WASTE MANAGEMENT INC
Form 10-K
February 14, 2019
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UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

Form 10-K

(Mark One)

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES AND EXCHANGE ACT OF 1934

For the fiscal year ended December 31, 2018

OR

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

For the transition period from to

Commission file number 1-12154

Waste Management, Inc.

(Exact name of registrant as specified in its charter)

Delaware (State or other jurisdiction of incorporation or organization)	73-1309529 (I.R.S. Employer Identification No.)
1001 Fannin Street Houston, Texas (Address of principal executive offices)	 77002 (Zip code)

Registrant's telephone number, including area code:

(713) 512-6200

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

Title of Each Class	Name of Each Exchange on Which Registered
Common Stock, $0.01 par value	New York Stock Exchange

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined by Rule 405 of the Securities Act. Yes No

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes No

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 Regulations S-T (§ 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes No

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulations S-K (§ 229.405 of this chapter) is not contained herein, and will not be contained, to the best of Registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K.

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
Non-accelerated filer	Smaller reporting company
	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 Act). Yes No

The aggregate market value of the voting stock held by non-affiliates of the registrant as of June 30, 2018 was approximately $34.8 billion. The aggregate market value was computed by using the closing price of the common stock as of that date on the New York Stock Exchange ("NYSE"). (For purposes of calculating this amount only, all directors and executive officers of the registrant have been treated as affiliates.)

The number of shares of Common Stock, $0.01 par value, of the registrant outstanding as of February 8, 2019 was 423,779,540 (excluding treasury shares of 206,502,921).

DOCUMENTS INCORPORATED BY REFERENCE

Document	Incorporated as to
Proxy Statement for the 2019 Annual Meeting of Stockholders	Part III

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PART I

Item 1. Business.

General

Waste Management, Inc. is a holding company and all operations are conducted by its subsidiaries. When the terms "the Company," "we," "us" or "our" are used in this document, those terms refer to Waste Management, Inc., its consolidated subsidiaries and consolidated variable interest entities. When we use the term "WM," we are referring only to Waste Management, Inc., the parent holding company.

WM was incorporated in Oklahoma in 1987 under the name "USA Waste Services, Inc." and was reincorporated as a Delaware company in 1995. In a 1998 merger, the Illinois-based waste services company formerly known as Waste Management, Inc. became a wholly-owned subsidiary of WM and changed its name to Waste Management Holdings, Inc. ("WM Holdings"). At the same time, our parent holding company changed its name from USA Waste Services to Waste Management, Inc. Like WM, WM Holdings is a holding company and all operations are conducted by subsidiaries. For details on the financial position, results of operations and cash flows of WM, WM Holdings and their subsidiaries, see Note 21 to the Consolidated Financial Statements.

Our principal executive offices are located at 1001 Fannin Street, Houston, Texas 77002. Our telephone number is (713) 512 6200. Our website address is www.wm.com. Our annual reports on Form 10 K, quarterly reports on Form 10 Q and current reports on Form 8 K are all available, free of charge, on our website as soon as practicable after we file the reports with the SEC. Our stock is traded on the New York Stock Exchange under the symbol "WM."

We are North America's leading provider of comprehensive waste management environmental services. We partner with our residential, commercial, industrial and municipal customers and the communities we serve to manage and reduce waste at each stage from collection to disposal, while recovering valuable resources and creating clean, renewable energy. Our "Solid Waste" business is operated and managed locally by our subsidiaries that focus on distinct geographic areas and provides collection, transfer, disposal, and recycling and resource recovery services. Our "Traditional Solid Waste" business excludes our recycling and resource recovery services. Through our subsidiaries, we are also a leading developer, operator and owner of landfill gas-to-energy facilities in the United States ("U.S."). During 2018, our largest customer represented 1% of annual revenues. We employed approximately 43,700 people as of December 31, 2018.

We own or operate 252 landfill sites, which is the largest network of landfills in North America. In order to make disposal more practical for larger urban markets, where the distance to landfills is typically farther, we manage 314 transfer stations that consolidate, compact and transport waste efficiently and economically. We also use waste to create energy, recovering the gas produced naturally as waste decomposes in landfills and using the gas in generators to make electricity. We are a leading recycler in North America, handling materials that include paper, cardboard, glass, plastic and metal. We provide cost-efficient, environmentally sound recycling programs for municipalities, businesses and households across the U.S. and Canada as well as other services that supplement our Traditional Solid Waste business.

Our Company's goals are targeted at serving our customers, our employees, the environment, the communities in which we work and our stockholders. Increasingly, customers want more of their waste materials recovered while waste streams are becoming more complex, and our aim is to address the current needs, while anticipating the expanding and evolving needs of our customers.

We believe we are uniquely equipped to meet the challenges of the changing waste industry and our customers' waste management needs, both today and as we work together to envision and create a more sustainable future. As the waste industry leader, we have the expertise necessary to collect and handle our customers' waste efficiently and responsibly by delivering environmental performance — maximizing resource value, while minimizing environmental impact — so that both our economy and our environment can thrive.

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Our fundamental strategy has not changed; we remain dedicated to providing long-term value to our stockholders by successfully executing our core strategy of focused differentiation and continuous improvement. Our strategic planning processes appropriately consider that the future of our business and the industry can be influenced by changes in economic conditions, the competitive landscape, the regulatory environment, asset and resource availability and technology. We believe that focused differentiation, which is driven by capitalizing on our unique and extensive network of assets, will deliver profitable growth and position us to leverage competitive advantages. Simultaneously, we believe the combination of cost control, process improvement and operational efficiency will deliver on the Company's strategy of continuous improvement and yield an attractive total cost structure and enhanced service quality. While we will continue to monitor emerging diversion technologies that may generate additional value and related market dynamics, our current attention will be on improving existing diversion technologies, such as our recycling operations.

We believe that execution of our strategy will deliver shareholder value and leadership in a dynamic industry. In addition, we intend to continue to return value to our stockholders through dividend payments and our common stock repurchase program. In December 2018, we announced that our Board of Directors expects to increase the quarterly dividend from \$0.465 to \$0.5125 per share for dividends declared in 2019, which is a 10.2% increase from the quarterly dividends we declared in 2018. This is an indication of our ability to generate strong and consistent cash flows and marks the 16th consecutive year of dividend increases. All quarterly dividends will be declared at the discretion of our Board of Directors and depend on various factors, including our net earnings, financial condition, cash required for future business plans, growth and acquisitions and other factors the Board of Directors may deem relevant.

Operations

General

We evaluate, oversee and manage the financial performance of our Solid Waste business subsidiaries through our 17 Areas. See Note 19 to the Consolidated Financial Statements for additional information about our reportable segments. We also provide additional services that are not managed through our Solid Waste business, as described below. These operations are presented in this report as "Other." The services we currently provide include collection, landfill (solid and hazardous waste landfills), transfer, recycling and resource recovery and other services, as described below.

Collection. Our commitment to customers begins with a vast waste collection network. Collection involves picking up and transporting waste and recyclable materials from where it was generated to a transfer station, material recovery facility ("MRF") or disposal site. We generally provide collection services under one of two types of arrangements:

- For commercial and industrial collection services, typically we have a three-year service agreement. The fees under the agreements are influenced by factors such as collection frequency, type of collection equipment we furnish, type and volume or weight of the waste collected, distance to the disposal facility, labor costs, cost of disposal and general market factors. As part of the service, we provide steel containers to most customers to store their solid waste between pick-up dates. Containers vary in size and type according to the needs of our customers and the restrictions of their communities. Many are designed to be lifted mechanically and either emptied into a truck's compaction hopper or directly into a disposal site. By using these containers, we can service most of our commercial and industrial customers with trucks operated by only one employee.
- For most residential collection services, we have a contract with, or a franchise granted by, a municipality, homeowners' association or some other regional authority that gives us the exclusive right to service all or a portion of the homes in an area. These contracts or franchises are typically for periods of three to ten years. We also provide services under individual monthly subscriptions directly to households. The fees for residential collection are either

paid by the municipality or authority from their tax revenues or service charges, or are paid directly by the residents receiving the service.

Landfill. Landfills are the main depositories for solid waste in North America. As of December 31, 2018, we owned or operated 247 solid waste landfills and five secure hazardous waste landfills, which represents the largest network of landfills in North America. Solid waste landfills are constructed and operated on land with engineering safeguards that limit the possibility of water and air pollution, and are operated under procedures prescribed by regulation. A landfill must

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meet federal, state or provincial, and local regulations during its design, construction, operation and closure. The operation and closure activities of a solid waste landfill include excavation, construction of liners, continuous spreading and compacting of waste, covering of waste with earth or other acceptable material and constructing final capping of the landfill. These operations are carefully planned to maintain environmentally safe conditions and to maximize the use of the airspace.

All solid waste management companies must have access to a disposal facility, such as a solid waste landfill. The significant capital requirements of developing and operating a landfill serve as a barrier to landfill ownership and, thus, third-party haulers often dispose of waste at our landfills. It is usually preferable for our collection operations to use disposal facilities that we own or operate, a practice we refer to as internalization, rather than using third-party disposal facilities. Internalization generally allows us to realize higher consolidated margins and stronger operating cash flows. The fees charged at disposal facilities, which are referred to as tipping fees, are based on several factors, including competition and the type and weight or volume of solid waste deposited.

Under environmental laws, the federal government (or states with delegated authority) must issue permits for all hazardous waste landfills. All of our hazardous waste landfills have obtained the required permits, although some can accept only certain types of hazardous waste. These landfills must also comply with specialized operating standards. Only hazardous waste in a stable, solid form, which meets regulatory requirements, can be deposited in our secure disposal cells. In some cases, hazardous waste can be treated before disposal. Generally, these treatments involve the separation or removal of solid materials from liquids and chemical treatments that transform waste into inert materials that are no longer hazardous. Our hazardous waste landfills are sited, constructed and operated in a manner designed to provide long-term containment of waste. We also operate a hazardous waste facility at which we isolate treated hazardous waste in liquid form by injection into deep wells that have been drilled in certain acceptable geologic formations far below the base of fresh water to a point that is safely separated by other substantial geological confining layers.

Transfer. As of December 31, 2018, we owned or operated 314 transfer stations in North America. We deposit waste at these stations, as do other waste haulers. The solid waste is then consolidated and compacted to reduce the volume and increase the density of the waste and transported by transfer trucks or by rail to disposal sites.

Access to transfer stations is critical to haulers who collect waste in areas not in close proximity to disposal facilities. Fees charged to third parties at transfer stations are usually based on the type and volume or weight of the waste deposited at the transfer station, the distance to the disposal site, market rates for disposal costs and other general market factors.

The utilization of our transfer stations by our own collection operations improves internalization by allowing us to retain fees that we would otherwise pay to third parties for the disposal of the waste we collect. It enables us to manage costs associated with waste disposal because (i) transfer trucks, railcars or rail containers have larger capacities than collection trucks, allowing us to deliver more waste to the disposal facility in each trip; (ii) waste is accumulated and compacted at transfer stations that are strategically located to increase the efficiency of our network of operations and (iii) we can retain the volume by managing the transfer of the waste to one of our own disposal sites.

The transfer stations that we operate but do not own generally are operated through lease agreements under which we lease property from third parties. There are some instances where transfer stations are operated under contract, generally for municipalities. In most cases, we own the permits and will be responsible for any regulatory requirements relating to the operation and closure of the transfer station.

Recycling. Our recycling operations provide communities and businesses with an alternative to traditional landfill disposal and support our strategic goals to extract more value from the materials we manage. We were the first major solid waste company to focus on residential single-stream recycling, which allows customers to mix recyclable paper, plastic and glass in one bin. Residential single-stream programs have greatly increased the recycling volumes. Single-stream recycling is possible through the use of various mechanized screens and optical sorting technologies. We have also been advancing the single-stream recycling programs for commercial applications. Recycling involves the separation of

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reusable materials from the waste stream for processing and resale or other disposition. Our recycling operations include the following:

Materials processing — Through our collection operations, we collect recyclable materials from residential, commercial and industrial customers and direct these materials to one of our MRFs for processing. As of December 31, 2018, we operated 102 MRFs where paper, cardboard, metals, plastics, glass, construction and demolition materials and other recycling commodities are recovered for resale or redirected for other purposes.

Recycling commodities — We market and resell recycling commodities globally. We manage the marketing of recycling commodities that are processed in our facilities by maintaining comprehensive service centers that continuously analyze market prices, logistics, market demands and product quality.

Recycling brokerage services — We also provide recycling brokerage services, which involve managing the marketing of recyclable materials for third parties. The experience of our recycling operations in managing recycling commodities for our own operations gives us the expertise needed to effectively manage volumes for third parties. Utilizing the resources and knowledge of our recycling operations' service centers, we can assist customers in marketing and selling their recycling commodities with minimal capital requirements.

Some of the recyclable materials processed in our MRFs are purchased from various sources, including third parties and our own operations. The price we pay for recyclable materials is often referred to as a "rebate." In some cases, rebates are based on fixed contractual rates or on defined minimum per-ton rates but are generally based upon the price we receive for sales of processed goods, market conditions and transportation costs. As a result, changes in commodity prices for recycled materials also significantly affect the rebates we pay to our suppliers and depending on the key terms of the agreement are recorded as either operating expenses or a reduction in operating revenues within our Consolidated Statements of Operations, subsequent to the adoption of Accounting Standards Update ("ASU") 2014-09 on January 1, 2018. See Note 2 to the Consolidated Financial Statements for additional information. In recent years, we have been focused on revising our rebate structures to ensure that we cover our cost of handling and processing the materials and generate an acceptable margin on the materials we process and sell.

Other. Other services we provide include the following:

Although many waste management services such as collection and disposal are local services, our strategic accounts organization, which is managed by our Strategic Business Solutions ("WMSBS") organization, works with customers whose locations span the U.S. and Canada. Our strategic accounts program provides centralized customer service, billing and management of accounts to streamline the administration of customers multiple locations' waste management needs.

Our Energy and Environmental Services ("EES") organization offers our customers in all Areas a variety of services in collaboration with our Area and strategic accounts programs, including (i) construction and remediation services; (ii) services associated with the disposal of fly ash, residue generated from the combustion of coal and other fuel stocks; (iii) in-plant services, where our employees work full-time inside our customers' facilities to provide full-service waste management solutions and consulting services; this service is managed through our EES organization but reflected principally in our collection line of business and (iv) specialized disposal services for oil and gas exploration and production operations; revenues for this service are also reflected principally in our collection line of business. Our vertically integrated waste management operations enable us to provide customers with full management of their waste. The breadth of our service offerings and the familiarity we have with waste management practices gives us the unique ability to assist customers in minimizing the amount of waste they generate, identifying recycling opportunities, determining the most efficient means available for waste collection and disposal and ensuring that disposal is achieved in a manner that is both reflective of the current regulatory environment and environmentally friendly.

We develop, operate and promote projects for the beneficial use of landfill gas through our WM Renewable Energy organization. Landfill gas is produced naturally as waste decomposes in a landfill. The methane component of the landfill gas is a readily available, renewable energy source that can be gathered and used beneficially as an alternative to fossil fuel. The U.S. Environmental Protection Agency (“EPA”) endorses landfill gas as a renewable energy resource, in the

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same category as wind, solar and geothermal resources. As of December 31, 2018, we had 130 landfill gas beneficial use projects producing commercial quantities of methane gas at owned or operated landfills. For 101 of these projects, the processed gas is used to fuel electricity generators. The electricity is then sold to public utilities, municipal utilities or power cooperatives. For 15 of these projects, the landfill gas is processed to pipeline-quality natural gas and then sold to natural gas suppliers. For 14 of these projects, the gas is used at the landfill or delivered by pipeline to industrial customers as a direct substitute for fossil fuels in industrial processes.

We continue to invest in businesses and technologies that are designed to offer services and solutions ancillary or supplementary to our current operations. These investments include joint ventures, acquisitions and partial ownership interests. The solutions and services include the collection of project waste, including construction debris and household or yard waste, through our Bagster® program; the development, operation and marketing of plasma gasification facilities; operation of a landfill gas-to-liquid natural gas plant; solar powered trash compactors and organic waste-to-fuel conversion technology. We also have expanded service offerings and solutions including fluorescent bulb and universal waste mail-back through our LampTracker® program; portable restroom servicing under the name Port-o-Let®; and street and parking lot sweeping services.

Competition

We encounter intense competition from governmental, quasi-governmental and private sources in all aspects of our operations. We principally compete with large national waste management companies, counties and municipalities that maintain their own waste collection and disposal operations and regional and local companies of varying sizes and financial resources. The industry also includes companies that specialize in certain discrete areas of waste management, operators of alternative disposal facilities, companies that seek to use parts of the waste stream as feedstock for renewable energy and other by-products, and waste brokers that rely upon haulers in local markets to address customer needs. In recent years, the industry has seen some additional consolidation, though the industry remains intensely competitive.

Operating costs, disposal costs and collection fees vary widely throughout the areas in which we operate. The prices that we charge are determined locally, and typically vary by volume and weight, type of waste collected, treatment requirements, risk of handling or disposal, frequency of collections, distance to final disposal sites, the availability of airspace within the geographic region, labor costs and amount and type of equipment furnished to the customer. We face intense competition in our Solid Waste business based on pricing and quality of service. We have also begun competing for business based on breadth of service offerings. As companies, individuals and communities look for ways to be more sustainable, we are investing in greener technologies and promoting our comprehensive services that go beyond our core business of collecting and disposing of waste.

Seasonal Trends

Our operating revenues tend to be somewhat higher in summer months, primarily due to the higher construction and demolition waste volumes. The volumes of industrial and residential waste in certain regions where we operate also tend to increase during the summer months. Our second and third quarter revenues and results of operations typically reflect these seasonal trends.

Service disruptions caused by severe storms, extended periods of inclement weather or climate extremes resulting from climate change can significantly affect the operating results of the Areas affected. On the other hand, certain destructive weather and climate conditions, such as wildfires in the Western U.S. and hurricanes that most often impact our operations in the Southern and Eastern U.S. during the second half of the year, can increase our revenues in the Areas affected. While weather-related and other event driven special projects can boost revenues through additional work for a limited time, as a result of significant start-up costs and other factors, such revenue can generate earnings at comparatively lower margins.

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Employees

As of December 31, 2018, we had approximately 43,700 full-time employees, of which approximately 8,200 were employed in administrative and sales positions and the balance in operations. Approximately 8,300 of our employees are covered by collective bargaining agreements.

Financial Assurance and Insurance Obligations

Financial Assurance

Municipal and governmental waste service contracts generally require contracting parties to demonstrate financial responsibility for their obligations under the contract. Financial assurance is also a requirement for (i) obtaining or retaining disposal site or transfer station operating permits; (ii) supporting certain variable-rate tax-exempt debt and (iii) estimated final capping, closure, post-closure and environmental remedial obligations at many of our landfills. We establish financial assurance using surety bonds, letters of credit, insurance policies, trust and escrow agreements and financial guarantees. The type of assurance used is based on several factors, most importantly: the jurisdiction, contractual requirements, market factors and availability of credit capacity.

Surety bonds and insurance policies are supported by (i) a diverse group of third-party surety and insurance companies; (ii) an entity in which we have a noncontrolling financial interest or (iii) a wholly-owned insurance captive, the sole business of which is to issue surety bonds and/or insurance policies on our behalf. Letters of credit generally are supported by our long-term U.S. and Canadian revolving credit facility ("$2.75 billion revolving credit facility") and other credit facilities established for that purpose.

Insurance

We carry a broad range of insurance coverages, including general liability, automobile liability, workers' compensation, real and personal property, directors' and officers' liability, pollution legal liability and other coverages we believe are customary to the industry. Our exposure to loss for insurance claims is generally limited to the per-incident deductible under the related insurance policy. In December 2017, we elected to use a wholly-owned insurance captive to insure the deductibles for our general liability, automobile liability and workers' compensation claims programs. As of December 31, 2018, both our commercial General Liability Insurance Policy and our workers' compensation insurance program carried self-insurance exposures of up to $5 million per incident. As of December 31, 2018, our automobile liability insurance program included a per-incident deductible of up to $10 million. We do not expect the impact of any known casualty, property, environmental or other contingency to have a material impact on our financial condition, results of operations or cash flows. Our estimated insurance liabilities as of December 31, 2018 are summarized in Note 10 to the Consolidated Financial Statements.

Regulation

Our business is subject to extensive and evolving federal, state or provincial and local environmental, health, safety and transportation laws and regulations. These laws and regulations are administered by the EPA, Environment Canada, and various other federal, state, provincial and local environmental, zoning, transportation, land use, health and safety agencies in the U.S. and Canada. Many of these agencies regularly examine our operations to monitor compliance with these laws and regulations and have the power to enforce compliance, obtain injunctions or impose civil or criminal penalties in case of violations.

Because the primary mission of our business is to collect and manage solid waste in an environmentally sound manner, a significant amount of our capital expenditures is related, either directly or indirectly, to environmental protection measures, including compliance with federal, state, provincial and local rules. There are costs associated with siting, design, permitting, operations, monitoring, site maintenance, corrective actions, financial assurance, and facility closure and post-closure obligations. With acquisition, development or expansion of a waste management or disposal facility or transfer station, we must often spend considerable time, effort and money to obtain or maintain required permits and approvals. There are no assurances that we will be able to obtain or maintain required governmental approvals. Once obtained, operating permits are subject to renewal, modification, suspension or revocation by the issuing agency. Compliance with current regulations and future requirements could require us to make significant capital and operating expenditures. However, most of these expenditures are made in the normal course of business and do not place us at any competitive disadvantage.

In recent years, we perceived an increase in both the amount of government regulation and the number of enforcement actions being brought by regulatory entities against operations in the waste services industry. The current U.S. presidential administration has called for substantial changes to foreign trade policy and has generally appeared to be in favor of reducing regulation, including environmental regulation. We cannot predict what impact the current administration will have on regulations impacting our industry, especially given the number of rules currently in litigation, nor can we predict the timing of any such changes. Reduction of regulation may have a favorable impact on our operating costs, but the extensive environmental regulation applicable to landfills is a substantial barrier to entry that benefits our Company. Moreover, the risk reduction provided by stringent regulation is valuable to our customers and the communities we serve.

The primary U.S. federal statutes affecting our business are summarized below:

- The Resource Conservation and Recovery Act of 1976 (“RCRA”), as amended, regulates handling, transporting and disposing of hazardous and non-hazardous waste and delegates authority to states to develop programs to ensure the safe disposal of solid waste. In 1991, the EPA issued final regulations under Subtitle D of RCRA, which set forth minimum federal performance and design criteria for solid waste landfills. These regulations are typically implemented by the states, although states can impose requirements that are more stringent than the Subtitle D standards. We incur costs in complying with these standards in the ordinary course of our operations. In December 2018, the EPA signed a final rule that establishes management standards for pharmaceutical wastes that are classified as hazardous wastes. The requirements of the rule apply primarily to healthcare facilities and reverse distributors of hazardous waste pharmaceuticals and include a broad prohibition on disposal of hazardous waste pharmaceuticals in sewage systems. The rule is not currently anticipated to materially affect our industry, but we do expect that it will create new waste volumes for disposal at facilities permitted to incinerate hazardous waste. Also, in December 2018, the EPA published an Advanced Notice of Proposed Rulemaking to consider whether to propose revisions to the MSW Landfill criteria to support advances in liquids management. The notice does not reopen any existing regulations; we will review the topic for both risks and opportunities for our business and respond appropriately.
- The Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended, (“CERCLA”) which is also known as Superfund, provides for federal authority to respond directly to releases or threatened releases of hazardous substances into the environment that have created actual or potential environmental hazards. CERCLA’s primary means for addressing such releases is to impose strict liability for cleanup of disposal sites upon current and former site owners and operators, generators of the hazardous substances at the site and transporters who selected the disposal site and transported substances thereto. Liability under CERCLA is not dependent on the intentional release of hazardous substances; it can be based upon the release or threatened release of hazardous substances, even resulting from lawful, unintentional and attentive action, as the term is defined by CERCLA and other applicable statutes and regulations. The EPA may issue orders requiring responsible parties to perform response actions at sites, or the EPA may seek recovery of funds expended or to be expended in the future at sites. Liability may include contribution for cleanup costs incurred by a defendant in a CERCLA civil action or by an entity that has previously resolved its liability to federal or state regulators in an administrative or judicially-approved settlement. Liability under CERCLA could also include obligations to a potentially responsible party (“PRP”) that voluntarily expends site clean-up costs. Further, liability for damage to publicly-owned natural resources may also be imposed. We are subject to potential liability under CERCLA as an owner or operator of facilities at which hazardous substances have been disposed and as a generator or transporter of hazardous

substances disposed of at other locations.

- The Federal Water Pollution Control Act of 1972, as amended, known as the Clean Water Act, regulates the discharge of pollutants into streams, rivers, groundwater, or other surface waters from a variety of sources, including solid and hazardous waste disposal sites. If our operations discharge any pollutants into surface waters, the Clean Water Act requires us to apply for and obtain discharge permits, conduct sampling and monitoring, and, under certain circumstances, reduce the quantity of pollutants in those discharges. In 1990, the EPA issued additional standards for management of storm water run-off that require landfills and other waste-handling facilities to obtain storm water discharge permits. Also, if a landfill or other facility discharges wastewater through a sewage system to a publicly-owned treatment works, the facility must comply with discharge limits imposed by the treatment works. Further, before the development or expansion of a landfill can alter or affect "wetlands," a permit may have to be obtained providing for mitigation or replacement wetlands. The Clean Water Act provides for civil, criminal and administrative penalties for violations of its provisions.

· The Clean Air Act of 1970, as amended, provides for federal, state and local regulation of the emission of air pollutants. Certain of our operations are subject to the requirements of the Clean Air Act, including large municipal solid waste landfills and landfill gas-to-energy facilities. In 1996 the EPA issued new source performance standards ("NSPS") and emission guidelines controlling landfill gases from new and existing large landfills. In January 2003, the EPA issued Maximum Achievable Control Technology ("MACT") standards for municipal solid waste landfills subject to the NSPS. These regulations impose limits on air emissions from large municipal solid waste landfills, subject most of these landfills to certain operating permit requirements under Title V of the Clean Air Act and, in many instances, require installation of landfill gas collection and control systems to control emissions or to treat and utilize landfill gas on- or off-site. On August 29, 2016, the EPA published two rules with new requirements for landfill gas control and monitoring at both new municipal solid waste landfills (constructed or modified after July 17, 2014) as well as existing landfills (operating after November 8, 1987 and not modified after July 17, 2014). Working with our trade associations and other landfill owners and operators, we identified significant legal, technical and implementation concerns with the rules and together filed a judicial appeal of the rules while also filing administrative petitions asking that the EPA stay the rules and initiate a rulemaking process, which the EPA has convened. The EPA is also reviewing the landfill MACT standards to determine whether revisions are warranted. A court has required that this Risk Technology Review must be completed, and a final rule issued by March 2020. We cannot predict the outcome of either rulemaking process; however, we do not believe regulatory changes, if determined, will have a material adverse impact on our business as a whole.

The EPA and the Department of Transportation finalized Greenhouse Gas Emissions and Fuel Efficiency Standards for Medium and Heavy-Duty Engines and Vehicles – Phase 2 on August 16, 2016. The rule will increase fuel economy standards and reduce vehicle emissions standards for our collection fleet between model years 2021 and 2027. We expect to be able to purchase fully compliant vehicles that will meet our operational needs, and while the regulations could increase the costs of operating our fleet, we do not believe any such regulations would have a material adverse impact on our business as a whole.

· The Occupational Safety and Health Act of 1970, as amended, ("OSHA") establishes certain employer responsibilities, including maintenance of a workplace free of recognized hazards likely to cause death or serious injury, compliance with standards promulgated by the Occupational Safety and Health Administration, and various reporting and record keeping obligations as well as disclosure and procedural requirements. Various standards for notices of hazards, safety in excavation and demolition work and the handling of asbestos, may apply to our operations. The Department of Transportation and OSHA, along with other federal agencies, have jurisdiction over certain aspects of hazardous materials and hazardous waste, including safety, movement and disposal. Various state and local agencies with jurisdiction over disposal of hazardous waste may seek to regulate movement of hazardous materials in areas not otherwise preempted by federal law.

We are also actively monitoring the following recent regulatory developments affecting our business:

· In 2010, the EPA issued the Prevention of Significant Deterioration ("PSD") and Title V Greenhouse Gas ("GHG") Tailoring Rule, which expanded the EPA's federal air permitting authority to include the six GHGs, including methane and carbon dioxide. The rule sets new thresholds for GHG emissions that define when Clean Air Act permits are required. The requirements of these rules have not significantly affected our operations or cash flows, due to the tailored thresholds and exclusions of certain emissions from regulation.

Since 2014, decisions from the U.S Supreme Court and U.S. Court of Appeals for the D.C Circuit, as well as EPA policy memorandum, have significantly narrowed the applicability and scope of EPA permitting requirements for GHGs from stationary sources, including with respect to biogenic carbon dioxide (“CO2”) permitting. In

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2016, the EPA proposed revisions to the PSD and Title V GHG permitting regulations establishing a significant emissions rate (“SER”) threshold, below which sources would not be required to implement additional control technologies for their GHG emissions. This SER threshold should prevent most of our operational changes, such as landfill expansions and beneficial gas recovery projects, from being subject to PSD or Title V permit requirements due to our GHG emissions – assuming the EPA classifies biogenic CO2 emissions from municipal solid waste and landfill gas as carbon neutral. The EPA has not yet finalized this rulemaking. The EPA also has not yet finalized its policy for addressing biogenic CO2 emissions from waste management; however, the EPA’s independent Science Advisory Board has recommended it treat waste-derived CO2 emissions as carbon-neutral. These recent judicial and regulatory actions have reduced, and are expected to continue to reduce, the potential impact of the PSD and Title V GHG Tailoring Rule on our air permits, compliance and operating requirements. See Item 1A. Risk Factors — The adoption of climate change legislation or regulations restricting emissions of “greenhouse gases” could increase our costs to operate.

Other recent regulatory actions to increase the stringency of certain National Ambient Air Quality Standards (“NAAQS”) could affect the cost, timeliness and availability of air permits for new and modified large municipal solid waste landfills and landfill gas-to-energy facilities. However, the EPA under the current administration is reviewing the implementation of the new NAAQS and considering revisions to make the regulations less stringent. While we cannot predict the ultimate outcome of potential revisions to NAAQS, we do not believe that the ultimate requirements will have a material adverse impact on our business as a whole.

We continue to anticipate the needs of our customers, which includes investing in and developing ever-more-advanced recycling and reuse technologies. Potential climate change, GHG regulatory, and corporate sustainability initiatives have influenced our business strategy to provide low-carbon services to our customers, and we increasingly view our ability to offer lower carbon services as a key component of our business growth. If the U.S. were to impose a carbon tax or other form of GHG regulation increasing demand for low-carbon service offerings in the future, the services we are developing will be increasingly valuable.

- In December 2014, the EPA issued a final rule regulating the disposal and beneficial use of coal combustion residuals (“CCR”). This codification of the CCR rule provides utilities with a stable regulatory regime and encourages beneficial use of CCR in encapsulated uses (e.g., used in cement or wallboard), and use according to established industry standards (e.g., application of sludge for agricultural enrichment). The EPA also deemed disposal and beneficial use of CCR at permitted municipal solid waste landfills exempt from the new regulations because the RCRA Subtitle D standards applicable at municipal solid waste landfills provide at least equivalent protection. The new standards are consistent with our approach to handling CCR at our sites currently, and the new standards have provided a growth opportunity for the Company. States may impose standards more stringent than the federal program, and under the 2016 Water Infrastructure Improvements for the Nation Act, may receive approval to run permitting programs for CCR in their states. In 2018, the U.S. Court of Appeals for the D.C Circuit vacated significant portions of the 2014 final rule and remanded the rule to the EPA for further revision. Because vacated elements of the rule had allowed for the continued operation of unlined CCR ash ponds, the ongoing EPA rulemaking may further expand the Company’s opportunity to provide CCR disposal services.
- In May 2016, the EPA established lifetime health advisories for certain per- and polyfluoroalkyl substances (“PFAS”), a group of man-made chemicals that have been manufactured and used globally since the 1940s in products such as textiles, fire suppressants, cookware, packaging and plastics. PFAS are typically very persistent in the environment and can be found in water, soil and air. Citing concerns about potential adverse human health effects from exposure to PFAS, several states have recently enacted new drinking water, surface water and/or groundwater limits for various PFAS, and the EPA has stated that it will be considering additional regulatory action related to the compounds. We are working with both the EPA and state regulatory agencies to maintain compliance with these evolving PFAS standards and anticipate additional expense that will result from these efforts

State, Provincial and Local Regulations

There are also various state or provincial and local regulations that affect our operations. Each state and province in which we operate has its own laws and regulations governing solid waste disposal, water and air pollution, and, in most cases, releases and cleanup of hazardous substances and liabilities for such matters. States and provinces have also adopted regulations governing the design, operation, maintenance and closure of landfills and transfer stations. Some counties, municipalities and other local governments have adopted similar laws and regulations. Our facilities and operations are likely to be subject to these types of requirements.

Our landfill operations are affected by the increasing preference for alternatives to landfill disposal. Many state and local governments mandate recycling and waste reduction at the source and prohibit the disposal of certain types of waste, such as yard waste, food waste and electronics at landfills. The number of state and local governments with recycling requirements and disposal bans continues to grow, while the logistics and economics of recycling the items remain challenging.

Various states have enacted, or are considering enacting, laws that restrict the disposal within the state of solid waste generated outside the state. While laws that overtly discriminate against out-of-state waste have been found to be unconstitutional, some laws that are less overtly discriminatory have been upheld in court. From time to time, the U.S. Congress has considered legislation authorizing states to adopt regulations, restrictions, or taxes on the importation of out-of-state or out-of-jurisdiction waste. Additionally, several state and local governments have enacted “flow control” regulations, which attempt to require that all waste generated within the state or local jurisdiction be deposited at specific sites. In 1994, the U.S. Supreme Court ruled that a flow control ordinance that gave preference to a local facility that was privately owned was unconstitutional, but in 2007, the Court ruled that an ordinance directing waste to a facility owned by the local government was constitutional. The U.S. Congress’ adoption of legislation allowing restrictions on interstate transportation of out-of-state or out-of-jurisdiction waste or certain types of flow control, or courts’ interpretations of interstate waste and flow control legislation, could adversely affect our solid and hazardous waste management services.

Additionally, regulations establishing extended producer responsibility (“EPR”) are being considered or implemented in many places around the world, including in the U.S. and Canada. EPR regulations are designed to place either partial or total responsibility on producers to fund the post-use life cycle of the products they create. Along with the funding responsibility, producers may be required to take over management of local recycling programs by taking back their products from end users or managing the collection operations and recycling processing infrastructure. There is no federal law establishing EPR in the U.S. or Canada; however, state, provincial and local governments could take, and in some cases have taken, steps to implement EPR regulations. If wide-ranging EPR regulations were adopted, they could have a fundamental impact on the waste, recycling and other streams we manage and how we operate our business, including contract terms and pricing.

Many states, provinces and local jurisdictions have enacted “fitness” laws that allow the agencies that have jurisdiction over waste services contracts or permits to deny or revoke these contracts or permits based on the applicant’s or permit holder’s compliance history. Some states, provinces and local jurisdictions go further and consider the compliance history of the parent, subsidiaries or affiliated companies, in addition to the applicant or permit holder. These laws authorize the agencies to make determinations of an applicant’s or permit holder’s fitness to be awarded a contract to operate, and to deny or revoke a contract or permit because of unfitness, unless there is a showing that the applicant or permit holder has been rehabilitated through the adoption of various operating policies and procedures put in place to assure future compliance with applicable laws and regulations. While fitness laws can present potential increased costs and barriers to entry into market areas, these laws have not, and are not expected to have a material adverse impact on our business as a whole.

Recycling; Foreign Import and Export Regulations

Enforcement or implementation of foreign and domestic regulations can affect our ability to export products. A significant portion of the fiber that we market has been shipped to export markets across the globe, particularly China.

In 2013, the Chinese government began to strictly enforce regulations that establish limits on moisture and non-conforming materials that may be contained in imported recycled paper and plastics and restrict the import of certain other plastic recyclables. In 2017, the Chinese government announced a ban on certain materials, including mixed waste paper and mixed plastics, effective January 1, 2018, as well as extremely restrictive quality requirements effective March 1, 2018 that have been difficult for the industry to achieve. Many other markets, both domestic and foreign, have tightened their quality expectations as well. In addition, other countries have limited or restricted the import of certain recyclables.

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Single stream MRFs process a wide range of commingled materials and tend to receive a higher percentage of non-recyclables, which results in increased processing and residual disposal costs to achieve quality standards. Also in 2017, the Chinese government began to limit the flow of material into the country by restricting the issuance of required import licenses. The use of restrictions on import licenses to restrict flow into China continued in 2018 and is expected to continue to constrict in 2019. Additionally, increased container weight tracking and port fees have driven up operating costs in the recycling industry and have resulted in increased price volatility. The current U.S. presidential administration has made substantial changes to foreign trade policy and imposed increases in tariffs on international trade. In response, China has imposed new tariffs on the import of recyclable commodities, including wastepaper, plastics and metals. Such restrictions and tariffs may have a significant impact on our recycling operations.

In recent years, we have been revising our service agreements to address increased costs and are working with stakeholders to educate the public on the need to recycle properly. We are investing time and labor and working with customers to help improve quality. However, there is uncertainty about the industry's ability to adapt to the stricter quality expectations. We have been actively working to identify alternative markets for recycled commodities, but it is possible there may not be sufficient demand for all of the material we produce, resulting in price decreases and volatility. Industry trade organizations and government agencies are engaged in discussions to mitigate long-term impacts to recycling programs and the industry as a whole.

With a heightened awareness of the global problems of plastic waste in the environment, an increasing number of cities across the country have passed ordinances banning certain types of plastics from sale or use. Bans on single use plastic bags, straws, and polystyrene food containers have been passed in over 350 cities, and a ban on single use plastic bags has been implemented in the State of California. These bans have increased pressure by manufacturers on our recycling facilities to accept a broader array of materials in curbside recycling programs to alleviate public pressures to ban the sale of those materials. However, with no viable end markets for recycling these materials, we and other recyclers are working to educate and remind customers of the need for end market demand and economic viability to support sustainable recycling programs.

Regulation of Oil and Gas Exploration, Production and Disposal

Our EES organization provides specialized environmental management and disposal services for fluids used and wastes generated by customers engaged in oil and gas exploration and production, and these disposal services include use of underground injection wells. There is heightened federal regulatory focus on emissions of methane that occur during drilling and transportation of natural gas, as well as state attention to protective disposal of drilling residuals. There also remains heightened attention from the public, some states and the EPA to the alleged potential for hydraulic fracturing that occurs during drilling to impact drinking water supplies. Increased regulation of oil and gas exploration and production, including GHG emissions or hydraulic fracturing, could make it more difficult or cost-prohibitive for our EES customers to continue operations, adversely affecting our business.

Additionally, any new regulations regarding the treatment and disposal of wastes associated with exploration and production operations, including through use of injection wells, could increase our costs to provide oilfield services and reduce our margins and revenue from such services. Conversely, any loosening of regulations regarding how such wastes are handled or disposed of could adversely affect our business, as we believe the size, capital structure, regulatory sophistication and established reliability of our Company provide us with an advantage in providing services that must comply with any complex regulatory regime that may govern providing oilfield waste services.

Emissions from Natural Gas Fueling and Infrastructure

We operate a large fleet of natural gas vehicles, and we plan to continue to invest in these assets for our collection fleet. As of December 31, 2018, we were operating 7,621 natural gas trucks and 123 natural gas fueling facilities; 25 of these fueling stations also serve the public, and in some cases our facilities serve the fleet of pre-approved third parties. Concerns have been raised about the potential for emissions from the fueling stations and infrastructure that serve natural gas-fueled vehicles. We have partnered with the environmental organization Environmental Defense Fund, as well as other heavy-duty equipment users and experts, on an emissions study to be made available to policy makers. We anticipate that

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this comprehensive study of emissions from our heavy-duty fleet may ultimately help inform regulations that will affect equipment manufacturers and will define operating procedures across the industry. Additional regulation of, or restrictions on, natural gas fueling infrastructure or reductions in associated tax incentives could increase our operating costs. We are not yet able to evaluate potential operating changes or costs associated with such regulations, but we do not anticipate that such regulations would have a material adverse impact on our business or our future investment in natural gas vehicles.

Renewable Fuel Production

We have invested, and continue to invest, in facilities to capture and treat renewable natural gas ("RNG") from the Company's landfills, and we use RNG from landfill biogas in approximately 30% of our natural gas collection vehicles. The Energy Policy Act of 2005 and Energy Independence and Security Act of 2007 authorize the Renewable Fuels Standards ("RFS") program that promotes the production and use of renewable transportation fuels. The Company is an EPA-registered producer of transportation fuel making compressed and liquefied RNG from landfill biogas, which qualifies as a cellulosic biofuel under the RFS program. Oil refiners and importers are required through the RFS program to blend specified volumes of various categories of renewable transportation fuels with gasoline or buy credits, referred to as renewable identification numbers ("RINs"), from renewable fuel producers. The market value for RINs is tied to renewable fuel volumes set by the EPA annually, and the final 2019 required volumes for cellulosic biofuel are 45% higher than in 2018. The EPA is required to develop a rulemaking this year that will set required volume requirements for a three year period from 2020 through 2022. Based on the overall political framework and the upcoming rulemakings, we anticipate a stable market for the Company's RINs.

Federal, State and Local Climate Change Initiatives; Sustainability

In light of regulatory and business developments related to concerns about climate change, we have identified a strategic business opportunity to provide our public and private sector customers with sustainable solutions to reduce their GHG emissions. As part of our on-going marketing evaluations, we assess customer demand for and opportunities to develop waste services offering verifiable carbon reductions, such as waste reduction, increased recycling, and conversion of landfill gas and discarded materials into electricity and fuel. We use carbon life cycle tools in evaluating potential new services and in establishing the value proposition that makes us attractive as an environmental service provider. We are active in support of public policies that encourage development and use of lower carbon energy and waste services that lower users' carbon footprints. We understand the importance of broad stakeholder engagement in these endeavors, and actively seek opportunities for public policy discussion on more sustainable materials management practices. In addition, we work with stakeholders at the federal and state level in support of legislation that encourages production and use of renewable, low-carbon fuels and electricity. Despite the announcement that the U.S. will withdraw from the Paris Climate Accords, we have seen no reduction in customer demand for services aligned with their GHG reduction goals and strategies. Moreover, we have seen initiatives at the federal, state and local level to enhance the environmental benefits in terms of GHG reductions realized by recycling programs by focusing on reducing contamination in the recyclable material.

We continue to assess the physical risks to company operations from the effects of severe weather events and use risk mitigation planning to increase our resiliency in the face of such events. We are investing in infrastructure to withstand more severe storm events, which may afford us a competitive advantage and reinforce our reputation as a reliable service provider through continued service in the aftermath of such events.

Consistent with our Company's long-standing commitment to corporate sustainability and environmental stewardship, we have published our 2018 Sustainability Report, "Driving Change," which details the GHG emissions reductions we have facilitated to date and our determination to expand these reductions in the future, as well as our commitment to help make the communities in which we live and work safe, resilient and sustainable. The information in this report can be found at our Company website but does not constitute a part of this Form 10-K. The Company actively participates in a number of sustainability reporting programs and frameworks, including the Dow Jones Sustainability Index, where we are "Sector Leader" for Commercial Services, the CDP, where we are among "A List" companies, and the Sustainability Accounting Standards Board, on which we serve as a member of the Board's advisory council.

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Item 1A. Risk Factors.

In an effort to keep our stockholders and the public informed about our business, we may make "forward-looking statements." Forward-looking statements usually relate to future events and anticipated revenues, earnings, cash flows or other aspects of our operations or operating results. Forward-looking statements are often identified by the words, "will," "may," "should," "continue," "anticipate," "believe," "expect," "plan," "forecast," "project," "estimate," "intend" and w nature and generally include statements containing:

· projections about accounting and finances;
· plans and objectives for the future;
· projections or estimates about assumptions relating to our performance; or
· our opinions, views or beliefs about the effects of current or future events, circumstances or performance.

You should view these statements with caution. These statements are not guarantees of future performance, circumstances or events. They are based on facts and circumstances known to us as of the date the statements are made. All aspects of our business are subject to uncertainties, risks and other influences, many of which we do not control. Any of these factors, either alone or taken together, could have a material adverse effect on us and could change whether any forward-looking statement ultimately turns out to be true. Additionally, we assume no obligation to update any forward-looking statement as a result of future events, circumstances or developments. The following discussion should be read together with the Consolidated Financial Statements and the notes thereto. Outlined below are some of the risks that we believe could affect our business and financial statements for 2019 and beyond and that could cause actual results to be materially different from those that may be set forth in forward-looking statements made by the Company.

The waste industry is highly competitive, and if we cannot successfully compete in the marketplace, our business, financial condition and operating results may be materially adversely affected.

We encounter intense competition from governmental, quasi-governmental and private sources in all aspects of our operations. We principally compete with large national waste management companies, counties and municipalities that maintain their own waste collection and disposal operations and regional and local companies of varying sizes and financial resources. The industry also includes companies that specialize in certain discrete areas of waste management, operators of alternative disposal facilities, companies that seek to use parts of the waste stream as feedstock for renewable energy and other by-products, and waste brokers that rely upon haulers in local markets to address customer needs. In recent years, the industry has seen some additional consolidation, though the industry remains intensely competitive. Counties and municipalities may have financial competitive advantages because tax revenues are available to them and tax-exempt financing is more readily available to them. Also, such governmental units may attempt to impose flow control or other restrictions that would give them a competitive advantage. In addition, some of our competitors may have lower financial expectations, allowing them to reduce their prices to expand sales volume or to win competitively-bid contracts, including large national accounts and exclusive franchise arrangements with municipalities. When this happens, we may lose customers and be unable to execute our pricing strategy, resulting in a negative impact to our revenue growth from yield on base business.

If we fail to implement our business strategy, our financial performance and our growth could be materially and adversely affected.

Our future financial performance and success are dependent in large part upon our ability to implement our business strategy successfully. Implementation of our strategy will require effective management of our operational, financial and human resources and will place significant demands on those resources. See Item 1. Business for more information on our business strategy.

There are risks involved in pursuing our strategy, including the following:

· Our employees, customers or investors may not embrace and support our strategy.

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- We may not be able to hire or retain the personnel necessary to manage our strategy effectively.
    - A key element of our strategy is yield management through focus on price leadership, which has presented challenges to keep existing business and win new business at reasonable returns. We have also continued our environmental fee, fuel surcharge and regulatory recovery fee to offset costs. The loss of volumes as a result of price increases and our unwillingness to pursue lower margin volumes may negatively affect our cash flows or results of operations. Additionally, we have in the past and continue to face purported class action lawsuits related to our customer service agreements, prices and fees.
- We may be unsuccessful in implementing improvements to operational efficiency and such efforts may not yield the intended result.
- We may not be able to maintain cost savings achieved through optimization efforts.
- Strategic decisions with respect to our asset portfolio may result in impairments to our assets. See Item 1A. Risk Factors — We may record material charges against our earnings due to impairments to our assets.
- Our ability to make strategic acquisitions depends on our ability to identify desirable acquisition targets, negotiate advantageous transactions despite competition for such opportunities, fund such acquisitions on favorable terms, obtain regulatory approvals and realize the benefits we expect from those transactions.
- Acquisitions, investments and/or new service offerings may not increase our earnings in the timeframe anticipated, or at all, due to difficulties operating in new markets or providing new service offerings, failure of emerging technologies to perform as expected, failure to operate within budget, integration issues, or regulatory issues, among others.
- Integration of acquisitions and/or new services offerings could increase our exposure to the risk of inadvertent noncompliance with applicable laws and regulations.
- Liabilities associated with acquisitions, including ones that may exist only because of past operations of an acquired business, may prove to be more difficult or costly to address than anticipated.
    - Execution of our strategy, particularly growth through acquisitions, may cause us to incur substantial additional indebtedness, which may divert capital away from our traditional business operations and other financial plans.
- We continue to seek to divest underperforming and non-strategic assets if we cannot improve their profitability. We may not be able to successfully negotiate the divestiture of underperforming and non-strategic operations, which could result in asset impairments or the continued operation of low-margin businesses.

In addition to the risks set forth above, implementation of our business strategy could also be affected by factors beyond our control, such as increased competition, legal developments, government regulation, general economic conditions, increased operating costs or expenses, subcontractor costs and availability and changes in industry trends. We may decide to alter or discontinue certain aspects of our business strategy at any time. If we are not able to implement our business strategy successfully, our long-term growth and profitability may be adversely affected. Even if we are able to implement some or all of the initiatives of our business strategy successfully, our operating results may not improve to the extent we anticipate, or at all.

Compliance with existing or increased future regulations and/or enforcement of such regulations may restrict or change our operations, increase our operating costs or require us to make additional capital expenditures, and a decrease in regulation may lower barriers to entry for our competitors.

Stringent government regulations at the federal, state, provincial and local level in the U.S. and Canada have a substantial impact on our business, and compliance with such regulations is costly. Many complex laws, rules, orders and interpretations govern environmental protection, health, safety, land use, zoning, transportation and related matters.

Among other things, governmental regulations and enforcement actions may restrict our operations and adversely affect our financial condition, results of operations and cash flows by imposing conditions such as:

- limitations on siting and constructing new waste disposal, transfer, recycling or processing facilities or on expanding existing facilities;
- limitations, regulations or levies on collection and disposal prices, rates and volumes;
- limitations or bans on disposal or transportation of out-of-state waste or certain categories of waste;
- mandates regarding the management of solid waste, including requirements to recycle, divert or otherwise process certain waste, recycling and other streams; or
- limitations or restrictions on the recycling, processing or transformation of waste, recycling and other streams.

Regulations affecting the siting, design and closure of landfills could require us to undertake investigatory or remedial activities, curtail operations or close landfills temporarily or permanently. Future changes in these regulations may require us to modify, supplement or replace equipment or facilities. The costs of complying with these regulations could be substantial.

We also have significant financial obligations relating to final capping, closure, post-closure and environmental remediation at our existing landfills. We establish accruals for these estimated costs, but we could underestimate such accruals because of the types of waste collected and manner in which it is transported and disposed of, including actions taken in the past by companies we have acquired or third-party landfill operators or due to new information about waste types previously collected, among other reasons. Environmental regulatory changes could accelerate or increase capping, closure, post-closure and remediation costs, requiring our expenditures to materially exceed our current accruals.

In order to develop, expand or operate a landfill or other waste management facility, we must have various facility permits and other governmental approvals, including those relating to zoning, environmental protection and land use. The permits and approvals are often difficult, time consuming and costly to obtain and could contain conditions that limit our operations.

Various states have enacted, or are considering enacting, laws that restrict the disposal within the state of solid waste generated outside the state. From time to time, the U.S. Congress has considered legislation authorizing states to adopt regulations, restrictions, or taxes on the importation of out-of-state or out-of-jurisdiction waste. Additionally, several state and local governments have enacted “flow control” regulations, which attempt to require that all waste generated within the state or local jurisdiction be deposited at specific sites. The U.S. Congress’ adoption of legislation allowing restrictions on interstate transportation of out-of-state or out-of-jurisdiction waste certain types of flow control, or courts’ interpretations of interstate waste and flow control legislation, could adversely affect our solid and hazardous waste management services.

Additionally, regulations establishing extended producer responsibility (“EPR”) are being considered or implemented in many places around the world, including in the U.S. and Canada. EPR regulations are designed to place either partial or total responsibility on producers to fund the post-use life cycle of the products they create. Along with the funding responsibility, producers may be required to take over management of local recycling programs by taking back their products from end users or managing the collection operations and recycling processing infrastructure. There is no federal law establishing EPR in the U.S. or Canada; however, state, provincial and local governments could, and in some cases have, taken steps to implement EPR regulations. If wide-ranging EPR regulations were adopted, they could have a fundamental impact on the waste streams we manage and how we operate our business, including contract terms and pricing. A significant reduction in the waste, recycling and other streams we manage could have a material adverse effect on our financial condition, results of operations and cash flows.

In recent years, we perceived an increase in both the amount of government regulation and the number of enforcement actions being brought by regulatory entities against operations in the waste services industry. The current U.S. presidential administration has called for substantial changes to foreign trade policy and has generally appeared to be in favor of reducing regulation, including environmental regulation. We cannot predict what impact the current administration will have on the political and regulatory environment in the U.S., the timing of any such changes, or the impact of any such changes on our business. Reduction of regulation may have a favorable impact on our operating costs, but the extensive environmental regulation applicable to landfills is a substantial barrier to entry that benefits our Company. Moreover, the risk reduction provided by stringent regulation is valuable to our customers and the communities we serve. It is likely that some policies adopted by the current administration will benefit us and others will negatively affect us.

Our revenues, earnings and cash flows will fluctuate based on changes in commodity prices, and commodity prices for recyclable materials are particularly susceptible to volatility based on regulations and tariffs that affect our ability to export products.

Our recycling operations process for sale certain recyclable materials, including fibers, aluminum and plastics, which are subject to significant market price fluctuations. Most of the recyclables that we process for sale are paper fibers, including old corrugated cardboard and old newsprint, and a significant portion of the fiber that we market has been shipped to export markets across the globe, particularly China. In 2013, the Chinese government began to strictly enforce regulations that establish limits on moisture and non-conforming materials that may be contained in imported recycled paper and plastics and restrict the import of certain other plastic recyclables. In 2017, the Chinese government announced a ban on certain materials, including mixed waste paper and mixed plastics, effective January 1, 2018, as well as extremely restrictive quality requirements effective March 1, 2018 that have been difficult for the industry to achieve. Many other markets, both domestic and foreign, have tightened their quality expectations as well. In addition, other countries have limited or restricted the import of certain recyclables. Single stream MRFs process a wide range of commingled materials and tend to receive a higher percentage of non-recyclables, which results in increased processing and residual disposal costs to achieve quality standards. Also in 2017, the Chinese government began to limit the flow of material into the country by restricting the issuance of required import licenses. The use of restrictions on import licenses to restrict flow into China continued in 2018 and is expected to continue in 2019. The current U.S. presidential administration has made substantial changes to foreign trade policy and imposed increases in tariffs on international trade. In response, China has imposed new tariffs on the import of recyclable commodities, including wastepaper, plastics and metals. If the Chinese government's regulations and tariffs or initiatives or other similar regulations, tariffs or initiatives result in further reduced demand or increased operating costs, the profitability of our recycling operations may decline.

We have been actively working to identify alternative markets for recycled commodities, but it is possible there may not be sufficient demand for all of the material we produce, resulting in price decreases and increased volatility. The fluctuations in the market prices or demand for these commodities can affect our operating income and cash flows negatively, as we experienced in 2018 or positively, as we experienced in 2017 and 2016. As we have increased the size of our recycling operations, we have also increased our exposure to commodity price fluctuations.

The decline in market prices in 2018 for recycling commodities resulted in a decrease in revenue of $273 million. The increase in market prices in 2017 and 2016 for recycling commodities resulted in increases in revenue of $237 million and $51 million, respectively. Additionally, under some agreements, our recycling operations are required to pay rebates to suppliers. In some cases, if we experience higher revenues based on increased market prices for recycling commodities, the rebates we pay will also increase. In other circumstances, the rebates may be subject to a floor, such that as market prices decrease, any expected profit margins on materials subject to the rebate floor are reduced or eliminated. As we work to revise service agreements to mitigate the impact of commodity price fluctuations, the potential increase in the cost for recycling services may make it more difficult for us to win bids and may slow the growth of recycling overall.

Fluctuation in energy prices also affects our business, including recycling of plastics manufactured from petroleum products. Significant variations in the price of methane gas, electricity and other energy-related products that are marketed and sold by our landfill gas recovery operations can result in a corresponding significant impact to our revenue from yield from such operations. Additionally, we provide specialized disposal services for oil and gas exploration and production operations through our EES organization. Demand for these services decreases when drilling activity slows due to depressed oil and gas prices, such as the low prices throughout the last few years. Any of the commodity prices to which we are subject may fluctuate substantially and without notice in the future.

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Changes in regulations applicable to oil and gas exploration, production and disposal could adversely affect our EES organization.

Our EES organization provides specialized environmental management and disposal services for fluids used and wastes generated by customers engaged in oil and gas exploration and production, and these disposal services include the use of underground injection wells. Demand for these services may be adversely affected if drilling activity slows due to regulation and industry conditions beyond our control, in addition to changes in oil and gas prices. There is heightened federal regulatory focus on emissions of methane that occur during drilling and transportation, as well as state attention to protective disposal of drilling residuals. There also remains heightened attention from the public, some states and the EPA to the alleged potential for hydraulic fracturing that occurs during drilling to impact drinking water supplies. Increased regulation of oil and gas exploration and production, including GHG emissions or hydraulic fracturing, could make it more difficult or cost-prohibitive for our EES customers to continue operations, adversely affecting our business.

Additionally, any new regulations regarding the treatment and disposal of wastes associated with exploration and production operations, including through the use of injection wells, could increase our costs to provide oilfield services and reduce our margins and revenue from such services. Conversely, any loosening of regulations regarding how such wastes are handled or disposed of could adversely impact demand for our EES services.

Changes to the regulatory framework related to renewable fuel standards could affect our financial performance in that sector as a renewable fuel producer.

The Company acts as a renewable fuel producer in the RFS program enacted by Congress under the Energy Policy Act and Energy Independence and Security Act. Oil refiners and importers are required through the RFS program to blend specified volumes of renewable transportation fuels with gasoline or buy credits, referred to as RINs, from renewable fuel producers. The Company has invested, and continues to invest, in facilities to capture and treat renewable natural gas from the Company’s landfills so that we can participate in the program. The value of the RINs associated with our landfill gas is set through a market established by the program. Changes in the RFS market or the structure of the RFS program could reduce the value of landfill gas RINs and negatively impact the financial performance of the facilities constructed to capture and treat the gas.

Increasing customer preference for alternatives to landfill disposal and bans on certain types of waste could reduce our landfill volumes and cause our revenues and operating results to decline.

Our customers are increasingly diverting waste to alternatives to landfill disposal, such as recycling and composting, while also working to reduce the amount of waste they generate. In addition, many state and local governments mandate diversion, recycling and waste reduction at the source and prohibit the disposal of certain types of waste, such as yard waste, food waste and electronics at landfills. Where such organic waste is not banned from the landfill, some large customers such as grocery stores and restaurants are choosing to divert their organic waste from landfills. Zero-waste goals (sending no waste to the landfill) have been set by many of North America’s largest companies. Although such mandates and initiatives help to protect our environment, these developments reduce the volume of waste going to our landfills which may affect the prices that we can charge for landfill disposal. Our landfills currently provide our highest income from operations margins. If we are not successful in expanding our service offerings and growing lines of businesses to service waste streams that do not go to landfills and to provide services for customers that wish to reduce waste entirely, then our revenues and operating results may decline. Additionally, despite the development of new service offerings and lines of business, it is possible that our revenues and our income from operations margins could be negatively affected due to disposal alternatives.

Additionally, with a heightened awareness of the global problems of plastic waste in the environment, an increasing number of cities across the country have passed ordinances banning certain types of plastics from sale or use. Bans on single use plastic bags, straws, and polystyrene food containers have been passed in over 350 cities, and a ban on single use plastic bags has been implemented in the State of California. These bans have increased pressure by manufacturers on our recycling facilities to accept a broader array of materials in curbside recycling programs to alleviate public pressure to ban the sale of those materials. However, there are currently no viable end markets for recycling these materials and inclusion of such materials in our recycling stream can increase contamination of the recycling stream and negatively affect the results of our recycling operations.

Developments in technology could trigger a fundamental change in the waste management industry, as waste streams are increasingly viewed as a resource, which may adversely impact volumes at our landfills and our profitability.

Our Company and others have recognized the value of the traditional waste stream as a potential resource. Research and development activities are on-going to provide disposal alternatives that maximize the value of waste, including using waste as a source for renewable energy and other valuable by-products. We and many other companies are investing in these technologies. It is possible that such investments and technological advancements may reduce the cost of waste disposal or the value of landfill gas recovery to a level below our costs and may reduce the demand for landfill space. As a result, our revenues and margins could be adversely affected due to advancements in disposal alternatives.

If we are not able to develop new service offerings and protect intellectual property, or if a competitor develops or obtains exclusive rights to a breakthrough technology, our financial results may suffer.

Our existing and proposed service offerings to customers may require that we invest in, develop or license, and protect new technologies. Research and development of new technologies and investment in emerging technologies often requires significant spending that may divert capital investment away from our traditional business operations. We may experience difficulties or delays in the research, development, production and/or marketing of new products and services or emerging technologies in which we have invested, which may negatively impact our operating results and prevent us from recouping or realizing a return on the investments required to bring new products and services to market. Further, protecting our intellectual property rights and combating unlicensed copying and use of intellectual property is difficult, and any inability to obtain or protect new technologies could impact our services to customers and development of new revenue sources. Our Company and others are increasingly focusing on new technologies that provide alternatives to traditional disposal and maximize the resource value of waste. If a competitor develops or obtains exclusive rights to a “breakthrough technology” that provides a revolutionary change in traditional waste management, or if we have inferior intellectual property to our competitors, our financial results may suffer.

Our business depends on our reputation and the value of our brand.

We believe we have developed a reputation for high-quality service, reliability and social and environmental responsibility, and we believe our brand symbolizes these attributes. The Waste Management brand name, trademarks and logos and our reputation are powerful sales and marketing tools, and we devote significant resources to promoting and protecting them. Adverse publicity, whether or not justified, relating to activities by our operations, employees or agents could tarnish our reputation and reduce the value of our brand. Damage to our reputation and loss of brand equity could reduce demand for our services. This reduction in demand, together with the dedication of time and expense necessary to defend our reputation, could have an adverse effect on our financial condition, liquidity and results of operations, as well as require additional resources to rebuild our reputation and restore the value of our brand.

Our operations are subject to environmental, health and safety laws and regulations, as well as contractual obligations that may result in significant liabilities.

There is risk of incurring significant environmental liabilities in the use, treatment, storage, transfer and disposal of waste materials. Under applicable environmental laws and regulations, we could be liable if our operations cause environmental damage to our properties or to the property of other landowners, particularly as a result of the contamination of air, drinking water or soil. Under current law, we could also be held liable for damage caused by conditions that existed before we acquired the assets or operations involved and for conditions resulting from waste types or compounds previously considered non-hazardous but later determined to present possible threat to public health or the environment. The risks of successor liability and emerging contaminants are of particular concern as we execute our growth strategy, partially though acquisitions, because we may be unsuccessful in identifying and assessing potential liabilities during our due diligence investigations. Further, the counterparties in such transactions may be unable to perform their indemnification obligations owed to us. Any substantial liability for environmental damage could have a material adverse effect on our financial condition, results of operations and cash flows.

In the ordinary course of our business, we have in the past, we are currently, and we may in the future, become involved in legal and administrative proceedings relating to land use and environmental laws and regulations. These include proceedings in which:

- agencies of federal, state, local or foreign governments seek to impose liability on us under applicable statutes, sometimes involving civil or criminal penalties for violations, or to revoke or deny renewal of a permit we need; and
- local communities, citizen groups, landowners or governmental agencies oppose the issuance of a permit or approval we need, allege violations of the permits under which we operate or laws or regulations to which we are subject, or seek to impose liability on us for environmental damage.

We generally seek to work with the authorities or other persons involved in these proceedings to resolve any issues raised. If we are not successful, the adverse outcome of one or more of these proceedings could result in, among other things, material increases in our costs or liabilities as well as material charges for asset impairments.

Further, we often enter into agreements with landowners imposing obligations on us to meet certain regulatory or contractual conditions upon site closure or upon termination of the agreements. Compliance with these agreements inherently involves subjective determinations and may result in disputes, including litigation. Costs to remediate or restore the condition of closed sites may be significant.

General economic conditions can directly and adversely affect our revenues and our income from operations margins.

Our business is directly affected by changes in national and general economic factors that are outside of our control, including consumer confidence, interest rates and access to capital markets. A weak economy generally results in decreased consumer spending and decreases in volumes of waste generated, which negatively impacts the ability to grow through new business or service upgrades, and may result in customer turnover and reduction in customers' waste service needs. Consumer uncertainty and the loss of consumer confidence may also reduce the number and variety of services requested by customers. Additionally, a weak market for consumer goods can significantly decrease demand by paper mills for recycled corrugated cardboard used in packaging; such decrease in demand can negatively impact commodity prices and our operating income and cash flows.

A decrease in waste volumes generated results in an increase in competitive pricing pressure, and such economic conditions may also interfere with our ability to implement our pricing strategy. Many of our contracts have price adjustment provisions that are tied to an index such as the Consumer Price Index, and our costs may increase more than the increase, if any, in the Consumer Price Index. This is partially due to our relatively high fixed-cost structure, which is difficult to quickly adjust to match shifting volume levels and vendor costs, which may not correlate with the Consumer Price Index or the waste industry.

Some of our customers, including governmental entities, have suffered financial difficulties affecting their credit risk, which could negatively impact our operating results.

We provide service to a number of governmental entities and municipalities, some of which have suffered significant financial difficulties in recent years, due in part to reduced tax revenue and/or high cost structures. Some of these entities could be unable to pay amounts owed to us or renew contracts with us at previous or increased rates.

Many non-governmental customers have also suffered serious financial difficulties, including bankruptcy in some cases. Purchasers of our recycling commodities can be particularly vulnerable to financial difficulties in times of commodity price volatility. The inability of our customers to pay us in a timely manner or to pay increased rates, particularly large national accounts, could negatively affect our operating results.

In addition, the financial difficulties of municipalities could result in a decline in investors' demand for municipal bonds and a correlating increase in interest rates. As of December 31, 2018, we had $705 million of tax-exempt bonds with term interest rate periods that expire within the next 12 months and $513 million of variable-rate tax-exempt bonds with interest rates reset on either a daily or a weekly basis. If market dynamics resulted in repricing of our tax-exempt bonds at significantly higher interest rates, we would incur increased interest expenses that may negatively affect our operating results and cash flows.

We may be unable to obtain or maintain required permits or to expand existing permitted capacity of our landfills, which could decrease our revenue and increase our costs.

Our ability to meet our financial and operating objectives depends in part on our ability to obtain and maintain the permits necessary to operate landfill sites. Permits to build, operate and expand solid waste management facilities, including landfills and transfer stations, have become more difficult and expensive to obtain and maintain. Permits often take years to obtain as a result of numerous hearings and compliance requirements with regard to zoning, environmental and other regulations. These permits are also often subject to resistance from citizen or other groups and other political pressures. Local communities and citizen groups, adjacent landowners or governmental agencies may oppose the issuance of a permit or approval we may need, allege violations of the permits under which we currently operate or laws or regulations to which we are subject, or seek to impose liability on us for environmental damage. Responding to these challenges has, at times, increased our costs and extended the time associated with establishing new facilities and expanding existing facilities. In addition, failure to receive regulatory and zoning approval may prohibit us from establishing new facilities or expanding existing facilities. Our failure to obtain the required permits to operate our landfills could have a material adverse impact on our financial condition, results of operations and cash flows.

Significant shortages in diesel fuel supply or increases in diesel fuel prices will increase our operating expenses.

The price and supply of diesel fuel can fluctuate significantly based on international, political and economic circumstances, as well as other factors outside our control, such as actions by the Organization of the Petroleum Exporting Countries ("OPEC") and other oil and gas producers, regional production patterns, weather conditions and environmental concerns. We need diesel fuel to run a significant portion of our collection and transfer trucks and our equipment used in our landfill operations. Supply shortages could substantially increase our operating expenses. Additionally, if fuel prices increase, our direct operating expenses increase and many of our vendors raise their prices to offset their own rising costs. We have in place a fuel surcharge program, designed to offset increased fuel expenses; however, we may not be able to pass through all of our increased costs and some customers' contracts prohibit any pass-through of the increased costs. Additionally, lawsuits have challenged our fuel and environmental charges included on our invoices. Regardless of any offsetting surcharge programs, increased operating costs due to higher diesel fuel prices will decrease our income from operations margins.

We have an extensive natural gas truck fleet, which makes us partially dependent on the availability of natural gas and fueling infrastructure and vulnerable to natural gas prices.

We operate a large fleet of natural gas vehicles, and we plan to continue to invest in these assets for our collection fleet. However, natural gas fueling infrastructure is not yet broadly available in North America; as a result, we have constructed and operate natural gas fueling stations, some of which also serve the public or pre-approved third parties. It will remain necessary for us to invest capital in fueling infrastructure in order to power our natural gas fleet. Concerns have been raised about the potential for emissions from fueling infrastructure that serve natural gas-fueled vehicles. New regulation of, or restrictions on, natural gas fueling infrastructure or reductions in associated tax incentives could increase our operating costs. Additionally, fluctuations in the price and supply of natural gas could substantially increase our operating expenses, and a reduction in the existing cost differential between natural gas and diesel fuel could materially reduce the benefits we anticipate from our investment in natural gas vehicles. Further, our fuel surcharge program is currently indexed to diesel fuel prices, and price fluctuations for natural gas may not effectively be recovered by this program.

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We are increasingly dependent on technology in our operations and if our technology fails, our business could be adversely affected.

We may experience problems with the operation of our current information technology systems or the technology systems of third parties on which we rely, as well as the development and deployment of new information technology systems, that could adversely affect, or even temporarily disrupt, all or a portion of our operations until resolved. Inabilities and delays in implementing new systems can also affect our ability to realize projected or expected cost savings. Additionally, any systems failures could impede our ability to timely collect and report financial results in accordance with applicable laws and regulations.

A cybersecurity incident could negatively impact our business and our relationships with customers and expose us to litigation risk.

Substantially all aspects of our business operations rely on digital technology. We use computers, mobile devices, social networking and other online platforms to connect with our employees and our customers. Such uses give rise to cybersecurity risks, including security breach, espionage, system disruption, theft and inadvertent release of information. Our business involves the storage and transmission of numerous classes of sensitive and/or confidential information and intellectual property, including customers' personal information, private information about employees, and financial and strategic information about the Company and its business partners. We also rely on a Payment Card Industry compliant third party to protect our customers' credit card information.

We are regularly the target of attempted cyber intrusions, and we must commit substantial resources to continuously monitor and further develop our networks and infrastructure to prevent, detect, and address the risk of unauthorized access, misuse, computer viruses and other events. Our preventative measures and incident response efforts may not be effective in all cases. The theft, destruction, loss, misappropriation, or release of sensitive and/or confidential information or intellectual property, or interference with our information technology systems or the technology systems of third parties on which we rely, could result in business disruption, direct financial loss, negative publicity, brand damage, violation of privacy laws, loss of customers, potential litigation and liability and competitive disadvantage.

Further, as the Company pursues its strategy to grow through acquisitions and to pursue new initiatives that improve our operations and cost structure, the Company is also expanding and improving its information technologies, resulting in a larger technological presence and corresponding exposure to cybersecurity risk. Certain new technologies, such as use of autonomous vehicles, remote-controlled equipment and virtual reality, present new and significant cybersecurity safety risks that must be analyzed and addressed before implementation. If we fail to assess and identify cybersecurity risks associated with acquisitions and new initiatives, we may become increasingly vulnerable to such risks.

Our operating expenses could increase as a result of labor unions organizing or changes in regulations related to labor unions.

Labor unions continually attempt to organize our employees, and these efforts will likely continue in the future. Certain groups of our employees are currently represented by unions, and we have negotiated collective bargaining agreements with these unions. Additional groups of employees may seek union representation in the future, and, if successful, would enhance organized labor's leverage to obtain higher than expected wage and benefits costs and resist the introduction of new technology and other initiatives, which can result in increased operating expenses and lower net income. If we are unable to negotiate acceptable collective bargaining agreements, our operating expenses could increase significantly as a result of work stoppages, including strikes. Any of these matters could adversely affect our financial condition, results of operations and cash flows.

We could face significant liabilities for withdrawal from Multiemployer Pension Plans.

We are a participating employer in a number of trustee-managed multiemployer defined benefit pension plans ("Multiemployer Pension Plans") for employees who are covered by collective bargaining agreements. In the event of our withdrawal from a Multiemployer Pension Plan, we may incur expenses associated with our obligations for unfunded vested benefits at the time of the withdrawal. Depending on various factors, future withdrawals could have a material adverse effect on results of operations or cash flows for a particular reporting period. We have previously withdrawn from certain underfunded Multiemployer Pension Plans, and we recognized related expenses of $3 million and $12 million in 2018 and 2017, respectively. In 2016, we did not recognize any charges for the withdrawal from Multiemployer Pension Plans. See Notes 9 and 10 to the Consolidated Financial Statements for more information related to our participation in Multiemployer Pension Plans.

Our business is subject to operational and safety risks, including the risk of personal injury to employees and others.

Providing environmental and waste management services, including constructing and operating landfills, transfer stations, MRFs and other disposal facilities, involves risks such as truck accidents, equipment defects, malfunctions and failures. Additionally, we closely monitor and manage landfills to minimize the risk of waste mass instability, releases of hazardous materials, and odors that could be triggered by weather or natural disasters. There may also be risks presented by the potential for subsurface heat reactions causing elevated landfill temperatures and increased production of leachate, landfill gas and odors. We also build and operate natural gas fueling stations, some of which also serve the public or third parties. Operation of fueling stations and landfill gas collection and control systems involves additional risks of fire and explosion. Any of these risks could potentially result in injury or death of employees and others, a need to shut down or reduce operation of facilities, increased operating expense and exposure to liability for pollution and other environmental damage, and property damage or destruction.

While we seek to minimize our exposure to such risks through comprehensive training, compliance and response and recovery programs, as well as vehicle and equipment maintenance programs, if we were to incur substantial liabilities in excess of any applicable insurance, our business, results of operations and financial condition could be adversely affected. Any such incidents could also tarnish our reputation and reduce the value of our brand. Additionally, a major operational failure, even if suffered by a competitor, may bring enhanced scrutiny and regulation of our industry, with a corresponding increase in operating expense.

We have substantial financial assurance and insurance requirements, and increases in the costs of obtaining adequate financial assurance, or the inadequacy of our insurance coverages, could negatively impact our liquidity and increase our liabilities.

The amount of insurance we are required to maintain for environmental liability is governed by statutory requirements. We believe that the cost for such insurance is high relative to the coverage it would provide and, therefore, our coverages are generally maintained at the minimum statutorily-required levels. We face the risk of incurring additional costs for environmental damage if our insurance coverage is ultimately inadequate to cover those damages. We also carry a broad range of other insurance coverages that are customary for a company our size. We use these programs to mitigate risk of loss, thereby enabling us to manage our self-insurance exposure associated with claims. The inability of our insurers to meet their commitments in a timely manner and the effect of significant claims or litigation against insurance companies may subject us to additional risks. To the extent our insurers are unable to meet their obligations, or our own obligations for claims are more than we estimated, there could be a material adverse effect to our financial results.

In addition, to fulfill our financial assurance obligations with respect to variable-rate tax-exempt debt, final capping, closure, post-closure and environmental remediation obligations, we generally obtain letters of credit or surety bonds, rely on insurance, including captive insurance, fund trust and escrow accounts or rely upon WM financial guarantees. We currently have in place all financial assurance instruments necessary for our operations. Our financial position, which can be negatively affected by asset impairments, our credit profile and general economic factors, may adversely affect the cost of our current financial assurance instruments, and changes in regulations may impose stricter requirements on the types of financial assurance that will be accepted. Additionally, in the event we are unable to obtain sufficient surety bonding, letters of credit or third-party insurance coverage at reasonable cost, or one or more states cease to view captive insurance as adequate coverage, we would need to rely on other forms of financial assurance. It is possible that we could be forced to deposit cash to collateralize our obligations. Other forms of financial assurance could be more expensive to obtain, and any requirements to use cash to support our obligations would negatively impact our liquidity and capital resources and could affect our ability to meet our obligations as they become due.

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We may record material charges against our earnings due to impairments to our assets.

In accordance with U.S. Generally Accepted Accounting Principles ("GAAP"), we capitalize certain expenditures and advances relating to disposal site development, expansion projects, acquisitions, software development costs and other projects. Events that could, in some circumstances, lead to an impairment include, but are not limited to, shutting down a facility or operation or abandoning a development project or the denial of an expansion permit. Additionally, declining waste volumes and development of, and customer preference for, alternatives to traditional waste disposal could warrant asset impairments. If we determine an asset or expansion project is impaired, we will charge against earnings any unamortized capitalized expenditures and advances relating to such asset or project reduced by any portion of the capitalized costs that we estimate will be recoverable, through sale or otherwise. We also carry a significant amount of goodwill on our Consolidated Balance Sheets, which is required to be assessed for impairment annually, and more frequently in the case of certain triggering events. We may be required to incur charges against earnings if such impairment tests indicate that the fair value of a reporting unit is below its carrying amount. Any such charges could have a material adverse effect on our results of operations.

Our capital requirements and our business strategy could increase our expenses, cause us to change our growth and development plans, or result in an inability to maintain our desired credit profile.

If economic conditions or other risks and uncertainties cause a significant reduction in our cash flows from operations, we may reduce or suspend capital expenditures, growth and acquisition activity, implementation of our business strategy, dividend declarations or share repurchases. We may choose to incur indebtedness to pay for these activities, although our access to capital markets is not assured and we may not be able to incur indebtedness at a cost that is consistent with current borrowing rates. We also may need to incur indebtedness to refinance scheduled debt maturities, and it is possible that the cost of financing could increase significantly, thereby increasing our expenses and decreasing our net income. Further, our ability to execute our financial strategy and our ability to incur indebtedness is somewhat dependent upon our ability to maintain investment grade credit ratings on our senior debt. The credit rating process is contingent upon our credit profile and several other factors, many of which are beyond our control, including methodologies established and interpreted by third-party rating agencies. If we were unable to maintain our investment grade credit ratings in the future, our interest expense would increase and our ability to obtain financing on favorable terms could be adversely affected.

Additionally, we have $2.2 billion of debt as of December 31, 2018 that is exposed to changes in market interest rates within the next 12 months because of the combined impact of our tax-exempt bonds, outstanding borrowings under our commercial paper program and our $2.75 billion revolving credit facility. If interest rates increase, our interest expense would also increase, lowering our net income and decreasing our cash flow.

We may use our $2.75 billion revolving credit facility to meet our cash needs, to the extent available, until maturity in June 2023. As of December 31, 2018, we had C$15 million, or $11 million, of Canadian borrowings outstanding borrowings under this facility. We had $587 million of letters of credit issued and $990 million of outstanding borrowings under our commercial paper program, both supported by this facility, leaving unused and available credit capacity of $1.2 billion as of December 31, 2018. In the event of a default under our credit facility, we could be required to immediately repay all outstanding borrowings and make cash deposits as collateral for all obligations the facility supports, which we may not be able to do. Additionally, any such default could cause a default under many of our other credit agreements and debt instruments. Without waivers from lenders party to those agreements, any such default would have a material adverse effect on our ability to continue to operate.

The adoption of climate change legislation or regulations restricting emissions of "greenhouse gases" could increase our costs to operate.

Our landfill operations emit methane, identified as a GHG. There are a number of legislative and regulatory efforts at the state, regional and federal levels to curtail the emission of GHGs to ameliorate the effect of climate change. Should comprehensive federal climate change legislation be enacted, we expect it could impose costs on our operations that might not be offset by the revenue increases associated with our lower-carbon service options, the materiality of which we cannot predict. In 2010, the EPA published a Prevention of Significant Deterioration and Title V GHG Tailoring Rule, which

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expanded the EPA's federal air permitting authority to include the six GHGs. The rule sets new thresholds for GHG emissions that define when Clean Air Act permits are required. The current requirements of these rules have not significantly affected our operations or cash flows, due to the tailored thresholds and exclusions of certain emissions from regulation. However, if certain changes to these regulations were enacted, such as lowering the thresholds or the inclusion of biogenic emissions, then the amendments could have an adverse effect on our operating costs.

The seasonal nature of our business, severe weather events and event driven special projects cause our results to fluctuate, and prior performance is not necessarily indicative of our future results.

Our operating revenues tend to be somewhat higher in summer months, primarily due to the higher construction and demolition waste volumes. The volumes of industrial and residential waste in certain regions where we operate also tend to increase during the summer months. Our second and third quarter revenues and results of operations typically reflect these seasonal trends.

Service disruptions caused by severe storms, extended periods of inclement weather or climate extremes resulting from climate change can significantly affect the operating results of the Areas affected. On the other hand, certain destructive weather and climate conditions, such as wildfires in the Western U.S. and hurricanes that most often impact our operations in the Southern and Eastern U.S. during the second half of the year, can increase our revenues in the Areas affected. While weather-related and other event driven special projects can boost revenues through additional work for a limited time, due to significant start-up costs and other factors, such revenue can generate earnings at comparatively lower margins.

For these and other reasons, operating results in any interim period are not necessarily indicative of operating results for an entire year, and operating results for any historical period are not necessarily indicative of operating results for a future period. Our stock price may be negatively impacted by interim variations in our results.

We could be subject to significant fines and penalties, and our reputation could be adversely affected, if our businesses, or third parties with whom we have a relationship, were to fail to comply with U.S. or foreign laws or regulations.

Some of our projects and new business may be conducted in countries where corruption has historically been prevalent. It is our policy to comply with all applicable anti-bribery laws, such as the U.S. Foreign Corrupt Practices Act, and with applicable local laws of the foreign countries in which we operate, and we monitor our local partners' compliance with such laws as well. Our reputation may be adversely affected if we were reported to be associated with corrupt practices or if we or our local partners failed to comply with such laws. Such damage to our reputation could adversely affect our ability to grow our business. Additionally, violations of such laws could subject us to significant fines and penalties.

Currently pending or future litigation or governmental proceedings could result in material adverse consequences, including judgments or settlements.

From time to time we are involved in governmental proceedings relating to the conduct of our business. We are also party to civil litigation. As a large company with operations across the U.S. and Canada, we are subject to various proceedings, lawsuits, disputes and claims arising in the ordinary course of our business. Actions that have been filed against us, and that may be filed against us in the future, include personal injury, property damage, commercial, customer, and employment-related claims, including purported state and national class action lawsuits related to:

· alleged environmental contamination, including releases of hazardous materials and odors;

·

sales and marketing practices, customer service agreements, prices and fees; and

- federal and state wage and hour and other laws.

The timing of the final resolutions to these types of matters is often uncertain. Additionally, the possible outcomes or resolutions to these matters could include adverse judgments or settlements, either of which could require substantial payments, adversely affecting our liquidity.

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We may experience adverse impacts on our reported results of operations as a result of adopting new accounting standards or interpretations.

Our implementation of and compliance with changes in accounting rules, including new accounting rules and interpretations, could adversely affect our reported financial position or operating results or cause unanticipated fluctuations in our reported operating results in future periods.

Item 1B. Unresolved Staff Comments.

None.

Item 2. Properties.

Our principal executive offices are in Houston, Texas, where we occupy approximately 345,000 square feet under leases expiring through 2020. We also have administrative offices in Arizona, Connecticut, Illinois and India. We own or lease real property in most locations where we have operations or administrative functions. We have operations in all 50 states except Montana, the District of Columbia and throughout Canada.

Our principal property and equipment consists of land (primarily landfills and other disposal facilities, transfer stations and bases for collection operations), buildings, vehicles and equipment. We believe that our operating properties, vehicles and equipment are adequately maintained and sufficient for our current operations. However, we expect to continue to make investments in additional property and equipment for expansion, for the replacement of aging assets and investment in assets that support our strategy of continuous improvement through efficiency and innovation. For more information, see Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations included within this report.

The following table summarizes our various operations as of December 31:

	2018	2017
Landfills owned or operated (a)	252	249
Transfer stations	314	305
Material recovery facilities	102	90

(a) As of December 31, 2018 and 2017, our landfills owned or operated consisted of total acreage of 157,369 and 156,784; permitted acreage of 42,730 and 42,590; and expansion acreage of 944 and 821, respectively. Total acreage includes permitted acreage, expansion acreage, other acreage available for future disposal that has not been permitted, buffer land and other land. Permitted acreage consists of all acreage at the landfill encompassed by an active permit to dispose of waste. Expansion acreage consists of unpermitted acreage where the related expansion efforts meet our criteria to be included as expansion airspace. A discussion of the related criteria is included within Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations — Critical Accounting Estimates and Assumptions included within this report.

Item 3. Legal Proceedings.

Information regarding our legal proceedings can be found under the Environmental Matters and Litigation sections of Note 10 to the Consolidated Financial Statements included within this report.

Item 4. Mine Safety Disclosures.

Information concerning mine safety and other regulatory matters required by Section 1503(a) of the Dodd-Frank Wall Street Reform and Consumer Protection Act and Item 104 of Regulation S-K is included in Exhibit 95 to this annual report.

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PART II

Item 5. Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities.

Our common stock is traded on the New York Stock Exchange ("NYSE") under the symbol "WM." The number of holders of record of our common stock on February 8, 2019 was 8,942.

The graph below shows the relative investment performance of Waste Management, Inc. common stock, the S&P 500 Index and the Dow Jones Waste & Disposal Services Index for the last five years, assuming reinvestment of dividends at date of payment into the common stock. The graph is presented pursuant to SEC rules and is not meant to be an indication of our future performance.

	12/31/13	12/31/14	12/31/15	12/31/16	12/31/17	12/31/18
Waste Management, Inc.	$ 100	$ 118	$ 127	$ 173	$ 215	$ 226
S&P 500 Index	$ 100	$ 114	$ 115	$ 129	$ 157	$ 150
Dow Jones Waste & Disposal Services Index	$ 100	$ 114	$ 119	$ 144	$ 168	$ 168

The Company repurchases shares of its common stock as part of capital allocation programs authorized by our Board of Directors. We announced in December 2017 that the Board of Directors authorized up to $1.25 billion in future share repurchases. During 2018, we repurchased an aggregate of $1,008 million of our common stock under accelerated share repurchase ("ASR") agreements and open market repurchases, which equated to 11.7 million shares with a weighted average price per share of $86.35. See Note 13 to the Consolidated Financial Statements for additional information.

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The following table summarizes common stock repurchases made during the fourth quarter of 2018 (shares in millions):

Issuer Purchases of Equity Securities

Period	Total Number of Shares Purchased	Average Price Paid per Share		Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs	Approximate Maximum Dollar Value of Shares that May Yet be Purchased Under the Plans or Programs	
October 1 — 31	2.8	$ 89.60	(a)	2.8	$ 252 million	
November 1 — 30	—	$ —		—	$ 252 million	
December 1 — 31	0.5	$ 88.88	(b)	0.5	$ 1.5 billion	(c)
Total	3.3	$ 89.49		3.3		

(a) In October 2018, we completed an ASR agreement that was entered into in July 2018 to repurchase $200 million of our common stock. At the beginning of the repurchase period, we delivered $200 million in cash and received 1.8 million shares. The ASR agreement completed in October 2018, at which time we received 0.4 million additional shares. At the beginning of October, subsequent to the completion of the July 2018 ASR agreement, we repurchased 0.5 million shares of our common stock in open market transactions in compliance with Rule 10b5-1 and Rule 10b 18 of the Exchange Act for $48 million, inclusive of per-share commissions.

At the end of October 2018, we entered into a new ASR agreement to repurchase $200 million of our common stock. At the beginning of the repurchase period, we delivered $200 million in cash and received 1.9 million shares. The October 2018 ASR agreement completed in December 2018.

The “Average Price Paid per Share” in the table represents the final weighted average price per share paid for the completed ASR agreements and the open market repurchases.

(b) In December 2018, we completed the October 2018 ASR agreement discussed above at which time we received 0.4 million additional shares. Subsequent to the completion of the October 2018 ASR agreement, we repurchased an additional 0.1 million shares of our common stock in open market transactions in compliance with Rule 10b5-1 and Rule 10b-18 of the Exchange Act for $10 million, inclusive of per-share commissions. The “Average Price Paid per Share” in the table represents the final weighted average price per share paid for the completed ASR agreement and the open market repurchases.

(c) We announced in December 2018 that the Board of Directors has authorized up to $1.5 billion in future share repurchases, which supersedes and replaces remaining authority under any prior Board of Directors authorization for share repurchases after the completion of our current open market repurchase plan ending February 15, 2019.

Any future share repurchases will be made at the discretion of management and will depend on various factors including our net earnings, financial condition, cash required for future business plans, and growth and acquisitions.

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Item 6. Selected Financial Data.

The information below was derived from the audited Consolidated Financial Statements included within this report and in previous annual reports we filed with the SEC. This information should be read together with those Consolidated Financial Statements and the notes thereto. These historical results are not necessarily indicative of the results to be expected in the future.

	Years Ended December 31,				
	2018(a)	2017(a)	2016(a)	2015	2014
	(In Millions, Except per Share Amounts)				
Statement of Operations Data:					
Operating revenues	$ 14,914	$ 14,485	$ 13,609	$ 12,961	$ 13,996
Consolidated net income	1,923	1,949	1,180	752	1,338
Net income attributable to Waste Management, Inc.	1,925	1,949	1,182	753	1,298
Basic earnings per common share	4.49	4.44	2.66	1.66	2.80
Diluted earnings per common share	4.45	4.41	2.65	1.65	2.79
Cash dividends declared per common share	1.86	1.70	1.64	1.54	1.50
Balance Sheet Data:					
Working capital (deficit) (b)	$ (463)	$ (568)	$ (418)	$ (165)	$ 41
Total assets	22,650	21,829	20,859	20,367	21,252
Long-term debt, including current portion	10,026	9,491	9,310	8,929	9,390
Total Waste Management, Inc. stockholders' equity	6,275	6,019	5,297	5,345	5,866
Total equity	6,276	6,042	5,320	5,367	5,889

(a) For more information see Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations.

(b) Prior year information was revised to conform to our current year presentation.

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations.

This section includes a discussion of our results of operations for the three years ended December 31, 2018. This discussion may contain forward-looking statements that anticipate results based on management's plans that are subject to uncertainty. We discuss in more detail various factors that could cause actual results to differ materially from expectations in Item 1A. Risk Factors. The following discussion should be read considering those disclosures and together with the Consolidated Financial Statements and the notes thereto.

Overview

We are North America's leading provider of comprehensive waste management environmental services. We partner with our residential, commercial, industrial and municipal customers and the communities we serve to manage and reduce waste at each stage from collection to disposal, while recovering valuable resources and creating clean, renewable energy. We own or operate the largest network of landfills in North America. In order to make disposal more practical for larger urban markets, where the distance to landfills is typically farther, we manage transfer stations that consolidate, compact and transport waste efficiently and economically. We also use waste to create energy, recovering the gas produced naturally as waste decomposes in landfills and using the gas in generators to make electricity. Additionally, we are a leading recycler in North America, handling materials that include paper, cardboard, glass, plastic and metal. Our “Solid Waste” business is operated and managed locally by our subsidiaries that focus on distinct geographic areas and provides collection, transfer, disposal, and recycling and resource recovery services. Our “Traditional Solid Waste” business excludes our recycling and resource recovery services. Through our subsidiaries, we are also a leading developer, operator and owner of landfill gas-to-energy facilities in the U.S.

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Our Solid Waste operating revenues are primarily generated from fees charged for our collection, transfer, disposal, and recycling and resource recovery services, and from sales of commodities by our recycling and landfill gas-to-energy operations. Revenues from our collection operations are influenced by factors such as collection frequency, type of collection equipment furnished, type and volume or weight of the waste collected, distance to the disposal facility or material recovery facility and our disposal costs. Revenues from our landfill operations consist of tipping fees, which are generally based on the type and weight or volume of waste being disposed of at our disposal facilities. Fees charged at transfer stations are generally based on the weight or volume of waste deposited, taking into account our cost of loading, transporting and disposing of the solid waste at a disposal site. Recycling revenues generally consist of tipping fees and the sale of recycling commodities to third parties. The fees we charge for our services generally include our environmental fee, fuel surcharge and regulatory recovery fee which are intended to pass through to customers direct and indirect costs incurred. We also provide additional services that are not managed through our Solid Waste business, described under Results of Operations below.

Business Environment

The waste industry is a comparatively mature and stable industry. However, customers increasingly expect more of their waste materials to be recovered and those waste streams are becoming more complex. In addition, many state and local governments mandate diversion, recycling and waste reduction at the source and prohibit the disposal of certain types of waste at landfills. Due to this, we monitor these developments to adapt our services offerings. As companies, individuals and communities look for ways to be more sustainable, we are promoting our comprehensive services that go beyond our core business of collecting and disposing of waste in order to meet their needs.

Despite some industry consolidation in recent years, we encounter intense competition from governmental, quasi-governmental and private service providers based on pricing, service quality, customer experience and breadth of service offerings. We also encounter competition for acquisition and growth opportunities. Our industry is directly affected by changes in general economic factors, as increases and decreases in consumer spending, business expansions and construction starts generally correlate to volumes of waste generated and our revenues. Negative economic conditions, in addition to competitor actions, can make it more challenging to negotiate, renew or expand service contracts with acceptable margins and customers may reduce their service needs. General economic factors and the market for consumer goods, in addition to regulatory developments, can also significantly impact commodity prices for recyclable materials we sell. Our operating expenses are directly impacted by volume levels; as volume levels shift, due to economic and other factors, we must manage our network capacity and cost structure accordingly.

The generally favorable macro-economic environment, including steady spending by consumers and businesses and construction starts, has benefited our volume growth and gross margins in recent quarters. We are not expecting any significant shift in the near term, but there is increased market volatility and uncertainty about longer-term macro-economic indicators. Disruptions in the global movement of recycling commodities, due in part to actions by the Chinese government, resulted in significantly lower average markets prices in 2018 compared to 2017; however, we currently expect market price declines for recycling commodities to moderate in 2019. The recycling industry is continuing to adapt to the heightened quality standards and regulations. In addition, we are also focusing on managing processing costs, developing alternative markets and educating customers to reduce contamination in the recycling stream.

Current Year Financial Results

During 2018, we continued to produce strong operating results from our Traditional Solid Waste business, driven by strong yield and volume growth in our collection and disposal business. Net income and earnings per diluted share both increased primarily as a result of the strong operating results from our Traditional Solid Waste business as well as the favorable impact on our effective tax rate due to enactment of tax reform. The Company continued its commitment to supporting both organic and inorganic growth during 2018, allocating $1,694 million of available cash to capital expenditures and $466 million to the acquisition of solid waste businesses. We also allocated $1,806 million to our shareholders during 2018 through common stock repurchases and dividends.

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Key items of our 2018 financial results include:

- Revenues of $14,914 million for 2018 compared with $14,485 million in 2017, an increase of $429 million, or 3.0%. This increase is primarily attributable to (i) higher volumes due to improving market conditions; (ii) increased yield in our collection and disposal business and (iii) increased recycling brokerage volumes, partially offset by (i) lower market prices for recycling commodities and (ii) fluctuations in foreign currency and other;
- Operating expenses of $9,249 million in 2018, or 62.0% of revenues, compared with $9,021 million, or 62.3% of revenues, in 2017. This increase of $228 million is primarily attributable to higher volumes and cost inflation in the current year period, partially offset by (i) changes in accounting for rebates and certain franchise fees required by the adoption of ASU 2014-09 and (ii) decreased cost of goods sold due to lower market prices for recycling commodities;
- Selling, general and administrative expenses of $1,453 million in 2018, or 9.7% of revenues, compared with $1,468 million, or 10.1% of revenues, in 2017. This decrease of $15 million is primarily attributable to lower incentive compensation accruals partially offset by increased professional fees and bad debt expense;
- Income from operations of $2,789 million, or 18.7% of revenues, in 2018 compared with $2,636 million, or 18.2% of revenues, in 2017, an increase of $153 million;
- Net income attributable to Waste Management, Inc. of $1,925 million, or $4.45 per diluted share, for 2018 as compared with $1,949 million, or $4.41 per diluted share, for 2017. The comparability is impacted by an increase in the effective income tax rate in the current year period of 19% compared with 11% in the prior year period primarily due to the one-time impacts associated with enactment of tax reform in late 2017. The current year was favorably impacted by (i) improved operating results in our Traditional Solid Waste business and (ii) net gains associated with the sale of certain hauling and ancillary operations. Partially offsetting these increases was lower earnings from our recycling line of business due to lower market prices for recycling commodities and the impairment of a landfill;
- Net cash provided by operating activities was $3,570 million in 2018 compared with $3,180 million in 2017; and
- Free cash flow was $2,084 million in 2018 compared with $1,770 million in 2017. The $314 million increase was a result of (i) higher earnings from our Traditional Solid Waste business; (ii) lower income tax payments associated with enactment of tax reform in late 2017 and timing of income tax payments and (iii) divestitures of certain hauling and ancillary operations partially offset by higher capital expenditures to support organic growth in our business. Free cash flow is a non-GAAP measure of liquidity. Refer to Free Cash Flow below for our definition of free cash flow, additional information about our use of this measure, and a reconciliation to net cash provided by operating activities, which is the most comparable GAAP measure.

Results of Operations

Operating Revenues

Our operating revenues set forth below are primarily generated from fees charged for our collection, transfer, disposal, and recycling and resource recovery services, and from sales of commodities by our recycling and landfill gas-to-energy operations. We also provide additional services that are not managed through our Solid Waste business, including both our WMSBS and EES organizations, recycling brokerage services, landfill gas-to-energy services and certain other

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expanded service offerings and solutions. These operations are presented in our "Other" segment in the table below. The following table summarizes revenues during the years ended December 31 (in millions):

	2018	2017	2016
Solid Waste	$ 15,537	$ 14,832	$ 13,968
Other	2,487	2,538	2,278
Intercompany	(3,110)	(2,885)	(2,637)
Total	$ 14,914	$ 14,485	$ 13,609

The mix of operating revenues from our major lines of business is reflected in the table below for the years ended December 31 (in millions):

	2018	2017	2016
Commercial	$ 3,972	$ 3,714	$ 3,480
Residential	2,529	2,528	2,487
Industrial	2,773	2,583	2,412
Other	450	439	423
Total collection	9,724	9,264	8,802
Landfill	3,560	3,370	3,110
Transfer	1,711	1,591	1,512
Recycling	1,293	1,432	1,221
Other (a)	1,736	1,713	1,601
Intercompany (b)	(3,110)	(2,885)	(2,637)
Total	$ 14,914	$ 14,485	$ 13,609

(a) The "Other" line of business includes (i) our WMSBS organization; (ii) our landfill gas-to-energy operations; (iii) certain services within our EES organization, including our construction and remediation services and our services associated with the disposal of fly ash and (iv) certain other expanded service offerings and solutions. In addition, our "Other" line of business reflects the results of non-operating entities that provide financial assurance and self-insurance support, net of intercompany activity.

(b) Intercompany revenues between lines of business are eliminated in the Consolidated Financial Statements included within this report.

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The following table provides details associated with the period-to-period change in revenues and average yield (dollars in millions):

	2018 vs. 2017				2017 vs. 2016			
	Amount	As a % of Related Business(a)	Amount	As a % of Total Company(b)	Amount	As a % of Related Business(a)	Amount	As a % of Total Company(b)
ollection d disposal	$ 291	2.3 %			$ 241	2.0 %		
ecycling mmodities	(273)	(19.1)			237	20.1		
el rcharges d andated es	111	21.3			73	16.3		
otal average eld (c)			$ 129	0.9 %			$ 551	4.1 %
olume			478	3.3			289	2.1
ternal venue owth			607	4.2			840	6.2
cquisitions			199	1.4			48	0.3
vestitures			(133)	(0.9)			(27)	(0.2)
oreign rrency anslation d other			(244)	(1.7)			15	0.1
otal			$ 429	3.0 %			$ 876	6.4 %

(a) Calculated by dividing the increase or decrease for the current year by the prior year's related business revenue adjusted to exclude the impacts of divestitures for the current year.
(b) Calculated by dividing the increase or decrease for the current year by the prior year's total Company revenue adjusted to exclude the impacts of divestitures for the current year.
(c) The amounts reported herein represent the changes in our revenue attributable to average yield for the total Company.

The following provides further details about our period-to-period change in revenues:

Average Yield

Collection and Disposal Average Yield — This measure reflects the effect on our revenue from the pricing activities of our collection, transfer and landfill operations, exclusive of volume changes. Revenue growth from collection and disposal average yield includes not only base rate changes and environmental and service fee increases, but also (i) certain average price changes related to the overall mix of services, which are due to the types of services provided; (ii) changes in average price from new and lost business and (iii) price decreases to retain customers.

Revenue growth from collection and disposal average yield was $291 million, or 2.3%, and $241 million, or 2.0%, for the years ended December 31, 2018 and 2017, respectively. We experienced growth in yield for all of our collection and disposal lines of business in both 2018 and 2017. The period-to-period changes are as follows (dollars in millions):

	2018 vs. 2017		2017 vs. 2016	
	Amount	As a % of Related Business	Amount	As a % of Related Business
Commercial	$ 99	2.9 %	$ 99	3.0 %
Industrial	107	4.4	69	3.1
Residential	47	1.9	44	1.8
Total collection	253	2.9	212	2.6
Landfill	22	1.1	17	0.9
Transfer	16	1.9	12	1.5
Total collection and disposal	$ 291	2.3 %	$ 241	2.0 %

Our increase in collection and disposal yield for the years ended December 31, 2018 and 2017, compared with the prior years, includes increased revenues from our environmental fees of $74 million and $67 million, respectively.

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Recycling Commodities — Fluctuations in the market prices for recycling commodities resulted in revenue decline of $273 million and revenue growth of $237 million for the years ended December 31, 2018 and 2017, respectively, as compared with the prior years. Disruptions in the global movement of recycling commodities began in September 2017 and continued throughout 2018. Average market prices for recycling commodities at the Company's facilities were 40% lower in 2018 compared to 2017. We currently expect market prices for recycling commodities to moderate in 2019.

Fuel Surcharges and Mandated Fees — These revenues, which are predominantly generated by our fuel surcharge program, increased $111 million and $73 million for the years ended December 31, 2018 and 2017, respectively, as compared with the prior years. These revenues fluctuate in response to changes in the national average prices for diesel fuel on which our surcharge is based. Market prices for diesel fuel increased 20% and 15% for the years ended December 31, 2018 and 2017, respectively, compared with the prior years. The mandated fees included in this line item are primarily related to fees and taxes assessed by various state, county and municipal government agencies at our landfills and transfer stations where we are the primary obligor in the contractual arrangement.

Volume

Our revenues from volume increased $478 million, or 3.3%, and $289 million, or 2.1%, for the years ended December 31, 2018 and 2017, respectively, as compared with the prior years. The comparison does not include volumes from acquisitions.

We experienced higher volumes throughout 2018 and 2017 due to our focus on customer service and disciplined growth, combined with favorable market conditions in our Traditional Solid Waste business. We have experienced significant volume growth with existing customers, particularly in our commercial collection business. The volume growth is the result of proactive efforts taken to work with our customers as their businesses expand and grow to identify service upgrade opportunities. Contributors to our volume increase in both 2018 and 2017 included a large new contract addition in the second half of 2017 that continued to favorably impact volume growth for our commercial collection business into 2018. Additionally, a large contract executed in the second half of 2017 increased our volumes at our transfer stations with incremental volume additions during 2018 that will continue to favorably impact our volumes into 2019. The clean-up efforts of natural disasters throughout the U.S. in the second half of 2017 favorably affected our landfill volumes primarily in the fourth quarter of 2017 as compared with 2016 but negatively impacted the comparability of volumes for 2018. Furthermore, our WMSBS organization experienced favorable volume growth in both 2018 and 2017.

Additionally, a volume increase from our recycling brokerage services affected the comparability of volumes for 2018 and 2017. Drivers affecting the comparability of volumes for 2017 and 2016 included a volume increase from an eleven-month outage at a waste-to-energy facility in Virginia that ended in mid-December 2017 offset, in part, by one less workday in 2017 that negatively impacted our volume growth.

Foreign Currency Translation and Other

Fluctuations in foreign currency affect revenues from our Canadian operations. We also experienced revenue decline associated with the adoption of ASU 2014-09 and other changes. See Notes 2 and 3 to the Consolidated Financial Statements for further discussion.

Operating Expenses

Our operating expenses are comprised of (i) labor and related benefits costs (excluding labor costs associated with maintenance and repairs discussed below), which include salaries and wages, bonuses, related payroll taxes, insurance and benefits costs and the costs associated with contract labor; (ii) transfer and disposal costs, which include tipping fees paid to third-party disposal facilities and transfer stations; (iii) maintenance and repairs costs relating to equipment, vehicles and facilities and related labor costs; (iv) subcontractor costs, which include the costs of independent haulers who transport waste collected by us to disposal facilities and are affected by variables such as volumes, distance and fuel prices; (v) costs of goods sold, which includes the cost to purchase recycling materials for our recycling line of business, including certain rebates paid to suppliers; (vi) fuel costs, which represent the costs of fuel and oil to operate our truck fleet and landfill

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operating equipment; (vii) disposal and franchise fees and taxes, which include landfill taxes, municipal franchise fees, host community fees, contingent landfill lease payments and royalties; (viii) landfill operating costs, which include interest accretion on landfill liabilities, interest accretion on and discount rate adjustments to environmental remediation liabilities and recovery assets, leachate and methane collection and treatment, landfill remediation costs and other landfill site costs; (ix) risk management costs, which include general liability, automobile liability and workers' compensation claims programs costs and (x) other operating costs, which include gains and losses on sale of assets, telecommunications, equipment and facility lease expenses, property taxes, utilities and supplies.

The following table summarizes the major components of our operating expenses for the years ended December 31 (dollars in millions):

	2018	Period-to-Period Change		2017	Period-to-Period Change		2016
Labor and related benefits	$ 2,703	$ 203	8.1 %	$ 2,500	$ 90	3.7 %	$ 2,410
Transfer and disposal costs	1,105	109	10.9	996	22	2.3	974
Maintenance and repairs	1,255	85	7.3	1,170	94	8.7	1,076
Subcontractor costs	1,375	139	11.2	1,236	43	3.6	1,193
Cost of goods sold	783	(186)	(19.2)	969	111	12.9	858
Fuel	409	34	9.1	375	75	25.0	300
Disposal and franchise fees and taxes	598	(155)	(20.6)	753	51	7.3	702
Landfill operating costs	331	3	0.9	328	(24)	(6.8)	352
Risk management	235	16	7.3	219	27	14.1	192
Other	455	(20)	(4.2)	475	46	10.7	429
	$ 9,249	$ 228	2.5 %	$ 9,021	$ 535	6.3 %	$ 8,486
Percentage of revenues	62.0 %			62.3 %			62.4 %

The increase in volumes in the current year periods, as discussed above in Operating Revenues, affect the comparability of operating expenses for the periods presented. In addition, cost inflation affects the comparability of operating expenses particularly between 2018 and 2017.

Other significant items affecting the comparison of operating expenses between reported periods include:

Labor and Related Benefits — The increase in labor and related benefits costs in 2018 as compared with 2017 was driven by (i) volume growth in our collection line of business; (ii) a bonus plan established in early 2018 targeted at improving employee retention and (iii) merit increases. The increase in labor and related benefits costs in 2017 as compared with 2016 was due to (i) merit increases; (ii) increased headcount driven by higher volumes and (iii) charges for the withdrawal from certain underfunded Multiemployer Pension Plans. These cost increases were partially offset by one less workday in 2017.

Maintenance and Repairs — The increase in maintenance and repairs costs in 2018 and 2017 as compared with the prior year periods was primarily driven by (i) higher labor costs from volume growth and cost inflation and (ii) higher third-party service and parts costs.

Cost of Goods Sold — The decrease in cost of goods sold in 2018 as compared with 2017 was primarily driven by (i) lower market prices for recycling commodities and (ii) a change in accounting for certain customer rebates due to the adoption of ASU 2014-09 in the current year period. See Notes 2 and 3 to the Consolidated Financial Statements for further discussion of ASU 2014 09. The increase in cost of goods sold in 2017 as compared with 2016 was due to higher market prices for recycling commodities, partially offset by lower costs due to (i) continued efforts to restructure recycling rebates paid to customers and (ii) the divestiture of a majority-owned organics company in 2016.

Fuel — The increase in fuel costs in 2018 as compared with 2017 was due to higher market prices for diesel fuel, partially offset by the recognition of a $28 million benefit from the extension of federal natural gas fuel credits. We recognized the benefit in the first quarter of 2018 when the legislation was passed, though the credits relate to 2017 business

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activity and these credits were not extended into 2018. The increase in fuel costs in 2017 as compared with 2016 was primarily due to (i) higher market prices for diesel fuel; (ii) the expiration of certain natural gas fuel excise tax credits as of December 31, 2016 and (iii) higher volumes in our collection line of business. These cost increases were partially offset by (i) lower costs resulting from the continued conversion of our fleet to natural gas vehicles and (ii) reduced fuel consumption due to efficiency gains in the routing of our fleet.

Disposal and Franchise Fees and Taxes — The decrease in disposal and franchise fees and taxes in 2018 as compared with 2017 was driven by the adoption of ASU 2014-09 in the current year period; specifically, certain franchise fees were treated as disposal fees and taxes in the prior year periods and are treated as a reduction in operating revenues in the current year period. See Notes 2 and 3 to the Consolidated Financial Statements for further discussion of ASU 2014-09. The increase in disposal and franchise fees and taxes in 2017 as compared with 2016 is primarily due to higher landfill volumes and increased municipal franchise fees.

Risk Management — The increase in risk management costs in 2018 and 2017 was primarily due to increases in losses within our self-insured retention.

Other — The decrease in other operating costs in 2018 as compared with 2017 was primarily driven by net gains on sales of certain assets in the current year period. The increase in other operating costs in 2017 as compared with 2016 was principally driven by favorable adjustments to our contingent consideration liabilities associated with certain acquisitions in 2016 and higher operating lease expenses in 2017.

Selling, General and Administrative Expenses

Our selling, general and administrative expenses consist of (i) labor and related benefits costs, which include salaries, bonuses, related insurance and benefits, contract labor, payroll taxes and equity-based compensation; (ii) professional fees, which include fees for consulting, legal, audit and tax services; (iii) provision for bad debts, which includes allowances for uncollectible customer accounts and collection fees and (iv) other selling, general and administrative expenses, which include, among other costs, facility-related expenses, voice and data telecommunication, advertising, bank charges, computer costs, travel and entertainment, rentals, postage and printing. In addition, the financial impacts of litigation settlements generally are included in our “Other” selling, general and administrative expenses.

The following table summarizes the major components of our selling, general and administrative expenses for the years ended December 31 (dollars in millions):

	2018	Period-to-Period Change		2017	Period-to-Period Change		2016
Labor and related benefits	$ 957	$ (43)	(4.3) %	$ 1,000	$ 32	3.3 %	$ 968
Professional fees	113	11	10.8	102	5	5.2	97
Provision for bad debts	53	11	26.2	42	2	5.0	40
Other	330	6	1.9	324	19	6.2	305
	$ 1,453	$ (15)	(1.0) %	$ 1,468	$ 58	4.1 %	$ 1,410
Percentage of revenues	9.7 %			10.1 %			10.4 %

Significant items affecting the comparison of our selling, general and administrative expenses between reported periods include:

Labor and Related Benefits — The decrease in labor and related benefits costs in 2018 compared with 2017 was primarily due to (i) lower incentive compensation accruals in the current year period and (ii) severance costs for former executives incurred in 2017 partially offset by merit increases and a bonus plan established in early 2018 targeted at improving employee retention. The increase in labor and related benefits costs in 2017 compared with 2016 was primarily due to (i) merit increases; (ii) higher incentive compensation accruals and (iii) higher severance costs for former executives in 2017.

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Professional Fees — The increase in professional fees in 2018 compared with 2017 was primarily due to the investments we are making in technology to improve our operations and our customer service and higher legal fees.

Provision for Bad Debts — Our provision for bad debts increased in 2018 compared with 2017 primarily due to (i) an increase in revenues and (ii) the bankruptcy of a strategic customer in our WMSBS organization.

Other — The increase in other expenses in 2018 compared with 2017 was primarily due to higher litigation settlements in 2018, which were partially offset by lower costs associated with advertising and travel and entertainment as we continued to focus on controlling costs. The increase in other expenses in 2017 compared with 2016 was primarily due to favorable litigation settlements in 2016 and charitable contributions made for hurricane relief efforts in 2017.

Depreciation and Amortization Expenses

The following table summarizes the components of our depreciation and amortization expenses for the years ended December 31 (dollars in millions):

	2018	Period-to-Period Change		2017	Period-to-Period Change		2016
Depreciation of tangible property and equipment	$ 838	$ 55	7.0 %	$ 783	$ 10	1.3 %	$ 773
Amortization of landfill airspace	538	41	8.2	497	69	16.1	428
Amortization of intangible assets	101	5	5.2	96	(4)	(4.0)	100
	$ 1,477	$ 101	7.3 %	$ 1,376	$ 75	5.8 %	$ 1,301
Percentage of revenues	9.9 %			9.5 %			9.6 %

The increase in depreciation of tangible property and equipment during 2018 as compared to 2017 is primarily due to increased capital expenditures to support organic growth in our business. The increase in amortization of landfill airspace during 2018 and 2017 as compared with the prior year periods is primarily due to higher volumes at our landfills and changes in our landfill estimates.

(Gain) Loss from Divestitures, Asset Impairments and Unusual Items, Net

The following table summarizes the major components of (gain) loss from divestitures, asset impairments and unusual items, net for the years ended December 31 (in millions):

	2018	2017	2016
(Gain) loss from divestitures	$ (96)	$ (38)	$ 9
Asset impairments	38	41	59
Other	—	(19)	44
	$ (58)	$ (16)	$ 112

During the year ended December 31, 2018, we recognized net gains of $58 million, primarily related to (i) a $52 million gain associated with the sale of certain hauling operations in Tier 1 and (ii) net gains of $44 million substantially all from divestitures of certain ancillary operations. These gains were partially offset by (i) a $30 million charge to impair a landfill in Tier 3 based on an internally developed discounted projected cash flow analysis, taking into account continued volume decreases and revised capping cost estimates and (ii) $8 million of impairment charges primarily related to our LampTracker® reporting unit.

During the year ended December 31, 2017, we recognized net gains of $16 million, primarily related to (i) gains of $31 million from the sale of certain oil and gas producing properties and (ii) a $30 million reduction in post-closing, performance-based contingent consideration obligations associated with an acquired business in our EES organization. These gains were partially offset by (i) $34 million of goodwill impairment charges primarily related to our EES organization; (ii) $11 million of charges to adjust our subsidiary’s estimated potential share of an environmental

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remediation liability and related costs for a closed site in Harris County, Texas, as discussed in Note 10 to the Consolidated Financial Statements and (iii) $7 million of charges to write down certain renewable energy assets.

During the year ended December 31, 2016, we recognized net charges of $112 million, primarily related to (i) $44 million of charges to adjust our subsidiary's estimated potential share of an environmental remediation liability and related costs for a closed site in Harris County, Texas, as discussed in Note 10 to the Consolidated Financial Statements; (ii) a $43 million charge to impair a landfill in Tier 3 due to a loss of expected volumes; (iii) $12 million of goodwill impairment charges primarily related to our LampTracker® reporting unit and (iv) an $8 million loss on the sale of a majority-owned organics company.

See Note 3 to the Consolidated Financial Statements for additional information related to the accounting policy and analysis involved in identifying and calculating impairments.

Income from Operations

The following table summarizes income from operations for the years ended December 31 (dollars in millions):

	2018	Period-to-Period Change		2017	Period-to-Period Change		2016
Solid Waste:							
Tier 1	$ 1,642	$ 104	6.8 %	$ 1,538	$ 108	7.6 %	$ 1,430
Tier 2	542	(10)	(1.8)	552	30	5.7	522
Tier 3	1,211	12	1.0	1,199	205	20.6	994
Solid Waste	3,395	106	3.2	3,289	343	11.6	2,946
Other	(66)	2	(2.9)	(68)	32	(32.0)	(100)
Corporate and Other	(540)	45	(7.7)	(585)	(35)	6.4	(550)
Total	$ 2,789	$ 153	5.8 %	$ 2,636	$ 340	14.8 %	$ 2,296
Percentage of revenues	18.7 %			18.2 %			16.9 %

Our segments are discussed further in Note 19 to the Consolidated Financial Statements.

Solid Waste — The most significant items affecting the results of operations of our Solid Waste business during the three years ended December 31, 2018 are summarized below:

The following items affected both comparable periods:

- Our Solid Waste business benefited from internal revenue growth offset, in part, by merit increases and increased maintenance and repair costs.

In addition, the following items affected 2018 when compared with 2017:

- Our income from operations for our Solid Waste business benefited from certain federal natural gas fuel credits in the first quarter of 2018 and was negatively impacted by (i) lower market prices for recycling commodities; (ii) higher operating costs, including a bonus plan established in early 2018 targeted at improving employee retention and (iii) increased depreciation and amortization expenses to support growth of our business. During 2018, Tier 1 also benefited from the divestiture of certain hauling operations and Tier 3 was negatively impacted by an impairment of a landfill.

In addition, the following items affected 2017 when compared with 2016:

- Our Solid Waste business benefited from (i) higher market prices for recycling commodities; (ii) decreased landfill leachate management costs in Tier 3 and (iii) an impairment charge for a landfill in Tier 3 in 2016. However, our income from operations was negatively impacted by (i) charges for the withdrawal from certain underfunded Multiemployer Pension Plans, primarily in Tier 3 and (ii) increased landfill amortization expense related to higher volumes at our landfills and changes in our landfill estimates, primarily in Tier 3.

Other — In 2018 compared with 2017, our Other segment benefited from net gains from divestitures of certain ancillary operations and improved results in our EES and WM Renewable Energy businesses, partially offset by higher risk management costs. A reduction in contingent consideration obligations in our EES business favorably affected 2017 when compared with 2016.

Corporate and Other — Corporate and other was affected by charges in 2016, and to a lesser extent in 2017, to adjust our subsidiary's estimated potential share of an environmental remediation liability and related costs for a closed site in Harris County, Texas.

In addition, the following items affected 2018 when compared with 2017:

- Decreased expenses in 2018 as a result of lower incentive compensation accruals and severance costs for former executives incurred in 2017. These decreases were offset, in part, by higher professional fees primarily due to the investments we are making in technology to improve our operations and our customer service in 2018.

In addition, the following items affected 2017 when compared with 2016:

- Increased expenses in 2017 as a result of higher incentive compensation accruals and severance costs. These increases were offset, in part, by a favorable litigation settlement in 2016.

Interest Expense, Net

Our interest expense, net was $374 million, $363 million and $376 million in 2018, 2017 and 2016, respectively. Our 2017 interest expense benefited from higher capitalized interest on certain projects under development and the early repayment of high-coupon senior notes and issuance of new senior notes at lower coupon interest rates in 2017.

Equity in Net Losses of Unconsolidated Entities

We recognized equity in net losses of unconsolidated entities of $41 million, $68 million and $44 million in 2018, 2017 and 2016, respectively. The amount in 2017 includes impairment charges of $29 million to write down equity method investments in waste diversion technology companies to their estimated fair values. The remaining losses for each period are primarily related to our noncontrolling interests in entities established to invest in and manage low-income housing properties and a refined coal facility. We generate tax benefits, including tax credits, from the losses incurred from these investments, which are discussed further in Note 8 to the Consolidated Financial Statements.

Other, Net

We recognized other, net income of $2 million in 2018 compared to other, net expense of $14 million and $54 million in 2017 and 2016, respectively. The expenses for 2017 and 2016 were impacted by impairment charges of $11 million and $42 million, respectively, related to other-than-temporary declines in the value of minority-owned investments in waste diversion technology companies. In addition, we also recognized (i) $8 million of expense during 2016 associated with the termination of our cross-currency swaps, which is discussed further in Note 7 to the Consolidated Financial Statements and (ii) a loss on early extinguishment of debt of $6 million and $4 million in 2017 and 2016, respectively.

Income Tax Expense

We recorded income tax expense of $453 million, $242 million and $642 million in 2018, 2017 and 2016, respectively, resulting in effective income tax rates of 19.0%, 11.0% and 35.2% for the years ended December 31, 2018, 2017 and 2016, respectively. The comparability of our income tax expense for the reported periods has been primarily affected by the following:

- Enactment of Tax Reform — For the year ended December 31, 2018, we recognized measurement period adjustments related to enactment of the Tax Cuts and Jobs Act primarily due to the filing of our income tax returns resulting in a reduction in our income tax expense of $12 million. The reduction consisted of a net income tax benefit of (i) $7 million for the remeasurement of our deferred income tax assets and liabilities and other reserves due to the decrease in the federal corporate income tax rate and (ii) a $5 million adjustment for the one-time, mandatory transition tax. For the year ended December 31, 2017, we recognized a reduction in our income tax expense of $529 million consisting of a net tax benefit of $595 million for the initial remeasurement of our deferred income tax assets and liabilities due to the decrease in the federal corporate income tax rate, partially offset by income tax expense of $66 million for the one-time, mandatory transition tax.

· Other Adjustments – We recognized reductions in our income tax expense of $92 million, $7 million and $21 million for the years ended December 31, 2018, 2017 and 2016, respectively, associated with adjustments to accruals and related deferred taxes and tax audit settlements.

See Note 8 to the Consolidated Financial Statements for more information related to income taxes.

Landfill and Environmental Remediation Discussion and Analysis

We owned or operated 247 solid waste and five secure hazardous waste landfills as of December 31, 2018 and 244 solid waste and five secure hazardous waste landfills as of December 31, 2017. For these landfills, the following table reflects changes in capacity, as measured in tons of waste, for the years ended December 31 and remaining capacity, measured in cubic yards of waste, as of December 31 (in millions):

	2018 Remaining Permitted Capacity	Expansion Capacity	Total Capacity	2017 Remaining Permitted Capacity	Expansion Capacity	Total Capacity
Balance as of beginning of year (in tons)	4,799	186	4,985	4,754	219	4,973
Acquisitions, divestitures, newly permitted landfills and closures	5	—	5	6	—	6
Changes in expansions pursued (a)	—	72	72	—	65	65
Expansion permits granted (b)	42	(42)	—	98	(98)	—
Airspace consumed	(116)	—	(116)	(112)	—	(112)
Changes in engineering estimates and other (c)	32	4	36	53	—	53
Balance as of end of year (in tons)	4,762	220	4,982	4,799	186	4,985
Balance as of end of year (in cubic yards)	4,735	194	4,929	4,815	169	4,984

(a) Amounts reflected here relate to the combined impacts of (i) new expansions pursued; (ii) increases or decreases in the airspace being pursued for ongoing expansion efforts; (iii) adjustments for differences between the airspace being pursued and airspace granted and (iv) decreases due to decisions to no longer pursue expansion permits, if any.

(b) We received expansion permits at six of our landfills during 2018 and nine of our landfills during 2017, demonstrating our continued success in working with municipalities and regulatory agencies to expand the disposal capacity of our existing landfills.

(c) Changes in engineering estimates can result in changes to the estimated available remaining capacity of a landfill or changes in the utilization of such landfill capacity, affecting the number of tons that can be placed in the future. Estimates of the amount of waste that can be placed in the future are reviewed annually by our engineers and are based on a number of factors, including standard engineering techniques and site-specific factors such as current and projected mix of waste type; initial and projected waste density; estimated number of years of life remaining; depth of underlying waste; anticipated access to moisture through precipitation or recirculation of landfill leachate and operating practices. We continually focus on improving the utilization of airspace through efforts that may include recirculating landfill leachate where allowed by permit; optimizing the placement of daily cover materials and increasing initial compaction through improved landfill equipment, operations and training.

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The tons received at our landfills are shown below (tons in thousands):

	2018 # of Sites		Total Tons		Tons per Day	2017 # of Sites	Total Tons		Tons per Day
Solid waste landfills	247	(a)	115,972		426	244	112,849		415
Hazardous waste landfills	5		739		3	5	584		2
	252		116,711		429	249	113,433		417
Solid waste landfills closed, divested or contract expired during related year	1		424			1	139		
			117,135	(b)			113,572	(b)	

(a) In 2018, we acquired four landfills and closed one landfill.
(b) These amounts include 1.5 million tons and 1.8 million tons as of December 31, 2018 and 2017, respectively, that were received at our landfills but were used for beneficial purposes and generally were redirected from the permitted airspace to other areas of the landfill. Waste types that are frequently identified for beneficial use include green waste for composting and clean dirt for on-site construction projects.

When a landfill we own or operate receives certification of closure from the applicable regulatory agency, we generally transfer the management of the site, including any remediation activities, to our environmental legacy management group. As of December 31, 2018, our environmental legacy management group managed 207 closed landfills.

Based on remaining permitted airspace as of December 31, 2018 and projected annual disposal volumes, the weighted average remaining landfill life for all of our owned or operated landfills is approximately 41 years. Many of our landfills have the potential for expanded disposal capacity beyond what is currently permitted. We monitor the availability of permitted disposal capacity at each of our landfills and evaluate whether to pursue an expansion at a given landfill based on estimated future waste volumes, disposal prices, construction and operating costs, remaining capacity and likelihood of obtaining an expansion permit. We are seeking expansion permits at 15 of our landfills that meet the expansion criteria outlined in the Critical Accounting Estimates and Assumptions — Landfills section below. Although no assurances can be made that all future expansions will be permitted or permitted as designed, the weighted average remaining landfill life for all owned or operated landfills is approximately 43 years when considering remaining permitted airspace, expansion airspace and projected annual disposal volume.

The number of landfills owned or operated as of December 31, 2018, segregated by their estimated operating lives based on remaining permitted and expansion capacity and projected annual disposal volume, was as follows:

	# of Landfills	
0 to 5 years	30	
6 to 10 years	16	
11 to 20 years	35	
21 to 40 years	68	
41+ years	103	
Total	252	(a)

(a) Of the 252 landfills, 204 are owned, 35 are operated under lease agreements and 13 are operated under other contractual agreements. For the landfills not owned, we are usually responsible for final capping, closure and post-closure obligations.

As of December 31, 2018, we have 16 landfills which are not currently accepting waste. During the year ended December 31, 2018, we performed tests of recoverability for seven of these landfills with an aggregate net recorded capitalized landfill asset cost of $270 million, for which the undiscounted expected future cash flows resulting from our

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probability-weighted estimation approach exceeded the carrying values. We did not perform recoverability tests for the remaining nine landfills as the net recorded capitalized landfill asset cost was not material.

Landfill Assets — We capitalize various costs that we incur to prepare a landfill to accept waste. These costs generally include expenditures for land (including the landfill footprint and required landfill buffer property), permitting, excavation, liner material and installation, landfill leachate collection systems, landfill gas collection systems, environmental monitoring equipment for groundwater and landfill gas, directly related engineering, capitalized interest, and on-site road construction and other capital infrastructure costs. The cost basis of our landfill assets also includes estimates of future costs associated with landfill final capping, closure and post-closure activities, which are discussed further below.

The changes to the cost basis of our landfill assets and accumulated landfill airspace amortization for the year ended December 31, 2018 are reflected in the table below:

	Cost Basis of Landfill Assets	Accumulated Landfill Airspace Amortization	Landfill Assets
December 31, 2017	$ 14,904	$ (8,788)	$ 6,116
Capital additions	513	—	513
Asset retirement obligations incurred and capitalized	83	—	83
Acquisitions	2	—	2
Amortization of landfill airspace	—	(538)	(538)
Foreign currency translation	(89)	35	(54)
Asset retirements and other adjustments	(173)	134	(39)
December 31, 2018	$ 15,240	$ (9,157)	$ 6,083

As of December 31, 2018, we estimate that we will spend approximately $600 million in 2019, and approximately $1.25 billion in 2020 and 2021 combined, for the construction and development of our landfill assets. The specific timing of landfill capital spending is dependent on future events and spending estimates are subject to change due to fluctuations in landfill waste volumes, changes in environmental requirements and other factors impacting landfill operations.

Landfill and Environmental Remediation Liabilities — As we accept waste at our landfills, we incur significant asset retirement obligations, which include liabilities associated with landfill final capping, closure and post-closure activities. These liabilities are accounted for in accordance with authoritative guidance on accounting for asset retirement obligations and are discussed in Note 3 to the Consolidated Financial Statements. We also have liabilities for the remediation of properties that have incurred environmental damage, which generally was caused by operations or for damage caused by conditions that existed before we acquired operations or a site. We recognize environmental remediation liabilities when we determine that the liability is probable and the estimated cost for the likely remedy can be reasonably estimated.

The changes to landfill and environmental remediation liabilities for the year ended December 31, 2018 are reflected in the table below (in millions):

	Landfill	Environmental Remediation

December 31, 2017	$ 1,675	$ 251
Obligations incurred and capitalized	83	—
Obligations settled	(108)	(26)
Interest accretion	95	5
Revisions in estimates and interest rate assumptions (a) (b)	(3)	9
Acquisitions, divestitures and other adjustments (c)	18	(2)
December 31, 2018	$ 1,760	$ 237

(a) The amount reported for our landfill liabilities includes a net decrease of $15 million primarily related to our year-end annual review of landfill final capping, closure and post-closure obligations partially offset by an increase of

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$12 million due to the acceleration of the expected timing of capping activities for a landfill. See Note 11 to the Consolidated Financial Statements for discussion of the impairment charge related to this landfill.

(b) The amount reported for our environmental remediation liabilities includes changes in cost estimates associated with environmental remediation projects resulting in an increase in the required obligation. These charges were partially offset by a decrease of $3 million in our environmental remediation liabilities due to an increase in the risk-free discount rate used to measure our liabilities from 2.5% at December 31, 2017 to 2.75% at December 31, 2018.

(c) The amount reported for our landfill liabilities includes an increase of $27 million due to landfill acquisitions partially offset by landfill divestitures and other adjustments.

Landfill Operating Costs — The following table summarizes our landfill operating costs for the years ended December 31 (in millions):

	2018	2017	2016
Interest accretion on landfill liabilities	$ 95	$ 92	$ 91
Interest accretion on and discount rate adjustments to environmental remediation liabilities and recovery assets	(2)	3	—
Leachate and methane collection and treatment	150	143	176
Landfill remediation costs	13	14	15
Other landfill site costs	75	76	70
Total landfill operating costs	$ 331	$ 328	$ 352

Amortization of Landfill Airspace — Amortization of landfill airspace, which is included as a component of depreciation and amortization expenses, includes the following:

- the amortization of landfill capital costs, including (i) costs that have been incurred and capitalized and (ii) estimated future costs for landfill development and construction required to develop our landfills to their remaining permitted and expansion airspace; and
- the amortization of asset retirement costs arising from landfill final capping, closure and post-closure obligations, including (i) costs that have been incurred and capitalized and (ii) projected asset retirement costs.

Amortization expense is recorded on a units-of-consumption basis, applying cost as a rate per ton. The rate per ton is calculated by dividing each component of the amortizable basis of a landfill by the number of tons needed to fill the corresponding asset's airspace. Landfill capital costs and closure and post-closure asset retirement costs are generally incurred to support the operation of the landfill over its entire operating life and are, therefore, amortized on a per-ton basis using a landfill's total airspace capacity. Final capping asset retirement costs are related to a specific final capping event and are, therefore, amortized on a per-ton basis using each discrete final capping event's estimated airspace capacity. Accordingly, each landfill has multiple per-ton amortization rates.

The following table presents our landfill airspace amortization expense on a per-ton basis for the years ended December 31:

	2018	2017	2016
Amortization of landfill airspace (in millions)	$ 538	$ 497	$ 428
Tons received, net of redirected waste (in millions)	116	112	104
Average landfill airspace amortization expense per ton	$ 4.64	$ 4.44	$ 4.10

Different per-ton amortization rates are applied at each of our 252 landfills, and per-ton amortization rates vary significantly from one landfill to another due to (i) inconsistencies that often exist in construction costs and provincial, state and local regulatory requirements for landfill development and landfill final capping, closure and post-closure activities and (ii) differences in the cost basis of landfills that we develop versus those that we acquire. Accordingly, our landfill airspace amortization expense measured on a per-ton basis can fluctuate due to changes in the mix of volumes we receive across the Company each year.

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Liquidity and Capital Resources

The Company consistently generates cash flow from operations that meets and exceeds its working capital needs, the payments of its dividend and investment in the business through capital expenditures and acquisitions. We continually monitor our actual and forecasted cash flows, our liquidity and our capital resources, enabling us to plan for our present needs and fund unbudgeted business activities that may arise during the year as a result of changing business conditions or new opportunities. The Company believes that its investment grade credit ratings, large value of unencumbered assets and modest leverage enable it to obtain adequate financing to meet its ongoing capital, operating and other liquidity requirements.

Summary of Cash and Cash Equivalents, Restricted Trust and Escrow Accounts and Debt Obligations

The following is a summary of our cash and cash equivalents, restricted trust and escrow accounts and debt balances as of December 31 (in millions):

	2018	2017
Cash and cash equivalents	$ 61	$ 22
Restricted trust and escrow accounts:		
Insurance reserves (a)	$ 252	$ 203
Final capping, closure, post-closure and environmental remediation funds	103	101
Other	11	15
Total restricted trust and escrow accounts	$ 366	$ 319
Debt:		
Current portion	$ 432	$ 739
Long-term portion	9,594	8,752
Total debt	$ 10,026	$ 9,491

(a)Includes $70 million as of December 31, 2018 and 2017 in other current assets in our Consolidated Balance Sheets.

We use long-term borrowings in addition to the cash we generate from operations as part of our overall financial strategy to support and grow our business. We primarily use senior notes and tax-exempt bonds to borrow on a long-term basis, but we also use other instruments and facilities, when appropriate. The components of our borrowings as of December 31, 2018 are described in Note 7 to the Consolidated Financial Statements.

Changes in our outstanding debt balances from December 31, 2017 to December 31, 2018 were primarily attributable to (i) net debt cash borrowings of $313 million; (ii) our recent federal low-income housing investment discussed in Note 8 to the Consolidated Financial Statements and new capital leases, which increased our debt obligations by $250 million and (iii) the impacts of other non-cash changes in our debt balances such as divestitures, debt issuance costs, discounts, premiums, foreign currency translation and terminated interest rate derivatives.

As of December 31, 2018, we had $1.9 billion of debt maturing within the next 12 months, including (i) $990 million of short-term borrowings under our commercial paper program; (ii) $705 million of tax-exempt bonds with term interest rate periods that expire within the next 12 months, which is prior to their scheduled maturities; (iii) $161 million of other debt with scheduled maturities within the next 12 months, including $106 million of tax-exempt bonds and (iv) C$15 million, or $11 million, of Canadian borrowings under our $2.75 billion revolving credit facility. Of the $990 million of short-term borrowings outstanding under our commercial paper program as of December 31, 2018 that are supported by our $2.75 billion revolving credit facility, we have the intent and ability to refinance or maintain approximately $730 million of these borrowings on a long-term basis, and we have classified these amounts as long-term debt. As of December 31, 2018, we have classified an additional $705 million of debt maturing in the next 12 months as long-term because we have the intent and ability to refinance these borrowings on a long-term basis as supported by the forecasted available capacity under our $2.75 billion revolving credit facility, as discussed below. The remaining $432 million of debt maturing in the next 12 months is classified as current obligations.

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As of December 31, 2018, we also have $268 million of variable-rate tax-exempt bonds that are supported by letters of credit under our $2.75 billion revolving credit facility. The interest rates on our variable-rate tax-exempt bonds are generally reset on either a daily or weekly basis through a remarketing process. All recent tax-exempt bond remarketings have successfully placed Company bonds with investors at market-driven rates and we currently expect future remarketings to be successful. However, 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 have the availability under our $2.75 billion revolving credit facility to fund these bonds until they are remarketed successfully. Accordingly, we have also classified these borrowings as long-term in our Consolidated Balance Sheet as of December 31, 2018.

We have credit facilities in place to support our liquidity and financial assurance needs. The following table summarizes our outstanding letters of credit, categorized by type of facility as of December 31 (in millions):

	2018	2017
Revolving credit facility (a)	$ 587	$ 642
Other letter of credit facilities (b)	556	507
	$ 1,143	$ 1,149

(a) As of December 31, 2018, we had an unused and available credit capacity of $1.2 billion.

(b) As of December 31, 2018, these other letter of credit facilities are both committed and uncommitted with terms extending through December 2020.

Refinancing of Revolving Credit Facility

In June 2018, we entered into the $2.75 billion revolving credit facility, which amended and restated our prior long-term U.S. revolving credit facility. Amendments to the credit agreement included (i) increasing total capacity under the facility from $2.25 billion to $2.75 billion; (ii) establishment of a $750 million accordion feature that may be used to increase total capacity in future periods; (iii) extending the term through June 2023 and (iv) inclusion of two one-year extension options. Waste Management of Canada Corporation and WM Quebec Inc., each an indirect wholly-owned subsidiary of WM, were added as additional borrowers under the $2.75 billion revolving credit facility, and the agreement permits borrowing in Canadian dollars up to the U.S. dollar equivalent of $375 million, with such borrowings to be repaid in Canadian dollars. WM Holdings, a wholly-owned subsidiary of WM, guarantees all of the obligations under the $2.75 billion revolving credit facility.

Summary of Cash Flow Activity

The following is a summary of our cash flows for the years ended December 31 (in millions):

	2018	2017(a)	2016(a)
Net cash provided by operating activities	$ 3,570	$ 3,180	$ 3,003
Net cash used in investing activities	$ (2,169)	$ (1,620)	$ (1,929)
Net cash used in financing activities	$ (1,508)	$ (1,361)	$ (1,084)

(a) Prior year information was revised to reflect the adoption of ASU 2016 15 and ASU 2016-18 and conform to our current year presentation. See Note 2 to the Consolidated Financial Statements for further discussion.

Net Cash Provided by Operating Activities — Our operating cash flows increased by $390 million for the year ended December 31, 2018, as compared with the prior year period, as a result of (i) higher earnings from our Traditional Solid Waste business and (ii) lower income tax payments of $213 million, driven by enactment of tax reform and timing of income tax payments partially offset by lower earnings from our recycling line of business.

Our operating cash flows increased by $177 million for the year ended December 31, 2017, as compared with the prior year period, as a result of higher earnings from our Traditional Solid Waste business and recycling line of business.

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This increase is partially offset by cash paid for income taxes, which was $120 million higher in 2017, largely driven by higher earnings and timing of income tax payments.

Net Cash Used in Investing Activities — The most significant items affecting the comparison of our investing cash flows for the periods presented are summarized below:

- Acquisitions — Our spending on acquisitions was $466 million, $200 million and $611 million in 2018, 2017 and 2016, respectively, of which $460 million, $198 million and $608 million, respectively, are considered cash used in investing activities. The remaining spend is either cash used in a financing or an operating activity related to the timing of contingent consideration paid subsequent to the adoption of ASU 2016-15. Substantially all of these acquisitions are related to our Solid Waste business. Our acquisitions in 2016 included $525 million for certain operations and business assets of Southern Waste Systems/Sun Recycling. See Notes 2 and 17 to the Consolidated Financial Statements for additional information. We continue to focus on accretive acquisitions and growth opportunities that will enhance and expand our existing service offerings.
- Capital Expenditures — We used $1,694 million, $1,509 million and $1,339 million for capital expenditures in 2018, 2017 and 2016, respectively. The Company continues to maintain a disciplined focus on capital management and fluctuations in our capital expenditures are a result of new business opportunities, growth in our existing business, the timing of replacement of aging assets and investment in assets that support our strategy of continuous improvement through efficiency and innovation.
- Proceeds from Divestitures — Proceeds from divestitures of businesses and other assets (net of cash divested) were $208 million, $99 million and $43 million in 2018, 2017 and 2016, respectively. In 2018, 2017 and 2016, $153 million, $62 million and $2 million of these divestitures, respectively, were made as part of our continuous focus on improving or divesting certain non-strategic or underperforming operations, with the remaining amounts generally related to the sale of fixed assets.
- Other, Net — Our spending within other, net was $223 million, $12 million, and $25 million in 2018, 2017 and 2016, respectively. The increase in 2018 is primarily due to changes in our investments portfolio associated with our wholly-owned insurance captive from restricted cash and cash equivalents to available-for-sale securities. See Note 16 to the Consolidated Financial Statements for additional information.

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Net Cash Used in Financing Activities — The most significant items affecting the comparison of our financing cash flows for the periods presented are summarized below:

· Debt Borrowings (Repayments) — The following summarizes our cash borrowings and repayments of debt (excluding our commercial paper program discussed below) for the years ended December 31 (in millions):

	2018	2017(a)	2016(a)
Borrowings:			
Revolving credit facility (b)	$ 119	$ 302	$ 1,889
Canadian term loan and revolving credit facility	8	9	347
Senior notes	—	745	496
Tax-exempt bonds	185	299	143
Other debt	47	124	182
	$ 359	$ 1,479	$ 3,057
Repayments:			
Revolving credit facility (b)	$ (108)	$ (728)	$ (1,483)
Canadian term loan and revolving credit facility	(117)	(146)	(193)
Senior notes	—	(590)	(510)
Tax-exempt bonds	(167)	(251)	(289)
Other debt	(107)	(192)	(207)
	$ (499)	$ (1,907)	$ (2,682)
Net cash borrowings (repayments)	$ (140)	$ (428)	$ 375

(a) Prior year information was revised to reflect the adoption of ASU 2016-18 and conform to our current year presentation. See Note 2 to the Consolidated Financial Statements for further discussion.
(b) Our revolving credit facility was amended and restated in June 2018.

During 2018, we had $250 million of non-cash financing activities from our recent federal low-income housing investment discussed in Note 8 to the Consolidated Financial Statements and new capital leases. During 2017 and 2016, we did not have any significant non-cash investing and financing activities. Non-cash investing and financing activities are generally excluded from the Consolidated Statements of Cash Flows.

Refer to Note 7 to the Consolidated Financial Statements for additional information related to our debt borrowings and repayments.

· Commercial Paper Program — During 2018 and 2017, we had net cash borrowings of $453 million and $513 million (net of the related discounts on issuance), respectively, under our commercial paper program. Borrowings were primarily to support new business opportunities and for general corporate purposes.
· Common Stock Repurchase Program — For the periods presented, all share repurchases have been made in accordance with financial plans approved by our Board of Directors. We repurchased $1,008 million, $750 million and $725 million of our common stock during 2018 (including $4 million paid in January 2019), 2017 and 2016, respectively. See Note 13 to the Consolidated Financial Statements for additional information.

We announced in December 2018 that our Board of Directors has authorized up to $1.5 billion in future share repurchases. Any future share repurchases will be made at the discretion of management and will depend on factors similar to those considered by the Board of Directors in making dividend declarations.

· Cash Dividends — For the periods presented, all dividends have been declared by our Board of Directors.

We paid aggregate cash dividends of $802 million, $750 million and $726 million during 2018, 2017 and 2016, respectively. The increase in dividend payments is due to our quarterly per share dividend increasing from $0.41 in 2016 to $0.425 in 2017 and to $0.465 in 2018 and has been offset, in part, by a reduction in our common stock outstanding as a result of our common stock repurchase program.

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In December 2018, we announced that our Board of Directors expects to increase the quarterly dividend from $0.465 to $0.5125 per share for dividends declared in 2019. However, all future dividend declarations are at the discretion of the Board of Directors and depend on various factors, including our net earnings, financial condition, cash required for future business plans, growth and acquisitions and other factors the Board of Directors may deem relevant.

· Proceeds from the Exercise of Common Stock Options — The exercise of common stock options generated financing cash inflows of $52 million, $95 million and $63 million during 2018, 2017 and 2016, respectively.
The year-over-year changes are generally due to the number of stock options exercised and the exercise price of those options.

Free Cash Flow

As is our practice, we are presenting free cash flow, which is a non-GAAP measure of liquidity, in our disclosures because we use this measure in the evaluation and management of our business. We define free cash flow as net cash provided by operating activities, less capital expenditures, plus proceeds from divestitures of businesses and other assets (net of cash divested). We believe it is indicative of our ability to pay our quarterly dividends, repurchase common stock, fund acquisitions and other investments and, in the absence of refinancings, to repay our debt obligations. Free cash flow is not intended to replace net cash provided by operating activities, which is the most comparable GAAP measure. We believe free cash flow gives investors useful insight into how we view our liquidity, but the use of free cash flow as a liquidity measure has material limitations because it excludes certain expenditures that are required or that we have committed to, such as declared dividend payments and debt service requirements.

Our calculation of free cash flow and reconciliation to net cash provided by operating activities is shown in the table below for the years ended December 31 (in millions), and may not be calculated the same as similarly-titled measures presented by other companies:

	2018	2017	2016
Net cash provided by operating activities (a)	$ 3,570	$ 3,180	$ 3,003
Capital expenditures	(1,694)	(1,509)	(1,339)
Proceeds from divestitures of businesses and other assets (net of cash divested)	208	99	43
Free cash flow (a)	$ 2,084	$ 1,770	$ 1,707

(a) Prior year information was revised to reflect the adoption of ASU 2016 18 and conform to our current year presentation. See Note 2 to the Consolidated Financial Statements.

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Summary of Contractual Obligations

The following table summarizes our contractual obligations as of December 31, 2018 and the anticipated effect of these obligations on our liquidity in future years (in millions):

	2019	2020	2021	2022	2023	Thereafter	Total
Recorded Obligations:							
Expected environmental liabilities: (a)							
Final capping, closure and post-closure	$ 143	$ 170	$ 132	$ 105	$ 98	$ 2,450	$ 3,098
Environmental remediation	26	19	65	37	13	81	241
	169	189	197	142	111	2,531	3,339
Debt payments (b) (c) (d)	1,166	780	584	622	614	6,382	10,148
Unrecorded Obligations: (e)							
Interest on debt (f)	340	319	291	278	254	2,101	3,583
Non-cancelable operating lease obligations	74	69	54	40	37	370	644
Estimated unconditional purchase obligations (g)	138	121	110	45	41	399	854
Anticipated liquidity impact as of December 31, 2018	$ 1,887	$ 1,478	$ 1,236	$ 1,127	$ 1,057	$ 11,783	$ 18,568

(a) Environmental liabilities include final capping, closure, post-closure and environmental remediation costs recorded in our Consolidated Balance Sheet as of December 31, 2018, without the impact of discounting and inflation. Our recorded environmental liabilities for final capping, closure and post-closure will increase as we continue to place additional tons within the permitted airspace at our landfills.

(b) These amounts represent the scheduled principal payments related to our long-term debt, excluding interest.

(c) Our debt obligations as of December 31, 2018 include $705 million of tax-exempt bonds with term interest rate periods that expire within the next 12 months. If the remarketings of our bonds are unsuccessful, then the bonds can be put to us, requiring immediate repayment. We have classified the anticipated cash flows for these contractual obligations based on the scheduled maturity of the borrowings for purposes of this disclosure. For additional information regarding the classification of these borrowings in our Consolidated Balance Sheet as of December 31, 2018, refer to Note 7 to the Consolidated Financial Statements.

(d) Our recorded debt obligations include non-cash adjustments associated with debt issuance costs, discounts, premiums and fair value adjustments attributable to terminated interest rate derivatives. These amounts have been excluded as they will not impact our liquidity in future periods.

(e) Our unrecorded obligations represent operating lease obligations and purchase commitments from which we expect to realize an economic benefit in future periods and interest payable on our debt. We have also made certain guarantees, as discussed in Note 10 to the Consolidated Financial Statements, that we do not expect to materially affect our current or future financial position, results of operations or liquidity.

(f) Interest on our fixed-rate debt was calculated based on contractual rates and interest on our variable-rate debt was calculated based on interest rates as of December 31, 2018. For debt balances outstanding under our commercial paper program, we have reflected limited interest amounts due to the short-term nature of the borrowings. For debt balances outstanding under our $2.75 billion revolving credit facility, we have reflected interest based on the current outstanding principal assuming the amount remains unchanged through maturity. As of December 31, 2018, we had $82 million of accrued interest related to our debt obligations.

(g)

Our unconditional purchase obligations are for various contractual obligations that we generally incur in the ordinary course of our business. Certain of our obligations are quantity driven. For contracts that require us to purchase minimum quantities of goods or services, we have estimated our future minimum obligations based on the current market values of the underlying products or services. Accordingly, the amounts reported in the table are subject to change and actual cash flow obligations in the near future may be different. See Note 10 to the Consolidated Financial Statements for discussion of the nature and terms of our unconditional purchase obligations.

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Critical Accounting Estimates and Assumptions

In preparing our financial statements, we make numerous estimates and assumptions that affect the accounting for and recognition and disclosure of assets, liabilities, equity, revenues and expenses. We must make these estimates and assumptions because certain information that we use is dependent on future events, cannot be calculated with precision from available data or simply cannot be calculated. In some cases, these estimates are difficult to determine, and we must exercise significant judgment. In preparing our financial statements, the most difficult, subjective and complex estimates and the assumptions that present the greatest amount of uncertainty relate to our accounting for landfills, environmental remediation liabilities, long-lived asset impairments and reserves associated with our insured and self-insured claims. Each of these items is discussed in additional detail below and in Note 3 to the Consolidated Financial Statements. Actual results could differ materially from the estimates and assumptions that we use in the preparation of our financial statements.

Landfills

Accounting for landfills requires that significant estimates and assumptions be made regarding (i) the cost to construct and develop each landfill asset; (ii) the estimated fair value of final capping, closure and post-closure asset retirement obligations, which must consider both the expected cost and timing of these activities; (iii) the determination of each landfill's remaining permitted and expansion airspace and (iv) the airspace associated with each final capping event.

Landfill Costs — We estimate the total cost to develop each of our landfill sites to its remaining permitted and expansion capacity. This estimate includes such costs as landfill liner material and installation, excavation for airspace, landfill leachate collection systems, landfill gas collection systems, environmental monitoring equipment for groundwater and landfill gas, directly related engineering, capitalized interest, on-site road construction and other capital infrastructure costs. Additionally, landfill development includes all land purchases for the landfill footprint and required landfill buffer property. The projection of these landfill costs is dependent, in part, on future events. The remaining amortizable basis of each landfill includes costs to develop a site to its remaining permitted and expansion capacity and includes amounts previously expended and capitalized, net of accumulated airspace amortization, and projections of future purchase and development costs.

Final Capping Costs — We estimate the cost for each final capping event based on the area to be capped and the capping materials and activities required. The estimates also consider when these costs are anticipated to be paid and factor in inflation and discount rates. Our engineering personnel allocate landfill final capping costs to specific final capping events. The landfill capacity associated with each final capping event is then quantified and the final capping costs for each event are amortized over the related capacity associated with the event as waste is disposed of at the landfill. We review these costs annually, or more often if significant facts change. Changes in estimates, such as timing or cost of construction, for final capping events immediately impact the required liability and the corresponding asset. When the change in estimate relates to a fully consumed asset, the adjustment to the asset must be amortized immediately through expense. When the change in estimate relates to a final capping event that has not been fully consumed, the adjustment to the asset is recognized in income prospectively as a component of landfill airspace amortization.

Closure and Post-Closure Costs — We base our estimates for closure and post-closure costs on our interpretations of permit and regulatory requirements for closure and post-closure monitoring and maintenance. The estimates for landfill closure and post-closure costs also consider when the costs are anticipated to be paid and factor in inflation and discount rates. The possibility of changing legal and regulatory requirements and the forward-looking nature of these types of costs make any estimation or assumption less certain. Changes in estimates for closure and post-closure events immediately impact the required liability and the corresponding asset. When the change in estimate relates to a fully consumed asset, the adjustment to the asset must be amortized immediately through expense. When the change in estimate relates to a landfill asset that has not been fully consumed, the adjustment to the asset is recognized in income prospectively as a component of landfill airspace amortization.

Remaining Permitted Airspace — Our engineers, in consultation with third-party engineering consultants and surveyors, are responsible for determining remaining permitted airspace at our landfills. The remaining permitted airspace

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is determined by an annual survey, which is used to compare the existing landfill topography to the expected final landfill topography.

Expansion Airspace — We also include currently unpermitted expansion airspace in our estimate of remaining permitted and expansion airspace in certain circumstances. First, to include airspace associated with an expansion effort, we must generally expect the initial expansion permit application to be submitted within one year and the final expansion permit to be received within five years. Second, we must believe that obtaining the expansion permit is likely, considering the following criteria:

- Personnel are actively working on the expansion of an existing landfill, including efforts to obtain land use and local, state or provincial approvals;
- We have a legal right to use or obtain land to be included in the expansion plan;
- There are no significant known technical, legal, community, business, or political restrictions or similar issues that could negatively affect the success of such expansion; and
- Financial analysis has been completed based on conceptual design, and the results demonstrate that the expansion meets Company criteria for investment.

For unpermitted airspace to be initially included in our estimate of remaining permitted and expansion airspace, the expansion effort must meet all the criteria listed above. These criteria are evaluated by our field-based engineers, accountants, managers and others to identify potential obstacles to obtaining the permits. Once the unpermitted airspace is included, our policy provides that airspace may continue to be included in remaining permitted and expansion airspace even if certain of these criteria are no longer met as long as we continue to believe we will ultimately obtain the permit, based on the facts and circumstances of a specific landfill. In these circumstances, continued inclusion must be approved through a landfill-specific review process that includes approval by our Chief Financial Officer and a review by the Audit Committee of our Board of Directors on a quarterly basis.

When we include the expansion airspace in our calculations of remaining permitted and expansion airspace, we also include the projected costs for development, as well as the projected asset retirement costs related to final capping, closure and post-closure of the expansion in the amortization basis of the landfill.

Once the remaining permitted and expansion airspace is determined in cubic yards, an airspace utilization factor ("AUF") is established to calculate the remaining permitted and expansion capacity in tons. The AUF is established using the measured density obtained from previous annual surveys and is then adjusted to account for future settlement. The amount of settlement that is forecasted will take into account several site-specific factors including current and projected mix of waste type, initial and projected waste density, estimated number of years of life remaining, depth of underlying waste, anticipated access to moisture through precipitation or recirculation of landfill leachate and operating practices. In addition, the initial selection of the AUF is subject to a subsequent multi-level review by our engineering group and the AUF used is reviewed on a periodic basis and revised as necessary. Our historical experience generally indicates that the impact of settlement at a landfill is greater later in the life of the landfill when the waste placed at the landfill approaches its highest point under the permit requirements.

After determining the costs and remaining permitted and expansion capacity at each of our landfills, we determine the per ton rates that will be expensed as waste is received and deposited at the landfill by dividing the costs by the corresponding number of tons. We calculate per ton amortization rates for each landfill for assets associated with each final capping event, for assets related to closure and post-closure activities and for all other costs capitalized or to be capitalized in the future. These rates per ton are updated annually, or more often, as significant facts change.

It is possible that actual results, including the amount of costs incurred, the timing of final capping, closure and post-closure activities, our airspace utilization or the success of our expansion efforts could ultimately turn out to be significantly different from our estimates and assumptions. To the extent that such estimates, or related assumptions, prove to be significantly different than actual results, lower profitability may be experienced due to higher amortization rates or higher expenses; or higher profitability may result if the opposite occurs. Most significantly, if it is determined that expansion capacity should no longer be considered in calculating the recoverability of a landfill asset, we may be required to recognize an asset impairment or incur significantly higher amortization expense. If at any time management makes the decision to abandon the expansion effort, the capitalized costs related to the expansion effort are expensed immediately.

Environmental Remediation Liabilities

We are subject to an array of laws and regulations relating to the protection of the environment. Under current laws and regulations, we may have liabilities for environmental damage caused by operations, or for damage caused by conditions that existed before we acquired a site. These liabilities include PRP investigations, settlements, and certain legal and consultant fees, as well as costs directly associated with site investigation and clean up, such as materials, external contractor costs and incremental internal costs directly related to the remedy. We provide for expenses associated with environmental remediation obligations when such amounts are probable and can be reasonably estimated. We routinely review and evaluate sites that require remediation and determine our estimated cost for the likely remedy based on a number of estimates and assumptions.

Where it is probable that a liability has been incurred, we estimate costs required to remediate sites based on site-specific facts and circumstances. We routinely review and evaluate sites that require remediation, considering whether we were an owner, operator, transporter, or generator at the site, the amount and type of waste hauled to the site and the number of years we were associated with the site. Next, we review the same type of information with respect to other named and unnamed PRPs. Estimates of the costs for the likely remedy are then either developed using our internal resources or by third-party environmental engineers or other service providers. Internally developed estimates are based on:

- Management's judgment and experience in remediating our own and unrelated parties' sites;
- Information available from regulatory agencies as to costs of remediation;
- The number, financial resources and relative degree of responsibility of other PRPs who may be liable for remediation of a specific site; and
- The typical allocation of costs among PRPs, unless the actual allocation has been determined.

Long-Lived Asset Impairments

We assess our long-lived assets for impairment as required under the applicable accounting standards. If necessary, impairments are recorded in (gain) loss from divestitures, asset impairments and unusual items, net in our Consolidated Statement of Operations.

Property and Equipment, Including Landfills and Definite-Lived Intangible Assets — We monitor the carrying value of our long-lived assets for potential impairment on an ongoing basis and test the recoverability of such assets generally using significant unobservable ("Level 3") inputs whenever events or changes in circumstances indicate that their carrying amounts may not be recoverable. These events or changes in circumstances, including management decisions pertaining to such assets, are referred to as impairment indicators. If an impairment indicator occurs, we perform a test of recoverability by comparing the carrying value of the asset or asset group to its undiscounted expected future cash flows. If cash flows cannot be separately and independently identified for a single asset, we will determine whether an impairment has occurred for the group of assets for which we can identify the projected cash flows. If the carrying values are in excess of undiscounted expected future cash flows, we measure any impairment by comparing the fair value of the asset or asset group to its carrying value and the difference is recorded in the period that the impairment indicator occurs. Fair value is generally determined by considering (i) internally developed discounted projected cash flow analysis of the asset or asset group; (ii) actual third-party valuations and/or (iii) information available regarding the current market for similar assets. Estimating future cash flows requires significant judgment and projections may vary from the cash flows eventually realized, which could impact our ability to accurately assess whether an asset has been impaired.

The assessment of impairment indicators and the recoverability of our capitalized costs associated with landfills and related expansion projects require significant judgment due to the unique nature of the waste industry, the highly regulated permitting process and the sensitive estimates involved. During the review of a landfill expansion application, a regulator may initially deny the expansion application although the expansion permit is ultimately granted. In addition, management may periodically divert waste from one landfill to another to conserve remaining permitted landfill airspace, or a landfill may be required to cease accepting waste, prior to receipt of the expansion permit. However, such events occur in the ordinary course of business in the waste industry and do not necessarily result in impairment of our landfill assets because, after consideration of all facts, such events may not affect our belief that we will ultimately obtain the expansion permit. As a result, our tests of recoverability, which generally make use of a probability-weighted cash flow estimation approach, may indicate that no impairment loss should be recorded.

Indefinite-Lived Intangible Assets, Including Goodwill — At least annually, and more frequently if warranted, we assess the indefinite-lived intangible assets including the goodwill of our reporting units for impairment using Level 3 inputs.

Beginning in 2018, we first performed a qualitative assessment to determine if it was more likely than not that the fair value of a reporting unit was less than its carrying value. If the assessment indicated a possible impairment, we completed a quantitative review, comparing the estimated fair value of a reporting unit to its carrying amount, including goodwill. An impairment charge was recognized if the asset's estimated fair value was less than its carrying amount. Fair value is typically estimated using an income approach. However, when appropriate, we may also use a market approach. The income approach is based on the long-term projected future cash flows of the reporting units. We discount the estimated cash flows to present value using a weighted average cost of capital that considers factors such as market assumptions, the timing of the cash flows and the risks inherent in those cash flows. We believe that this approach is appropriate because it provides a fair value estimate based upon the reporting units' expected long-term performance considering the economic and market conditions that generally affect our business. The market approach estimates fair value by measuring the aggregate market value of publicly-traded companies with similar characteristics to our business as a multiple of their reported earnings. We then apply that multiple to the reporting units' earnings to estimate their fair values. We believe that this approach may also be appropriate in certain circumstances because it provides a fair value estimate using valuation inputs from entities with operations and economic characteristics comparable to our reporting units.

Fair value is computed using several factors, including projected future operating results, economic projections, anticipated future cash flows, comparable marketplace data and the cost of capital. There are inherent uncertainties related to these factors and to our judgment in applying them in our analysis. However, we believe our methodology for estimating the fair value of our reporting units is reasonable.

See Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations — (Gain) Loss from Divestitures, Asset Impairments and Unusual Items, Net and Note 6 to the Consolidated Financial Statements for information related to goodwill impairments recognized during the reported periods.

Insured and Self-Insured Claims

We have retained a significant portion of the risks related to our health and welfare, general liability, automobile liability and workers' compensation claims programs. The exposure for unpaid claims and associated expenses, including incurred but not reported losses, are based on an actuarial valuations and internal estimates. The accruals for these liabilities could be revised if future occurrences or loss developments significantly differ from our assumptions used. Estimated recoveries associated with our insured claims are recorded as assets when we believe that the receipt of such amounts is probable.

In December 2017, we elected to use a wholly-owned insurance captive to insure the deductibles for our general liability, automobile liability and workers' compensation claims programs. We continue to maintain conventional insurance policies with third-party insurers. In addition to certain business and operating benefits of having a wholly-owned insurance captive, we expect to receive certain cash flow benefits related to the timing of tax deductions related to these claims. WM will pay an annual premium to the insurance captive, typically in the first quarter of the year, for the estimated losses based on the external actuarial analysis. These premiums are held in a restricted escrow account to be

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used solely for paying insurance claims, resulting in a transfer of risk from WM to the insurance captive and are allocated between current and long-term assets in our Consolidated Balance Sheets depending on timing on the use of funds.

Off-Balance Sheet Arrangements

We have financial interests in unconsolidated variable interest entities as discussed in Note 18 to the Consolidated Financial Statements. Additionally, we are party to guarantee arrangements with unconsolidated entities as discussed in the Guarantees section of Note 10 to the Consolidated Financial Statements. These arrangements have not materially affected our financial position, results of operations or liquidity during the year ended December 31, 2018, nor are they expected to have a material impact on our future financial position, results of operations or liquidity.

New Accounting Standard Pending Adoption

Leases — In February 2016, the FASB issued ASU 2016 02 associated with lease accounting. There have been further amendments, including practical expedients, with the issuance of ASU 2018-01 in January 2018, ASU 2018-11 in July 2018 and ASU 2018-20 in December 2018. The amended guidance requires the recognition of lease assets and lease liabilities on the balance sheet for those leases with terms in excess of 12 months and currently classified as operating leases. Disclosure of key information about leasing arrangements will also be required. We elected the optional transition method which allows entities to continue to apply historical accounting guidance in the comparative periods presented in the year of adoption.

At transition, lessees and lessors may elect to apply a package of practical expedients permitting entities not to reassess: (i) whether any expired or existing contracts are or contain leases; (ii) lease classification for any expired or existing leases and (iii) whether initial direct costs for any expired or existing leases qualify for capitalization under the amended guidance. These practical expedients must be elected as a package and consistently applied. We have elected to apply the package of practical expedients upon adoption.

We identified our leases or other contracts impacted by the new standard and are currently in the process of (i) finalizing our implementation of a software solution to manage and account for leases under the new standard and (ii) updating our business processes and related policies, systems and controls to support recognition and disclosure under the new standard.

Upon adoption of the amended guidance, we expect to recognize right-of-use assets and related liabilities of approximately $300 million to $350 million for our contracts which contain an operating lease. We currently do not expect the amended guidance to have any other material impacts on our consolidated financial statements.

Inflation

While inflationary increases in costs can affect our income from operations margins, we believe that inflation generally has not had, and in the near future is not expected to have, any material adverse effect on our results of operations. However, as of December 31, 2018, approximately 35% of our collection revenues are generated under long-term agreements with price adjustments based on various indices intended to measure inflation. Additionally, management’s estimates associated with inflation have had, and will continue to have, an impact on our accounting for landfill and environmental remediation liabilities.

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Item 7A. Quantitative and Qualitative Disclosures about Market Risk.

In the normal course of business, we are exposed to market risks, including changes in interest rates, certain commodity prices and Canadian currency rates. From time to time, we use derivatives to manage some portion of these risks. The Company had no derivatives outstanding as of December 31, 2018.

Interest Rate Exposure — Our exposure to market risk for changes in interest rates relates primarily to our financing activities. As of December 31, 2018, we had $10.1 billion of long-term debt, excluding the impacts of accounting for debt issuance costs, discounts, premiums and fair value adjustments attributable to terminated interest rate derivatives. We have $2.2 billion of debt that is exposed to changes in market interest rates within the next 12 months comprised of (i) $990 million of short-term borrowings under our commercial paper program; (ii) $705 million of tax-exempt bonds with term interest rate periods that expire within the next 12 months; (iii) $513 million of variable-rate tax-exempt bonds that are subject to repricing on either a daily or weekly basis and (iv) C$15 million, or $11 million, of Canadian borrowings under our $2.75 billion revolving credit facility. We currently estimate that a 100 basis point increase in the interest rates of our outstanding variable-rate debt obligations would increase our 2019 interest expense by $19 million.

Our remaining outstanding debt obligations have fixed interest rates through either the scheduled maturity of the debt or, for certain of our fixed-rate tax-exempt bonds, through the end of a term interest rate period that exceeds 12 months. The fair value of our fixed-rate debt obligations can increase or decrease significantly if market interest rates change.

We performed a sensitivity analysis to determine how market rate changes might affect the fair value of our market risk-sensitive debt instruments. This analysis is inherently limited because it reflects a singular, hypothetical set of assumptions. Actual market movements may vary significantly from our assumptions. An instantaneous, 100 basis point increase in interest rates across all maturities attributable to these instruments would have decreased the fair value of our debt by approximately $575 million as of December 31, 2018.

We are also exposed to interest rate market risk from our cash and cash equivalent balances, as well as assets held in restricted trust funds and escrow accounts. These assets are generally invested in high quality, liquid instruments including money market funds that invest in U.S. government obligations with original maturities of three months or less. We believe that our exposure to changes in fair value of these assets due to interest rate fluctuations is insignificant as the fair value generally approximates our cost basis. We also invest a portion of our restricted trust and escrow account balances in available-for-sale securities, including U.S. Treasury securities, U.S. agency securities, municipal securities, mortgage- and asset-backed securities and equity securities.

Commodity Price Exposure — In the normal course of our business, we are subject to operating agreements that expose us to market risks arising from changes in the prices for commodities such as diesel fuel; recyclable materials, including old corrugated cardboard, old newsprint and plastics; and electricity, which generally correlates with natural gas prices in many of the markets in which we operate. We attempt to manage these risks through operational strategies that focus on capturing our costs in the prices we charge our customers for the services provided. Accordingly, as the market prices for these commodities increase or decrease, our revenues may also increase or decrease.

Currency Rate Exposure — We have operations in Canada as well as certain support functions in India. Where significant, we have quantified and described the impact of foreign currency translation on components of income, including operating revenue and operating expenses. However, the impact of foreign currency has not materially affected our results of operations.

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Item 8. Financial Statements and Supplementary Data.

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CONSOLIDATED FINANCIAL STATEMENTS

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REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

The Board of Directors and Stockholders of Waste Management, Inc.

Opinion on Internal Control over Financial Reporting

We have audited Waste Management, Inc.'s internal control over financial reporting as of December 31, 2018, based on criteria established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) (the COSO criteria). In our opinion, Waste Management, Inc. (the Company) maintained, in all material respects, effective internal control over financial reporting as of December 31, 2018, based on the COSO criteria.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the 2018 consolidated financial statements of the Company, and our report dated February 14, 2019 expressed an unqualified opinion thereon.

Basis for Opinion

The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting included in the accompanying Management's Report on Internal Control Over Financial Reporting. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects.

Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Definition and Limitations of Internal Control Over Financial Reporting

A company's internal control over financial reporting is a process designed 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. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

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/s/ ERNST & YOUNG LLP

Houston, Texas
February 14, 2019

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REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

The Board of Directors and Stockholders of Waste Management, Inc.

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Waste Management, Inc. (the Company) as of December 31, 2018 and 2017, the related consolidated statements of operations, comprehensive income, cash flows, and changes in equity for each of the three years in the period ended December 31, 2018, and the related notes (collectively referred to as the "consolidated financial statements"). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company at December 31, 2018 and 2017, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2018, in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of December 31, 2018, based on criteria established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework), and our report dated February 14, 2019 expressed an unqualified opinion thereon.

Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

/s/ ERNST & YOUNG LLP

We have served as the Company’s auditor since 2002.

Houston, Texas
February 14, 2019

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WASTE MANAGEMENT, INC.

CONSOLIDATED BALANCE SHEETS

(In Millions, Except Share and Par Value Amounts)

	December 31, 2018	2017
ASSETS		
Current assets:		
Cash and cash equivalents	$ 61	$ 22
Accounts receivable, net of allowance for doubtful accounts of $29 and $21, respectively	1,931	1,805
Other receivables	344	569
Parts and supplies	102	96
Other assets	207	202
Total current assets	2,645	2,694
Property and equipment, net of accumulated depreciation and amortization of $18,264 and $17,704, respectively	11,942	11,559
Goodwill	6,430	6,247
Other intangible assets, net	572	547
Restricted trust and escrow accounts	296	249
Investments in unconsolidated entities	406	269
Other assets	359	264
Total assets	$ 22,650	$ 21,829
LIABILITIES AND EQUITY		
Current liabilities:		
Accounts payable	$ 1,037	$ 1,040
Accrued liabilities	1,117	980
Deferred revenues	522	503
Current portion of long-term debt	432	739
Total current liabilities	3,108	3,262
Long-term debt, less current portion	9,594	8,752
Deferred income taxes	1,291	1,248
Landfill and environmental remediation liabilities	1,828	1,770
Other liabilities	553	755
Total liabilities	16,374	15,787
Commitments and contingencies		
Equity:		
Waste Management, Inc. stockholders' equity:		
Common stock, $0.01 par value; 1,500,000,000 shares authorized; 630,282,461 shares issued	6	6
Additional paid-in capital	4,993	4,933
Retained earnings	9,797	8,588
Accumulated other comprehensive income (loss)	(87)	8
Treasury stock at cost, 206,299,352 and 196,963,558 shares, respectively	(8,434)	(7,516)
Total Waste Management, Inc. stockholders' equity	6,275	6,019
Noncontrolling interests	1	23

Total equity	6,276	6,042
Total liabilities and equity	$ 22,650	$ 21,829

See Notes to Consolidated Financial Statements.

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WASTE MANAGEMENT, INC.

CONSOLIDATED STATEMENTS OF OPERATIONS

(In Millions, Except per Share Amounts)

	Years Ended December 31,		
	2018	2017	2016
Operating revenues	$ 14,914	$ 14,485	$ 13,609
Costs and expenses:			
Operating	9,249	9,021	8,486
Selling, general and administrative	1,453	1,468	1,410
Depreciation and amortization	1,477	1,376	1,301
Restructuring	4	—	4
(Gain) loss from divestitures, asset impairments and unusual items, net	(58)	(16)	112
	12,125	11,849	11,313
Income from operations	2,789	2,636	2,296
Other income (expense):			
Interest expense, net	(374)	(363)	(376)
Equity in net losses of unconsolidated entities	(41)	(68)	(44)
Other, net	2	(14)	(54)
	(413)	(445)	(474)
Income before income taxes	2,376	2,191	1,822
Income tax expense	453	242	642
Consolidated net income	1,923	1,949	1,180
Less: Net loss attributable to noncontrolling interests	(2)	—	(2)
Net income attributable to Waste Management, Inc.	$ 1,925	$ 1,949	$ 1,182
Basic earnings per common share	$ 4.49	$ 4.44	$ 2.66
Diluted earnings per common share	$ 4.45	$ 4.41	$ 2.65
Cash dividends declared per common share	$ 1.86	$ 1.70	$ 1.64

CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

(In Millions)

	Years Ended December 31,		
	2018	2017	2016
Consolidated net income	$ 1,923	$ 1,949	$ 1,180
Other comprehensive income (loss), net of tax:			
Derivative instruments, net	8	7	12

Available-for-sale securities, net	5	2	5
Foreign currency translation adjustments	(105)	76	28
Post-retirement benefit obligation, net	2	3	2
Other comprehensive income (loss), net of tax	(90)	88	47
Comprehensive income	1,833	2,037	1,227
Less: Comprehensive loss attributable to noncontrolling interests	(2)	—	(2)
Comprehensive income attributable to Waste Management, Inc.	$ 1,835	$ 2,037	$ 1,229

See Notes to Consolidated Financial Statements.

WASTE MANAGEMENT, INC.

CONSOLIDATED STATEMENTS OF CASH FLOWS

(In Millions)

	Years Ended December 31,		
	2018	2017	2016
Cash flows from operating activities:			
Consolidated net income	$ 1,923	$ 1,949	$ 1,180
Adjustments to reconcile consolidated net income to net cash provided by operating activities:			
Depreciation and amortization	1,477	1,376	1,301
Deferred income tax expense (benefit)	25	(251)	73
Interest accretion on landfill liabilities	95	92	91
Provision for bad debts	54	43	42
Equity-based compensation expense	89	101	90
Net gain on disposal of assets	(47)	(20)	(24)
(Gain) loss from divestitures, asset impairments and other, net	(58)	49	114
Equity in net losses of unconsolidated entities, net of dividends	41	39	44
Change in operating assets and liabilities, net of effects of acquisitions and divestitures:			
Receivables	(16)	(271)	(78)
Other current assets	(16)	50	(12)
Other assets	(14)	(66)	75
Accounts payable and accrued liabilities	203	126	192
Deferred revenues and other liabilities	(186)	(37)	(85)
Net cash provided by operating activities	3,570	3,180	3,003
Cash flows from investing activities:			
Acquisitions of businesses, net of cash acquired	(460)	(198)	(608)
Capital expenditures	(1,694)	(1,509)	(1,339)
Proceeds from divestitures of businesses and other assets (net of cash divested)	208	99	43
Other, net	(223)	(12)	(25)
Net cash used in investing activities	(2,169)	(1,620)	(1,929)
Cash flows from financing activities:			