WASTE MANAGEMENT INC
Form 10-K
February 15, 2018
Table of Contents

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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, 2017

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	73-1309529
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)
1001 Fannin Street Houston, Texas	77002
(Address of principal executive offices)	(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, $.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 and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted 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	(Do not check if a smaller reporting company)	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, 2017 was approximately $32.2 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, 2018 was 433,673,878 (excluding treasury shares of 196,608,583).

DOCUMENTS INCORPORATED BY REFERENCE

Document	Incorporated as to
Proxy Statement for the 2018 Annual Meeting of Stockholders	Part III

Table of Contents

TABLE OF CONTENTS

Table of Contents

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 2017, our largest customer represented 1% of annual revenues. We employed approximately 42,300 people as of December 31, 2017.

We own or operate 249 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 305 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.

Table of Contents

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, with the current state of our strategy taking into account economic conditions, the regulatory environment, asset and resource availability and innovation through technology. We believe that focused differentiation in our industry, driven by capitalizing on our extensive, well-placed network of assets, will deliver profitable growth and 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 2017, we announced that our Board of Directors expects to increase the quarterly dividend from $0.425 to $0.465 per share for dividends declared in 2018, which is a 9.4% increase from the quarterly dividends we declared in 2017. This is an indication of our ability to generate strong and consistent cash flows and marks the 15th consecutive year of dividend increases. All quarterly dividends will be declared at the discretion of our Board of Directors.

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. The following table shows revenues contributed by these services for the years ended December 31 (in millions):

	2017	2016	2015
Collection	$ 9,264	$ 8,802	$ 8,439
Landfill	3,370	3,110	2,919
Transfer	1,591	1,512	1,377
Recycling	1,432	1,221	1,163
Other	1,713	1,601	1,452
Intercompany	(2,885)	(2,637)	(2,389)
Total	$ 14,485	$ 13,609	$ 12,961

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 eight 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, 2017, we owned or operated 244 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 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, 2017, we owned or operated 305 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 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, 2017, we operated 90 MRFs where paper, cardboard, metals, plastics, glass, construction and demolition materials and other recycling commodities are recovered for resale.

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, which are recorded as operating expenses within our Consolidated Statements of Operations. 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. Our strategic accounts program provides centralized customer service, billing and management of accounts to streamline the administration of customers' multiple and nationwide 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

6

Table of Contents

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 same category as wind, solar and geothermal resources. As of December 31, 2017, we had 127 landfill gas beneficial use projects producing commercial quantities of methane gas at owned or operated landfills. For 102 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 13 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. For 12 of these projects, the landfill gas is processed to pipeline-quality natural gas and then sold to natural gas suppliers.

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 portable self-storage and long distance moving services; 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. In addition, we hold interests in oil and gas producing properties.

Competition

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

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.

Table of Contents

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 conditions that tend to occur during the second half of the year, such as the hurricanes that most often impact our operations in the Southern and Eastern U.S., 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.

Employees

As of December 31, 2017, we had approximately 42,300 full-time employees, of which approximately 7,900 were employed in administrative and sales positions and the balance in operations. Approximately 8,100 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 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. revolving credit facility (“$2.25 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, 2017, 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, 2017, 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, 2017 are summarized in Note 10 to the Consolidated Financial Statements.

We previously chose to maintain a Directors’ and Officers’ Liability Insurance policy that covered only individual executive liability, often referred to as “Broad Form Side A." During 2017, due to attractive pricing, we converted to a traditional full coverage policy, and subject to the terms of that policy, the Company is now insured for money it advances for defense costs or pays as indemnity to the insured directors and officers in excess of applicable deductibles.

Table of Contents

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 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. It also appears that pending litigation has blunted the impact of deregulation for the immediate future.

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 its 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.
- 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 administrative petitions asking that the EPA stay the rules and initiate a rulemaking process to address our concerns, while also filing a petition for judicial review. The EPA has agreed to initiate a rulemaking process to address legal and technical concerns and revise the final rules. 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 final 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.

Table of Contents

We are also actively monitoring the following recent developments in U.S. federal regulations 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.

Further, in June 2014, the U.S. Supreme Court issued a decision that significantly limited the applicability and scope of EPA permitting requirements for GHGs from stationary sources. Following this ruling, the EPA issued a policy memorandum in July 2014 advising that the U.S. Supreme Court ruling effectively narrows the scope of biogenic carbon dioxide ("CO2") permitting issues that remain for the EPA to address. Further, on October 3, 2016, the EPA proposed revisions to the PSD and Title V GHG permitting regulations establishing a significant emissions rate ("SER") of 75,000 tons of CO2 equivalent, 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 plans to finalize the rulemaking in 2018. The EPA 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. The result of the U.S. Supreme Court ruling and anticipated EPA policy and regulatory action should significantly 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 final and proposed rules 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 2011, the EPA published the Non-Hazardous Secondary Materials ("NHSM") Rule, which provides the standards and procedures for identifying whether NHSM are solid waste under RCRA when used as fuels or ingredients in combustion units. The EPA also published New Source Performance Standards and Emission Guidelines for commercial and industrial solid waste incineration units ("CISWI") and Maximum Achievable Control Technology Standards for commercial and industrial boilers ("Boiler MACT"). The EPA published clarifications and amendments to the three rules in 2013 and legal challenges to the rules were subsequently filed by both industry and environmental groups. In May 2015, the Court of Appeals for the D.C. Circuit upheld the NHSM Rule together with the amendments to the rule that support some of our projects in which we are seeking to convert biomass or other secondary materials into products, fuels or energy. Through rulings in July and December of 2016 related to the CISWI and Boiler MACT challenges, the Court vacated certain elements of those rules while remanding other aspects of the rules to the EPA for reconsideration. We believe the ultimate rules and administrative determinations will not have a material adverse impact on our business as a whole and are more likely to facilitate our efforts to reuse or recover energy value from secondary material streams.

- 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

Table of Contents

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 2017, the EPA provided guidance to facilitate approval of state programs.

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

Table of Contents

entry into market areas, these laws have not, and are not expected to have a material adverse impact on our business as a whole.

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 is 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 will be difficult for the industry to achieve. 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 is expected to continue in 2018. 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 called for substantial changes to foreign trade policy and has raised the possibility of imposing significant increases in tariffs on international trade. Restrictions and tariffs on exporting would 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 Chinese government’s regulations. 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.

Hydraulic Fracturing Regulation

Our EES organization provides specialized environmental management and disposal services for oil and gas exploration and production operations. There remains heightened attention from the public, some states and the EPA on the alleged potential for hydraulic fracturing to impact drinking water supplies. There is also heightened federal regulatory focus on emissions of methane that occur during drilling and transportation of natural gas with regulations promulgated in 2012 and 2015, as well as state attention to protective disposal of drilling residuals. Increased regulation of hydraulic fracturing and new rules regarding the treatment and disposal of wastes associated with exploration and production operations could increase our costs to provide oilfield services and reduce our margins and revenue from such services. On the other hand, 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, 2017, we were operating 6,525 natural gas trucks and 106 natural gas fueling facilities, of which 101 are in the U.S. and five are in Canadian provinces; 29 of these fueling stations also serve the public or 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 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

Table of Contents

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.

Federal, State and Local Climate Change Initiatives

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.

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.

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 2018 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.

14

Table of Contents

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. In North America, the industry consists primarily of three national waste management companies and regional and local companies of varying sizes and financial resources, including companies that specialize in certain discrete areas of waste management, operators of alternative disposal facilities and companies that seek to use parts of the waste stream as feedstock for renewable energy and other by-products. In recent years, the industry has seen some additional consolidation, though the industry remains intensely competitive. The industry's national and regional competitors are often significant competitors in local markets. We compete with these companies as well as with counties and municipalities that maintain their own waste collection and disposal operations and waste brokers that rely upon haulers in local markets to address customer needs. These 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 7. Management's Discussion and Analysis of Financial Condition and Results of Operations — Overview 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.
- 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 restructuring 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.

15

- 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 a number of factors beyond our control, such as increased competition, legal developments, government regulation, general economic conditions, increased operating costs or expenses 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. A large number of 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, 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

16

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 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. The majority 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 is 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 will be difficult for the industry to achieve. 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 is expected to continue in 2018.

There is uncertainty about the industry's ability to adapt to the Chinese government's regulations. 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 positively, as we experienced in 2017 and 2016, or negatively, as we experienced in 2015. As we have increased the size of our recycling operations, we have also increased our exposure to commodity price fluctuations.

The increase in market prices in 2017 and 2016 for commodities resulted in increases in revenue of $237 million and $51 million, respectively. The decline in market prices in 2015 for commodities resulted in a decrease in revenue of $138 million. 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. If the Chinese government's regulations, or other similar regulations or initiatives, such as increased container weight tracking and port fees or restrictions and tariffs on exporting, result in reduced demand or increased operating costs, such regulations, initiatives, restrictions and tariffs could have a material adverse effect on the profitability of our recycling operations.

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.

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

EES organization demand may also be adversely affected if drilling activity slows due to industry conditions beyond our control, in addition to changes in oil and gas prices. Changes in laws or government regulations regarding GHG emissions from oil and gas operations and/or hydraulic fracturing could increase our customers' costs of doing business and reduce oil and gas exploration and production by customers. There remains heightened attention from the public, some states and the EPA to the alleged potential for hydraulic fracturing to impact drinking water supplies. There is also heightened federal regulatory focus on emissions of methane that occur during drilling and transportation of natural gas with regulations promulgated in 2012 and 2015 as well as state attention to protective disposal of drilling residuals. Increased regulation of oil and gas exploration and production and new rules regarding the treatment and disposal of wastes associated with exploration and production operations could increase our costs to provide oilfield services and reduce our margins and revenue from such services.

Increasing customer preference for alternatives to landfill disposal 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.

Table of Contents

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. This risk is 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. Additionally, we could be liable if we arrange for the transportation, disposal or treatment of hazardous substances that cause environmental contamination, or if a predecessor owner made such arrangements and, under applicable law, we are treated as a successor to the prior owner. Any substantial liability for environmental damage could have a material adverse effect on our financial condition, results of operations and cash flows.

Table of Contents

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 decreases our revenues. 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. In addition, we have a relatively high fixed-cost structure, which is difficult to quickly adjust to match shifting volume levels. Consumer uncertainty and the loss of consumer confidence may limit the number or amount of services requested by customers. Economic conditions may also limit our ability to implement our pricing strategy. For example, 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 in excess of the increase, if any, in the Consumer Price Index. Additionally, a prolonged economic downturn in China could significantly impact prices for post-consumer fiber and metals processed by our recycling operations.

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, 2017, we had $831 million of tax-exempt bonds with term interest rate periods that expire within the next 12 months and $328 million of variable-rate tax-exempt bonds with interest rates reset on either a daily or a weekly basis through a remarketing process, which is prior to their scheduled maturities. 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.

Table of Contents

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 as a means 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.

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.

Table of Contents

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.

We use computers in substantially all aspects of our business operations. We also use mobile devices, social networking and other online activities 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. 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. If we fail to assess and identify cybersecurity risks associated with acquisitions and new initiatives, we may become increasingly vulnerable to such risks. Additionally, while we have implemented measures to prevent security breaches and cyber incidents, our preventative measures and incident response efforts may not be entirely effective. 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, negative publicity, brand damage, violation of privacy laws, loss of customers, potential litigation and liability and competitive disadvantage.

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 several employee bargaining units from underfunded Multiemployer Pension Plans, and we recognized related expenses of $12 million and $51 million in 2017 and 2015, 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, 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

Table of Contents

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.

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.

Table of Contents

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, as well as a number of 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 $1.8 billion of debt as of December 31, 2017 that is exposed to changes in market interest rates within the next 12 months because of the combined impact of our tax-exempt bonds and outstanding borrowings under our commercial paper program and our Canadian term loan. If interest rates increase, our interest expense would also increase, lowering our net income and decreasing our cash flow.

We may use our $2.25 billion revolving credit facility and our C$50 million Canadian revolving credit facility ("Canadian revolving credit facility") to meet our cash needs, to the extent available, until maturity in July 2020 and March 2019, respectively. As of December 31, 2017, we had $642 million of letters of credit issued and $515 million of outstanding borrowings under our commercial paper program both supported by our $2.25 billion revolving credit facility, leaving unused and available credit capacity of $1,093 million, and we had no outstanding borrowings under both our $2.25 billion revolving credit facility and Canadian revolving credit facility. In the event of a default under our credit facilities, 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 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.

Table of Contents

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 conditions that tend to occur during the second half of the year, such as the hurricanes that most often impact our operations in the Southern and Eastern U.S., 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.

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.

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.

Table of Contents

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, Illinois, Connecticut 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, 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 replacement of assets and to 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:

	2017	2016
Landfills owned or operated (a)	249	248
Transfer stations	305	310
Material recovery facilities	90	95

(a) As of December 31, 2017 and 2016, our landfills owned or operated consisted of total acreage of 156,784 and 158,054; permitted acreage of 42,590 and 42,182; and expansion acreage of 821 and 905, 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.

Table of Contents

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 following table sets forth the range of the high and low per share sales prices for our common stock as reported on the NYSE:

	High	Low
2016		
First Quarter	$ 59.99	$ 50.36
Second Quarter	66.27	56.06
Third Quarter	70.49	62.42
Fourth Quarter	71.71	61.09
2017		
First Quarter	$ 73.90	$ 69.00
Second Quarter	74.57	70.10
Third Quarter	78.80	73.18
Fourth Quarter	86.89	75.87
2018		
First Quarter (through February 8, 2018)	$ 89.73	$ 78.89

On February 8, 2018, the closing sales price as reported on the NYSE was $79.12 per share. The number of holders of record of our common stock on February 8, 2018 was 9,248.

Table of Contents

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.

	12/31/12	12/31/13	12/31/14	12/31/15	12/31/16	12/31/17
Waste Management, Inc.	$ 100	$ 138	$ 163	$ 174	$ 238	$ 296
S&P 500 Index	$ 100	$ 132	$ 151	$ 153	$ 171	$ 208
Dow Jones Waste & Disposal Services Index	$ 100	$ 125	$ 142	$ 148	$ 179	$ 210

Our quarterly dividends have been declared by our Board of Directors. Cash dividends declared and paid were $750 million in 2017, or $1.70 per common share, $726 million in 2016, or $1.64 per common share, and $695 million in 2015, or $1.54 per common share.

In December 2017, we announced that our Board of Directors expects to increase the quarterly dividend from $0.425 to $0.465 per share for dividends declared in 2018. 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 and other factors the Board of Directors may deem relevant.

The Company repurchases shares of its common stock as part of capital allocation programs authorized by our Board of Directors. We announced in December 2016 that the Board of Directors authorized up to $750 million in future share repurchases. During 2017, we repurchased an aggregate of $750 million of our common stock under accelerated share repurchase (“ASR”) agreements. We received a total of 9.7 million shares pursuant to these ASR agreements with a weighted average per share purchase price of $77.67. See Note 13 to the Consolidated Financial Statements for additional information.

Table of Contents

The following table summarizes common stock repurchases made during the fourth quarter of 2017 (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	—		$ —		—		$ —	
November 1 — 30	—		$ —		—		$ —	
December 1 — 31	1.0	(a)	$ 79.47	(a)	1.0	(a)	$ 1.25 billion	(b)
Total	1.0		$ 79.47		1.0			

(a) In August 2017, we entered into an ASR agreement to repurchase $500 million of our common stock, and the “Average Price Paid per Share” in the table above is the final weighted average per share purchase price paid for all shares repurchased pursuant to the ASR agreement. At the beginning of the repurchase period, we delivered $500 million in cash and received 5.3 million shares based on a stock price of $75.25 per share. The ASR agreement completed in December 2017, at which time we received 1.0 million additional shares.

(b) We announced in December 2017 that the Board of Directors has authorized up to $1.25 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.

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,				
	2017(a)	2016(a)	2015(a)	2014	2013
	(In Millions, Except per Share Amounts)				
Statement of Operations Data:					
Operating revenues	$ 14,485	$ 13,609	$ 12,961	$ 13,996	$ 13,983
Consolidated net income	1,949	1,180	752	1,338	130
Net income attributable to Waste Management, Inc.	1,949	1,182	753	1,298	98
Basic earnings per common share	4.44	2.66	1.66	2.80	0.21
Diluted earnings per common share	4.41	2.65	1.65	2.79	0.21
Cash dividends declared per common share	1.70	1.64	1.54	1.50	1.46
Balance Sheet Data:					
Working capital (deficit)	$ (638)	$ (418)	$ (165)	$ 41	$ (628)

Total assets	21,829	20,859	20,367	21,252	22,441
Long-term debt, including current portion	9,491	9,310	8,929	9,390	10,177
Total Waste Management, Inc. stockholders' equity	6,019	5,297	5,345	5,866	5,707
Total equity	6,042	5,320	5,367	5,889	6,002

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

Table of Contents

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, 2017. 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

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.

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, with the current state of our strategy taking into account economic conditions, the regulatory environment, asset and resource availability and innovation through technology. We believe that focused differentiation in our industry, driven by capitalizing on our extensive, well-placed network of assets, will deliver profitable growth and 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.

Key items of our 2017 financial results include:

- Revenues of $14,485 million for 2017 compared with $13,609 million in 2016, an increase of $876 million, or 6.4%. This increase is primarily attributable to (i) yield and volume growth in our collection and disposal lines of business, which contributed $536 million of revenues; (ii) higher market prices for recycling commodities, which contributed $237 million of revenue growth in our recycling line of business and (iii) increased fuel surcharge and mandated fees of $73 million;
- Operating expenses of $9,021 million in 2017, or 62.3% of revenues, compared with $8,486 million, or 62.4% of revenues, in 2016. This increase of $535 million is primarily attributable to (i) increased cost of goods sold due to higher market prices for recycling commodities; (ii) higher volumes; (iii) increased maintenance and repairs costs; (iv) increased labor and related benefits costs, primarily due to merit and headcount increases and (v) increased fuel costs, primarily due to higher fuel prices and the expiration of certain natural gas fuel excise tax credits. These increases were partially offset by decreased landfill leachate management costs;
- Selling, general and administrative expenses of $1,468 million in 2017, or 10.1% of revenues, compared with $1,410 million, or 10.4% of revenues, in 2016. This increase of $58 million is primarily attributable to (i) the impact of favorable litigation settlements in 2016; (ii) merit increases; (iii) an increase in certain costs that vary with

revenue and earnings growth, including incentive compensation accruals; (iv) higher severance costs and (v) charitable contributions made for hurricane relief efforts;

- Income from operations of $2,636 million, or 18.2% of revenues, in 2017 compared with $2,296 million, or 16.9% of revenues, in 2016, an increase of $340 million;

- Net income attributable to Waste Management, Inc. of $1,949 million, or $4.41 per diluted share, for 2017 as compared with $1,182 million, or $2.65 per diluted share, for 2016; and
- In 2017, we returned $1,500 million to our shareholders through dividends and share repurchases compared with $1,451 million in 2016.

Our business performed exceptionally well in 2017, as our strategy of improving pricing, adding profitable volume and controlling costs led to another year of significant earnings improvement. Our focus on delivering exceptional customer service while bolstering employee engagement yielded consistently positive operational performance throughout the year. Our cash flow generation has also continued to exceed expectations, allowing us to invest in assets that support continuous improvement through efficiency and innovation and return $1.5 billion to our shareholders in dividends and share repurchases in 2017. The success that we achieved in 2017 reinforces our foundation for earnings and cash flow growth in 2018, despite anticipated disruption and downward price pressure in the global market for recycling commodities. With the reduction in our cash taxes due to enactment of tax reform, we are investing in our front-line employees, technology and revenue generating assets to continue to grow our business and improve customer service. These investments, together with our long-held commitments to maintain a strong balance sheet, return cash to shareholders and pursue attractive strategic growth opportunities, position the Company to capitalize on its momentum as we work to deliver superior performance again in 2018.

The following explanations of certain items that affected the comparability of the years presented has been provided to support investors' understanding of our performance. Our 2017 results were affected by the following:

- An income tax benefit of $529 million related to enactment of the Tax Cuts and Jobs Act, consisting of a net tax benefit of $595 million for the re-measurement of our deferred income tax assets and liabilities, partially offset by income tax expense of $66 million for a one-time, mandatory transition tax on the deemed repatriation of previously tax-deferred and unremitted foreign earnings. This net tax benefit had a favorable impact of $1.20 on our diluted earnings per share;
- The recognition of net pre-tax charges aggregating to $36 million, primarily related to (i) $37 million of impairment charges related to investments in waste diversion technology companies; (ii) $34 million of goodwill impairment charges for certain ancillary services businesses; (iii) an $11 million charge for the withdrawal from an underfunded Multiemployer Pension Plan; (iv) $11 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 and (v) a charge of $6 million related to the early extinguishment of $590 million of 6.1% senior notes. These charges were partially offset by gains of $31 million from the sale of certain oil and gas producing properties and a $30 million reduction in post-closing, performance-based contingent consideration obligations associated with an acquired business in our EES organization. These net charges had a negative impact of $0.08 on our diluted earnings per share; and
- Income tax benefit of $32 million for excess tax benefits related to the vesting or exercise of equity-based compensation awards, which had a favorable impact of $0.07 on our diluted earnings per share.

Our 2016 results were affected by the following:

- The recognition of pre-tax charges aggregating to $151 million, primarily related to (i) a $43 million impairment charge due to a loss of expected volumes for a landfill; (ii) a $42 million charge to adjust our subsidiary's estimated potential share of an environmental remediation liability and related costs for a closed site in Harris County, Texas; (iii) $41 million of impairment charges related to investments in waste diversion technology companies; (iv) a $10 million goodwill impairment charge related to our LampTracker® reporting unit and (v) an $8 million loss on the sale of a majority-owned organics company. These charges had a negative impact of $0.26 on our diluted earnings per share.

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

Table of Contents

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. However, we believe free cash flow gives investors useful insight into how we view our liquidity. Nonetheless, 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:

	2017	2016	2015
Net cash provided by operating activities (a)	$ 3,180	$ 3,006	$ 2,528
Capital expenditures	(1,509)	(1,339)	(1,233)
Proceeds from divestitures of businesses and other assets (net of cash divested)	99	43	145
Free cash flow (a)	$ 1,770	$ 1,710	$ 1,440

(a) Prior year information has been revised to reflect the adoption of Accounting Standards Update (“ASU”) 2016 09, which is discussed below in Adoption of New Accounting Standards, and conform to our current year presentation. See Note 2 to the Consolidated Financial Statements.

Our net cash flows provided by operating activities increased by $174 million for the year ended December 31, 2017 compared with 2016, impacted by (i) higher earnings from our Traditional Solid Waste and recycling businesses and (ii) favorable changes in assets and liabilities, net of effects of acquisitions and divestitures. These increases were partially offset by (i) higher income tax payments of $120 million in 2017; (ii) cash proceeds of $67 million from the termination of our cross-currency swaps in 2016 and (iii) higher annual incentive plan cash payments of $41 million in 2017.

Our net cash flows provided by operating activities increased by $478 million for the year ended December 31, 2016 compared with 2015, impacted by (i) higher earnings from our Traditional Solid Waste and recycling businesses; (ii) cash proceeds of $67 million from the termination of our cross-currency swaps in 2016; (iii) Multiemployer Pension Plan settlement payments of approximately $60 million in 2015 and (iv) lower annual incentive plan cash payments of $46 million in 2016; partially offset by higher income tax payments of $23 million in 2016. Additionally, we experienced favorable changes in assets and liabilities, net of effects of acquisitions and divestitures, particularly non-trade related items including payroll and incentive accruals.

Capital expenditures increased by $170 million when comparing 2017 with 2016 and $106 million when comparing 2016 with 2015. 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, timing of replacement of aging assets and investment in assets that support our strategy of continuous improvement through efficiency and innovation.

Acquisitions

Southern Waste Systems/Sun Recycling (“SWS”) — On January 8, 2016, Waste Management Inc. of Florida, an indirect wholly-owned subsidiary of WM, acquired certain operations and business assets of SWS in Southern Florida for total consideration of $525 million. The acquired business assets include residential, commercial and industrial solid waste collection, processing/recycling and transfer operations, equipment, vehicles, real estate and customer agreements.

Deffenbaugh Disposal, Inc. (“Deffenbaugh”) — On March 26, 2015, we acquired Deffenbaugh, one of the largest privately owned collection and disposal firms in the Midwest, for total consideration, net of cash acquired, of $400 million. Deffenbaugh’s assets include collection operations, transfer stations, recycling facilities and landfills.

Table of Contents

Adoption of New Accounting Standards

Equity-Based Compensation — In March 2016, the Financial Accounting Standards Board (“FASB”) issued ASU 2016 09 associated with equity-based compensation as part of its simplification initiative to reduce the cost and complexity of compliance with GAAP, while maintaining or improving the usefulness of the information provided. This amended guidance was effective for the Company on January 1, 2017 and required the following changes to the presentation of our financial statements:

· Excess tax benefits or deficiencies for share-based payments are now recorded as a discrete item in the period shares vest or stock options are exercised as an adjustment to income tax expense or benefit rather than additional paid-in capital. This change was applied prospectively as of January 1, 2017. The Company did not have any excess tax benefits that were not previously recognized as of January 1, 2017. See Note 8 to the Consolidated Financial Statements for discussion of the current year impact;
· As of January 1, 2017, the calculation of diluted weighted average shares outstanding was changed prospectively to no longer include excess tax benefits as assumed proceeds. This change did not have a material impact on our current year diluted earnings per share;
· Cash flows related to excess tax benefits or deficiencies are included in net cash provided by operating activities rather than as a financing activity. The Company adopted this change retrospectively, which resulted in an increase to net cash provided by operating activities and a corresponding increase to net cash used in financing activities of $28 million and $15 million for the years ended December 31, 2016 and 2015, respectively;
· Cash paid to taxing authorities when withholding shares from an employee’s vesting or exercise of equity-based compensation awards for tax-withholding purposes is now considered a repurchase of the Company’s equity instruments and is classified as net cash used in financing activities rather than as an operating activity. The Company adopted this change retrospectively, which resulted in an increase to net cash provided by operating activities and a corresponding increase to net cash used in financing activities of $18 million and $15 million for the years ended December 31, 2016 and 2015, respectively; and
· The Company elected to continue to estimate forfeitures rather than account for forfeitures as they occur.

Goodwill Impairment Testing — In January 2017, the FASB issued ASU 2017 04 which simplifies the goodwill impairment test by eliminating Step 2 of the quantitative assessment and should reduce the cost and complexity of evaluating goodwill for impairment. Under the amended guidance, when a quantitative assessment is required, an entity will perform a goodwill impairment test by comparing the estimated fair value of a reporting unit with its carrying amount. An impairment charge will be measured as the amount by which the carrying amount exceeds the reporting unit’s estimated fair value, not to exceed the total amount of recorded goodwill. This amended guidance, effective for the Company on January 1, 2020, permits early adoption. The Company’s early adoption on January 1, 2017 did not have a material impact on our consolidated financial statements.

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. 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 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 of 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. Of the 15 landfill sites with expansions included as of December 31, 2017, three landfills required the Chief Financial Officer to approve the inclusion of the unpermitted airspace. One landfill required approval by our Chief Financial Officer because of community or political opposition that could impede the expansion process. The remaining two landfills required approval because the permit application process did not meet the one- or five-year requirements.

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 (income) expense 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.

Table of Contents

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.

We assess whether an impairment exists using a quantitative assessment. Our quantitative assessment identifies potential impairments by comparing the estimated fair value of a reporting unit to its carrying amount, including goodwill. An impairment charge is recognized if the asset's estimated fair value is 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 — (Income) Expense 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 comprised of equal parts cash and an intercompany note, for the estimated losses based on the external actuarial analysis. These premiums will be held in a restricted escrow account to be used solely for paying insurance claims, resulting in a transfer of risk from WM to the insurance captive.

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. 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 MRF 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 collection, disposal, transfer and recycling services generally include fuel surcharges, which are indexed to current market costs for diesel fuel. 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 expanded service offerings and solutions. Our expanded service offerings and solutions include (i) portable self-storage and long distance moving services; (ii) fluorescent bulb and universal waste mail-back through our LampTracker® program; (iii) portable restroom servicing under the name Port-o-Let® and (iv) street and parking lot sweeping services. In addition, we hold interests in oil and gas producing properties. 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):

	2017	2016	2015
Solid Waste	$ 14,832	$ 13,968	$ 13,285
Other	2,538	2,278	2,065
Intercompany	(2,885)	(2,637)	(2,389)
Total	$ 14,485	$ 13,609	$ 12,961

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):

	2017	2016	2015
Commercial	$ 3,714	$ 3,480	$ 3,332
Residential	2,528	2,487	2,499
Industrial	2,583	2,412	2,252
Other	439	423	356
Total collection	9,264	8,802	8,439
Landfill	3,370	3,110	2,919
Transfer	1,591	1,512	1,377
Recycling	1,432	1,221	1,163
Other (a)	1,713	1,601	1,452
Intercompany (b)	(2,885)	(2,637)	(2,389)
Total	$ 14,485	$ 13,609	$ 12,961

(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) our expanded service offerings and solutions, such as portable self-storage and long distance moving services, and interests we hold in oil and gas producing properties. 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.

Table of Contents

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

	2017 vs. 2016		2016 vs. 2015	
	Amount	As a % of Total Company(a)	Amount	As a % of Total Company(a)
Average yield (b)	$ 551	4.1 %	$ 251	1.9 %
Volume	289	2.1	186	1.4
Internal revenue growth	840	6.2	437	3.3
Acquisitions	48	0.3	268	2.1
Divestitures	(27)	(0.2)	(30)	(0.2)
Foreign currency translation	15	0.1	(27)	(0.2)
Total	$ 876	6.4 %	$ 648	5.0 %

(a) 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 ($13,582 million and $12,931 million for 2017 and 2016, respectively).

(b) The amounts reported herein represent the changes in our revenue attributable to average yield for the total Company. We also analyze the changes in average yield in terms of related business revenues in order to differentiate the changes in yield attributable to our pricing strategies from the changes that are caused by market-driven price changes in commodities. The following table summarizes the period-to-period change in revenues from average yield on a related business basis (dollars in millions):

	2017 vs. 2016		2016 vs. 2015	
	Amount	As a % of Related Business(i)	Amount	As a % of Related Business(i)
Average yield:				
Collection and disposal	$ 241	2.0 %	$ 267	2.4 %
Recycling commodities	237	20.1	51	4.6
Fuel surcharges and mandated fees	73	16.3	(67)	(13.1)
Total	$ 551	4.1 %	$ 251	1.9 %

(i) 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.

Our revenues increased $876 million, or 6.4%, for the year ended December 31, 2017 as compared with the prior year, driven primarily by (i) higher volumes; (ii) revenue growth from yield on our collection and disposal lines of business (iii) higher market prices for the recycling commodities we sell and (iv) higher revenues from our fuel surcharge program due to higher diesel fuel prices.

Our revenues increased $648 million, or 5.0%, for the year ended December 31, 2016 as compared with the prior year, driven by (i) acquisitions, primarily the acquired operations of SWS in January 2016; (ii) revenue growth from yield on our collection and disposal lines of business; (iii) higher volumes and (iv) higher market prices for the recycling commodities we sell. Partially offsetting these revenue increases were (i) lower revenues from our fuel surcharge program due to lower diesel fuel prices; (ii) divestitures and (iii) foreign currency translation which affects revenues from our Canadian operations.

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 $241 million, or 2.0%, and $267 million, or 2.4%, for the years ended December 31, 2017 and 2016, respectively. We experienced growth in yield for all of our collection and disposal lines of business in both 2017 and 2016. The period-to-period changes are as follows (dollars in millions):

	2017 vs. 2016		2016 vs. 2015	
	Amount	As a % of Related Business	Amount	As a % of Related Business
Commercial	$ 99	3.0 %	$ 130	4.2 %
Industrial	69	3.1	59	2.8
Residential	44	1.8	46	1.9
Total collection	212	2.6	235	3.0
Landfill	17	0.9	15	0.8
Transfer	12	1.5	17	2.5
Total collection and disposal	$ 241	2.0 %	$ 267	2.4 %

Our increase in collection and disposal yield for the years ended December 31, 2017 and 2016, compared with the prior years, includes increased revenues from our environmental fees of $67 million and $72 million, respectively.

Recycling Commodities — Increases in the market prices for recycling commodities resulted in revenue growth of $237 million and $51 million for the years ended December 31, 2017 and 2016, respectively, as compared with the prior years due to the increase in the market prices of the recycling commodities we sell at our recycling facilities and through our recycling brokerage business. However, beginning in September 2017, disruptions in the global movement of recycling commodities and the impact of natural disasters along the Gulf Coast decreased market prices for recycling commodities, which reduced our revenues in the fourth quarter of 2017 as compared with the prior year period. We expect these disruptions in the market for recycling commodities to extend through the first half of 2018, which will continue to put downward pressure on average market prices for recycling commodities.

Fuel Surcharges and Mandated Fees — These revenues, which are predominantly generated by our fuel surcharge program, increased $73 million for the year ended December 31, 2017 and decreased $67 million for the year ended December 31, 2016, 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 15% for the year ended December 31, 2017 and decreased 14% for the year ended December 31, 2016, compared with the prior years. The mandated fees included in this line item are primarily related to pass-through fees and taxes assessed by various state, county and municipal government agencies at our landfills and transfer stations. These fees did not have a significant impact on the comparability of the periods presented.

Volume

Our revenues from volume increased $289 million, or 2.1%, and $186 million, or 1.4%, for the years ended December 31, 2017 and 2016, respectively, as compared with the prior years. The comparison does not include volumes from acquisitions.

We experienced higher volumes due to improving market conditions and strong sales performance. Our focus on customer service and disciplined growth delivered consistent results throughout 2017 and 2016. The most significant contributors to our volume growth were commercial and industrial collection; municipal solid waste and construction and demolition landfills; and transfer stations. Our residential line of business experienced volume declines in 2017 and 2016 due to our continued focus on renegotiating existing contracts and winning only those new contracts with a reasonable rate of return.

Table of Contents

Additional drivers affecting the comparability of volumes for 2017 to 2016 are as follows:

- Over $60 million of our landfill volume increases resulted from events during 2017 that may not repeat, including natural disasters throughout the U.S. primarily in the fourth quarter of 2017 and from an eleven-month outage at a waste-to-energy facility in Virginia that ended in mid-December;
- Two large new contract additions in 2017 that favorably impacted our volume growth;
- Our WMSBS organization experienced favorable volume growth;
- The completion of certain project work performed throughout 2016 in our collection line of business in Southern California and other line of business from our EES organization negatively impacted our volume growth; and
- One less workday in 2017 negatively impacted our volume growth.

Additional drivers affecting the comparability of volumes for 2016 to 2015 are as follows:

- In our ancillary services businesses, we experienced higher volumes in 2016 as compared with 2015 resulting from our EES organization, particularly our remediation and construction services, our WM Renewable Energy organization and our portable self-storage business. These volume increases were partially offset by lower volumes due to lower oil prices, which negatively affected both our oil and gas producing properties and our oilfield services business; and
- An additional workday in 2016 favorably impacted our volume growth.

Acquisitions and Divestitures

Acquisitions increased revenues $48 million and $268 million for the years ended December 31, 2017 and 2016, respectively, as compared with the prior years. The increase in revenues in 2016 was principally due to the acquired operations of SWS in January 2016. These revenues were partially offset by revenue decreases due to divestitures of $27 million and $30 million for the years ended December 31, 2017 and 2016, respectively, as compared with the prior years.

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 business, including rebates paid to suppliers; (vi) fuel costs, which represent the costs of fuel and oil to operate our truck fleet and landfill 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, workers’ compensation and insurance and claim costs and (x) other operating costs, which include telecommunications, equipment and facility lease expenses, property taxes, utilities and supplies.

Table of Contents

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

	2017	Period-to-Period Change		2016	Period-to- Period Change		2015
Labor and related benefits	$ 2,500	$ 90	3.7 %	$ 2,410	$ 29	1.2 %	$ 2,381
Transfer and disposal costs	996	22	2.3	974	35	3.7	939
Maintenance and repairs	1,170	94	8.7	1,076	54	5.3	1,022
Subcontractor costs	1,236	43	3.6	1,193	56	4.9	1,137
Cost of goods sold	969	111	12.9	858	67	8.5	791
Fuel	375	75	25.0	300	(61)	(16.9)	361
Disposal and franchise fees and taxes	753	51	7.3	702	40	6.0	662
Landfill operating costs	328	(24)	(6.8)	352	97	38.0	255
Risk management	219	27	14.1	192	(29)	(13.1)	221
Other	475	46	10.7	429	(33)	(7.1)	462
	$ 9,021	$ 535	6.3 %	$ 8,486	$ 255	3.1 %	$ 8,231

Our operating expenses increased $535 million, or 6.3%, when comparing 2017 with 2016 and $255 million, or 3.1%, when comparing 2016 with 2015. Operating expenses as a percentage of revenues were 62.3% in 2017, 62.4% in 2016 and 63.5% in 2015.

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 2017 as compared with 2016 was due to (i) merit increases; (ii) increased headcount driven, in part, by higher volumes and (iii) charges for the withdrawal from certain Multiemployer Pension Plans. These cost increases were partially offset by one less workday in 2017.

The increase in labor and related benefits costs in 2016 as compared with 2015 was due to (i) merit increases; (ii) additional costs associated with the acquired operations of SWS in January 2016; (iii) health and welfare cost increases; (iv) an additional workday in 2016 and (v) higher incentive compensation accruals. These cost increases were partially offset by (i) $51 million of charges in 2015 for the withdrawal from certain underfunded Multiemployer Pension Plans and (ii) lower headcount and contract labor costs in 2016 due to operating efficiencies in our recycling line of business.

Transfer and Disposal Costs — The increase in transfer and disposal costs in 2017 compared with 2016 was primarily driven by higher volumes. The increase in costs in 2016 compared with 2015 was driven by acquisitions, primarily SWS, and higher volumes.

Maintenance and Repairs — The increase in maintenance and repairs costs in 2017 compared with 2016 was primarily driven by (i) higher third-party repairs and parts costs and (ii) higher labor costs due to increased headcount, merit increases, and retention and training efforts. The increase in costs in 2016 compared with 2015 was primarily driven by (i) higher labor and parts and supplies costs and (ii) acquisitions, primarily the acquired operations of SWS.

Subcontractor Costs — Increases in subcontractor costs in 2017 compared with 2016 were driven by higher volumes in our Solid Waste business and our WMSBS organization. The increase in costs in 2016 compared with 2015 was driven by acquisitions and higher volumes in our WMSBS organization. The increases for both years were partially offset by a decrease in subcontracted remediation and construction services to industrial customers.

Cost of Goods Sold — The increase in cost of goods sold in 2017 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. The increase in costs in 2016 compared with 2015 was due to (i) higher market prices for recycling commodities and (ii) increased costs in our remediation and construction services business, partially offset by lower costs due to continued efforts to restructure recycling rebates paid to customers.

Table of Contents

Fuel — The increase in fuel costs in 2017 compared with 2016 was primarily due to (i) higher fuel prices; (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. The decrease in fuel costs in 2016 compared with 2015 was driven by (i) lower fuel prices; (ii) lower costs resulting from the continued conversion of our fleet to natural gas vehicles; (iii) increases in natural gas fuel excise credits and (iv) reduced fuel consumption due to efficiency gains in the routing of our fleet. The higher volumes in our collection line of business in 2016 partially offset these decreases.

Disposal and Franchise Fees and Taxes — The increase in disposal and franchise fees and taxes in 2017 compared with 2016 is primarily due to higher landfill volumes and increased municipal franchise fees. The increase in 2016 compared with 2015 is primarily due to (i) higher landfill volumes; (ii) increased municipal franchise fees and (iii) increased subcontracted remediation and construction services to industrial customers.

Landfill Operating Costs — The most significant item impacting landfill operating costs for the periods presented was landfill leachate management costs, which were lower in 2017 compared to 2016 and higher in 2016 compared to 2015.

Risk Management — The increase in risk management costs in 2017 compared with 2016 was primarily due to increases in certain uninsured losses. The decrease in costs in 2016 compared with 2015 was primarily due to a reduction in certain uninsured losses and, to a lesser extent, decreased workers' compensation claims.

Other — The changes in other operating costs in the reported periods were principally driven by favorable adjustments to our contingent consideration liabilities associated with certain acquisitions in 2016 and fluctuations in operating lease expenses. Operating lease expenses were higher in 2017 compared with 2016 and lower in 2016 when compared with 2015.

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):

	2017	Period-to-Period Change		2016	Period-to-Period Change		2015
Labor and related benefits	$ 1,000	$ 32	3.3%	$ 968	$ 94	10.8 %	$ 874
Professional fees	102	5	5.2	97	(15)	(13.4)	112
Provision for bad debts	42	2	5.0	40	4	11.1	36
Other	324	19	6.2	305	(16)	(5.0)	321
	$ 1,468	$ 58	4.1%	$ 1,410	$ 67	5.0 %	$ 1,343

Our selling, general and administrative expenses increased $58 million, or 4.1%, when comparing 2017 with 2016 and $67 million, or 5.0%, when comparing 2016 with 2015. Our selling, general and administrative expenses as a percentage of revenues were 10.1% in 2017 and 10.4% in 2016 and 2015.

Table of Contents

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

Labor and Related Benefits — The increase in labor and related benefits costs in 2017 compared with 2016 was primarily due to (i) merit increases; (ii) an increase in certain costs that vary with revenue and earnings growth, including incentive compensation accruals and (iii) higher severance costs for former executives in 2017. The increase in costs in 2016 compared with 2015 was primarily due to (i) higher incentive compensation accruals; (ii) merit increases; (iii) higher severance costs and (iv) acquisitions.

Professional Fees — The decrease in professional fees in 2016 compared with 2015 was primarily due to lower legal fees.

Other — 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. The decrease in other expenses in 2016 compared with 2015 was principally driven by favorable litigation settlements and lower bank charges.

Depreciation and Amortization Expenses

Depreciation and amortization expenses include (i) depreciation of property and equipment, including assets recorded for capital leases, on a straight-line basis from three to 40 years; (ii) amortization of landfill costs, including those incurred and all estimated future costs for landfill development, construction and asset retirement costs arising from closure and post-closure, on a units-of-consumption method as landfill airspace is consumed over the total estimated remaining capacity of a site, which includes both permitted capacity and expansion capacity that meets our Company-specific criteria for amortization purposes; (iii) amortization of landfill asset retirement costs arising from final capping obligations on a units-of-consumption method as airspace is consumed over the estimated capacity associated with each final capping event and (iv) amortization of intangible assets with a definite life, using either a 150% declining balance approach or a straight-line basis over the definitive terms of the related agreements, which are generally from two to 15 years depending on the type of asset.

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

	2017	Period-to-Period Change		2016	Period-to-Period Change		2015
Depreciation of tangible property and equipment	$ 783	$ 10	1.3 %	$ 773	$ 13	1.7 %	$ 760
Amortization of landfill airspace	497	69	16.1	428	19	4.6	409
Amortization of intangible assets	96	(4)	(4.0)	100	24	31.6	76
	$ 1,376	$ 75	5.8 %	$ 1,301	$ 56	4.5 %	$ 1,245

The increase in amortization of landfill airspace during 2017 as compared with the prior year is primarily due to higher volumes at our landfills and changes in our landfill estimates.

The increase in depreciation of tangible property and equipment and amortization of intangible assets during 2016 as compared with the prior year is primarily due to the acquired operations of SWS in January 2016. The increase in amortization of landfill airspace during 2016 as compared with the prior year is due to higher volumes at our landfills, partially offset by changes in our landfill estimates.

Table of Contents

(Income) Expense from Divestitures, Asset Impairments and Unusual Items, Net

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

	2017	2016	2015
(Income) expense from divestitures	$ (38)	$ 9	$ (7)
Asset impairments	41	59	89
Other	(19)	44	—
	$ (16)	$ 112	$ 82

During the year ended December 31, 2017, we recognized net income 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 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 Western Pennsylvania 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.

During the year ended December 31, 2015, we recognized net charges of $82 million, primarily related to (i) $66 million of charges to impair certain oil and gas producing properties as a result of declines in oil and gas prices; (ii) $18 million of charges to write down or divest certain assets in our recycling operations and (iii) a $5 million impairment of a landfill in our Western Canada Area due to revised post-closure cost estimates. Partially offsetting these charges was $7 million of net gains from divestitures, including a $6 million gain on the sale of an oil and gas producing property in 2015.

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

Table of Contents

Income from Operations

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

	2017	Period-to-Period Change		2016	Period-to-Period Change		2015
Solid Waste:							
Tier 1	$ 1,538	$ 108	7.6 %	$ 1,430	$ 140	10.9%	$ 1,290
Tier 2	552	30	5.7	522	76	17.0	446
Tier 3	1,199	205	20.6	994	3	0.3	991
Solid Waste	3,289	343	11.6	2,946	219	8.0	2,727
Other	(68)	32	(32.0)				