for Asset Retirement Obligations	Depreciation, Amortization, Depletion and Accretion	Loss (Gain) on Business Divestitures and Impairments, Net	Operating Income (Loss)	Operating Margin
Nine Months Ended September 30, 2020							
Group 1	$ 3,774.8	$ 391.2	$ (0.7)	$ 390.5	$ —	$ 981.2	26.0 %
Group 2	3,687.1	405.5	(5.1)	400.4	—	699.7	19.0 %
Corporate entities	118.5	80.5	(0.6)	79.9	32.9	(404.5)	—
Total	$ 7,580.4	$ 877.2	$ (6.4)	$ 870.8	$ 32.9	$ 1,276.4	16.8 %
Nine Months Ended September 30, 2019							
Group 1	$ 3,742.8	$ 377.4	$ (0.3)	$ 377.1	$ —	$ 913.5	24.4 %
Group 2	3,866.3	391.9	0.6	392.5	—	693.3	17.9 %
Corporate entities	113.6	74.9	—	74.9	(23.5)	(278.8)	—
Total	$ 7,722.7	$ 844.2	$ 0.3	$ 844.5	$ (23.5)	$ 1,328.0	17.2 %

Corporate entities include legal, tax, treasury, information technology, risk management, human resources, closed landfills and other administrative functions. National Accounts revenue included in corporate entities represents the portion of revenue generated from nationwide and regional contracts in markets outside our operating areas where the associated waste handling services are subcontracted to local operators. Consequently, substantially all of this revenue is offset with related subcontract costs, which are recorded in cost of operations.

Significant changes in the revenue and operating margins of our reportable segments comparing the three and nine months ended September 30, 2020 with the same periods in 2019 are discussed below:

Group 1

Revenue for the three and nine months ended September 30, 2020 increased 0.4% and 0.9%, respectively, due to an increase in average yield in all lines of business and one additional workday for the nine months ended September 30, 2020 as compared to the same period in 2019. This increase was partially offset by volume declines in our small- and large-container collection, transfer station, and landfill lines of business.

Operating income in Group 1 increased from $316.1 million for the three months ended September 30, 2019, or a 24.6% operating income margin, to $348.9 million for the three months ended September 30, 2020, or a 27.0% operating income margin. Operating income in Group 1 increased from $913.5 million for the nine months ended September 30, 2019, or a 24.4% operating income margin, to $981.2 million for the nine months ended September 30, 2020, or a 26.0% operating income margin. The following cost categories impacted operating income margin:

- Cost of operations favorably impacted operating income margin for the three and nine months ended September 30, 2020, primarily due to a decrease in labor and related benefits, maintenance and repairs expenses, transportation and subcontract costs, and fuel costs as a result of decreased service levels attributable to the COVID-19 pandemic. Fuel costs were further decreased as a result of a decline in diesel fuel prices combined with CNG tax credits that were enacted in December 2019 and recognized during the three and nine months ended September 30, 2020.
- Landfill and depletion favorably impacted operating income margin during the three and nine months ended September 30, 2020 due to lower landfill disposal volumes primarily driven by decreased special waste volumes, partially offset by an increase in our overall average depletion rate. Depreciation unfavorably impacted operating income margin for the three and nine months ended September 30, 2020, primarily due to additional assets acquired with our acquisitions.

Group 2

Revenue for the three and nine months ended September 30, 2020 decreased 6.0% and 4.6%, respectively, due to volume declines in our collection line of business as well as a decrease in special waste volumes in our landfill line of business. These decreases were partially offset by an increase in average yield in all lines of business, an increase in construction and demolition volumes in our landfill line of business, and one additional workday during the nine months ended September 30, 2020, as compared to the same period in 2019.

Operating income in Group 2 decreased in aggregate dollars from $242.0 million for the three months ended September 30, 2019, or an 18.3% operating income margin, to $238.0 million for the three months ended September 30, 2020, or a 19.1% operating income margin. Operating income in Group 2 increased from $693.3 million for the nine months ended September 30, 2019, or a 17.9% operating income margin, to $699.7 million for the nine months ended September 30, 2020, or a 19.0% operating income margin. The following cost categories impacted operating income margin:

- Cost of operations favorably impacted operating income margin for the three and nine months ended September 30, 2020, primarily due to a decrease in labor and related benefits, transfer and disposal costs, maintenance and repairs expenses and fuel costs as a result of decreased service levels attributable to the COVID-19 pandemic. Fuel costs were further decreased as a result of a decline in diesel fuel prices combined with CNG tax credits that were enacted in December 2019 and recognized during the three and nine months ended September 30, 2020.
- Landfill depletion and amortization favorably impacted operating income margin for the three and nine months ended September 30, 2020 due to lower landfill disposal volumes primarily driven by decreased special waste volumes combined with favorable one-time amortization adjustments recorded during the three months ended September 30, 2020, partially offset by an increase in our overall average depletion rate. Depreciation unfavorably impacted operating income margin during the three and nine months ended September 30, 2020, primarily due to additional assets acquired with our acquisitions.

Corporate Entities

Operating loss in our Corporate Entities increased from $90.3 million for the three months ended September 30, 2019 to $139.0 million for the three months ended September 30, 2020. Operating loss in our Corporate Entities increased from $278.8 million for the nine months ended September 30, 2019 to $404.5 million for the nine months ended September 30, 2020. The operating loss for the three and nine months ended September 30, 2020 was unfavorably impacted by a net loss on business divestitures and impairments, partially offset by favorable actuarial development in our auto liability and workers compensation programs. Additionally, during the nine months ended September 30, 2020, we recognized net unfavorable changes in our legal reserves as well as incremental business resumption costs related to the COVID-19 pandemic as selling, general and administrative expenses. We recognized certain direct and incremental costs attributable to the COVID-19 pandemic, including costs for additional safety equipment and hygiene products, increased facility and equipment cleaning, and costs associated with our Committed to Serve initiative.

Landfill and Environmental Matters

Available Airspace

As of September 30, 2020, we owned or operated 188 active solid waste landfills with total available disposal capacity estimated to be 5.0 billion in-place cubic yards. For these landfills, the following table reflects changes in capacity and remaining capacity, as measured in cubic yards of airspace:

	Balance as of December 31, 2019	New Expansions Undertaken	Landfills Acquired, Net of Divestitures	Permits Granted / New Sites, Net of Closures	Airspace Consumed	Changes in Engineering Estimates	Balance as of September 30, 2020
Cubic yards (in millions):							
Permitted airspace	4,673.0	—	(5.1)	206.3	(57.1)	(0.2)	4,816.9
Probable expansion airspace	321.7	32.9	—	(158.2)	—	—	196.4
Total cubic yards (in millions)	4,994.7	32.9	(5.1)	48.1	(57.1)	(0.2)	5,013.3
Number of sites:							
Permitted airspace	189	—	(2)	1			188
Probable expansion airspace	12	2	—	(3)			11

Total available disposal capacity represents the sum of estimated permitted airspace plus an estimate of probable expansion airspace. Engineers develop these estimates at least annually using information provided by annual aerial surveys. Before airspace included in an expansion area is determined to be probable expansion airspace and, therefore, included in our calculation of total available disposal capacity, it must meet all of our expansion criteria.

As of September 30, 2020, 11 of our landfills met all of our criteria for including their probable expansion airspace in their total available disposal capacity. At projected annual volumes, these landfills have an estimated remaining average site life of 120 years, including probable expansion airspace. The average estimated remaining life of all of our landfills is 62 years. We have other expansion opportunities that are not included in our total available airspace because they do not meet all of our criteria for treatment as probable expansion airspace.

Remediation and Other Charges for Landfill Matters

It is reasonably possible that we will need to adjust our accrued landfill and environmental liabilities to reflect the effects of new or additional information, to the extent that such information impacts the costs, timing or duration of the required actions. Future changes in our estimates of the costs, timing or duration of the required actions could have a material adverse effect on our consolidated financial position, results of operations and cash flows.

For a description of our significant remediation matters, see Note 6, *Landfill and Environmental Costs,* of the notes to our unaudited consolidated financial statements in Part I, Item 1 of this Quarterly Report on Form 10-Q.

Selected Balance Sheet Accounts

The following table reflects the activity in our allowance for doubtful accounts and other, final capping, closure, post-closure costs, remediation liabilities, and accrued insurance during the nine months ended September 30, 2020 (in millions of dollars):

	Allowance for Doubtful Accounts and Other	Final Capping, Closure and Post-Closure	Remediation	Insurance Reserves
Balance as of December 31, 2019	$ 34.0	$ 1,335.6	$ 500.2	$ 438.5
Non-cash additions for asset retirement obligations	—	32.0	—	—
Acquisitions, net of divestitures and other adjustments	—	(14.3)	2.9	—
Asset retirement obligation adjustments	—	(13.5)	—	—
Accretion expense	—	62.4	13.9	0.4
Premium written for third-party risk assumed	—	—	—	27.8
Reclassified to ceded insurance reserves	—	—	—	(7.7)
Net adjustments charged to expense	22.0	—	(1.2)	349.9
Payments or usage	(22.4)	(39.5)	(39.8)	(361.6)
Balance as of September 30, 2020	33.6	1,362.7	476.0	447.3
Less: current portion	(33.6)	(65.2)	(58.2)	(168.4)
Long-term portion	$ —	$ 1,297.5	$ 417.8	$ 278.9

As of September 30, 2020, accounts receivable were $1,097.2 million, net of allowance for doubtful accounts and other of $33.6 million. As of December 31, 2019, accounts receivable were $1,125.9 million, net of allowance for doubtful accounts and other of $34.0 million.

Property and Equipment

The following tables reflect the activity in our property and equipment accounts for the nine months ended September 30, 2020 (in millions of dollars):

	Gross Property and Equipment							
	Balance as of December 31, 2019	Capital Additions	Retirements	Acquisitions, Net of Divestitures	Non-cash Additions for Asset Retirement Obligations	Adjustments for Asset Retirement Obligations	Impairments, Transfers and Other Adjustments	Balance as of September 30, 2020
Land	$ 448.3	$ 4.7	$ (1.3)	$ 5.6	$ —	$ —	$ —	$ 457.3
Non-depletable landfill land	170.5	0.2	(6.3)	(2.9)	—	—	—	161.5
Landfill development costs	7,474.7	1.2	(15.5)	62.4	30.3	(13.5)	300.0	7,839.6
Vehicles and equipment	7,766.0	451.2	(260.8)	(48.2)	—	—	8.8	7,917.0
Buildings and improvements	1,342.6	0.8	(5.3)	6.1	1.7	—	31.4	1,377.3
Construction-in-progress - landfill	366.8	282.4	—	(3.6)	—	—	(300.3)	345.3
Construction-in-progress - other	87.7	79.5	—	—	—	—	(80.9)	86.3
Total	$ 17,656.6	$ 820.0	$ (289.2)	$ 19.4	$ 32.0	$ (13.5)	$ (41.0)	$ 18,184.3

	Accumulated Depreciation, Amortization and Depletion						
	Balance as of December 31, 2019	Additions Charged to Expense	Retirements	Acquisitions, Net of Divestitures	Adjustments for Asset Retirement Obligations	Impairments, Transfers and Other Adjustments	Balance as of September 30, 2020
Landfill development costs	$ (3,968.6)	$ (251.3)	$ 15.5	$ 26.2	$ 6.5	$ —	$ (4,171.7)
Vehicles and equipment	(4,728.2)	(470.7)	250.0	43.8	—	35.1	(4,870.0)
Buildings and improvements	(576.3)	(49.2)	4.5	4.2	—	1.7	(615.1)
Total	$ (9,273.1)	$ (771.2)	$ 270.0	$ 74.2	$ 6.5	$ 36.8	$ (9,656.8)

Liquidity and Capital Resources

Cash and Cash Equivalents

The following is a summary of our cash and cash equivalents and restricted cash and marketable securities balances as of:

	September 30, 2020	December 31, 2019
Cash and cash equivalents	$ 406.4	$ 47.1
Restricted cash and marketable securities	145.2	179.4
Less: restricted marketable securities	(62.4)	(49.1)
Cash, cash equivalents, restricted cash and restricted cash equivalents	$ 489.2	$ 177.4

Our restricted cash and marketable securities include, among other things, restricted cash and marketable securities pledged to regulatory agencies and governmental entities as financial guarantees of our performance under certain collection, landfill and transfer station contracts and permits, and relating to our final capping, closure and post-closure obligations at our landfills, restricted cash and marketable securities related to our insurance obligations, and restricted cash related to a payment for a certain maturing tax-exempt financing.

The following table summarizes our restricted cash and marketable securities:

	September 30, 2020	December 31, 2019
Capping, closure and post-closure obligations	$ 31.4	$ 30.6
Insurance	113.8	99.4
Payment for maturing tax-exempt financing	—	49.4
Total restricted cash and marketable securities	$ 145.2	$ 179.4

Intended Uses of Cash

We intend to use excess cash on hand and cash from operating activities to fund capital expenditures, acquisitions, dividend payments, share repurchases and debt repayments. Debt repayments may include purchases of our outstanding indebtedness in the secondary market or otherwise. We believe that our excess cash, cash from operating activities and our availability to draw on our credit facilities provide us with sufficient financial resources to meet our anticipated capital requirements and maturing obligations as they come due.

We may choose to voluntarily retire certain portions of our outstanding debt before their maturity dates using cash from operations or additional borrowings. We may also explore opportunities in the capital markets to fund redemptions should market conditions be favorable. Early extinguishment of debt will result in an impairment charge in the period in which the debt is repaid. The loss on early extinguishment of debt relates to premiums paid to effectuate the repurchase and the relative portion of unamortized note discounts and debt issue costs.

Summary of Cash Flow Activity

The major components of changes in cash flows are discussed in the following paragraphs. The following table summarizes our cash flow from operating activities, investing activities and financing activities for the nine months ended September 30, 2020 and 2019 (in millions of dollars):

	Nine Months Ended September 30,	
	2020	2019
Cash provided by operating activities	$ 1,909.0	$ 1,786.9
Cash used in investing activities	$ (1,032.9)	$ (1,316.6)
Cash used in financing activities	$ (564.3)	$ (475.0)

The Coronavirus Aid, Relief and Economic Security (CARES) Act provides companies the option to defer the payment of the employer's portion of social security taxes that would otherwise be required to be made during the period between March 27, 2020 and December 31, 2020 (Payroll Tax Deferral Period). The first half of the deferred payments are due to be paid by December 31, 2021, and the second half of the deferred payments are due to be paid by December 31, 2022. We intend to defer approximately $100 million of payments related to our portion of our employees' social security taxes throughout the Payroll Tax Deferral Period in accordance with the CARES Act.

Cash Flows Provided by Operating Activities

The most significant items affecting the comparison of our operating cash flows for the nine months ended September 30, 2020 and 2019 are summarized below:

Changes in assets and liabilities, net of effects from business acquisitions and divestitures, increased our cash flow from operations by $75.7 million during the nine months ended September 30, 2020, compared to an increase of $3.9 million during the same period in 2019, primarily as a result of the following:

- Our accounts receivable, exclusive of the change in allowance for doubtful accounts and customer credits, decreased $3.4 million during the nine months ended September 30, 2020 due to the timing of billings net of collections, compared to a $65.3 million increase in the same period in 2019. As of September 30, 2020, our days sales outstanding were 38.9, or 26.8 days net of deferred revenue, compared to 39.9, or 28.2 days net of deferred revenue, as of September 30, 2019.
- Our prepaid expenses and other assets decreased $135.0 million during the nine months ended September 30, 2020, compared to a $98.3 million decrease in the same period in 2019, primarily due to timing of our estimated tax payments and our receipt of the $24.0 million Bridgeton insurance settlement we recognized in the fourth quarter of 2019. Cash paid for income taxes was $34.2 million and a net refund of $4.3 million for the nine months ended September 30, 2020 and 2019, respectively.
- Our accounts payable decreased $60.4 million during the nine months ended September 30, 2020, compared to a $9.3 million decrease in the same period in 2019, due to the timing of payments.
- Cash paid for capping, closure and post-closure obligations was $39.5 million during the nine months ended September 30, 2020, compared to $47.7 million in the same period in 2019. The decrease in cash paid for capping, closure, and post-closure obligations is primarily due to the timing of capping and post-closure payments at certain of our landfill sites.
- Cash paid for remediation obligations was $10.4 million higher during the nine months ended September 30, 2020, compared to the same period in 2019, primarily due to $19.8 million of payments related to management and monitoring of the remediation area of our closed Bridgeton Landfill in Missouri as compared to $12.0 million of payments for the same period in 2019.

In addition, cash paid for interest, excluding net swap settlements for our fixed-to-floating interest rate swaps, was $246.1 million and $257.1 million for the nine months ended September 30, 2020 and 2019, respectively.

We use cash flows from operations to fund capital expenditures, acquisitions, dividend payments, share repurchases and debt repayments.

Cash Flows Used in Investing Activities

The most significant items affecting the comparison of our cash flows used in investing activities for the nine months ended September 30, 2020 and 2019 are summarized below:

- Capital expenditures during the nine months ended September 30, 2020 were $889.0 million, compared with $908.3 million for the same period in 2019.

- During the nine months ended September 30, 2020 and 2019, we paid $189.9 million and $455.9 million, respectively, for acquisitions and investments.

In September 2020, we entered into an agreement to extend the term of one of our landfill finance leases by 43 years, or through the end of the landfill's site life. Accordingly, we recognized an incremental finance lease obligation of $90.4 million as of September 30, 2020.

We intend to finance capital expenditures and acquisitions through cash on hand, restricted cash held for capital expenditures, cash flows from operations, our revolving credit facilities, and tax-exempt bonds and other financings. We expect to primarily use cash and borrowings under our revolving credit facilities to pay for future business acquisitions.

Cash Flows Used in Financing Activities

The most significant items affecting the comparison of our cash flows used in financing activities for the nine months ended September 30, 2020 and 2019 are summarized below:

- Net payments from notes payable and long-term debt and senior notes were $35.8 million during the nine months ended September 30, 2020, compared to net proceeds of $250.8 million in the same period in 2019.
- During the nine months ended September 30, 2020, we paid a $34.0 million cash premium on the redemption of senior notes.
- During the nine months ended September 30, 2020, we repurchased 1.2 million shares of our stock for $98.8 million compared to repurchases of 4.3 million shares for $353.8 million during the same period in 2019.
- Dividends paid were $387.1 million and $361.9 million during the nine months ended September 30, 2020 and 2019, respectively.

Financial Condition

Debt Obligations

As of September 30, 2020, we had $184.3 million of principal debt maturing within the next 12 months, which includes certain variable rate tax-exempt financings, finance lease obligations and debentures. All of our tax-exempt financings are remarketed either quarterly or semiannually by remarketing agents to effectively maintain a variable yield. The holders of the bonds can put them back to the remarketing agents at the end of each interest period. If the remarketing agent is unable to remarket our bonds, the remarketing agent can put the bonds to us. In the event of a failed remarketing, we currently have availability under our $2.25 billion unsecured revolving credit facility to fund these bonds until they are remarketed successfully. Accordingly, we have classified these borrowings as long-term in our consolidated balance sheet as of September 30, 2020.

An extended period of economic disruption associated with the COVID-19 pandemic could further disrupt the global supply chain, negatively impact demand for our services, and disrupt financial markets. These effects could materially and adversely affect our business and financial condition, including our access to sources of liquidity. We will continue to monitor the evolving COVID-19 pandemic along with the effect on our business and access to capital markets. Refer to Part II, Item 1A - Risk Factors of this Quarterly Report on Form 10-Q for a discussion of certain risk factors related to this pandemic.

For further discussion of the components of our overall debt, see Note 7, *Debt,* of the notes to our unaudited consolidated financial statements in Part I, Item 1 of this Quarterly Report on Form 10-Q.

Credit Facilities

The 364-Day Credit Facility

In August 2020, we entered into a $1.0 billion 364-day unsecured revolving credit facility (the 364-Day Credit Facility), which matures in August 2021. At our option, borrowings under the 364-Day Credit Facility bear interest at a Base Rate, or a Eurodollar Rate, plus an applicable margin based on our Debt Ratings (all as defined in the 364-Day Credit Facility agreement).

The 364-Day Credit Facility is subject to facility fees based on applicable rates defined in the 364-Day Credit Facility agreement and the aggregate commitment, regardless of usage. Availability under our 364-Day Credit Facility totaled $1.0 billion as of September 30, 2020. The 364-Day Credit Facility can be used for working capital, capital expenditures, acquisitions, and other general corporate purposes. The 364-Day Credit Facility agreement requires us to comply with financial and other covenants. We may pay dividends and repurchase common stock if we are in compliance with these covenants.

As of September 30, 2020, we had no borrowings outstanding under our 364-Day Credit Facility.

The Credit Facility

In 2018, we entered into a $2.25 billion unsecured revolving credit facility (the Credit Facility) (collectively with the 364-Day Credit Facility referred to as the Credit Facilities), which matures in June 2023. We may request two one-year extensions of the maturity date but none of the lenders are committed to participate in such extension. The Credit Facility also includes a feature that allows us to increase availability, at our option, by an aggregate amount of up to $1.0 billion through increased commitments from existing lenders or the addition of new lenders. At our option, borrowings under the Credit Facility bear interest at a Base Rate, or a Eurodollar Rate, plus an applicable margin based on our Debt Ratings (all as defined in the Credit Facility agreement).

Availability under our Credit Facility totaled $1,857.8 million and $1,696.9 million as of September 30, 2020 and December 31, 2019, respectively. As of September 30, 2020, we had no borrowings under our Credit Facility, and as of December 31, 2019, we had $184.4 million of borrowings under our Credit Facility. We had $376.5 million and $351.4 million of letters of credit outstanding under our Credit Facility as of September 30, 2020 and December 31, 2019, respectively. The Credit Facility can be used for working capital, capital expenditures, acquisitions, letters of credit and other general corporate purposes.

Financial and Other Covenants

The Credit Facilities require us to comply with financial and other covenants. To the extent we are not in compliance with these covenants, we cannot pay dividends or repurchase common stock. Compliance with covenants also is a condition for any incremental borrowings under our Credit Facilities and failure to meet these covenants would enable the lenders to require repayment of any outstanding loans (which would adversely affect our liquidity). In July 2020, we executed an amendment to the Credit Facility agreement to increase flexibility and reduce restrictions, in particular, for future acquisitions. Effective June 30, 2020, the amendment eliminated the consolidated interest coverage ratio and revised the sole remaining financial covenant, total debt to EBITDA ratio. As amended, the Credit Facilities provide that our total debt to EBITDA ratio may not exceed 3.75 to 1.00 as of the last day of any fiscal quarter. In the case of an "elevated ratio period", which may be elected by us if one or more acquisitions during a fiscal quarter involve aggregate consideration in excess of $200 million (the Trigger Quarter), the total debt to EBITDA ratio may not exceed 4.25 to 1.00 during the Trigger Quarter and for the three fiscal quarters thereafter. The Credit Facility amendment also provides that there may not be more than two elevated ratio periods during the term of the Credit Facility agreement. As of September 30, 2020, our total debt to EBITDA ratio was 3.06 compared to the 3.75 maximum allowed by the covenant. As of September 30, 2020, we were in compliance with the covenants under our Credit Facilities, and we expect to be in compliance throughout the remainder of 2020.

EBITDA, which is a non-U.S. GAAP measure, is calculated as defined in the Credit Facilities agreements. In this context, EBITDA is used solely to provide information regarding the extent to which we are in compliance with debt covenants and is not comparable to EBITDA used by other companies or used by us for other purposes.

Failure to comply with the financial and other covenants under the Credit Facilities, as well as the occurrence of certain material adverse events, would constitute defaults and would allow the lenders under the Credit Facilities to accelerate the maturity of all indebtedness under the Credit Facilities agreements. This could have an adverse effect on the availability of financial assurances. In addition, maturity acceleration on the Credit Facilities constitutes an event of default under our other debt instruments, including our senior notes, and, therefore, our senior notes would also be subject to acceleration of maturity. If such acceleration were to occur, we would not have sufficient liquidity available to repay the indebtedness. We would likely have to seek an amendment under the Credit Facilities for relief from the financial covenant or repay the debt with proceeds from the issuance of new debt or equity, or asset sales, if necessary. We may be unable to amend the Credit Facilities or raise sufficient capital to repay such obligations in the event the maturity is accelerated.

Uncommitted Credit Facility

We also have an Uncommitted Credit Facility, which bears interest at LIBOR, plus an applicable margin. We can use borrowings under the Uncommitted Credit Facility for working capital and other general corporate purposes. The agreement governing our Uncommitted Credit Facility requires us to comply with certain covenants. The Uncommitted Credit Facility may be terminated by either party at any time. As of September 30, 2020, we had no borrowings outstanding under our Uncommitted Credit Facility, and as of December 31, 2019, we had $11.6 million of borrowings outstanding under our Uncommitted Credit Facility.

Senior Notes and Debentures

As of September 30, 2020, we had $7,449.1 million of unsecured senior notes and debentures outstanding with maturities ranging from 2021 to 2050. As of December 31, 2019, we had $7,257.0 million of unsecured senior notes and debentures outstanding with maturities ranging from 2020 to 2041.

In August 2020, we issued $650.0 million of 1.450% senior notes due 2031 (the 1.450% Notes). We used the net proceeds to redeem all $600.0 million of the outstanding 5.250% senior notes due November 2021 plus a make-whole premium of $34.0 million. The remaining proceeds were used for general corporate purposes.

In February 2020, we issued $600.0 million of 2.300% senior notes due 2030 (the 2.300% Notes) and $400.0 million of 3.050% senior notes due 2050 (the 3.050% Notes). We used the net proceeds from the 2.300% Notes and 3.050% Notes to repay $850.0 million of 5.000% senior notes that matured in March 2020. The remaining proceeds were used to repay amounts outstanding under our unsecured credit facilities as well as for general corporate purposes.

Derivative Instruments and Hedging Relationships

Our ability to obtain financing through the capital markets is a key component of our financial strategy. Historically, we have managed risk associated with executing this strategy, particularly as it relates to fluctuations in interest rates, by using a combination of fixed and floating rate debt. From time to time, we also have entered into interest rate swap and lock agreements to manage risk associated with interest rates, either to effectively convert specific fixed rate debt to a floating rate (fair value hedges), or to lock interest rates in anticipation of future debt issuances (cash flow hedges).

Additionally, we amended certain interest rate lock agreements, extending the mandatory maturity date and dedesignated them as cash flow hedges (the Extended Interest Rate Locks). In addition, we entered into offsetting interest rate swaps to offset future exposures to fair value fluctuations of the Extended Interest Rate Locks.

For a description of our derivative contracts and hedge accounting, see Note 7, *Debt*, to our unaudited consolidated financial statements included in Part I, Item 1 of this Quarterly Report on Form 10-Q.

Tax-Exempt Financings

As of September 30, 2020, we had $1,119.6 million of certain variable rate tax-exempt financings outstanding with maturities ranging from 2020 to 2050. As of December 31, 2019, we had $1,116.2 million of certain variable rate tax-exempt financings outstanding with maturities ranging from 2020 to 2049. During the second quarter of 2020, we issued $60.0 million of tax-exempt financings. During the second quarter of 2019, we refinanced $35.0 million of tax-exempt financings and issued $30.0 million of new tax-exempt financings.

Finance Leases

We had finance lease liabilities of $210.1 million as of September 30, 2020 with maturities ranging from 2020 to 2063. We had finance lease liabilities of $119.3 million as of December 31, 2019 with maturities ranging from 2020 to 2049.

In September 2020, we entered into an agreement to extend the term of one of our landfill finance leases by approximately 43 years, or through the end of the landfill's site life. Accordingly, we recognized an incremental finance lease obligation of $90.4 million as of September 30, 2020.

Credit Ratings

Our continued access to the debt capital markets and to new financing facilities, as well as our borrowing costs, depend on multiple factors, including market conditions, our operating performance and maintaining strong credit ratings. As of September 30, 2020, our credit ratings were BBB+, Baa2 and BBB by Standard & Poor’s Ratings Services, Moody’s Investors Service and Fitch Ratings, Inc., respectively. If our credit ratings were downgraded, especially any downgrade to below investment grade, our ability to access the debt markets with the same flexibility that we have experienced historically, our cost of funds and other terms for new debt issuances, could be adversely impacted.

Off-Balance Sheet Arrangements

We have no off-balance sheet debt or similar obligations, other than short-term operating leases and financial assurances, which are not classified as debt. We have no transactions or obligations with related parties that are not disclosed, consolidated into or reflected in our reported financial position or results of operations. We have not guaranteed any third-party debt.

Seasonality and Severe Weather

Our operations can be adversely affected by periods of inclement or severe weather, which could increase the volume of waste collected under our existing contracts (without corresponding compensation), delay the collection and disposal of waste, reduce the volume of waste delivered to our disposal sites, or delay the construction or expansion of our landfills and other facilities. Our operations also can be favorably affected by severe weather, which could increase the volume of waste in situations where we are able to charge for our additional services.

Contingencies

For a description of our commitments and contingencies, see Note 6, *Landfill and Environmental Costs*, Note 8, *Income Taxes,* and Note 14, *Commitments and Contingencies*, to our unaudited consolidated financial statements included in Part I, Item 1 of this Quarterly Report on Form 10-Q.

Critical Accounting Judgments and Estimates

We identified and discussed our critical accounting judgments and estimates in our Annual Report on Form 10-K for the fiscal year ended December 31, 2019. Although we believe our estimates and judgments are reasonable, they are based upon information available at the time the judgment or estimate is made. Actual results may differ significantly from estimates under different assumptions or conditions.

New Accounting Pronouncements

For a description of new accounting standards that may affect us, see Note 1, *Basis of Presentation*, to our unaudited consolidated financial statements included in Part I, Item 1 of this Quarterly Report on Form 10-Q.

ITEM 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK.

Fuel Price Risk

Fuel costs represent a significant operating expense. When economically practical, we may enter into new fuel hedges, renew contracts, or engage in other strategies to mitigate market risk. As of September 30, 2020, we had no fuel hedges in place. While we charge fuel recovery fees to a majority of our customers, we are unable to charge such fees to all customers.

At current consumption levels, we believe a twenty-cent per gallon change in the price of diesel fuel would change our fuel costs by approximately $26 million per year. Offsetting these changes in fuel expense would result in changes in our fuel recovery fee charged to our customers. At current participation rates, we believe a twenty-cent per gallon change in the price of diesel fuel would change our fuel recovery fee by approximately $26 million per year.

Our operations also require the use of certain petrochemical-based products (such as liners at our landfills) the cost of which may vary with the price of petrochemicals. An increase in the price of petrochemicals could increase the cost of those products, which would increase our operating and capital costs. We also are susceptible to increases in fuel recovery fees from our vendors.

Our fuel costs were $204.4 million during the nine months ended September 30, 2020, or 2.7% of revenue, compared to $283.1 million during the comparable period in 2019, or 3.7% of revenue.

Commodities Price Risk

We market recovered materials such as old corrugated containers and old newsprint from our recycling processing centers. Changes in market supply and demand for recycled commodities causes volatility in commodity prices. In prior periods, we have entered into derivative instruments such as swaps and costless collars designated as cash flow hedges to manage our exposure to changes in prices of these commodities. As of September 30, 2020, we had no recycling commodity hedges in place.

At current volumes and mix of materials, we believe a $10 per ton change in the price of recycled commodities would change both annual revenue and operating income by approximately $13 million.

Revenue from recycling processing and commodity sales during the nine months ended September 30, 2020 and 2019 was $216.2 million and $213.3 million, respectively.

Interest Rate Risk

We are subject to interest rate risk on our variable rate long-term debt. Additionally, we enter into various interest rate swap agreements with the goal of reducing overall borrowing costs and increasing our floating interest rate exposure, as well as interest rate locks to manage exposure to fluctuations in anticipation of future debt issuances. Our interest rate swap and lock contracts have been authorized pursuant to our policies and procedures. We do not use financial instruments for trading purposes and are not a party to any leveraged derivatives.

As of September 30, 2020, we had $1,126.2 million of floating rate debt and $300.0 million of floating interest rate swap contracts. If interest rates increased or decreased by 100 basis points on our variable rate debt, annualized interest expense and net cash payments for interest would increase or decrease by approximately $14 million. This analysis does not reflect the effect that interest rates would have on other items, such as new borrowings and the impact on the economy. See Note 7, *Debt,* of the notes to our unaudited consolidated financial statements in Part I, Item 1 of this Quarterly Report on Form 10-Q for further information regarding how we manage interest rate risk.

ITEM 4. CONTROLS AND PROCEDURES.

Disclosure Controls and Procedures

We carried out an evaluation, under the supervision and with the participation of our management, including our Chief Executive Officer and Chief Financial Officer, of the effectiveness of our disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e), and 15d-15(e)) as of the end of the period covered by this Form 10-Q. Based upon that evaluation, our Chief Executive Officer and Chief Financial Officer concluded that our disclosure controls and procedures were effective as of the end of the period covered by this Form 10-Q.

Changes in Internal Control Over Financial Reporting

Based on an evaluation, under the supervision and with the participation of our management, including our Chief Executive Officer and Chief Financial Officer, there has been no change in our internal control over financial reporting during the period covered by this Form 10-Q identified in connection with that evaluation, that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

PART II - OTHER INFORMATION

ITEM 1. LEGAL PROCEEDINGS.

General Legal Proceedings

We are subject to extensive and evolving laws and regulations and have implemented safeguards to respond to regulatory requirements. In the normal course of our business, we become involved in legal proceedings. Some may result in fines, penalties or judgments against us, or settlements, which may impact earnings and cash flows for a particular period. Although we cannot predict the ultimate outcome of any legal matter with certainty, we do not believe the outcome of any of our pending legal proceedings will have a material adverse impact on our consolidated financial position, results of operations or cash flows.

As used herein, the term *legal proceedings* refers to litigation and similar claims against us and our subsidiaries, excluding: (1) ordinary course accidents, general commercial liability and workers' compensation claims, which are covered by insurance programs, subject to customary deductibles, and which, together with self-insured employee health care costs, are discussed in Note 5, *Other Liabilities,* to our unaudited consolidated financial statements in Part I, Item 1 of this Quarterly Report on Form 10-Q; and (2) environmental remediation liabilities, which are discussed in Note 6, *Landfill and Environmental Costs,* to our unaudited consolidated financial statements in Part I, Item 1 of this Quarterly Report on Form 10-Q.

We accrue for legal proceedings when losses become probable and reasonably estimable. We have recorded an aggregate accrual of approximately $25 million relating to our outstanding legal proceedings as of September 30, 2020. As of the end of each applicable reporting period, we review each of our legal proceedings and, where it is probable that a liability has been incurred, we accrue for all probable and reasonably estimable losses. Where we are able to reasonably estimate a range of losses we may incur with respect to such a matter, we record an accrual for the amount within the range that constitutes our best estimate. If we are able to reasonably estimate a range but no amount within the range appears to be a better estimate than any other, we use the amount that is the low end of such range. If we had used the high ends of such ranges, our aggregate potential liability would be approximately $9 million higher than the amount recorded as of September 30, 2020.

Legal Proceedings over Certain Environmental Matters Involving Governmental Authorities with Possible Sanctions of $100,000 or More

Item 103 of the SEC's Regulation S-K requires disclosure of certain environmental matters when a governmental authority is a party to the proceedings and the proceedings involve potential monetary sanctions unless we reasonably believe the monetary sanctions will not equal or exceed $100,000. We are disclosing the following matters in accordance with that requirement:

Pine Avenue Landfill Matter

On December 20, 2016, the EPA issued a Finding of Violation (FOV) to Allied Waste Niagara Falls Landfill, LLC (Allied-Niagara). The FOV alleges violations of the Clean Air Act and associated regulations relating to operation of Allied-Niagara’s Pine Avenue Landfill in Niagara County, New York. On October 16, 2017, Allied-Niagara received a civil penalty demand from the EPA. The demand proposes a penalty of $0.6 million or $2.5 million, depending on the results of requested sampling analysis at the site. Allied-Niagara is negotiating a resolution to the FOV, including the amount of the penalty.

West Contra Costa Sanitary Landfill Matters

The West Contra Costa Sanitary Landfill is a closed landfill formerly operated by West Contra Costa Sanitary Landfill, Inc. (WCCSL). The top deck area of the closed landfill is being utilized for a composting operation. In 2017 and 2018, the California State Water Resources Control Board (Water Board) issued three Notices of Violation alleging that operations at the closed landfill violated stormwater and waste discharge requirements permits. In September 2018, we received a proposed penalty assessment from the Water Board in the amount of $513,400. After negotiations between the parties, WCCSL agreed to a penalty amount of $460,600, one half of which can be satisfied by funding a Supplemental Environmental Project approved by the Water Board. The terms of the settlement will be memorialized in a settlement agreement, which the parties will negotiate.

Blue Ridge Landfill Matter

On January 9, 2020, the Texas Commission on Environmental Quality (TCEQ) sent a Proposed Agreed Order (PAO) to Blue Ridge Landfill TX, LP (BRLF). The PAO alleges that BRLF violated certain federal and state air regulations and permit requirements and failed to prevent nuisance odor conditions at our Blue Ridge Landfill in Fresno, Texas. The TCEQ proposed an administrative penalty in the amount of $183,055. BRLF declined to accept the PAO but did provide a substantive response to the PAO to the TCEQ. On April 7, 2020, BRLF learned that the TCEQ referred enforcement to the Office of the Attorney General (OAG). BRLF will seek to negotiate a resolution with the OAG.

ITEM 1A. RISK FACTORS.

Our material risk factors are disclosed in Part I, Item 1A of our Annual Report on Form 10-K for the year ended December 31, 2019. There have been no material changes during the nine months ended September 30, 2020 from or updates to the risk factors discussed in Part I, Item 1A, Risk Factors, of our 2019 Annual Report on Form 10-K, except as follows.

Weakened global economic conditions, including those resulting from the recent COVID-19 pandemic, may harm our industry, business and results of operations.

Our business is directly affected by changes in national and general economic factors and overall economic activity that are outside of our control, including consumer confidence and interest rates. For example, the COVID-19 pandemic has negatively impacted the global economy, disrupted global supply chains and created significant volatility and disruption of financial markets. A weak economy generally results in decreases in volumes of waste generated, which adversely affects our revenues. In addition, we have certain fixed costs (e.g., facility expense associated with long-term leases, depreciation expense and accretion expense), which may be difficult to adjust quickly to match declining waste volume levels. Consumer uncertainty and the loss of consumer confidence may decrease overall economic activity and thereby limit the amount of services we provide. Additionally, a decline in waste volumes may result in increased competitive pricing pressure and increased customer turnover, resulting in lower revenue and increased operating costs. Operating in an environment of worsening economic conditions could have a material adverse effect on our consolidated financial condition, results of operations and cash flows. Further, recovery in the solid waste industry historically has lagged behind recovery in the general economy. Accordingly, we cannot assure you that an improvement in general economic conditions will result in an immediate, or any, improvement in our consolidated financial condition, results of operations or cash flows.

The COVID-19 pandemic has negatively impacted, and is likely to continue to negatively impact, our business, results of operations and financial performance.

The COVID-19 pandemic is having an unprecedented effect on the U.S. economy, which has created significant uncertainties. These uncertainties include, but are not limited to, the potential adverse effect of the pandemic on the economy, our supply chain partners, our employees and our customers. As a result of the COVID-19 pandemic, our costs of doing business have increased, including for the purchase of additional safety equipment and hygiene products, increased facility and equipment cleaning, meals for our frontline employees, the expansion of certain aspects of our existing healthcare programs, and the guarantee of a minimum hourly work week to certain frontline employees regardless of service decreases. Additionally, if the pandemic continues and conditions worsen or if there is a large outbreak or resurgence of COVID-19 in various regions, we expect to experience additional adverse impacts on our operational and commercial activities and our collections of accounts receivable, which adverse impacts may be material. The degree to which COVID-19 impacts our results going forward will depend on future developments, which are uncertain and cannot be predicted, including, but not limited to, the duration and spread of COVID-19, its severity, the actions to contain the virus or treat its impact, and how quickly and to what extent normal economic and operating conditions can resume. Any of the foregoing factors, or other cascading effects of the COVID-19 pandemic that are not currently foreseeable, could materially increase our costs, negatively impact our business and damage our results of operations and our liquidity position, possibly to a significant degree.

ITEM 2. UNREGISTERED SALES OF EQUITY SECURITIES AND USE OF PROCEEDS.

Issuer Purchases of Equity Securities

The following table provides information relating to our purchases of shares of our common stock during the three months ended September 30, 2020:

	Total Number of Shares Purchased (a)	Average Price Paid per Share (a)	Total Number of Shares Purchased as Part of Publicly Announced Program (b)	Dollar Value of Shares that May Yet Be Purchased Under the Program (c)
July 1 - 31	—	$ —	—	$ 605,818,899
August 1 - 31	—	$ —	—	$ 605,818,899
September 1 - 30	—	$ —	—	$ 605,818,899
	—		—	

a. In October 2017, our Board of Directors added $2.0 billion to the previous share repurchase authorization, which continues through December 31, 2020. In October 2020, our Board of Directors approved a $2.0 billion share repurchase authorization effective starting January 1, 2021 and extending through December 31, 2023. Share repurchases under the program may be made through open market purchases or privately negotiated transactions in accordance with applicable federal securities laws. While the Board of Directors has approved the program, the timing of any purchases, the prices and the number of shares of common stock to be purchased will be determined by our management, at its discretion, and will depend upon market conditions and other factors. The share repurchase program may be extended, suspended or discontinued at any time. As of September 30, 2020, no repurchased shares were pending settlement.

b. The total number of shares purchased as part of the publicly announced program were all purchased pursuant to the October 2017 authorization.

c. Shares that may be purchased under the program exclude shares of common stock that may be surrendered to satisfy statutory minimum tax withholding obligations in connection with the vesting of restricted stock units and performance stock units issued to employees.

ITEM 3. DEFAULTS UPON SENIOR SECURITIES.

None.

ITEM 4. MINE SAFETY DISCLOSURES.

None.

ITEM 5. OTHER INFORMATION.

None.

ITEM 6. EXHIBITS.

Exhibit Number	Description of Exhibit
4.1	Amendment No. 3, dated as of August 25, 2020, to Credit Agreement, dated as of June 8, 2018, as amended, by and among Republic Services, Inc., as Borrower, Bank of America, N.A., as Administrative Agent, Swing Line Lender and L/C Issuer, and the other lenders party thereto (incorporated by reference to Exhibit 4.2 of the Company's Current Report on Form 8-K dated August 27, 2020).
4.2	Credit Agreement, dated as of August 25, 2020, by and among Republic Services, Inc., as Borrower, Bank of America, N.A., as Administrative Agent, and the other lenders party thereto (incorporated by reference to Exhibit 4.1 of the Company's Current Report on Form 8-K dated August 27, 2020).
4.3	Tenth Supplemental Indenture, dated as of August 20, 2020, between Republic Services, Inc. and U.S. Bank National Association, as trustee, including the form of 1.450% Notes due 2031 (incorporated by reference to Exhibit 4.1 of the Company's Current Report on Form 8-K dated August 13, 2020).
10.1*+	Republic Services, Inc. Executive Incentive Plan, as amended and restated effective October 26, 2020.
31.1*	Rule 13a-14(a)/15d-14(a) Certification of Chief Executive Officer.
31.2*	Rule 13a-14(a)/15d-14(a) Certification of Chief Financial Officer.
32.1**	Section 1350 Certification of Chief Executive Officer.
32.2**	Section 1350 Certification of Chief Financial Officer.
101.INS*	XBRL Instance Document. - the instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document.
101.SCH*	XBRL Taxonomy Extension Schema Document.
101.CAL*	XBRL Taxonomy Extension Calculation Linkbase Document.
101.LAB*	XBRL Taxonomy Extension Labels Linkbase Document.
101.PRE*	XBRL Taxonomy Extension Presentation Linkbase Document.
101.DEF*	XBRL Taxonomy Extension Definition Linkbase Document.
104*	Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101).

* Filed herewith.

** This exhibit is being furnished rather than filed, and shall not be deemed incorporated by reference into any filing, in accordance with Item 601 of Regulation S-K.

\+ Indicates a management or compensatory plan or arrangement

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the Registrant, Republic Services, Inc., has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized.

REPUBLIC SERVICES, INC.

Date: November 5, 2020	By: /s/ BRIAN DELGHIACCIO **Brian DelGhiaccio** **Executive Vice President,** **Chief Financial Officer** **(Principal Financial Officer)**
Date: November 5, 2020	By: /s/ BRIAN A. GOEBEL **Brian A. Goebel** **Vice President and** **Chief Accounting Officer** **(Principal Accounting Officer)**

Republic Services, Inc.
Executive Incentive Plan

(As amended and restated effective October 26, 2020)

Introduction

The Republic Services, Inc. Executive Incentive Plan was adopted by the Management Development and Compensation Committee of the Board (the "Committee") on March 12, 2009 and approved by shareholders on May 14, 2009. The Plan was most recently amended and restated February 4, 2014. The Committee now desires to amend and restate the Plan, effective October 26, 2020, to remove references to the performance-based compensation exception that was previously permitted but is no longer applicable under Section 162(m) of the Code.

1. Purpose

The purposes of the Plan are to promote the success of the Company; to provide designated Executive Officers with an opportunity to receive incentive compensation dependent upon that success; and to attract, retain and motivate such individuals.

2. Definitions

"Affiliate" means all entities whose financial statements are required to be consolidated with the financial statements of the Company pursuant to United States generally accepted accounting principles.

"Award" means an incentive award, either a Long Term Award or an Annual Award, made pursuant to the Plan.

- Annual Award — is designed to recognize the annual contribution of Participants to the achievement of certain short term goals and objectives of the Company.

- Long Term Award — is designed to recognize the impact by Participants upon the achievement by the Company of longer term success in enhancing shareholder value.

"Award Formula" means one or more objective formulas or standards established by the Committee for purposes of determining an Award based on the level of performance with respect to one or more Performance Goals. Award Formulas may vary from Performance Period to Performance Period and from Participant to Participant and may be established on a stand-alone basis, in tandem or in the alternative.

"Award Schedule" means the Award Schedule established pursuant to Section 4.1.

"Beneficiary" means the person(s) designated by the Participant, in writing on a form prescribed by the Committee, to receive payments under the Plan in the event of his or her death while a Participant or, in the absence of such designation, the Participant's estate.

"Board" means the Board of Directors of the Company.

"Change of Control" means the occurrence of any of the following:

(i) an acquisition (other than directly from the Company) of any voting securities of the Company (the "Voting Securities") by any "Person" (as the term person is used for purposes of Section 13(d) or 14(d) of the Securities Exchange Act of 1934, as amended (the "Exchange Act")), immediately after which such Person has "Beneficial Ownership" (within the meaning of Rule 13d-3 promulgated under the Exchange Act) of fifty percent (50%) or more of the then outstanding common stock of the Company ("Shares") or the combined voting power of the Company's then outstanding Voting Securities; *provided, however,* in determining whether a Change of Control has occurred pursuant to this subsection (i), Shares or Voting Securities which are acquired in a "Non-Control Acquisition" (as hereinafter defined) shall not constitute an acquisition which would cause a Change of Control. A "Non-Control Acquisition" shall mean an acquisition by (a) an employee benefit plan (or a trust forming a part thereof) maintained by (1) the Company or (2) any corporation or other Person of which a majority of its voting power or its voting equity securities or equity interest is owned, directly or indirectly, by the Company (for purposes of this definition, a "Related Entity"), (b) the Company or any Related Entity, or (c) any Person in connection with a "Non-Control Transaction" (as hereinafter defined);

(ii) the individuals who, as of October 26, 2020, are members of the Board (the "Incumbent Board"), cease for any reason to constitute at least a majority of the members of the Board or, following a Merger Event which results in a Parent Corporation, the board of directors of the ultimate Parent Corporation (as defined in paragraph (iii)(1)(A) below); *provided, however,* that if the election, or nomination for election by the Company's common stockholders, of any new director was approved by a vote of at least two-thirds of the Incumbent Board, such new director shall, for purposes of this Agreement, be considered as a member of the Incumbent Board; *provided further, however,* that no individual shall be considered a member of the Incumbent Board if such individual initially assumed office as a result of an actual or threatened solicitation of proxies or consents by or on behalf of a Person other than the Board (a "Proxy Contest") including by reason of any agreement intended to avoid or settle a Proxy Contest; or

(iii) the consummation of:

(1) a merger, consolidation or reorganization with or into the Company or in which securities of the Company are issued (a "Merger Event"), unless such Merger Event is a "Non-Control Transaction." A "Non-Control Transaction" shall mean a Merger Event where:

(A) the stockholders of the Company immediately before such Merger Event own directly or indirectly immediately following such Merger Event at least fifty percent (50%) of the combined voting power of the outstanding voting securities of (x) the corporation resulting from such Merger Event (the “Surviving Corporation”) if fifty percent (50%) or more of the combined voting power of the then outstanding voting securities of the Surviving Corporation is not Beneficially Owned, directly or indirectly, by another Person (a “Parent Corporation”), or (y) if there are one or more Parent Corporations, the ultimate Parent Corporation; and,

(B) the individuals who were members of the Incumbent Board immediately prior to the execution of the agreement providing for such Merger Event constitute at least a majority of the members of the board of directors of (x) the Surviving Corporation, if there is no Parent Corporation, or (y) if there are one or more Parent Corporations, the ultimate Parent Corporation; and

(C) no Person other than (i) the Company, (ii) any Related Entity, (iii) any employee benefit plan (or any trust forming a part thereof) that, immediately prior to such Merger Event was maintained by the Company or any Related Entity, or (iv) any Person who, immediately prior to such Merger Event had Beneficial Ownership of fifty percent (50%) or more of the then outstanding Voting Securities or Shares, has Beneficial Ownership of fifty percent (50%) or more of the combined voting power of the outstanding voting securities or common stock of (x) the Surviving Corporation if there is no Parent Corporation, or (y) if there are one or more Parent Corporations, the ultimate Parent Corporation.

(2) a complete liquidation or dissolution of the Company; or

(3) the sale or other disposition of all or substantially all of the assets of the Company to any Person (other than a transfer to a Related Entity or under conditions that would constitute a Non-Control Transaction with the disposition of assets being regarded as a Merger Event for this purpose or the distribution to the Company’s stockholders of the stock of a Related Entity or any other assets).

Notwithstanding the foregoing, a Change of Control shall not be deemed to occur solely because any Person (the “Subject Person”) acquired Beneficial Ownership of more than the permitted amount of the then outstanding Shares or Voting Securities as a result of the acquisition of Shares or Voting Securities by the Company which, by reducing the number of Shares or Voting Securities then outstanding, increases the proportional number of shares Beneficially Owned by the Subject Person, provided that if a Change of Control would occur (but for the operation of this sentence) as a result of the acquisition of Shares or Voting Securities by the Company, and after such share acquisition by the Company, the

Subject Person becomes the Beneficial Owner of any additional Shares or Voting Securities which increases the percentage of the then outstanding Shares or Voting Securities Beneficially Owned by the Subject Person, then a Change of Control shall occur.

In addition, a Change of Control shall not be deemed to occur unless the event(s) that causes such Change of Control also constitutes a "change in control event," as such term is defined in Code Section 409A.

"Code" means the Internal Revenue Code of 1986, as amended.

"Committee" means the Management Development and Compensation Committee of the Board or any successor committee. The Committee shall be composed of not fewer than two directors.

"Company" means Republic Services, Inc. and its successors.

"Determination Period" means, with respect to a Performance Period applicable t any Award under the Plan, the period commencing on or before the first day of such Performance Period and generally ending 90 days after the commencement of the Performance Period.

"Disability" means the inability of the Participant to engage in any substantial gainful activity by reason of any medically determinable physical or mental impairment which can be expected to result in death or can be expected to last for a continuous period of not less than 12 months, or the Participant is, by reason of any medically determinable physical or mental impairment which can be expected to result in death or can be expected to last for a continuous period of not less than 12 months, receiving income replacement benefits for a period of not less than three months under an accident and health plan covering employees of the Company.

"Executive Officer" means a person who is the chief executive officer, chief operating officer, chief financial officer, chief legal officer, executive vice president, or regional president of the Company (or any person in the same role if the title of such role changes).

"Participant" means an Executive Officer selected from time to time by the Committee to participate in the Plan.

"Performance Goal" means the level of performance established by the Committee as the Performance Goal with respect to a Performance Measure. Performance Goals may vary from Performance Period to Performance Period and from Participant to Participant and may be established on a stand-alone basis, in tandem or in the alternative. Initially, Performance Goals shall include minimum, target and maximum performance levels.

"Performance Measure" means one or more of the following selected by the Committee for a Performance Period: (i) the attainment of certain target levels of, or a specified increase in, the Company's enterprise value or value creation targets; (ii) the

attainment of certain target levels of, or a percentage increase in, the Company's after-tax or pre-tax profits, including, without limitation, that attributable to the Company's continuing and/or other operations; (iii) the attainment of certain target levels of, or a specified increase relating to, the Company's operational cash flow or working capital, or a component thereof; (iv) the attainment of certain target levels of, or a specified decrease relating to, the Company's operational costs, or a component thereof; (v) the attainment of a certain level of reduction of, or other specified objectives with regard to limiting the level of increase in all or a portion of bank debt or other of the Company's long-term or short-term public or private debt or other similar financial obligations of the Company, which may be calculated net of cash balances and/or other offsets and adjustments as may be established by the Committee; (vi) the attainment of a certain target level of, or a specified increase in earnings per share or earnings per share from the Company's continuing operations; (vii) the attainment of certain target levels of, or a specified percentage increase in, the Company's net sales, revenues, net income or earnings before income tax or other exclusions; (viii) the attainment of certain target levels of, or a specified increase in, the Company's return on capital employed or return on invested capital; (ix) the attainment of certain target levels of, or a percentage increase in, the Company's after-tax or pre-tax return on stockholder equity; (x) the attainment of certain target levels in the fair market value of the Company's Common Stock; (xi) the growth in the value of an investment in the Common Stock assuming the reinvestment of dividends; and/or (xii) the attainment of certain target levels of, or a specified increase in, EBITDA (earnings before interest, taxes, depreciation, depletion, amortization and accretion); (xiii) the attainment of certain target levels of, or a specified increase in, an objective measure of customer satisfaction and/or loyalty; and/or (xiv) the attainment of certain target levels of, or a specified increase in, an objective measure of employee engagement. Performance Measures may be based upon the attainment by a subsidiary, division or other operational unit of the Company of specified levels of performance under one or more of the measures described above. Further, the Performance Measures may be based upon the attainment by the Company (or a subsidiary, division or other operational unit of the Company) of specified levels of performance under one or more of the foregoing measures relative to the performance of other corporations. The Committee may, in its sole and absolute discretion: (i) designate additional business criteria upon which the Performance Measures may be based; (ii) modify, amend or adjust the business criteria described herein; or (iii) incorporate in the Performance Measures provisions regarding changes in accounting methods, corporate transactions (including, without limitation, dispositions or acquisitions) and similar events or circumstances. Performance Measures may include a threshold level of performance below which no Award will be earned, levels of performance at which an Award will become partially earned and a level at which an Award will be fully earned. Performance Measures may vary from Performance Period to Performance Period and from Participant to Participant and may be established on a stand-alone basis, in tandem or in the alternative.

"Performance Period" means one or more periods of time, as the Committee may designate, over which the attainment of one or more Performance Goals will be measured for the purpose of determining a Participant's right to payment in respect of an Award. Unless otherwise determined by the Committee in advance, the Performance Period for an Annual Award shall be one calendar year. Unless otherwise determined by the Committee in advance, a Performance Period for a Long Term Award shall be three calendar years.

"Plan" means the Republic Services, Inc. Executive Incentive Plan as most recently amended and restated effective October 26, 2020 as set forth herein.

"Plan Year" means the calendar year.\

"Retirement" means retirement (i) on or after attaining age 65 or (ii) on or after satisfying any of the following age and service requirements provided the Participant provides the Company written notice of his or her intention to retire at least one year in advance of retirement: age 55 and 20 years of service; age 56 and 10 years of service; or age 60 and five years of service.

3. Participation

3.1 Participants shall be selected by the Committee from among the Executive Officers. The selection of an Executive Officer as a Participant for a Performance Period shall not entitle such individual to be selected as a Participant with respect to any other Performance Period; *provided, however,* that once an Executive Officer becomes a Participant, he or she shall continue as a Participant until the Committee terminates his or her participation or an event occurs under the Plan which causes termination of participation.

4. Awards

4.1 *Award Schedules*. For each Performance Period with respect to which an Award may be earned by a Participant under the Plan, prior to the expiration of the Determination Period (or at such other time as the Committee may determine in its discretion), the Committee shall establish for such Performance Period an Award Schedule for each Participant. The Award Schedule shall set forth the applicable Performance Period, Performance Measure(s), Performance Goal(s), and Award Formula(s) and such other information as the Committee may determine. Award Schedules may vary from Performance Period to Performance Period and from Participant to Participant.

4.2 *Determination of Awards*. A Participant shall be eligible to receive payment with respect to an Award only to the extent that the Performance Goal(s) for such Award are achieved and the Participant earns such Award based on the application of the Award Formula against the Performance Goal(s) for the applicable Performance Period. As soon as practicable after the close of each Performance Period, the Committee shall meet to review and determine whether, and to what extent, the Performance Goals for the Performance Period have been achieved and, if so, to calculate the amount of the Award earned by each Participant for such Performance Period based upon such Participant's Award Formula. The Committee shall then determine the actual amount of the Award to be paid to each Participant and in so doing may use negative discretion to decrease, but not increase, the amount of the Award otherwise payable to the Participant based upon such performance. Anything in this Plan to the contrary notwithstanding: the maximum Award payable to any one Participant is (i) in the case of an Annual Award, $10,000,000 with respect to any

Performance Period; and (ii) in the case of a Long Term Award, $5,000,000 multiplied by the number of full or partial 12-month periods that are in the Performance Period.

4.3 *Payment of Awards*. Awards shall be paid in a lump sum cash payment after the amount thereof has been determined in accordance with Section 4.2. Except as otherwise provided in any Employment Agreement or Award Schedule, payment of any Award shall be made at such time determined by the Committee that is within the first 2 ½ months of the Company's taxable year that immediately follows the last day of the applicable Performance Period. The Committee may, subject to such terms and conditions and within such limits as it may from time to time establish, permit one or more Participants to defer the receipt of amounts due under the Plan in a manner consistent with the requirements of Code Section 409A. If any Award which is earned pursuant to this Section 4 is paid prior to the time determined when the Award was initially granted, the amount of such Award shall be reduced by an appropriate discount factor determined by the Committee.

4.4 *Change of Control*. All Performance Goals and other conditions to payment of Awards shall be deemed to be achieved or fulfilled as of the time of a Change of Control. In the event of a Change of Control, the Company shall promptly pay each Participant 100% of the Participant's Target Award (as established in the applicable Award Schedules) for the Performance Periods in which the Change of Control occurs. In addition, if at the time of a Change of Control there has been no determination or payment of an Award for the preceding Performance Periods, the Company shall pay to each individual who was a Participant with respect to such prior Performance Periods the full amount to which he or she would have been paid assuming the Committee determines that the Participant satisfied the applicable Performance Goals for such Performance Periods without reduction in Award payments. for factors other than those resulting from the failure to satisfy the applicable Performance Goals. Payments under this Section 4.4 shall be made not later than ten (10) days following the Change of Control.

5. Termination of Employment

5.1 Termination of Employment.

- Except as otherwise provided in Sections 4.4, 5.2 or 5.3, a Participant who has a termination of employment for any reason other than "cause" prior to the date of payment of an Award shall forfeit all right to or interest in the Award.

- Except as otherwise provided in Section 5.3, a Participant whose employment is terminated for "cause" (Termination for Cause) prior to the date of payment of an Award shall forfeit all right to or interest in the Award.

Termination for Cause shall mean with respect to any Participant, cause or for cause as defined in any employment, consulting or other agreement for the performance of services between the Participant and the Company, or, in the Executive Separation Policy for any Participant who is covered by the Executive Separation Policy. In the absence of any such agreement or policy or any such definition in such agreement or policy, cause shall mean (i) Participant's willful and continued failure to substantially perform his or her duties after he or she has received written notice from the Company identifying the actions or omissions constituting willful and continued failure to perform, (ii) Participant's conviction or plea to a felony, misdemeanor or any other crime, (iii) Participant's actions or omissions that constitute fraud, dishonesty or gross misconduct, (iv) Participant's breach of any fiduciary duty that causes material injury to the Company, (v) Participant's breach of any duty causing material injury to the Company, (vi) Participant's inability to perform his or her material duties to the reasonable satisfaction of the Company due to alcohol or other substance abuse, or (vii) any violation of the Company's policies or procedures involving discrimination, harassment, substance abuse or work place violence. Any termination for Cause pursuant to this Section shall be given to the Participant in writing and shall set forth in detail all acts or omissions upon which the Company is relying to terminate the Participant for Cause. With respect to Participants other than the Chief Executive Officer: Chief Operating Officer, Chief Financial Officer and Chief Legal Officer (the Executive Group), a determination of cause shall be made by the Chief Executive Officer.

With respect to the Executive Group, before any determination by the Company that Cause exists to terminate the Participant, the Company shall cause a special meeting of the Committee to be called and held at a time mutually convenient to the Committee and Participant, but in no event later than ten (10) business days after Participant's receipt of the notice that the Company intends to terminate the Participant for Cause. Participant shall have the right to appear before such special meeting of the Committee with legal counsel of his or her choosing to refute such allegations and shall have a reasonable period of time to cure any actions or omissions which provide the Company with a basis to terminate the Participant for Cause (provided that such cure period shall not exceed 30 days). A majority of the members of the Committee must affirm that Cause exists to terminate the Participant. No finding by the Committee will prevent the Participant's contesting such determination through appropriate legal proceedings, provided that the Participant's sole remedy shall be to sue for damages, not reinstatement, and damages shall be limited to those that would be paid to the Participant if he or she had been terminated without Cause.

5.2 Death, Disability or Retirement

- Except as otherwise provided in Section 5.3 hereof, in the event that a Participant dies after an Award has been granted to the Participant but before it has been determined to be earned pursuant to Section 4.2, there shall be paid to the Participant's Beneficiary or estate an amount equal to the full targeted Award that the Committee was authorized in accordance with the Award Formula to pay to the Participant pursuant to Section 4.3 had his or her employment continued through the end of the Performance Period and had all Performance Goals been met. Payment of all such Awards shall be made within thirty (30) days following the date of termination of the Participant's employment as a result of death.

- Except as otherwise provided in Section 5.3 hereof and if and to the extent permitted under Section 409A of the Code, in the event that a Participant's employment is terminated by reason of Disability or Retirement after an Award has been granted to the Participant but before it has been determined to be earned pursuant to Section 4.2, there shall be paid to the Participant a pro-rated amount equal to the Award payment that the Committee determines would have been paid to the Participant pursuant to Section 4.3 had his or her employment continued through the end of the Performance Periods, multiplied by a fraction, the numerator of which is the number of completed calendar months of employment during the applicable Performance Period and the denominator of which is the total number of months in the applicable Performance Period. Payment of all such Awards shall be made at the same time as Awards are paid to Participants who remained employed through the end of the applicable Performance Period.

5.3 Committee Discretion. The provisions of Sections 5.1 and/or 5.2 hereof shall not apply to any Participant or Participants if and to the extent (i) determined by the Committee, in its sole and absolute discretion, or (ii) provided in any employment, consulting or other agreement for the performance of services between the Participant and the Company, or in the Executive Separation Policy for any Participant who is covered by the Executive Separation Policy.

6. Administration

6.1 In General. The Committee shall have full and complete authority, in its sole and absolute discretion, (i) to exercise all of the powers granted to it under the Plan, (ii) to construe, interpret and implement the Plan and any related document, (iii) to prescribe, amend and rescind rules relating to the Plan, (iv) to make all determinations necessary or advisable in administering the Plan, and (v) to correct any defect, supply any omission and reconcile any inconsistency in the Plan. The Chief Executive Officer of the Company may recommend to the Committee Executive Officers for participation and target award levels for Participants.

6.2 Determinations. The actions and determinations of the Committee or others to whom authority is delegated under the Plan on all matters relating to the Plan and any Awards shall be final and conclusive. Such determinations need not be uniform and may be made selectively among persons who receive, or are eligible to receive, Awards under the Plan, whether or not such persons are similarly situated.

6.3 Appointment of Experts. The Committee may appoint such accountants, counsel, and other experts as it deems necessary or desirable in connection with the administration of the Plan.

6.4 Delegation. The Committee may delegate to others the authority to execute and deliver such instruments and documents, to do all such acts and things, and to take all such other steps deemed necessary, advisable or convenient for the effective administration of the Plan in accordance with its terms and purposes.

6.5 Books and Records. The Committee and others to whom the Committee has delegated such duties shall keep a record of all their proceedings and actions and shall maintain all such books of account, records and other data as shall be necessary for the proper administration of the Plan.

6.6 Payment of Expenses. The Company shall pay all reasonable expenses of administering the Plan, including, but not limited to, the payment of professional and expert fees.

6.7 Clawback of Benefits. If and to the extent required under applicable law or stock exchange requirements, the Committee may (i) cause the cancellation of any Award, (ii) require reimbursement of any Award by a Participant or beneficiary, and (iii) effect any other right of recoupment of compensation provided under this Plan. By accepting an Award, a Participant is agreeing to be bound by this Section 6.7 and the Republic Services, Inc. Clawback Policy (the "Clawback Policy") and any future amendment or restatement of the Clawback Policy adopted by the Company to comply with applicable laws or stock exchange requirements.

7. Miscellaneous

7.1 Nonassignability. No Award shall be assignable or transferable (including pursuant to a pledge or security interest) other than by will or by the laws of descent and distribution.

7.2 Withholding Taxes. Whenever payments under the Plan are to be made or deferred, the Company will withhold therefrom, or from any other amounts payable to or in respect of the Participant, an amount sufficient to satisfy any applicable governmental withholding tax requirements related thereto.

7.3 Amendment of Termination of the Plan. The Plan may be amended or terminated by the Committee in any respect except that (i) no amendment may be made after the date on which an Executive Officer is selected as a Participant for a Performance Period that would adversely affect the rights of such Participant with respect to such Performance Period without the consent of the affected Participant, and (ii) no amendment shall be effective without the approval of the shareholders of the Company to increase the maximum Award payable under the Plan.

7.4 Other Payments or Awards. Nothing contained in the Plan will be deemed in any way to limit or restrict the Company from making any award or payment to any person under any other plan, arrangement or understanding, whether now existing or hereafter in effect.

7.5 Payments to Other Persons. If payments are legally required to be made to any person other than the person to whom any amount is payable under the Plan, such payments will be made accordingly. Any such payment will be a complete discharge of the liability of the Company under the Plan.

7.6 Unfunded Plan. Nothing in this Plan will require the Company to purchase assets or place assets in a trust or other entity to which contributions are made or otherwise to segregate any assets for the purpose of satisfying any obligations, under the Plan. Participants will have no rights under the Plan other than as unsecured general creditors of the Company.

7.7 *Limits of Liability.* Neither the Company, the Committee nor any other person participating in any determination of any question under the Plan, or in the interpretation, administration or application of the Plan, will have any liability to any party for any action taken or not taken in good faith under the Plan.

7.8 *No Right of Employment.* Nothing in this Plan will be construed as creating any contract of employment or conferring upon any Participant any right to continue in the employ or other service of the Company or limit in any way the right of the Company to change such person's compensation or other benefits or to terminate the employment or other service of such person with or without cause.

7.9 *Section 409A.* It is intended that the Plan comply with Section 409A of the Code. If an Award is payable on account of a termination of employment (i) it shall be paid no earlier than the Participant's separation from service as determined in accordance with Section 409A and (ii) if at the time of the Participant's separation from service with the Company, the Participant is a "specified employee" as defined in Section 409A and the deferral of the commencement of any payments or benefits otherwise payable as a result of such separation from service is necessary in order to avoid the additional tax under Section 409A, the Company will defer the payment or commencement of the payment of any such payments or benefits (without any reduction in such payments or benefits ultimately paid or provided to the Participant) until the date that is six (6) months following the Participant's separation from service with the Company (or, if earlier, the date of death of the Participant). The Plan shall be interpreted, administered and operated in accordance with Section 409A, although nothing herein shall be construed as an entitlement to or guarantee of any particular tax treatment to the Participant.

7.10 *Section Headings.* The section headings contained herein are for convenience only and, in the event of any conflict, the text of the Plan, rather than the section headings, will control.

7.11 *Invalidity.* If any term or provision contained herein is to any extent invalid or unenforceable, such term or provision will be reformed so that it is valid, and such invalidity or unenforceability will not affect any other provision or part hereof.

7.12 *Applicable Law.* The Plan will be governed by the laws of the State of Arizona, as determined without regard to the conflict of law principles thereof.

EXHIBIT 31.1

**CERTIFICATION PURSUANT TO RULES 13a-14(a) AND 15d-14(a),
AS ADOPTED PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002**

I, Donald W. Slager, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Republic Services, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

    a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

    b. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

    c. Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

    d. Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

    a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

    b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

/S/ DONALD W. SLAGER

Donald W. Slager
Chief Executive Officer
(Principal Executive Officer)

Date: November 5, 2020

EXHIBIT 31.2

CERTIFICATION PURSUANT TO RULES 13a-14(a) AND 15d-14(a),
AS ADOPTED PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Brian DelGhiaccio, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Republic Services, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

    a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

    b. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

    c. Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

    d. Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

    a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

    b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

/S/ BRIAN DELGHIACCIO

Brian DelGhiaccio
Executive Vice President,
Chief Financial Officer
(Principal Financial Officer)

Date: November 5, 2020

EXHIBIT 32.1

**CERTIFICATION PURSUANT TO 18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

In connection with the Quarterly Report on Form 10-Q of Republic Services, Inc. (the Company) for the period ended September 30, 2020 as filed with the Securities and Exchange Commission on the date hereof (the Report), I, Donald W. Slager, Chief Executive Officer of the Company, hereby certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to the best of my knowledge:

1. The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended; and

2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

/S/ DONALD W. SLAGER

Donald W. Slager
Chief Executive Officer
(Principal Executive Officer)

Date: November 5, 2020

EXHIBIT 32.2

CERTIFICATION PURSUANT TO 18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Quarterly Report on Form 10-Q of Republic Services, Inc. (the Company) for the period ended September 30, 2020 as filed with the Securities and Exchange Commission on the date hereof (the Report), I, Brian DelGhiaccio, Chief Financial Officer of the Company, hereby certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to the best of my knowledge:

1. The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended; and

2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

/S/ BRIAN DELGHIACCIO

Brian DelGhiaccio
Executive Vice President,
Chief Financial Officer
(Principal Financial Officer)

Date: November 5, 2020