The Management's Discussion and Analysis of Financial Condition and Results of Operations for Waste Connections, Inc. is also included in the Form 10-K for the year ended December 31, 2016 filed on SEDAR on February 27, 2017 in its entirety.

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following discussion should be read in conjunction with the “Selected Financial Data” included in Item 6 of this Annual Report on Form 10-K, our consolidated financial statements and the related notes included elsewhere in this Annual Report on Form 10-K.

Industry Overview

The solid waste industry is a local and highly competitive business, requiring substantial labor and capital resources. The participants compete for collection accounts primarily on the basis of price and, to a lesser extent, the quality of service, and compete for landfill business on the basis of tipping fees, geographic location and quality of operations. The solid waste industry has been consolidating and continues to consolidate as a result of a number of factors, including the increasing costs and complexity associated with waste management operations and regulatory compliance. Many small independent operators and municipalities lack the capital resources, management, operating skills and technical expertise necessary to operate effectively in such an environment. The consolidation trend has caused solid waste companies to operate larger landfills that have complementary collection routes that can use company-owned disposal capacity. Controlling the point of transfer from haulers to landfills has become increasingly important as landfills continue to close and disposal capacity moves farther from the collection markets it serves.

Generally, the most profitable operators within the solid waste industry are those companies that are vertically integrated or enter into long-term collection contracts. A vertically integrated operator will benefit from: (1) the internalization of waste, which is bringing waste to a company-owned landfill; (2) the ability to charge third-party haulers tipping fees either at landfills or at transfer stations; and (3) the efficiencies gained by being able to aggregate and process waste at a transfer station prior to landfilling.

The E&P waste services industry is regional in nature and is also highly fragmented, with acquisition opportunities available in several active natural resource basins. Competition for E&P waste comes primarily from smaller regional companies that utilize a variety of disposal methods and generally serve specific geographic markets, and other solid waste companies. In addition, customers in many markets have the option of using internal disposal methods or outsourcing to another third-party disposal company. The principal competitive factors in this business include: gaining customer approval of treatment and disposal facilities; location of facilities in relation to customer activity; reputation; reliability of services; track record of environmental compliance; ability to accept multiple waste types at a single facility; and price. The demand for our E&P waste services depends on the continued demand for, and production of, oil and natural gas. Crude oil and natural gas prices historically have been volatile and the substantial reductions in crude oil prices that began in October 2014, and continued through 2015 and into early 2016, resulted in a decline in the level of drilling and production activity, reducing the demand for E&P waste services in the basins in which we operate. During the year ended December 31, 2015, we recorded charges totaling $517.8 million associated with the impairment of a portion of our goodwill, intangible assets and property and equipment within our E&P segment as a result of the sustained decline in oil prices being experienced at the time, together with market expectations of a likely slow recovery in such prices, making it more likely than not that the fair value of these assets had decreased below their respective carrying values. The prices of crude oil and natural gas began to recover during the later portion of 2016 and into early 2017 and the demand for our E&P waste services has improved as a result of increased production of oil and natural gas. If this recovery of the prices of crude oil and natural gas is not sustained, or if a further reduction in crude oil and natural gas prices occurs, it could lead to continued declines in the level of production activity and demand for our E&P waste services, which could result in the recognition of additional impairment charges on our goodwill, intangible assets and property and equipment associated with our E&P operations.

Executive Overview

We are an integrated solid waste services company that provides waste collection, transfer, disposal and recycling services in mostly exclusive and secondary markets in the U.S. and Canada. Through our R360 Environmental Solutions subsidiary, we are also a leading provider of non-hazardous E&P waste treatment, recovery and disposal services in several of the most active natural resource producing areas in the U.S. We also provide intermodal services for the rail haul movement of cargo and solid waste containers in the Pacific Northwest through a network of intermodal facilities.

We seek to avoid highly competitive, large urban markets and instead target markets where we can attain high market share either through exclusive contracts, vertical integration or asset positioning. In markets where waste collection services are provided under exclusive arrangements, or where waste disposal is municipally owned or funded or available at multiple municipal sources, we believe that controlling the waste stream by providing collection services under exclusive arrangements is often more important to our growth and profitability than owning or operating landfills. We also target niche markets, like E&P waste treatment and disposal services.

As of December 31, 2016, we served residential, commercial, industrial and E&P customers in 40 states and the District of Columbia in the U.S. and five provinces in Canada: Alabama, Alaska, Arizona, Arkansas, California, Colorado, Florida, Idaho, Illinois, Iowa, Kansas, Kentucky, Louisiana, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Montana, Nebraska, Nevada, New Jersey, New Mexico, New York, North Carolina, North Dakota, Oklahoma, Oregon, Pennsylvania, South Carolina, South Dakota, Tennessee, Texas, Utah, Vermont, Virginia, Washington, Wisconsin and Wyoming and the provinces of Alberta, British Columbia, Manitoba, Ontario and Québec. As of December 31, 2016, we owned or operated a network of 261 solid waste collection operations; 135 transfer stations; seven intermodal facilities; 71 recycling operations; 93 active MSW, E&P and/or non-MSW landfills; 22 E&P liquid waste injection wells and 17 E&P waste treatment and oil recovery facilities.

2016 Financial Performance

The functional currency of the Company, as the parent corporate entity, and its operating subsidiaries in the United States is the U.S. dollar. The functional currency of the Company's Canadian operations is the Canadian dollar. The reporting currency of the Company is the U.S. dollar. The Company's consolidated Canadian dollar financial position is translated to U.S. dollars by applying the foreign currency exchange rate in effect at the consolidated balance sheet date. The Company's consolidated Canadian dollar results of operations and cash flows are translated to U.S. dollars by applying the average foreign currency exchange rate in effect during the reporting period. The resulting translation adjustments are included in other comprehensive income or loss. Gains and losses from foreign currency transactions are included in earnings for the period.

Operating Results

Revenues in 2016 increased 59.4% to $3.376 billion from $2.117 billion in 2015, due primarily to acquisitions, which accounted for $1.270 billion in incremental revenues in 2016, with the remainder due to growth in solid waste, partially offset by decreased E&P waste activity. Solid waste internal growth increased to 4.5% in 2016, from 4.2% in 2015, due primarily to higher recycled commodity values. Pricing growth was 0.1 percentage point lower than in 2015, due to lower growth in fuel, materials and environmental surcharges, and smaller increases in landfill and hauling volumes contributed to total volume growth decreasing to 1.9% in 2016 from 2.2% in 2015. Recycled commodity prices increased in 2016 after decreasing in 2015, thus resulting in recycling contributing 0.1% to internal growth in 2016 versus a negative 0.6% 2015. E&P waste revenues decreased to $120.5 million from $215.4 million in 2015, due to decreased activity at existing facilities.

In 2016, adjusted earnings before interest, taxes, depreciation and amortization, or adjusted EBITDA, a non-GAAP financial measure (refer to page 68 of this Annual Report on Form 10-K for a definition and reconciliation to Net income (loss) attributable to Waste Connections), increased 50.7% to $1.071 billion, from $710.6 million in 2015. As a percentage of revenue, adjusted EBITDA decreased from 33.6% in 2015, to 31.7% in 2016. This 1.9 percentage point decrease was attributable to the comparably lower margin profile of Progressive Waste operations acquired on June 1, 2016. Adjusted net income attributable to Waste Connections, a non-GAAP financial measure (refer to page 69 of this Annual Report on Form 10-K for a definition and reconciliation to Net income (loss) attributable to Waste Connections), in 2016 increased 61.4% to $395.2 million from $244.9 million in 2015.

Adjusted Free Cash Flow

Net cash provided by operating activities increased 37.8% to $795.3 million in 2016, from $577.0 million in 2015, and capital expenditures increased from $238.8 million in 2015 to $344.7 million in 2016, an increase of $105.9 million, or 44.3%. This increase in capital expenditures was primarily due to the Progressive Waste acquisition. Adjusted free cash flow, a non-GAAP financial measure (refer to page 67 of this Annual Report on Form 10-K for a definition and reconciliation to Net cash provided by operating activities), increased by $207.9 million to $550.9 million in 2016, from $343.0 million in 2015. Adjusted free cash flow as a percentage of revenues was 16.3% in 2016, as compared to 16.2% in 2015.

Return of Capital to Shareholders

In 2016, we returned $92.5 million to shareholders through cash dividends declared by our Board of Directors, which also increased the quarterly cash dividend by 24% from $0.145 to $0.18 per common share in October 2016. Our Board of Directors intends to review the quarterly dividend during the fourth quarter of each year, with a long-term objective of increasing the amount of the dividend. In 2016, we did not repurchase any common shares due to the size and timing of acquisitions. We expect the amount of capital we return to shareholders through share repurchases to vary depending on our financial condition and results of operations, capital structure, the amount of cash we deploy on acquisitions, the market price of our common shares, and overall market conditions. We cannot assure you as to the amounts or timing of future share repurchases or dividends. We have the ability under our credit agreement and master note purchase agreement to repurchase our common shares and pay dividends provided that we maintain specified financial ratios.

Capital Position

We target a leverage ratio, as defined in our credit agreement, of approximately 2.75x – 3.0x total debt to EBITDA. Total consideration for the Progressive Waste acquisition consisted of the issuance of common shares and the assumption of Progressive Waste’s debt and other liabilities.

The percentage increase in EBITDA in 2016 more than offset the percentage increase in debt in 2016; therefore, our leverage ratio decreased to 2.69x at December 31, 2016, from 2.88x at December 31, 2015.

Critical Accounting Estimates and Assumptions

The preparation of financial statements in conformity with U.S. generally accepted accounting principles requires estimates and assumptions that affect the reported amounts of assets and liabilities, revenues and expenses and related disclosures of contingent assets and liabilities in the consolidated financial statements. As described by the SEC, critical accounting estimates and assumptions are those that may be material due to the levels of subjectivity and judgment necessary to account for highly uncertain matters or the susceptibility of such matters to change, and that have a material impact on the financial condition or operating performance of a company. Such critical accounting estimates and assumptions are applicable to our reportable segments. Based on this definition, we believe the following are our critical accounting estimates.

<u>Insurance liabilities</u>. We maintain high deductible or self-insured retention insurance policies for automobile, general, employer’s, environmental, cyber, employment practices and directors’ and officers’ liability as well as for employee group health insurance, property insurance and workers’ compensation. We carry umbrella policies for certain types of claims to provide excess coverage over the underlying policies and per incident deductibles or self-insured retentions. Our insurance accruals are based on claims filed and estimates of claims incurred but not reported and are developed by our management with assistance from our third-party actuary and third-party claims administrator. The insurance accruals are influenced by our past claims experience factors, which have a limited history, and by published industry development factors. If we experience insurance claims or costs above or below our historically evaluated levels, our estimates could be materially affected. The frequency and amount of claims or incidents could vary significantly over time, which could materially affect our self-insurance liabilities. Additionally, the actual costs to settle the self-insurance liabilities could materially differ from the original estimates and cause us to incur additional costs in future periods associated with prior year claims.

Income taxes. Deferred tax assets and liabilities are determined based on differences between the financial reporting and income tax bases of assets and liabilities and are measured using the enacted tax rates and laws that are expected to be in effect when the differences are expected to reverse. If our judgment and estimates concerning assumptions made in calculating our expected future income tax rates are incorrect, our deferred tax assets and liabilities would change. Based on our net deferred tax liability balance at December 31, 2016, each 0.1 percentage point change to our expected future income tax rates would change our net deferred tax liability balance and income tax expense by approximately $2.3 million.

Accounting for landfills. We recognize landfill depletion expense as airspace of a landfill is consumed. Our landfill depletion rates are based on the remaining disposal capacity at our landfills, considering both permitted and probable expansion airspace. We calculate the net present value of our final capping, closure and post-closure commitments by estimating the total obligation in current dollars, inflating the obligation based upon the expected date of the expenditure and discounting the inflated total to its present value using a credit-adjusted risk-free rate. Any changes in expectations that result in an upward revision to the estimated undiscounted cash flows are treated as a new liability and are inflated and discounted at rates reflecting current market conditions. Any changes in expectations that result in a downward revision (or no revision) to the estimated undiscounted cash flows result in a liability that is inflated and discounted at rates reflecting the market conditions at the time the cash flows were originally estimated. This policy results in our final capping, closure and post-closure liabilities being recorded in "layers." The resulting final capping, closure and post-closure obligations are recorded on the consolidated balance sheet along with an offsetting addition to site costs, which is amortized to depletion expense as the remaining landfill airspace is consumed. Interest is accreted on the recorded liability using the corresponding discount rate. The accounting methods discussed below require us to make certain estimates and assumptions. Changes to these estimates and assumptions could have a material effect on our financial condition and results of operations. Any changes to our estimates are applied prospectively.

Landfill development costs. Landfill development costs include the costs of acquisition, construction associated with excavation, liners, site berms, groundwater monitoring wells, gas recovery systems and leachate collection systems. We estimate the total costs associated with developing each landfill site to its final capacity. Total landfill costs include the development costs associated with expansion airspace. Expansion airspace is described below. Landfill development costs depend on future events and thus actual costs could vary significantly from our estimates. Material differences between estimated and actual development costs may affect our cash flows by increasing our capital expenditures and thus affect our results of operations by increasing our landfill depletion expense.

Final capping, closure and post-closure obligations. We accrue for estimated final capping, closure and post-closure maintenance obligations at the landfills we own, and the landfills that we operate, but do not own, under life-of-site agreements. We could have additional material financial obligations relating to final capping, closure and post-closure costs at other disposal facilities that we currently own or operate or that we may own or operate in the future. Our discount rate assumption for purposes of computing 2016 and 2015 "layers" for final capping, closure and post-closure obligations was 4.75% for both years, which reflects our long-term credit adjusted risk free rate as of the end of both 2015 and 2014. Our inflation rate assumption was 2.5% for the years ended December 31, 2016 and 2015. Significant reductions in our estimates of the remaining lives of our landfills or significant increases in our estimates of the landfill final capping, closure and post-closure maintenance costs could have a material adverse effect on our financial condition and results of operations. Additionally, changes in regulatory or legislative requirements could increase our costs related to our landfills, resulting in a material adverse effect on our financial condition and results of operations.

We own two landfills for which the prior owner is obligated to reimburse us for certain costs we incur for final capping, closure and post-closure activities on the portion of the landfills utilized by the prior owner. We accrue the prior owner's portion of the final capping, closure and post-closure obligation within the balance sheet classification of Other long-term liabilities, and a corresponding receivable from the prior owner in long-term Other assets.

Disposal capacity. Our internal and third-party engineers perform surveys at least annually to estimate the remaining disposal capacity at our landfills. Our landfill depletion rates are based on the remaining disposal capacity, considering both permitted and probable expansion airspace, at the landfills that we own and at landfills that we operate, but do not own, under life-of-site agreements. Our landfill depletion rate is based on the term of the operating agreement at our operated landfill that has capitalized expenditures. Expansion airspace consists of additional disposal capacity being pursued through means of an expansion that has not yet been permitted. Expansion airspace that meets the following criteria is included in our estimate of total landfill airspace:

1) whether the land where the expansion is being sought is contiguous to the current disposal site, and we either own the expansion property or have rights to it under an option, purchase, operating or other similar agreement;
2) whether total development costs, final capping costs, and closure/post-closure costs have been determined;
3) whether internal personnel have performed a financial analysis of the proposed expansion site and have determined that it has a positive financial and operational impact;
4) whether internal personnel or external consultants are actively working to obtain the necessary approvals to obtain the landfill expansion permit; and
5) whether we consider it probable that we will achieve the expansion (for a pursued expansion to be considered probable, there must be no significant known technical, legal, community, business or political restrictions or similar issues existing that we believe are more likely than not to impair the success of the expansion).

We may be unsuccessful in obtaining permits for expansion disposal capacity at our landfills. In such cases, we will charge the previously capitalized development costs to expense. This will adversely affect our operating results and cash flows and could result in greater landfill depletion expense being recognized on a prospective basis.

We periodically evaluate our landfill sites for potential impairment indicators. Our judgments regarding the existence of impairment indicators are based on regulatory factors, market conditions and operational performance of our landfills. Future events could cause us to conclude that impairment indicators exist and that our landfill carrying costs are impaired. Any resulting impairment loss could have a material adverse effect on our financial condition and results of operations.

<u>Goodwill and indefinite-lived intangible assets testing</u>. Goodwill and indefinite-lived intangible assets are tested for impairment on at least an annual basis in the fourth quarter of the year. In addition, we evaluate our reporting units for impairment if events or circumstances change between annual tests indicating a possible impairment. Examples of such events or circumstances include, but are not limited to, the following:

- a significant adverse change in legal factors or in the business climate;
- an adverse action or assessment by a regulator;
- a more likely than not expectation that a segment or a significant portion thereof will be sold;
- the testing for recoverability of a significant asset group within the segment; or
- current period or expected future operating cash flow losses.

In the first step (“Step 1”) of testing for goodwill impairment, we estimate the fair value of each of our reporting units, which consisted of five geographic operating segments and our E&P segment at December 31, 2016 and three geographic operating segments and our E&P segment at December 31, 2015, using discounted cash flow analyses, which require significant assumptions and estimates about the future operations of each reporting unit. We compare the fair value of each reporting unit to the carrying value of its net assets. If the fair value of a reporting unit is greater than the carrying value of the net assets, including goodwill, assigned to the reporting unit, then no impairment results. If the fair value is less than its carrying value, then we would perform a second step (“Step 2”) and determine the fair value of the goodwill. In Step 2, the fair value of goodwill is determined by deducting the fair value of a reporting unit’s identifiable assets and liabilities from the fair value of the reporting unit as a whole, as if that reporting unit had just been acquired and the purchase price were being initially allocated. If the fair value of the goodwill is less than its carrying value for a reporting unit, an impairment charge would be recorded to earnings in our Consolidated Statements of Net Income (Loss). In testing indefinite-lived intangible assets for impairment, we compare the estimated fair value of each indefinite-lived intangible asset to its carrying value. If the fair value of the indefinite-lived intangible asset is less than its carrying value, an impairment charge would be recorded to earnings in our Consolidated Statements of Net Income (Loss).

Significant judgments inherent in these analyses include the determination of appropriate discount rates, the amount and timing of expected future cash flows and growth rates. In assessing the reasonableness of our determined fair values of our reporting units, we evaluate our results against our current market capitalization. The results of our 2014, 2015 and 2016 impairment tests are described in Note 1 of our consolidated financial statements included in Item 8 of this Annual Report on Form 10-K.

For our annual impairment analysis of our E&P segment for the year ended December 31, 2016, we performed our Step 1 assessment of our E&P segment. The Step 1 assessment involved measuring the recoverability of goodwill by comparing the E&P segment's carrying amount, including goodwill, to the fair value of the reporting unit. The fair value was estimated using an income approach employing a discounted cash flow ("DCF") model. The DCF model incorporated projected cash flows over a forecast period based on the remaining estimated lives of the operating locations comprising the E&P segment. This was based on a number of key assumptions, including, but not limited to, a discount rate of 12%, annual revenue projections based on E&P waste resulting from projected levels of oil and natural gas E&P activity during the forecast period, gross margins based on estimated operating expense requirements during the forecast period and estimated capital expenditures over the forecast period, all of which were classified as Level 3 in the fair value hierarchy. As a result of the Step 1 assessment, we determined that the E&P segment did not pass the Step 1 test because the carrying value exceeded the estimated fair value of the reporting unit. We then performed the Step 2 test to determine the fair value of goodwill for our E&P segment. Based on the Step 1 and Step 2 analyses, we did not record an impairment charge to our E&P segment as a result of our goodwill impairment test during the year ended December 31, 2016. Additionally, we evaluated the recoverability of the E&P segment's indefinite-lived intangible assets (other than goodwill) by comparing the estimated fair value of each indefinite-lived intangible asset to its carrying value. We estimated the fair value of the indefinite-lived intangible assets using an excess earnings approach. Based on the result of the recoverability test, we determined that the carrying values of certain indefinite-lived intangible assets within the E&P segment exceeded their fair values and were therefore not recoverable. We recorded an impairment charge to Impairments and other operating items in the Consolidated Statements of Net Income (Loss) on certain indefinite-lived intangible assets within our E&P segment of $156,000 during the year ended December 31, 2016.

In 2015, we determined that sufficient indicators of potential impairment existed to require an interim goodwill and indefinite-lived intangible assets impairment analysis for our E&P segment as a result of the sustained decline in oil prices being experienced at the time, together with market expectations of a likely slow recovery in such prices. We performed a Step 1 assessment of our E&P segment, which involved measuring the recoverability of goodwill by comparing the E&P segment's carrying amount, including goodwill, to the fair value of the reporting unit. The fair value was estimated using an income approach employing a discounted cash flow ("DCF") model. The DCF model incorporated projected cash flows over a forecast period based on the remaining estimated lives of the operating locations comprising the E&P segment. This was based on a number of key assumptions, including, but not limited to, a discount rate of 11.6%, annual revenue projections based on E&P waste resulting from projected levels of oil and natural gas E&P activity during the forecast period, gross margins based on estimated operating expense requirements during the forecast period and estimated capital expenditures over the forecast period, all of which were classified as Level 3 in the fair value hierarchy. As a result of the Step 1 assessment, we determined that the E&P segment did not pass the Step 1 test because the carrying value exceeded the estimated fair value of the reporting unit. We then performed the Step 2 test to determine the fair value of goodwill for our E&P segment. Based on the Step 1 and Step 2 analyses, we recorded a goodwill impairment charge to Impairments and other operating items in the Consolidated Statements of Net Income (Loss) within our E&P segment of $411.8 million in 2015. Additionally, we evaluated the recoverability of the E&P segment's indefinite-lived intangible assets (other than goodwill) by comparing the estimated fair value of each indefinite-lived intangible asset to its carrying value. We estimated the fair value of the indefinite-lived intangible assets using an excess earnings approach. Based on the result of the recoverability test, we determined that the carrying values of certain indefinite-lived intangible assets within the E&P segment exceeded their fair values and were therefore not recoverable. We recorded an impairment charge to Impairments and other operating items in the Consolidated Statements of Net Income (Loss) on certain indefinite-lived intangible assets within our E&P segment of $38.4 million in 2015. We did not record an impairment charge to our E&P segment as a result of our goodwill and indefinite-lived intangible assets impairment tests during the year ended December 31, 2014.

Business Combination Accounting. We recognize, separately from goodwill, the identifiable assets acquired and liabilities assumed at their estimated acquisition date fair values. We measure and recognize goodwill as of the acquisition date as the excess of: (a) the aggregate of the fair value of consideration transferred, the fair value of any noncontrolling interest in the acquiree (if any) and the acquisition date fair value of our previously held equity interest in the acquiree (if any), over (b) the fair value of net assets acquired and liabilities assumed. At the acquisition date, we measure the fair values of all assets acquired and liabilities assumed that arise from contractual contingencies. We measure the fair values of all noncontractual contingencies if, as of the acquisition date, it is more likely than not that the contingency will give rise to an asset or liability.

General

Our revenues consist mainly of fees we charge customers for collection, transfer, recycling and disposal of non-hazardous solid waste and treatment, recovery and disposal of non-hazardous E&P waste. Our collection business also generates revenues from the sale of recyclable commodities, which have significant variability. A large part of our collection revenues comes from providing residential, commercial and industrial services. We frequently perform these services under service agreements, municipal contracts or franchise agreements with governmental entities. Our existing franchise agreements and most of our existing municipal contracts give us the exclusive right to provide specified waste services in the specified territory during the contract term. These exclusive arrangements are awarded, at least initially, on a competitive bid basis and subsequently on a bid or negotiated basis. We also provide residential collection services on a subscription basis with individual households.

We typically determine the prices of our solid waste collection services by the collection frequency and level of service, route density, volume, weight and type of waste collected, type of equipment and containers furnished, the distance to the disposal or processing facility, the cost of disposal or processing, and prices charged by competitors for similar services. The terms of our contracts sometimes limit our ability to pass on price increases. Long-term solid waste collection contracts often contain a formula, generally based on a published price index, that automatically adjusts fees to cover increases in some, but not all, operating costs, or that limit increases to less than 100% of the increase in the applicable price index.

We charge transfer station and landfill customers a tipping fee on a per ton and/or per yard basis for disposing of their solid waste at our transfer stations and landfill facilities. Many of our transfer station and landfill customers have entered into one to ten year disposal contracts with us, most of which provide for annual indexed price increases.

Our revenues from E&P waste services consist mainly of fees that we charge for the treatment and disposal of liquid and solid waste derived from the drilling of wells for the production of oil and natural gas. We also generate income from the transportation of waste to the disposal facility in certain markets and the sale of reclaimed oil, roadbase and processed and treated waters.

Our revenues from recycling services consist of proceeds generated from selling recyclable materials (including compost, cardboard, office paper, plastic containers, glass bottles and ferrous and aluminum metals) collected from our residential customers and at our recycling operations to third parties for processing before resale.

Other revenues consist primarily of the sale of gas generated from our MSW landfills and revenues from intermodal services which consist mainly of fees we charge customers for the movement of cargo and solid waste containers between our intermodal facilities.

No single contract or customer accounted for more than 10% of our total revenues at the consolidated or reportable segment level during the periods presented. The following tables reflect a breakdown of our revenue and inter-company eliminations for the periods indicated (dollars in thousands of U.S. dollars):

	Year Ended December 31, 2016			
	Revenue	**Intercompany Revenue**	**Reported Revenue**	**% of Reported Revenue**
Solid waste collection	$ 2,359,813	$ (7,766)	$ 2,352,047	69.7%
Solid waste disposal and transfer	1,155,410	(443,022)	712,388	21.1
Solid waste recycling	92,456	(6,941)	85,515	2.5
E&P waste treatment, recovery and disposal	132,286	(12,086)	120,200	3.6
Intermodal and other	106,363	(650)	105,713	3.1
Total	$ 3,846,328	$ (470,465)	$ 3,375,863	100.0%

	Year Ended December 31, 2015			
	Revenue	**Intercompany Revenue**	**Reported Revenue**	**% of Reported Revenue**
Solid waste collection	$ 1,378,679	$ (4,623)	$ 1,374,056	64.9%
Solid waste disposal and transfer	670,369	(255,200)	415,169	19.6
Solid waste recycling	47,292	(924)	46,368	2.2
E&P waste treatment, recovery and disposal	228,529	(13,156)	215,373	10.2
Intermodal and other	66,321	-	66,321	3.1
Total	$ 2,391,190	$ (273,903)	$ 2,117,287	100.0%

	Year Ended December 31, 2014			
	Revenue	**Intercompany Revenue**	**Reported Revenue**	**% of Reported Revenue**
Solid waste collection	$ 1,289,906	$ (3,593)	$ 1,286,313	61.9%
Solid waste disposal and transfer	617,161	(235,851)	381,310	18.3
Solid waste recycling	58,226	(2,118)	56,108	2.7
E&P waste treatment, recovery and disposal	326,934	(16,862)	310,072	14.9
Intermodal and other	46,291	(928)	45,363	2.2
Total	$ 2,338,518	$ (259,352)	$ 2,079,166	100.0%

Cost of operations includes labor and benefits, tipping fees paid to third-party disposal facilities, vehicle and equipment maintenance, workers' compensation, vehicle and equipment insurance, insurance and employee group health claims expense, third-party transportation expense, fuel, the cost of materials we purchase for recycling, district and state taxes and host community fees and royalties. Our significant costs of operations in 2016 were labor, third-party disposal and transportation, vehicle and equipment maintenance, taxes and fees, insurance and fuel. We use a number of programs to reduce overall cost of operations, including increasing the use of automated routes to reduce labor and workers' compensation exposure, utilizing comprehensive maintenance and health and safety programs, and increasing the use of transfer stations to further enhance internalization rates. We carry high-deductible or self-insured retention insurance for automobile liability, general liability, employer's liability, environmental liability, cyber liability, employment practices liability and directors' and officers' liability as well as for employee group health claims, property and workers' compensation. If we experience insurance claims or costs above or below our historically evaluated levels, our estimates could be materially affected.

Selling, general and administrative, or SG&A, expense includes management, sales force, clerical and administrative employee compensation and benefits, legal, accounting and other professional services, acquisition expenses, bad debt expense and rent expense for our corporate headquarters.

Depreciation expense includes depreciation of equipment and fixed assets over their estimated useful lives using the straight-line method. Depletion expense includes depletion of landfill site costs and total future development costs as remaining airspace of the landfill is consumed. Remaining airspace at our landfills includes both permitted and probable expansion airspace. Amortization expense includes the amortization of finite-lived intangible assets, consisting primarily of long-term franchise agreements and contracts, customer lists and non-competition agreements, over their estimated useful lives using the straight-line method. Goodwill and indefinite-lived intangible assets, consisting primarily of certain perpetual rights to provide solid waste collection and transportation services in specified territories, are not amortized.

We capitalize some third-party expenditures related to development projects, such as legal, engineering and interest expenses. We expense all third-party and indirect acquisition costs, including third-party legal and engineering expenses, executive and corporate overhead, public relations and other corporate services, as we incur them. We charge against net income any unamortized capitalized expenditures and advances (net of any portion that we believe we may recover, through sale or otherwise) that may become impaired, such as those that relate to any operation that is permanently shut down and any landfill development project that we believe will not be completed. We routinely evaluate all capitalized costs, and expense those related to projects that we believe are not likely to succeed. For example, if we are unsuccessful in our attempts to obtain or defend permits that we are seeking or have been awarded to operate or expand a landfill, we will no longer generate anticipated income from the landfill and we will be required to expense in a future period up to the carrying value of the landfill or expansion project, less the recoverable value of the property and other amounts recovered.

Results of Operations

The following table sets forth items in our Consolidated Statements of Net Income (Loss) in thousands of U.S. dollars and as a percentage of revenues for the periods indicated:

	Years Ended December 31,					
	2016	% of Revenues	2015	% of Revenues	2014	% of Revenues
Revenues	$ 3,375,863	100.0%	$ 2,117,287	100.0%	$ 2,079,166	100.0%
Cost of operations	1,957,712	58.0	1,177,409	55.6	1,138,388	54.8
Selling, general and administrative	474,263	14.0	237,484	11.2	229,474	11.0
Depreciation	393,600	11.7	240,357	11.4	230,944	11.1
Amortization of intangibles	70,312	2.1	29,077	1.4	27,000	1.3
Impairments and other operating items	27,678	0.8	494,492	23.3	4,091	0.2
Operating income (loss)	452,298	13.4	(61,532)	(2.9)	449,269	21.6
Interest expense	(92,709)	(2.7)	(64,236)	(3.1)	(64,674)	(3.1)
Other income (expense), net	655	0.0	(518)	(0.0)	1,067	0.0
Foreign currency transaction gain	1,121	0.0	-	-	-	-
Income tax (provision) benefit	(114,044)	(3.4)	31,592	1.5	(152,335)	(7.3)
Net income (loss)	247,321	7.3	(94,694)	(4.5)	233,327	11.2
Net income attributable to noncontrolling interests	(781)	(0.0)	(1,070)	(0.0)	(802)	(0.0)
Net income (loss) attributable to Waste Connections	$ 246,540	7.3%	$ (95,764)	(4.5)%	$ 232,525	11.2%

Years Ended December 31, 2016 and 2015

Revenues. Total revenues increased $1.259 billion, or 59.4%, to $3.376 billion for the year ended December 31, 2016, from $2.117 billion for the year ended December 31, 2015.

During the year ended December 31, 2016, incremental revenue from acquisitions closed during, or subsequent to, the year ended December 31, 2015, increased revenues by approximately $1.270 billion, of which $1.185 billion is attributable to the Progressive Waste acquisition completed on June 1, 2016. Operations divested during, or subsequent to, the year ended December 31, 2015, decreased revenues by approximately $3.3 million.

During the year ended December 31, 2016, the net increase in prices charged to our customers was $47.9 million, consisting of $52.6 million of core price increases, partially offset by a decrease of $4.7 million from fuel, materials and environmental surcharges due primarily to a decline in the market price of diesel fuel.

During the year ended December 31, 2016, volume increases in our existing business increased solid waste revenues by $36.5 million from increases in roll off collection, transfer station volumes and landfill volumes resulting from increased construction and general economic activity in our markets. E&P revenues at facilities owned and fully-operated in each of the comparable periods decreased by $95.2 million due to the substantial reductions in crude oil prices that began in October 2014, and continued through 2015 and 2016, which resulted in a decline in the level of drilling and production activity thereby reducing the demand for E&P waste services in the basins in which we operate.

Revenues from sales of recyclable commodities at facilities owned during the year ended December 31, 2016 and 2015 increased $2.2 million due primarily to increased prices for recyclable commodities, which began to recover in the second half of 2016.

Other revenues increased by $0.8 million during the year ended December 31, 2016, due primarily to increased landfill gas sales and equipment sales, partially offset by a decline in intermodal revenue.

Cost of Operations. Total cost of operations increased $780.3 million, or 66.3%, to $1.958 billion for the year ended December 31, 2016, from $1.178 billion for the year ended December 31, 2015. The increase was primarily the result of $736.2 million of operating costs from the Progressive Waste acquisition, $43.1 million of additional operating costs from all other acquisitions closed during, or subsequent to, the year ended December 31, 2015, and an increase in operating costs at our existing solid waste and intermodal operations of $48.1 million, less a decrease in operating costs at our E&P operations of $47.1 million.

The increase in operating costs at our existing solid waste and intermodal operations of $48.1 million for the year ended December 31, 2016 was comprised of an increase in labor expenses of $19.7 million due primarily to employee pay rate increases and headcount increases to support volume increases, an increase in employee benefits expenses of $10.2 million due to increased medical claims costs, an increase in truck, container, equipment and facility maintenance and repair expenses of $9.6 million due to variability in the timing and severity of major repairs, an increase in taxes on revenues of $9.0 million due to increased revenues in our solid waste markets, an increase in third-party trucking and transportation expenses of $6.1 million due to increased transfer station and landfill volumes that require us to transport the waste to our disposal sites, an increase in third-party disposal expense of $1.3 million due to disposal rate increases and higher disposal costs associated with increased collection and transfer station volumes and an increase in leachate disposal expenses at our landfills of $1.1 million, partially offset by a decrease in fuel expense of $7.6 million due to lower market prices for diesel fuel not purchased under diesel fuel hedge agreements, and a decrease in insurance premiums for our high deductible auto, workers' compensation and general liability program of $1.3 million due to leveraging the increased size of the Company as a result of the Progressive Waste acquisition.

During the year ended December 31, 2015, we incurred $5.0 million in expenses due to site clean-up and remediation work associated with flooding and other surface damage at two of our E&P disposal sites in New Mexico resulting from heavy precipitation affecting the sites, and $1.5 million of start-up related expenses at two new E&P disposal facilities. The remaining decrease in operating costs at our E&P operations of $40.6 million for the year ended December 31, 2016 was comprised of decreased fuel expenses of $2.1 million due primarily to decreases in the price of diesel fuel and the following changes attributable to a reduction in our operations resulting from the decline in the level of drilling and production activity: decreased employee wage and benefits expenses of $13.1 million, decreased third-party trucking and transportation expenses of $8.7 million, decreased equipment repair expenses of $4.1 million, decreased cell processing and site remediation work of $3.0 million, decreased landfill operating supplies of $2.3 million, decreased equipment rental expenses of $2.2 million, decreased disposal expenses of $1.3 million, decreased royalties on revenues of $1.2 million and $2.6 million of other net expense decreases.

Cost of operations as a percentage of revenues increased 2.4 percentage points to 58.0% for the year ended December 31, 2016, from 55.6% for the year ended December 31, 2015. The components of the 2.4 percentage point increase consist of a 2.4 percentage point increase from acquisitions closed during, or subsequent to, the year ended December 31, 2015 having operating margins lower than our Company average, a combined 0.6 percentage point increase from labor and benefits expenses in our solid waste segments and a 0.2 percentage point increase from our E&P operations resulting from fixed operating expenses increasing as an overall percentage of revenues due to the aforementioned decline in E&P revenues, partially offset by a 0.6 percentage point decrease at our solid waste operations due to decreased expenses for diesel fuel and a 0.2 percentage point decrease resulting from all other net changes.

SG&A. SG&A expenses increased $236.8 million, or 99.7%, to $474.3 million for the year ended December 31, 2016, from $237.5 million for the year ended December 31, 2015. The increase was comprised of $90.7 million of SG&A expenses from operating locations acquired in the Progressive Waste acquisition, $4.8 million of additional SG&A expenses from operating locations at all other acquisitions closed during, or subsequent to, the year ended December 31, 2015, an increase in direct acquisition costs of $29.1 million attributable primarily to the Progressive Waste acquisition, an increase of $26.0 million resulting from severance-related expenses payable to Progressive Waste personnel who were not permanently retained as employees of New Waste Connections following the close of the Progressive Waste acquisition, an increase of $14.5 million from New Waste Connections paying excise taxes levied on the unvested or vested and undistributed equity-compensation holdings of our corporate officers and members of our Board of Directors resulting from the Progressive Waste acquisition, an increase in share-based compensation expenses of $8.0 million related to awards granted to employees of

Progressive Waste prior to June 1, 2016 for which vesting was accelerated due to plan provisions regarding a change in control followed by termination of employment, an increase in share-based compensation expenses of $14.3 million resulting from time-lapse vesting and changes to the fair value of awards granted by Progressive Waste prior to the June 1, 2016 closing of the Progressive Waste acquisition to employees of Progressive Waste who were retained as employees of New Waste Connections following the closing and which awards were continued by New Waste Connections, an increase of $11.8 million resulting from the accrual of incentive compensation expenses to certain of our executive officers and key employees related to the achievement of defined synergy goals realized by New Waste Connections from the Progressive Waste acquisition, an increase in equity-based compensation expenses of $2.3 million resulting from the acceleration of vesting of performance share units granted to Old Waste Connections' management in 2014 and 2015, an increase of $8.1 million resulting from employee relocation expenses and professional fees incurred to integrate the operations of Progressive Waste into New Waste Connections, an increase in payroll expenses of $8.0 million at our solid waste segments primarily related to headcount increases and annual compensation increases, an increase in accrued cash incentive compensation expense of $11.3 million due primarily to the addition of accrued cash incentive compensation expense for the retained employees of Progressive Waste, an increase in employee benefits expenses of $2.9 million due to increased medical claims costs, an increase in travel, meetings and training expenses of $2.7 million resulting from the integration of employees of Progressive Waste into New Waste Connections, an increase in legal and accounting professional fee expenses of $2.6 million due to increased support required as a result of growth from the Progressive Waste acquisition, an increase in deferred compensation expense of $1.2 million resulting from deferred compensation liabilities to employees increasing as a result of increases in the market value of investments to which employee deferred compensation balances are tracked, an increase in software license fees of $1.1 million to support computer applications acquired in the Progressive Waste acquisition, an increase in equity-based compensation expenses of $1.0 million associated with our annual recurring grant of restricted share units to our personnel, an increase in credit card fees of $1.0 million resulting from an increase in the total number of customers remitting payments for our services using credit cards and $1.2 million of other net expense increases, partially offset by a decrease at our E&P segment of $5.8 million for payroll and employee travel expenses due to management-level headcount reductions resulting from the decline in E&P disposal volumes.

SG&A expenses as a percentage of revenues increased 2.8 percentage points to 14.0% for the year ended December 31, 2016, from 11.2% for the year ended December 31, 2015. The increase as a percentage of revenues was attributable to a 3.4 percentage point increase resulting from the combined totals of the aforementioned increases associated with direct acquisition costs, severance expenses, relocation and professional fee expense, synergy bonus expense, excise taxes, share-based compensation expense from the continuation of awards granted to Progressive Waste employees prior to the completion of the Progressive Waste acquisition and equity-based compensation expense from the acceleration of certain performance share units, a 0.3 percentage point increase from increased cash incentive compensation expense, a 0.3 percentage point increase from increased payroll and medical benefits expenses and a 0.1 percentage point increase from all other net changes at our existing operations, partially offset by a 1.3 percentage point decrease from the net impact of SG&A expenses from operating locations acquired in the Progressive Waste acquisition and all other acquisitions closed during, or subsequent to, the year ended December 31, 2015.

Depreciation. Depreciation expense increased $153.2 million, or 63.8%, to $393.6 million for the year ended December 31, 2016, from $240.4 million for the year ended December 31, 2015. The increase was primarily the result of additional depreciation and depletion expense of $136.6 million from the Progressive Waste acquisition, additional depreciation and depletion expense of $13.1 million from all other acquisitions closed during, or subsequent to, the year ended December 31, 2015, an increase in depreciation expense of $6.1 million associated with additions to our fleet and equipment purchased to support our existing operations and an increase in depletion expense of $2.7 million at our existing solid waste landfills due primarily to an increase in volumes, partially offset by a decrease in depletion expense of $5.3 million at our existing E&P landfills due to volume decreases resulting from a decline in the level of oil drilling and production activity due to reductions in crude oil prices.

Depreciation expense as a percentage of revenues increased 0.3 percentage points to 11.7% for the year ended December 31, 2016, from 11.4% for the year ended December 31, 2015. The increase as a percentage of revenues was due primarily to the Progressive Waste acquisition, the impact of a decline in E&P revenues from operations owned in the comparable periods and depreciation expense associated with additions to our fleet and equipment purchased to support our existing operations, partially offset by the decrease in depletion expense at our existing E&P landfills.

Amortization of Intangibles. Amortization of intangibles expense increased $41.2 million, or 141.8%, to $70.3 million for the year ended December 31, 2016, from $29.1 million for the year ended December 31, 2015. The increase in amortization expense was the result of $41.9 million recorded on contracts, customer lists and transfer station permits acquired in the Progressive Waste acquisition and $2.0 million from intangible assets acquired in other acquisitions closed in 2015 and 2016, partially offset by a decrease of $2.7 million from certain intangible assets becoming fully amortized subsequent to December 31, 2015.

Amortization expense as a percentage of revenues increased 0.7 percentage points to 2.1% for the year ended December 31, 2016, from 1.4% for the year ended December 31, 2015. The increase as a percentage of revenues was the result of the net impact of the aforementioned intangible assets acquired in the Progressive Waste acquisition, partially offset by certain intangible assets becoming fully amortized subsequent to the end of the prior year period.

Impairments and Other Operating Items. Impairments and other operating items decreased $466.8 million, to $27.7 million for the year ended December 31, 2016, from $494.5 million for the year ended December 31, 2015.

During the year ended December 31, 2016, we recorded a $15.0 million charge to adjust the carrying cost of assets held for disposal to fair market value, a $4.6 million charge to terminate an operating lease for our corporate aircraft, $3.3 million of losses on trucks and equipment that were disposed of through sales or as a result of being damaged in operations, impairment charges totaling $2.7 million related to four operating locations in our E&P segment which were permanently closed in 2016, a $2.5 million charge to write off the carrying cost of a tradename acquired from the Progressive Waste acquisition that will not provide future financial benefit, a $2.1 million charge to write off the carrying cost of certain contracts acquired from the Progressive Waste acquisition that were not renewed prior to their original estimated termination date and $1.1 million of other net charges, partially offset by a gain of $2.4 million resulting from the decrease to the fair value of an amount payable under a liability-classified contingent consideration arrangement from a prior year acquisition and a gain of $1.2 million from the favorable settlement of a legal matter.

During the year ended December 31, 2015, we recorded impairment charges at our E&P segment of $411.8 million associated with goodwill, $38.4 million associated with indefinite-lived intangible assets and $67.6 million related to property and equipment. These impairment charges were partially offset by $20.6 million of adjustments recorded during the year ended December 31, 2015 to reduce the fair value of amounts payable under liability-classified contingent consideration arrangements associated with the acquisition of an E&P business in 2014. The decline in oil prices that began in late 2014, and continued into 2015, resulted in decreased levels of oil and natural gas E&P activity and a corresponding decrease in demand for our E&P waste services. This decrease, together with market expectations of a likely slow recovery in oil prices, reduced the expected future period cash flows of our E&P segment, causing the fair value of the E&P segment to decrease below its carrying value. Additionally, we determined that the carrying value of certain asset groups in our E&P segment exceeded the undiscounted cash flows and were therefore not recoverable.

Operating Income (Loss). Operating income (loss) increased $513.8 million to income of $452.3 million for the year ended December 31, 2016, from a loss of $61.5 million for the year ended December 31, 2015. The increase was attributable to the $1.259 billion increase in revenues and a $466.8 million decrease in impairments and other operating items, partially offset by the $780.3 million increase in costs of operations, $236.8 million increase in SG&A expense, $153.2 million increase in depreciation expense and $41.2 million increase in amortization of intangibles expense.

Operating income (loss) as a percentage of revenues increased 16.3 percentage points to income of 13.4% for the year ended December 31, 2016, from a loss of 2.9% for the year ended December 31, 2015. The increase as a percentage of revenues was comprised of a 22.5 percentage point decrease in impairments and other operating items, partially offset by a 2.8 percentage point increase in SG&A expense, a 2.4 percentage point increase in cost of operations, a 0.7 percentage point increase in amortization expense and a 0.3 percentage point increase in depreciation expense.

Interest Expense. Interest expense increased $28.5 million, or 44.3%, to $92.7 million for the year ended December 31, 2016, from $64.2 million for the year ended December 31, 2015. The increase was primarily attributable to an increase of $12.4 million from the June 2016 issuance of our New 2021 Notes, 2023 Notes and 2026 Notes, an increase of $10.6 million from the August 2015 issuance of our 2022 Notes and 2025 Notes, an increase of $6.3 million due to an increase in the average borrowings outstanding under our Revolving Credit and Term Loan Agreement (as amended, restated, amended and restated, supplemented or otherwise modified from time to time, the "Credit Agreement"), an increase of $5.9 million due to higher interest rates on outstanding borrowings under our Credit Agreement, an increase of $2.5 million resulting from the commencement of four new interest rate swaps totaling $175 million with an average fixed rate of 2.34% and an increase of $1.4 million due to an increase in outstanding letters of credit resulting from the assumption of obligations from the Progressive Waste acquisition that are required to be secured with a letter of credit, partially offset by a decrease of $10.6 million for the redemption of our 2015 Notes and 2016 Notes using proceeds from the 2015 Old Waste Connections Credit Agreement which had a lower interest rate relative to the fixed interest rate in effect when the 2015 Notes and 2016 Notes were outstanding.

Other Income (Expense), Net. Other income (expense), net, increased $1.2 million, to an income total of $0.7 million for the year ended December 31, 2016, from an expense total of $0.5 million for the year ended December 31, 2015. The increase was primarily attributable to an increase of $1.4 million from investments purchased to fund our employee deferred compensation obligations and $0.6 million of other net changes, partially offset by an increase in expenses associated with the write off of unamortized debt issuance costs of $0.8 million.

Income Tax Provision (Benefit). Income taxes increased $145.6 million, to an expense total of $114.0 million for the year ended December 31, 2016, from a benefit total of $31.6 million for the year ended December 31, 2015.

Our effective tax expense rate for the year ended December 31, 2016 was 31.6%. Adjusting the prior year effective tax benefit rate for the impact of the aforementioned impairment charges, the year-over-year change in our effective tax rate was primarily the result of the impact of the Progressive Waste acquisition, which resulted in changes to the jurisdictions where we do business, including some jurisdictions with tax rates less than the U.S. federal statutory rate, partially offset by non-deductible expenses incurred in connection with the Progressive Waste acquisition. Our effective tax rate is dependent upon the proportion of pre-tax income among the jurisdictions where we do business. As such, our effective tax rate will be subject to some variability depending upon the proportional contribution of pre-tax income across jurisdictions in any period.

Our effective tax benefit rate for the year ended December 31, 2015 was 25.0%. The impairment of a portion of the goodwill, indefinite-lived intangible assets and property and equipment within our E&P segment impacted the geographical apportionment of our state income taxes primarily resulting in an adjustment to our deferred tax liabilities that increased our income tax benefit and increased our effective tax benefit rate during the year ended December 31, 2015 by $3.9 million and 3.1 percentage points, respectively. Additionally, a portion of the aforementioned goodwill impairment within our E&P segment that was not deductible for tax purposes, resulted in a decrease to our income tax benefit and our effective tax benefit rate of $15.5 million and 12.3 percentage points, respectively.

Years Ended December 31, 2015 and 2014

Revenues. Total revenues increased $38.1 million, or 1.8%, to $2.117 billion for the year ended December 31, 2015, from $2.079 billion for the year ended December 31, 2014.

During the year ended December 31, 2015, incremental revenue from acquisitions closed during, or subsequent to, the year ended December 31, 2014, increased revenues by approximately $58.6 million. Operations divested during, or subsequent to, the year ended December 31, 2014, decreased revenues by approximately $1.0 million.

During the year ended December 31, 2015, the net increase in prices charged to our customers was $46.4 million, consisting of $50.0 million of core price increases, partially offset by a decrease of $3.6 million from fuel, materials and environmental surcharges.

During the year ended December 31, 2015, volume increases in our existing business increased solid waste revenues by $39.5 million from increases in roll off collection, transfer station volumes and landfill volumes resulting from increased construction and general economic activity in our markets. E&P disposal facilities which opened subsequent to December 31, 2014, increased E&P revenues by $3.9 million. E&P revenues at facilities owned and fully-operated in each of the comparable periods decreased by $120.0 million due to the substantial reductions in crude oil prices that began in October 2014, and continued through 2015 and into early 2016, which resulted in a decline in the level of drilling and production activity thereby reducing the demand for E&P waste services in the basins in which we operate.

During the year ended December 31, 2015, the closure of a recycling operation in our Western segment in April 2014 decreased revenues by $2.0 million. Revenues from sales of recyclable commodities at all other facilities owned during the year ended December 31, 2015 and 2014 decreased $7.9 million due primarily to decreased recyclable commodity prices.

During the year ended December 31, 2015, intermodal revenues increased $21.8 million due to cargo volume from a new large intermodal customer and higher cargo volume with existing customers.

Other revenues decreased by $1.2 million during the year ended December 31, 2015 due primarily to contracted landfill construction services we performed in the prior year period at a landfill we operate that did not recur in the current year, partially offset by an increase in equipment rental revenue.

Cost of Operations. Total cost of operations increased $39.0 million, or 3.4%, to $1.178 billion for the year ended December 31, 2015, from $1.138 billion for the year ended December 31, 2014. The increase was primarily the result of $34.7 million of additional operating costs from solid waste and E&P acquisitions closed during, or subsequent to, the year ended December 31, 2014 and an increase in operating costs at our existing solid waste operations of $26.9 million, less a decrease in operating costs at our existing and internally developed E&P operations of $22.6 million.

The increase in operating costs at our existing solid waste and intermodal operations of $26.9 million for the year ended December 31, 2015 was comprised of an increase in labor and employee benefits expenses of $15.6 million due primarily to employee pay rate and headcount increases to support volume increases, an increase in rail transportation expenses at our intermodal operations of $9.6 million due to increased rail cargo volume, an increase in truck, container, equipment and facility maintenance and repair expenses of $6.8 million due to variability in the timing and severity of major repairs, an increase in third-party disposal expense of $6.5 million due to disposal rate increases and higher disposal costs associated with increased collection and transfer station volumes, an increase in taxes on revenues of $6.0 million due to increased revenues in our solid waste markets, an increase in third-party trucking and transportation expenses of $3.1 million due to increased transfer station and landfill volumes that require us to transport the waste to our disposal sites and $3.4 million of other net expense increases, partially offset by a decrease in fuel expense of $20.2 million due to lower market prices for diesel fuel not purchased under diesel fuel hedge agreements, a decrease of $2.0 million associated with the cost of contracted landfill construction services we performed during the prior year period and a decrease in auto, workers' compensation and property claims expense under our high deductible insurance program of $1.9 million due primarily to adjustments to projected losses on prior period claims.

The decrease in operating costs at our existing and internally developed E&P operations of $22.6 million for the year ended December 31, 2015 was comprised of decreased fuel expenses of $4.0 million due primarily to decreases in the price of diesel fuel and the following changes attributable to a reduction in our operations resulting from the decline in the level of drilling and production activity: decreased third-party trucking and transportation expenses of $6.7 million, decreased site remediation work of $6.2 million, decreased employee wage and benefits expenses of $3.3 million, decreased equipment repair expenses of $2.9 million, decreased equipment rental expenses of $1.9 million, decreased royalties on revenues of $1.1 million, decreased landfill operating supplies of $0.5 million and $2.5 million of other expense decreases, partially offset by an increase of $5.0 million in expenses due to site clean-up and remediation work during the first quarter of 2015 associated with flooding and other surface damage at two of our E&P disposal sites in New Mexico resulting from heavy precipitation affecting the sites and an increase of $1.5 million due to start-up related expenses at two new E&P disposal facilities during the first quarter of 2015.

Cost of operations as a percentage of revenues increased 0.8 percentage points to 55.6% for the year ended December 31, 2015, from 54.8% for the year ended December 31, 2014. The increase as a percentage of revenues was primarily the result of a 2.4 percentage point increase at our existing and internally developed E&P operations, partially offset by a 1.6 percentage point decrease at our existing solid waste operations. The increase at our existing and internally developed E&P operations was due primarily to fixed operating expenses increasing as an overall percentage of revenues due to the aforementioned decline in E&P revenues. The decrease at our existing solid waste operations was comprised of a 1.4 percentage point decrease in fuel expense and a 0.2 percentage point net decrease in all other expenses.

SG&A. SG&A expenses increased $8.0 million, or 3.5%, to $237.5 million for the year ended December 31, 2015, from $229.5 million for the year ended December 31, 2014. The increase was primarily the result of $3.5 million of additional SG&A expenses from acquisitions closed during, or subsequent to, the year ended December 31, 2014, an increase in payroll and benefits expenses of $3.9 million primarily related to headcount increases and annual compensation increases, an increase in professional fees of $2.0 million due primarily to increased expenses for external accounting services, legal expenses and sales consulting services, an increase in employee meeting, training and travel expenses of $1.0 million, an increase in direct acquisition costs of $2.1 million attributable to acquisitions closed during the current year period, an increase of $0.8 million in equity-based compensation expenses associated with our annual recurring grant of restricted share units to our personnel and a $0.6 million increase in credit card fees resulting from an increase in the total number of customer remitting payments for our services using credit cards, partially offset by a decrease in expenses for uncollectible accounts receivable of $3.0 million primarily related to improved collection results in the current year at our E&P segment and higher prior year expenses at our Western segment resulting from a receivables balance from a large customer that was deemed uncollectible, a decrease in accrued cash incentive compensation expense of $2.7 million as we are not projected to achieve the same level of certain financial targets that were met in the prior year period and $0.2 million of other net expense decreases.

SG&A expenses as a percentage of revenues increased 0.2% percentage points to 11.2% for the year ended December 31, 2015, from 11.0% for the year ended December 31, 2014, as a result of increases associated with higher payroll and benefit expenses, professional fees and direct acquisition costs being partially offset by decreased cash incentive compensation expense and decreased expenses for uncollectible accounts.

Depreciation. Depreciation expense increased $9.5 million, or 4.1%, to $240.4 million for the year ended December 31, 2015, from $230.9 million for the year ended December 31, 2014. The increase was primarily the result of an increase in depletion expense of $6.5 million at our existing solid waste landfills due primarily to an increase in volumes, additional depreciation and depletion expense of $8.6 million from acquisitions closed during, or subsequent to, the year ended December 31, 2014 and an increase in depreciation expense of $5.0 million associated with additions to our fleet and equipment purchased to support our existing operations, partially offset by a decrease in depletion expense of $10.6 million at our existing E&P landfills due to volume decreases resulting from a decline in the level of oil drilling and production activity due to reductions in crude oil prices.

Depreciation expense as a percentage of revenues increased 0.3 percentage points to 11.4% for the year ended December 31, 2015, from 11.1% for the year ended December 31, 2014. The increase as a percentage of revenues was due primarily to the impact of a decline in E&P revenues from operations owned in the comparable periods and depreciation expense associated with additions to our fleet and equipment purchased to support our existing operations, partially offset by the decrease in depletion expense at our existing E&P landfills.

Amortization of Intangibles. Amortization of intangibles expense increased $2.1 million, or 7.7%, to $29.1 million for the year ended December 31, 2015, from $27.0 million for the year ended December 31, 2014. Amortization expense as a percentage of revenues increased 0.1 percentage points to 1.4% for the year ended December 31, 2015, from 1.3% for the year ended December 31, 2014.

The dollar amount and percentage of revenues increases were attributable to additional amortization expense during the year ended December 31, 2015 from acquisitions closed during, or subsequent to, the year ended December 31, 2014.

Impairments and Other Operating Items. Impairments and other operating items increased $490.4 million, to $494.5 million for the year ended December 31, 2015, from $4.1 million for the year ended December 31, 2014.

The decline in oil prices that began in late 2014, and continued through 2015 and into early 2016, has resulted in decreased levels of oil and natural gas E&P activity and a corresponding decrease in demand for our E&P waste services. This decrease, together with market expectations of a likely slow recovery in oil prices, has reduced the expected future period cash flows of our E&P segment, causing the fair value of the E&P segment to decrease below its carrying value. During the third quarter of 2015, we recorded impairment charges of $411.8 million associated with goodwill and $38.4 million associated with indefinite-lived intangible assets in our E&P segment. The fair value of the E&P segment was estimated using an income approach employing a discounted cash flow, or DCF, model. The DCF model incorporated projected cash flows over a forecast period based on the estimated remaining lives of the operating locations comprising the E&P segment. We also recorded impairment charges of $67.6 million related to property and equipment at certain E&P operating locations during the third quarter and fourth quarter of 2015 based on an assessment that the carrying value of certain asset groups exceeded the undiscounted cash flows and were therefore not recoverable. The fair value of the unrecoverable asset groups was calculated using the aforementioned DCF model and the impairment charge was based on the amount the asset groups' carrying values exceeded their fair value. Each asset group that was assessed as being impaired had an insignificant fair value due primarily to the estimated discounted cash outflows exceeding the estimated discounted cash inflows over the remaining estimated lives of the asset groups.

The aforementioned impairment charges were partially offset by $20.6 million of adjustments recorded during the year ended December 31, 2015 to reduce the fair value of amounts payable under liability-classified contingent consideration arrangements associated with the acquisition of an E&P business in 2014 as it was determined that the decline in E&P waste services at acquired facilities subject to contingent consideration payments based on the earnings of the acquired facilities would reduce the amount ultimately payable by us upon the completion of the contingent consideration assessment period.

Other expense charges associated with changes to the fair value of certain long-term liabilities associated with prior year acquisitions and losses on the disposal of operating assets increased $1.6 million during the year ended December 31, 2015.

During the year ended December 31, 2014, we recorded an $8.4 million impairment charge at an E&P disposal facility as a result of projected operating losses resulting from the migration of the majority of the facility's customers to a new E&P facility that we own and operate.

Operating Income (Loss). Operating income (loss) decreased $510.8 million to a loss of $61.5 million for the year ended December 31, 2015, from income of $449.3 million for the year ended December 31, 2014. The decrease was attributable to the $490.4 million increase in impairments and other operating items, $39.0 million increase in costs of operations, $9.5 million increase in depreciation expense, $8.0 million increase in SG&A expense and $2.1 million increase in amortization of intangibles expense, partially offset by the $38.1 million increase in revenues.

Operating income (loss) as a percentage of revenues decreased 24.5 percentage points to negative 2.9% for the year ended December 31, 2015, from positive 21.6% for the year ended December 31, 2014. The decrease as a percentage of revenues was comprised of a 23.2 percentage point increase in impairments and other operating items, a 0.8 percentage point increase in cost of operations, a 0.2 percentage point increase in SG&A expense, a 0.2 percentage point increase in depreciation expense and a 0.1 percentage point increase in amortization expense.

Interest Expense. Interest expense decreased $0.5 million, or 0.7%, to $64.2 million for the year ended December 31, 2015, from $64.7 million for the year ended December 31, 2014. The decrease was primarily attributable to a decrease of $2.7 million for the redemption of our 2015 Notes in October 2015, a decrease of $3.8 million from the net change in the combined average outstanding borrowings under our revolving credit and term loan agreement and a decrease of $1.4 million due to refinancing and replacing our prior term loan agreement and prior credit agreement with our new revolving credit and term loan agreement resulting in a reduction in the applicable margin above the base rate or LIBOR rate for outstanding borrowings, partially offset by an increase of $6.0 million from the August 2015 issuance of our 2022 Notes and 2025 Notes and an increase of $1.4 million resulting from interest accretion expense recorded on long-term liabilities recorded at fair value associated with acquisitions closed in the fourth quarter of 2014.

Other Income (Expense), Net. Other income (expense), net, decreased $1.6 million, to an expense total of $0.5 million for the year ended December 31, 2015, from an income total of $1.1 million for the year ended December 31, 2014. The decrease was primarily attributable to an expense charge of $0.6 million for the write off of a portion of unamortized debt issuance costs resulting from refinancing our prior term loan agreement and prior credit agreement, a $0.8 million decrease in investment income and $0.2 million of other net changes.

Income Tax Provision (Benefit). Income taxes decreased $183.9 million, to a benefit total of $31.6 million for the year ended December 31, 2015, from an expense total of $152.3 million for the year ended December 31, 2014.

Our effective tax benefit rate for the year ended December 31, 2015 was 25.0%. The impairment of a portion of the goodwill, indefinite-lived intangible assets and property and equipment within our E&P segment impacted the geographical apportionment of our state income taxes primarily resulting in an adjustment to our deferred tax liabilities that increased our income tax benefit and increased our effective tax benefit rate during the year ended December 31, 2015 by $3.9 million and 3.1 percentage points, respectively. Additionally, a portion of the aforementioned goodwill impairment within our E&P segment that was not deductible for tax purposes, resulted in a decrease to our income tax benefit and our effective tax benefit rate of $15.5 million and 12.3 percentage points, respectively.

Our effective tax expense rate for the year ended December 31, 2014 was 39.5%. During the year ended December 31, 2014, an adjustment in deferred tax liabilities resulting from the enactment of New York State's 2014-2015 Budget Act increased our income tax expense and our effective tax expense rate by $1.2 million and 0.3 percentage points, respectively.

Segment Reporting

Our Chief Operating Decision Maker evaluates operating segment profitability and determines resource allocations based on several factors, of which the primary financial measure is segment EBITDA. We define segment EBITDA as earnings before interest, taxes, depreciation, amortization, impairments and other operating items, other income (expense) and foreign currency transaction gain (loss). Segment EBITDA is not a measure of operating income, operating performance or liquidity under GAAP and may not be comparable to similarly titled measures reported by other companies. Our management uses segment EBITDA in the evaluation of segment operating performance as it is a profit measure that is generally within the control of the operating segments.

We manage our operations through five geographic operating segments and our E&P segment, which includes the majority of our E&P waste treatment and disposal operations. Our five geographic operating segments and our E&P segment comprise our reportable segments. Each operating segment is responsible for managing several vertically integrated operations, which are comprised of districts. In June 2016, as a result of the Progressive Waste acquisition, described in Note 3 to the consolidated financial statements included in Item 8 of this Annual Report on Form 10-K, we formed two new geographic operating segments, Canada and Southern, and realigned our reporting structure at our existing Central and Eastern segments. Our segment realignment consisted of the transfer of certain operations in Texas and Louisiana from our Central segment to our Southern segment and the transfer of certain operations in Tennessee, Mississippi and Alabama from our Eastern segment to our Southern segment. The Progressive Waste acquisition did not impact our Western or E&P segments. The segment information presented herein reflects the realignment of these districts.

Under the current orientation, our Southern segment services customers located in Alabama, Arkansas, Florida, Louisiana, Mississippi, southern Oklahoma, western Tennessee and Texas; our Western segment services customers located in Alaska, California, Idaho, Montana, Nevada, Oregon, Washington and western Wyoming; our Eastern segment services customers located in Illinois, Iowa, Kentucky, Maryland, Massachusetts, Michigan, New Jersey, New York, North Carolina, Pennsylvania, South Carolina, eastern Tennessee, Vermont, Virginia, Wisconsin and the District of Columbia; our Canada segment services customers located in the provinces of Alberta, British Columbia, Manitoba, Ontario and Québec; and our Central segment services customers located in Arizona, Colorado, Kansas, Minnesota, Missouri, Nebraska, New Mexico, Oklahoma, South Dakota, western Texas, Utah and eastern

Wyoming. The E&P segment services E&P customers located in Arkansas, Louisiana, New Mexico, North Dakota, Oklahoma, Texas, Wyoming and along the Gulf of Mexico.

Revenues, net of intercompany eliminations, for our reportable segments are shown in the following table in thousands of U.S. dollars and as a percentage of total revenues for the periods indicated:

	Years Ended December 31,					
	2016	% of Revenues	2015	% of Revenues	2014	% of Revenues
Southern	$ 713,381	21.1%	$ 145,289	6.8%	$ 135,530	6.5%
Western	935,319	27.7	880,393	41.6	823,922	39.6
Eastern	636,652	18.9	376,156	17.8	342,338	16.5
Canada	407,861	12.1	-	-	-	-
Central	561,541	16.6	500,211	23.6	475,877	22.9
E&P	121,109	3.6	215,238	10.2	301,499	14.5
	$ 3,375,863	100.0%	$ 2,117,287	100.0%	$ 2,079,166	100.0%

Segment EBITDA for our reportable segments is shown in the following table in thousands of U.S. dollars and as a percentage of segment revenues for the periods indicated:

	Years Ended December 31,					
	2016	% of Revenues	2015	% of Revenues	2014	% of Revenues
Southern	$ 163,320	22.9%	$ 35,718	24.6%	$ 32,539	24.0%
Western	315,708	33.8	290,937	33.0	258,126	31.3
Eastern	193,361	30.4	119,668	31.8	104,224	30.4
Canada	149,305	36.6	-	-	-	-
Central	208,930	37.2	184,006	36.8	175,935	37.0
E&P	32,479	26.8	70,132	32.6	147,914	49.1
Corporate[(a)]	(119,215)	-	1,933	-	(7,434)	-
	$ 943,888	28.0%	$ 702,394	33.2%	$ 711,304	34.2%

(a) Corporate functions include accounting, legal, tax, treasury, information technology, risk management, human resources, training and other administrative functions. Amounts reflected are net of allocations to the six operating segments. Unallocated corporate overhead for the year ended December 31, 2016 includes direct acquisition costs associated with the Progressive Waste acquisition, severance-related expenses payable to Progressive Waste personnel, executive officer and key employee synergy bonus, excise taxes on corporate officer and Board of Directors' equity-compensation holdings paid by New Waste Connections and equity-based compensation expenses associated with Progressive Waste's equity-based compensation plans continued by New Waste Connections.

A reconciliation of segment EBITDA to Income before income tax provision is included in Note 14 to the consolidated financial statements included in Item 8 of this Annual Report on Form 10-K.

Significant changes in revenue and segment EBITDA for our reportable segments for the year ended December 31, 2016, compared to the year ended December 31, 2015, and for the year ended December 31, 2015, compared to the year ended December 31, 2014, are discussed below.

Segment Revenue

Revenue in our Southern segment increased $568.1 million, or 391.0%, to $713.4 million for the year ended December 31, 2016, from $145.3 million for the year ended December 31, 2015. The components of the increase consisted of net revenue growth from acquisitions and divestitures closed during, or subsequent to, the year ended December 31, 2015, of $557.9 million, solid waste volume increases of $4.9 million primarily from volume increases in residential collection, roll off collection, transfer station and landfill MSW, net price increases of $4.7 million and other revenue increases of $0.6 million.

Revenue in our Southern segment increased $9.8 million, or 7.2%, to $145.3 million for the year ended December 31, 2015, from $135.5 million for the year ended December 31, 2014. The components of the increase consisted of revenue growth from acquisitions closed during, or subsequent to, the year ended December 31, 2014, of $7.5 million and net price increases of $5.5 million, partially offset by other revenue decreases of $1.5 million due primarily to landfill construction services, contracted in the prior year, that we performed at a landfill we operate, decreases in solid waste volumes of $0.9 million due to primarily to declines in residential collection volumes and landfill special waste volumes and decreases in E&P volumes of $0.8 million due to the aforementioned decline in the level of drilling and production activity.

Revenue in our Western segment increased $54.9 million, or 6.2%, to $935.3 million for the year ended December 31, 2016, from $880.4 million for the year ended December 31, 2015. The components of the increase consisted of solid waste volume increases of $38.9 million associated with volume increases in residential collection, commercial collection, roll off collection, transfer station, landfill MSW and landfill special waste, net price increases of $12.5 million, net revenue growth from acquisitions and divestitures closed during, or subsequent to, the year ended December 31, 2015, of $3.6 million and recyclable commodity sales increases of $1.6 million due to increased prices for recyclable commodities, which began to recover in the second half of 2016, partially offset by decreases of $0.9 million from reduced E&P disposal volumes at our solid waste landfills and other revenue decreases of $0.8 million.

Revenue in our Western segment increased $56.5 million, or 6.9%, to $880.4 million for the year ended December 31, 2015, from $823.9 million for the year ended December 31, 2014. The components of the increase consisted of solid waste volume increases of $30.2 million associated with our residential, commercial and roll off collection operations, transfer stations and landfill special waste revenues being partially offset by lower landfill MSW revenues, intermodal revenue increases of $21.8 million due to a new large intermodal customer and higher cargo volume with existing customers, net price increases of $12.9 million, revenue growth from acquisitions closed during, or subsequent to, the year ended December 31, 2014, of $1.9 million and other revenue increases of $0.3 million, partially offset by recyclable commodity sales decreases of $2.0 million and $5.3 million resulting from the closure of a recycling operation in April 2014 and declines in the price of recyclable commodities, respectively, and decreases of $3.3 million from reduced E&P disposal volumes at our solid waste landfills.

Revenue in our Eastern segment increased $260.5 million, or 69.3%, to $636.7 million for the year ended December 31, 2016, from $376.2 million for the year ended December 31, 2015. The components of the increase consisted of revenue growth from acquisitions closed during, or subsequent to, the year ended December 31, 2015, of $246.4 million, net price increases of $10.9 million and solid waste volume increases of $2.4 million primarily from volume increases in roll off collection, transfer station and landfill special waste exceeding volume decreases in residential collection and other revenue increases of $0.8 million.

Revenue in our Eastern segment increased $33.9 million, or 9.9%, to $376.2 million for the year ended December 31, 2015, from $342.3 million for the year ended December 31, 2014. The components of the increase consisted of revenue growth from acquisitions closed during, or subsequent to, the year ended December 31, 2014, of $19.1 million, net price increases of $9.4 million and solid waste volume increases of $8.0 million primarily from volume increases in our roll off collection business, transfer station and landfill special waste exceeding decreases in residential collection volumes, partially offset by recyclable commodity sales decreases of $2.4 million due primarily to declines in the price of recyclable commodities and other revenue decreases of $0.2 million.

Revenue in our Canada segment was $407.9 million for the year ended December 31, 2016. Our Canada segment was formed in conjunction with the Progressive Waste acquisition on June 1, 2016; therefore, we did not recognize revenue in this segment prior to the close of the Progressive Waste acquisition.

Revenue in our Central segment increased $61.3 million, or 12.3%, to $561.5 million for the year ended December 31, 2016, from $500.2 million for the year ended December 31, 2015. The components of the increase consisted of revenue growth from acquisitions closed during, or subsequent to, the year ended December 31, 2015, of $50.6 million, net price increases of $19.8 million and other revenue increases of $0.7 million, partially offset by solid waste volume decreases of $7.4 million resulting from volume decreases in residential collection and transfer station and decreases of $2.4 million from reduced E&P disposal volumes at our solid waste landfills.

Revenue in our Central segment increased $24.3 million, or 5.1%, to $500.2 million for the year ended December 31, 2015, from $475.9 million for the year ended December 31, 2014. The components of the increase consisted of net price increases of $18.6 million, solid waste volume increases of $2.5 million associated with increases in roll off collection volumes, transfer station volumes, landfill MSW volumes and landfill special waste volumes exceeding declines in residential collection volumes, net revenue growth from acquisitions and divestitures closed during, or subsequent to, the year ended December 31, 2014, of $2.5 million and other revenue increases of $0.7 million.

Revenue in our E&P segment decreased $94.1 million, or 43.7%, to $121.1 million for the year ended December 31, 2016, from $215.2 million for the year ended December 31, 2015. The components of the decrease consisted of $91.7 million from reduced E&P volumes, $2.3 million from reduced solid waste volumes at non-E&P operations managed by our E&P segment and other revenue decreases of $0.1 million. During the year ended December 31, 2016, our E&P segment continued to be adversely affected by the substantial reductions in crude oil prices that began in October 2014, and continued through 2015 and 2016, resulting in a decline in the level of drilling and production activity, reducing the demand for E&P waste services in the basins in which we operate.

Revenue in our E&P segment decreased $86.3 million, or 28.6%, to $215.2 million for the year ended December 31, 2015, from $301.5 million for the year ended December 31, 2014. The components of the decrease consisted of $116.6 million of E&P revenue decreases at facilities owned and fully-operated in each of the comparable periods due to declines in both E&P waste volumes and prices charged for our services and solid waste decreases of $0.3 million, partially offset by revenue growth from acquisitions closed during, or subsequent to, the year ended December 31, 2014, of $26.7 million, and $3.9 million of revenue from two new E&P disposal facilities opened subsequent to December 31, 2014. During the year ended December 31, 2015, our E&P segment was adversely affected by the substantial reductions in crude oil prices that began in October 2014, and continued through 2015, resulting in a decline in the level of drilling and production activity, reducing the demand for E&P waste services in the basins in which we operate.

Segment EBITDA

Segment EBITDA in our Southern segment increased $127.6 million, or 357.2%, to $163.3 million for the year ended December 31, 2016, from $35.7 million for the year ended December 31, 2015. The increase was due primarily to an increase in revenues of $568.1 million and $0.8 million of other net expense decreases, partially offset by a net $435.7 million increase in cost of operations and SG&A expenses attributable to acquired operations, an increase in direct and administrative labor expenses of $3.5 million due primarily to employee pay rate increases and an increase in truck, container, equipment and facility maintenance and repair expenses of $2.1 million due to variability in the timing and severity of major repairs.

The Progressive Waste acquisition contributed $556.6 million of revenue and $121.4 million of EBITDA to our Southern segment for the year ended December 31, 2016. The reported EBITDA amounts include charges for allocated corporate overhead.

Segment EBITDA in our Southern segment increased $3.2 million, or 9.8%, to $35.7 million for the year ended December 31, 2015, from $32.5 million for the year ended December 31, 2014. The increase was due primarily to an increase in revenues of $9.8 million, a decrease in fuel expense of $2.3 million due to lower market prices for diesel fuel not purchased under diesel fuel hedge agreements and a decrease of $2.0 million associated with the cost of contracted landfill construction services we performed during the prior year period at a landfill we operate, partially offset by a net $5.6 million increase in cost of operations and SG&A expenses attributable to acquired operations, an increase in corporate overhead expense allocations of $1.6 million due primarily to revenue growth, an increase in direct and administrative labor expenses of $1.2 million due primarily to employee pay rate increases, an increase in medical benefits expenses of $0.6 million due primarily to increased claim costs and $1.9 million of other net expense increases.

Segment EBITDA in our Western segment increased $24.8 million, or 8.5%, to $315.7 million for the year ended December 31, 2016, from $290.9 million for the year ended December 31, 2015. The increase was due primarily to an increase in revenues of $54.9 million, a decrease in fuel expense of $1.1 million due to lower market prices for diesel fuel not purchased under diesel fuel hedges, a reduction in professional fees of $1.8 million associated with prior year expenses related to new contracts and regulatory compliance and a decrease in corporate overhead expense allocations of $2.3 million due to a lower overhead allocation rate, partially offset by an increase in direct and administrative labor expenses of $10.5 million due primarily to employee pay rate increases and increased headcount to support revenue volume increases, an increase in taxes on revenues of $6.3 million due to increased revenues, an increase in employee benefits expenses of $5.0 million due to increased medical claims costs, an increase in third-party disposal expense of $4.5 million due to increased collection volumes and disposal rate increases, an increase in truck, container, equipment and facility maintenance and repair expenses of $3.9 million due to variability in the timing and severity of major repairs, an increase in third-party trucking and transportation expenses of $1.7 million due to increased disposal volumes that require transportation to our landfills, an increase in expenses for uncollectable accounts receivable of $1.0 million due primarily to a large intermodal customer filing for bankruptcy, an increase in the cost to purchase recyclable commodities of $0.8 million and $1.6 million of other net expense increases.

Segment EBITDA in our Western segment increased $32.8 million, or 12.7%, to $290.9 million for the year ended December 31, 2015, from $258.1 million for the year ended December 31, 2014. The increase was due primarily to an increase in revenues of $56.5 million, a decrease in fuel expense of $9.5 million due to lower market prices for diesel fuel not purchased under diesel fuel hedge agreements, a decrease in current year expenses for uncollectible accounts receivable of $1.1 million due primarily to a prior year expense charge associated with receivables from a large customer that were deemed uncollectible and a decrease in auto, workers' compensation and property claims expenses under our high deductible insurance program of $1.0 million due primarily to adjustments to projected losses on prior period claims, partially offset by an increase in rail transportation expenses at our intermodal operations of $9.6 million due to increased rail cargo volume, an increase in direct and administrative labor expenses of $9.3 million due primarily to employee pay rate increases and increased headcount to support revenue volume increases, an increase in third-party disposal expense of $4.3 million due to increased collection volumes and disposal rate increases, an increase in taxes on revenues of $3.6 million due to increased revenues, an increase in truck, container, equipment and facility maintenance and repair expenses of $2.5 million due to variability in the timing and severity of major repairs, an increase in third-party trucking and transportation expenses of $1.6 million due to increased disposal volumes that require transportation to our landfills, an increase in corporate overhead expense allocations of $1.4 million due primarily to revenue growth, a net $0.8 million increase in cost of operations and SG&A expenses attributable to acquired operations, a $0.5 million increase in legal fees associated with our dispute with the County of Madera, California, a $0.4 million increase in credit card fees resulting from an increase in the total number of customers remitting payments for our services using credit cards and $1.3 million of other net expense increases.

Segment EBITDA in our Eastern segment increased $73.7 million, or 61.6%, to $193.4 million for the year ended December 31, 2016, from $119.7 million for the year ended December 31, 2015. The increase was due primarily to an increase in revenues of $260.5 million, a decrease in fuel expense of $1.8 million due to lower market prices for diesel fuel not purchased under diesel fuel hedge agreements, a decrease in corporate overhead expense allocations of $3.8 million due to a lower overhead allocation rate, a decrease in expenses for auto and workers' compensation claims of $1.5 million due to improved safety results, a decrease in third-party disposal expenses of $2.7 million due primarily to increased internal disposal of waste at our transfer stations and landfills in the Albany, NY market, a decrease in expenses for uncollectable accounts receivable of $0.8 million due primarily to the recovery of a receivable that was reserved as uncollectible in a prior period and $1.8 million of other net expense decreases, partially offset by a net $185.3 million increase in cost of operations and SG&A expenses attributable to acquired operations, an increase in direct and administrative labor expenses of $4.3 million due primarily to employee pay rate increases and increased headcount to support internal growth, an increase in employee benefits expenses of $3.1 million due to increased medical claims costs, an increase in third-party trucking and transportation expenses of $2.9 million due to increased landfill special waste volumes and transfer station volumes that require us to be responsible for the costs of transporting the waste to our disposal operations, an increase in taxes on revenues of $1.9 million due primarily to a new landfill site that commenced operations in 2015 and an increase in truck, container, equipment and facility maintenance and repair expenses of $1.7 million due to variability in the timing and severity of major repairs.

The Progressive Waste acquisition contributed $178.5 million of revenue and $42.3 million of EBITDA to our Eastern segment for the year ended December 31, 2016. The reported EBITDA amounts include charges for allocated corporate overhead.

Segment EBITDA in our Eastern segment increased $15.5 million, or 14.8%, to $119.7 million for the year ended December 31, 2015, from $104.2 million for the year ended December 31, 2014. The increase was due primarily to an increase in revenues of $33.9 million, a decrease in fuel expense of $5.1 million due to lower market prices for diesel fuel not purchased under diesel fuel hedge agreements and a decrease in disposal expenses of $1.6 million due primarily to increased internalization of collected waste volumes in our Albany, New York market, partially offset by a net $13.4 million increase in cost of operations and SG&A expenses attributable to acquired operations, an increase in corporate overhead expense allocations of $3.5 million due primarily to revenue growth, an increase in direct and administrative labor expenses of $3.5 million due primarily to employee pay rate increases and increased headcount to support internal growth, an increase in truck, container, equipment and facility maintenance and repair expenses of $2.3 million due to variability in the timing and severity of major repairs, an increase in third-party trucking and transportation expenses of $1.4 million due to increased volumes disposed of at our transfer stations that require further transportation to our landfills and an increase in taxes on revenues of $1.0 million at a new landfill site that commenced operations in 2015.

Segment EBITDA in our Canada segment was $149.3 million for the year ended December 31, 2016. The segment EBITDA was comprised of $407.9 million of acquired revenues, less the following expenses: direct labor and related benefits expenses of $82.0 million; disposal expenses of $46.2 million; SG&A and allocated corporate overhead expenses of $38.7 million; truck, container, equipment and facility maintenance and repair expenses of $24.2 million; third-party trucking and transportation expenses of $16.7 million; fuel expenses of $14.2 million; expenses related to the purchase and processing of recyclable commodities of $4.5 million; auto and workers' compensation expenses of $6.3 million; and $25.8 million of all other net expenses.

Segment EBITDA in our Central segment increased $24.9 million, or 13.5%, to $208.9 million for the year ended December 31, 2016, from $184.0 million for the year ended December 31, 2015. The increase was due primarily to an increase in revenues of $61.3 million, a decrease in fuel expense of $3.9 million due to lower market prices for diesel fuel not purchased under diesel fuel hedge agreements, a $1.1 million decrease in legal expenses due to the resolution of certain third-party claims subsequent to the prior year period and a decrease in corporate overhead expense allocations of $1.9 million due to a lower overhead allocation rate, partially offset by a net $31.3 million increase in cost of operations and SG&A expenses attributable to acquired operations, an increase in direct and administrative labor expenses of $4.5 million due primarily to employee pay rate increases, an increase in employee benefits expenses of $4.5 million due to increased employee participation in our benefit plans and increased medical claims costs, an increase in truck, container, equipment and facility maintenance and repair expenses of $1.9 million due to variability in the timing and severity of major repairs and a $1.1 million increase in third-party trucking and transportation expenses due to increased utilization of our transfer stations which require received disposal volumes to be transported to our landfills.

The Progressive Waste acquisition contributed $42.0 million of revenue and $13.3 million of EBITDA to our Central segment for the year ended December 31, 2016. The reported EBITDA amounts include charges for allocated corporate overhead.

Segment EBITDA in our Central segment increased $8.1 million, or 4.6%, to $184.0 million for the year ended December 31, 2015, from $175.9 million for the year ended December 31, 2014. The increase was due primarily to an increase in revenues of $24.3 million and a decrease in fuel expense of $3.3 million due to lower market prices for diesel fuel not purchased under diesel fuel hedge agreements, partially offset by an increase in direct and administrative labor expenses of $6.1 million due primarily to employee pay rate increases, an increase in corporate overhead expense allocations of $4.0 million due primarily to revenue growth and an increase to the overhead allocation rate, an increase in third-party disposal expense of $3.5 million due to disposal rate increases, changes in internalization of collected waste volumes in certain markets and increased transfer station volumes, an increase in truck, container, equipment and facility maintenance and repair expenses of $1.9 million due to variability in the timing and severity of major repairs, an increase in professional fees of $1.4 million due primarily to increased expenses for legal and sales consulting services, an increase in taxes on revenues of $1.2 million due primarily to increased landfill revenues, a net $0.6 million increase in cost of operations and SG&A expenses attributable to acquired operations and $0.8 million of other net expense increases.

Segment EBITDA in our E&P segment decreased $37.6 million, or 53.7%, to $32.5 million for the year ended December 31, 2016, from $70.1 million for the year ended December 31, 2015. The decrease was due primarily to a

$94.1 million decrease in revenues, partially offset by decreased expenses of $5.0 million associated with costs incurred during the year ended December 31, 2015 for site clean-up and remediation work associated with flooding and other surface damage at two of our E&P disposal sites in New Mexico resulting from heavy precipitation affecting the sites, a decrease of $1.5 million in expenses resulting from start-up costs incurred during the year ended December 31, 2015 at two new E&P disposal facilities, a decrease in corporate overhead expense allocations of $0.9 million due primarily to declines in revenue and a lower overhead allocation rate, decreased fuel expenses of $2.1 million due primarily to decreases in the price of diesel fuel and the following changes attributable to a reduction in our operations and headcount resulting from the decline in the level of drilling and production activity: decreased direct and administrative employee wage and benefits expenses of $17.3 million, decreased third-party trucking and transportation expenses of $8.7 million, decreased equipment repair expenses of $4.1 million, decreased cell processing and site remediation work of $3.0 million, decreased landfill operating supplies of $2.3 million, decreased equipment rental expenses of $2.2 million, decreased employee travel expenses of $1.7 million, decreased disposal expenses of $1.3 million, decreased royalties on revenues of $1.2 million and $5.2 million of other expense decreases.

Segment EBITDA in our E&P segment decreased $77.8 million, or 52.6%, to $70.1 million for the year ended December 31, 2015, from $147.9 million for the year ended December 31, 2014. The decrease was due primarily to an $86.3 million decrease in revenues, a net $17.8 million increase in cost of operations and SG&A expenses attributable to acquired operations, an increase of $5.0 million in expenses due to site clean-up and remediation work during the first quarter of 2015 associated with flooding and other surface damage at two of our E&P disposal sites in New Mexico resulting from heavy precipitation affecting the sites and an increase of $1.5 million due to start-up related expenses at two new E&P disposal facilities during the first quarter of 2015, partially offset by decreased fuel expenses of $4.1 million due primarily to decreases in the price of diesel fuel, a decrease in corporate overhead expense allocations of $1.9 million due to lower revenues, a decrease in expenses for uncollectible accounts receivable of $1.5 million due to improved collection results in the current year and the following changes attributable to a reduction in our operations resulting from the decline in the level of drilling and production activity: decreased third-party trucking and transportation expenses of $6.7 million, decreased site remediation work of $6.2 million, decreased employee wage and benefits expenses of $3.4 million, decreased equipment repair expenses of $3.0 million, decreased equipment rental expenses of $1.9 million, decreased royalties on revenues of $1.1 million, decreased landfill operating supplies of $0.5 million and $2.5 million of other expense decreases.

Segment EBITDA at Corporate decreased $121.1 million, to a loss of $119.2 million for the year ended December 31, 2016, from income of $1.9 million for the year ended December 31, 2015. The loss was due to an increase in direct acquisition costs of $29.1 million attributable primarily to the Progressive Waste acquisition, an increase of $26.0 million resulting from severance-related expenses payable to Progressive Waste personnel who were not permanently retained as employees of New Waste Connections following the close of the Progressive Waste acquisition, an increase of $14.5 million from New Waste Connections paying excise taxes levied on the unvested or vested and undistributed equity-compensation holdings of our corporate officers and members of our Board of Directors resulting from the Progressive Waste acquisition, an increase in share-based compensation expenses of $14.3 million resulting from time-lapse vesting and changes to the fair value of awards granted by Progressive Waste prior to the June 1, 2016 closing of the Progressive Waste acquisition to employees of Progressive Waste who were retained as employees of New Waste Connections following the closing and which awards were continued by New Waste Connections, an increase in share-based compensation expenses of $8.0 million related to awards granted to employees of Progressive Waste prior to June 1, 2016 for which vesting was accelerated due to plan provisions regarding a change in control followed by termination of employment, an increase in equity-based compensation expenses of $2.3 million resulting from the acceleration of vesting of performance share units granted to Old Waste Connections' management in 2014 and 2015, an increase of $8.1 million resulting from employee relocation expenses and professional fees incurred to integrate the operations of Progressive Waste into New Waste Connections, an increase of $11.8 million resulting from the accrual of incentive compensation expenses to certain of our executive officers and key employees related to the achievement of defined synergy goals realized by New Waste Connections from the Progressive Waste acquisition, an increase in accrued recurring cash incentive compensation expense to our management of $12.0 million due to our solid waste segments exceeding their collective financial targets in 2016 and the addition of four months of accrued cash incentive compensation expense for the retained Progressive Waste employees, an increase in payroll expenses and employee benefits of $7.5 million due to increased corporate headcount to support the operations of Progressive Waste, annual compensation increases and expenses associated with corporate employees of Progressive Waste continuing to provide services to us over a short-term transition period, an increase in legal, accounting and information technology professional fee expenses of $6.7 million due to increased support required as a result of growth from the Progressive Waste acquisition, an increase in corporate travel, meetings and training expenses of $2.8 million resulting from the integration of employees of Progressive Waste into New Waste Connections, an increase in deferred compensation expense of $1.2 million resulting from deferred compensation liabilities to employees increasing as a result of increases in the market value of investments to which employee deferred compensation balances are tracked, an increase in software license fees of $1.0 million to support computer applications acquired in the Progressive Waste acquisition, an increase in equity-based compensation expenses of $1.0 million associated with our annual recurring grant of restricted share units to our personnel, an increase in employee relocation expenses of $0.8 million associated with corporate personnel added to support the additional administrative oversight resulting from the Progressive Waste acquisition, an increase in real estate rent expense of $0.8 million due primarily to expenses incurred for duplicative corporate headquarters utilized by Progressive Waste which we expect to vacate and sublease in 2017 and $4.1 million of other net expense increases, partially offset by an increase in corporate overhead allocated to our segments of $30.9 million due to an increase in total corporate expenses to support the operations acquired in the Progressive Waste acquisition. During the year ended December 31, 2016, the allocation rate for charging corporate overhead to our segments was 2.9% of budgeted revenues, a decrease from 3.5% for the year ended December 31, 2015, as a result of allocating our total corporate expenses over a larger group of operations resulting from the Progressive Waste acquisition.

Segment EBITDA at Corporate increased $9.3 million, to income of $1.9 million for the year ended December 31, 2015, from a loss of $7.4 million for the year ended December 31, 2014. The increase was due to an increase in revenue-based corporate overhead expense allocations to our segments of $8.9 million due primarily to our revenue growth in our solid waste segments and an increase in the allocation rate to our Central and Eastern segments, a decrease in accrued cash incentive compensation expense of $2.9 million as we did not achieve the same level of certain financial targets that were met in the prior year period, a decrease in deferred compensation expense of $0.5 million resulting from deferred compensation liabilities to employees decreasing as a result of decreases in the market value of investments to which employee deferred compensation balances are tracked and $0.5 million of other net expense decreases, partially offset by an increase in direct acquisition expenses of $2.1 million attributable to acquisitions closed during the current year period, an increase of $0.8 million in equity-based compensation expenses associated with our annual recurring grant of restricted share units to our personnel and an increase in payroll expenses of $0.6 million due primarily to pay rate increases.

Liquidity and Capital Resources

The following table sets forth certain cash flow information for the years ended December 31, 2016, 2015 and 2014 (in thousands of U.S. dollars):

	2016	2015	2014
Net cash provided by operating activities	$ 795,312	$ 576,999	$ 545,077
Net cash used in investing activities	(296,395)	(470,534)	(363,408)
Net cash used in financing activities	(354,869)	(109,844)	(180,907)
Effect of exchange rate changes on cash and equivalents	(598)	-	-
Net increase (decrease) in cash and equivalents	143,450	(3,379)	762
Cash and equivalents at beginning of year	10,974	14,353	13,591
Less: cash held for sale	(42)	-	-
Cash and equivalents at end of year	$ 154,382	$ 10,974	$ 14,353

Operating Activities Cash Flows

For the year ended December 31, 2016, net cash provided by operating activities was $795.3 million. For the year ended December 31, 2015, net cash provided by operating activities was $577.0 million. The $218.3 million increase was due primarily to the following:

1) An increase in net income of $342.0 million, adjusted for a decrease in cash flows from operating assets and liabilities, net of effects from closed acquisitions, of $45.8 million. Cash flows from changes in operating assets and liabilities, net of effects from acquisitions, was a cash outflow of $35.2 million for the year ended December 31, 2016 and a cash inflow of $10.6 million for the year ended December 31, 2015. The significant components of the $35.2 million in net cash outflows from changes in operating assets and liabilities, net of effects from closed acquisitions, for the year ended December 31, 2016, include the following:
   a) an increase in cash resulting from an $8.0 million increase in deferred revenue due primarily to increased solid waste collection revenues and the timing of billing for those services; less
   b) a decrease in cash resulting from a $15.8 million decrease in accounts payable and accrued liabilities due primarily to the payment of $32.7 million of direct acquisition costs incurred by Progressive Waste prior to June 1, 2016 that were assumed by us in conjunction with the Progressive Waste acquisition, partially offset by an increase in accrued management bonuses; less
   c) a decrease in cash resulting from a $5.3 million increase in accounts receivable due to seasonally increased revenues, without improved collection results, contributing to a higher amount of revenues remaining uncollected at the end of the comparable periods; less
   d) a decrease in cash resulting from a $21.7 million increase in prepaid expenses and other current assets due primarily to increases in prepaid income taxes and prepaid insurance premiums;
2) An increase in depreciation expense of $153.2 million due primarily to increased depreciation expense resulting from increased capital expenditures and property, equipment and landfill assets acquired in the Progressive Waste acquisition;
3) An increase in amortization expense of $41.2 million due primarily to intangible assets acquired in the Progressive Waste acquisition;
4) An increase in our provision for deferred taxes of $174.8 million due primarily to tax deductible timing differences associated with depreciation and the prior year impairment charge in our E&P segment resulting in the reduction of corresponding deferred tax liabilities;
5) An increase in share-based compensation expense of $24.5 million due primarily to an increase in the total fair value of our annual recurring grant of restricted share units and performance share units to our personnel, expenses associated from time-lapse vesting and changes to the fair value of share-based compensation awards granted to Progressive Waste employees prior to the June 1, 2016 acquisition date that continued to remain outstanding following the close of the Progressive Waste acquisition and the acceleration of vesting of performance share units granted to Old Waste Connections' management in 2014 and 2015;
6) An increase of $19.6 million attributable to post-closing adjustments resulting in a net decrease in the fair value of amounts payable under liability-classified contingent consideration arrangements primarily associated with the 2014 acquisition of an E&P disposal company; and
7) An increase in interest accretion expense of $3.7 million due primarily to increased landfill closure and post-closure liabilities and contingent liabilities acquired in the Progressive Waste acquisition; less
8) A decrease in the loss on disposal of assets and impairments of $491.9 million due primarily to the prior year impairment of a portion of our goodwill, indefinite-lived intangible assets and property, plant and equipment within our E&P segment; less
9) A decrease of $3.1 million attributable to an increase in the excess tax benefits associated with equity-based compensation, due to an increase in taxable income recognized by employees from equity-based compensation that is tax deductible to us.

For the year ended December 31, 2015, net cash provided by operating activities was $577.0 million. For the year ended December 31, 2014, net cash provided by operating activities was $545.1 million. The $31.9 million increase was due primarily to the following:

1) A decrease in net income of $328.0 million, adjusted for an increase in cash flows from operating assets and liabilities, net of effects from acquisitions, of $10.2 million. Cash provided by operating assets and liabilities, net of effects from acquisitions, was $10.6 million and $0.4 million for the year ended December 31, 2015 and 2014, respectively. The significant components of the $10.6 million in net cash inflows from changes in operating assets and liabilities, net of effects from acquisitions, for the year ended December 31, 2015, include the following:
    a) an increase in cash resulting from a $17.3 million decrease in accounts receivable due, in part, to improved collection results;
    b) an increase in cash resulting from an increase in accrued liabilities of $8.2 million due primarily to an increase in accrued interest due to the timing of semi-annual interest payments under our various long-term notes and an increase in accrued payroll-related expenses due to our pay cycle timing resulting in an additional day of accrual at December 31, 2015, partially offset by a decrease in accrued cash incentive compensation expense as we did not achieve the same level of certain financial targets that were met in the prior year period;
    c) an increase in cash resulting from a $4.4 million increase in deferred revenue due primarily to increased collection revenues and the timing of billing for services; less
    d) a decrease in cash resulting from a $16.7 million increase in accounts payable due primarily to an increase in the volume of vendor payments remitted using electronic payment processes that decrease the period of time from receipt until payment for vendor invoices; less
    e) a decrease in cash resulting from a $2.8 million increase in prepaid expenses and other current assets due primarily to an increase in prepaid income taxes;
2) An increase in the loss on disposal of assets and impairments of $510.4 million due primarily to the current year impairment of a portion of our goodwill, indefinite-lived intangible assets and property and equipment within our E&P segment;
3) An increase in depreciation expense of $9.4 million due primarily to increased depreciation expense resulting from increased capital expenditures;
4) An increase of $5.4 million attributable to a decrease in the excess tax benefits associated with equity-based compensation, due to a decrease in share option exercises resulting in decreased taxable income recognized by employees that is tax deductible to us; and
5) An increase in interest accretion of $1.7 million from long-term liabilities recorded at fair value associated with acquisitions closed subsequent to December 31, 2014; less
6) A decrease in our provision for deferred taxes of $163.5 million due primarily to the aforementioned impairment charge in our E&P segment resulting in the reduction of corresponding deferred tax liabilities; less
7) A decrease of $18.7 million attributable to post-closing adjustments resulting in a net decrease in the fair value of amounts payable under liability-classified contingent consideration arrangements primarily associated with the 2014 acquisition of an E&P disposal company.

As of December 31, 2016, we had a working capital surplus of $140.4 million, including cash and equivalents of $154.4 million. Our working capital surplus increased $156.2 million from a working capital deficit of $15.8 million at December 31, 2015, including cash and equivalents of $11.0 million, due primarily to increased cash balances and increased prepaid income taxes. To date, we have experienced no loss or lack of access to our cash or cash equivalents; however, we can provide no assurances that access to our cash and cash equivalents will not be impacted by adverse conditions in the financial markets. Our strategy in managing our working capital is generally to apply the cash generated from our operations that remains after satisfying our working capital and capital expenditure requirements, along with share repurchase and dividend programs, to reduce the unhedged portion of our indebtedness under our Credit Agreement and to minimize our cash balances.

Investing Activities Cash Flows

Net cash used in investing activities decreased $174.1 million to $296.4 million for the year ended December 31, 2016, from $470.5 million for the year ended December 31, 2015. The significant components of the decrease include the following:

1) A decrease in cash paid for acquisitions of $213.4 million; and
2) Cash acquired in the Progressive Waste acquisition of $65.8 million; less
3) An increase in capital expenditures for property and equipment of $105.9 million.

Total consideration for the Progressive Waste acquisition consisted of the issuance of common shares and assumption of Progressive Waste's debt and other liabilities. We did not transfer cash consideration to the former shareholders of Progressive Waste. Progressive Waste had cash balances totaling $65.8 million, which we acquired upon the close of the Progressive Waste acquisition.

The increase in capital expenditures for property and equipment was due primarily to increases in expenditures for collection trucks and expenditures resulting from the November 2015 acquisition of Rock River Environmental Services, Inc. and the 2016 acquisition of Progressive Waste.

Net cash used in investing activities increased $107.1 million to $470.5 million for the year ended December 31, 2015, from $363.4 million for the year ended December 31, 2014. The significant components of the increase include the following:

1) An increase in payments for acquisitions of $104.3 million due primarily to the acquisition of ten solid waste collection businesses, two integrated solid waste collection and disposal businesses, an E&P waste stream treatment and recycling business and a permitted, development stage E&P landfill site during the year ended December 31, 2015; less
2) A decrease in capital expenditures for property and equipment of $2.4 million due primarily to decreases in expenditures for trucks purchased for purposes of converting fleets at certain hauling operations to compressed natural gas and decreases in expenditures for equipment in our E&P segment, partially offset by increased expenditures resulting from acquisitions closed subsequent to December 31, 2014 and expenditures in 2015 for two new E&P liquid waste injection wells.

Financing Activities Cash Flows

Net cash used in financing activities increased $245.0 million to $354.8 million for the year ended December 31, 2016, from $109.8 million for the year ended December 31, 2015. The significant components of the increase include the following:

1) An increase in net repayments of long-term borrowings of $305.1 million due primarily to increased cash provided from operations, cash acquired in the Progressive Waste acquisition, reduced proceeds from borrowings to fund payments for acquisitions and reduced proceeds from borrowings to fund payments to repurchase our common shares exceeding increased borrowings to fund capital expenditures and increases to end of period cash balances;
2) An increase in payments of contingent consideration recorded at acquisition date of $14.1 million due primarily to the payout of the fair value of contingent liabilities associated with the expansion of an acquired construction and demolition landfill, obtaining permits to construct and operate two new E&P landfills and a solid waste acquisition achieving required earnings targets;
3) An increase in payments for debt issuance costs of $6.6 million resulting primarily from our Credit Agreement that we entered into in June 2016 in conjunction with the Progressive Waste acquisition; and
4) An increase in cash dividends paid of $26.6 million due primarily to an increase in our quarterly dividend rate to an annual total of $0.615 per share for the year ended December 31, 2016, from an annual total of $0.535 per share for the year ended December 31, 2015, and an increase in common shares outstanding resulting from the Progressive Waste acquisition; less
5) A decrease in payments to repurchase our common shares of $91.2 million due to no shares being repurchased during the year ended December 31, 2016; less

6) An increase of $19.9 million from the sale of common shares held in trust; less
7) An increase of $3.1 million attributable to an increase in the excess tax benefits associated with equity-based compensation, due to an increase in taxable income recognized by employees from equity-based compensation that is tax deductible to us.

Net cash used in financing activities decreased $71.1 million to $109.8 million for the year ended December 31, 2015, from $180.9 million for the year ended December 31, 2014. The significant components of the decrease include the following:

1) A decrease in net repayments of long-term borrowings of $153.7 million due primarily to increased proceeds from borrowings to fund increases in payments for acquisitions and payments to repurchase our common stock during the year ended December 31, 2015;
2) A decrease in payment of contingent consideration recorded at acquisition date of $22.7 million due primarily to the payout in 2013 of the fair value of a contingent liability recorded at the close date of the 2012 acquisition of R360 associated with the achievement of a permitted expansion at one of the acquired landfills; less
3) An increase in payments to repurchase our common stock of $83.8 million due to an increase in share repurchase activity during the year ended December 31, 2015; less
4) An increase in cash dividends paid of $7.1 million due primarily to an increase in our quarterly dividend rate to an annual total of $0.535 per share for the year ended December 31, 2015, from an annual total of $0.475 per share for the year ended December 31, 2014; less
5) An increase in payments for debt issuance costs of $6.7 million incurred in connection with our new revolving credit and term loan agreement that we entered into in January 2015 and our new 2022 Notes and 2025 Notes that we issued in August 2015; less
6) A decrease of $5.4 million attributable to a decrease in the excess tax benefits associated with equity-based compensation, due to a decrease in share option exercises resulting in decreased taxable income recognized by employees that is tax deductible to us.

Our business is capital intensive. Our capital requirements include acquisitions and capital expenditures for landfill cell construction, landfill development, landfill closure activities and intermodal facility construction in the future.

On July 19, 2016, our Board of Directors approved, subject to receipt of regulatory approvals, undertaking a normal course issuer bid (the “NCIB”) to purchase up to 8,770,732 of our common shares for a one-year period that expires on August 7, 2017. We received TSX approval of the NCIB on August 3, 2016. Under the NCIB, we may make share repurchases only in the open market, including on the NYSE, the TSX, and alternative Canadian trading systems, at the prevailing market price at the time of the transaction.

In accordance with TSX rules, any daily repurchases made through the TSX and alternative Canadian trading systems would be limited to a maximum of 60,150 common shares, which represents 25% of the average daily trading volume on the TSX of 240,601 common shares for the period from June 1, 2016 to July 31, 2016, being the whole calendar month periods that our shares traded on the TSX from the June 1, 2016 closing of the Progressive Waste acquisition to the date we filed our NCIB application with the TSX. The TSX rules also allow us to purchase, once a week, a block of common shares not owned by any insiders, which may exceed such daily limit. The maximum number of shares that can be purchased per day on the NYSE will be 25% of the average daily trading volume for the four calendar weeks preceding the date of purchase, subject to certain exceptions for block purchases. Shareholders may obtain a copy of our TSX Form 12 – Notice of Intention to Make a Normal Course Issuer Bid, without charge, by request directed to our Vice President – Finance at (832) 442-2200.

The timing and amounts of any repurchases pursuant to the NCIB will depend on many factors, including our capital structure, the market price of the common shares and overall market conditions. All common shares purchased under the NCIB shall be immediately cancelled following their repurchase.

For the year ended December 31, 2016, we did not repurchase any common shares pursuant to the NCIB or other share repurchase programs. For the year ended December 31, 2015, Old Waste Connections repurchased 1,962,989 shares of common stock at an aggregate cost of $91.2 million.

The Board of Directors of Old Waste Connections authorized the initiation of a quarterly cash dividend in October 2010 and has increased it on an annual basis. Cash dividends of $92.5 million and $66.0 million were paid during the years ended December 31, 2016 and 2015, respectively. In October 2016, our Board of Directors authorized an increase to our regular quarterly cash dividend of $0.035, from $0.145 to $0.18 per share. We cannot assure you as to the amounts or timing of future dividends.

We made $344.7 million in capital expenditures during the year ended December 31, 2016. We expect to make capital expenditures of approximately $450 million in 2017 in connection with our existing business. We intend to fund our planned 2017 capital expenditures principally through cash on hand, internally generated funds and borrowings under our Credit Agreement. In addition, we may make substantial additional capital expenditures in acquiring MSW and E&P waste businesses. If we acquire additional landfill disposal facilities, we may also have to make significant expenditures to bring them into compliance with applicable regulatory requirements, obtain permits or expand our available disposal capacity. We cannot currently determine the amount of these expenditures because they will depend on the number, nature, condition and permitted status of any acquired landfill disposal facilities. We believe that our cash and equivalents, Credit Agreement and the funds we expect to generate from operations will provide adequate cash to fund our working capital and other cash needs for the foreseeable future. However, disruptions in the capital and credit markets could adversely affect our ability to draw on our Credit Agreement or raise other capital. Our access to funds under the Credit Agreement is dependent on the ability of the banks that are parties to the agreement to meet their funding commitments. Those banks may not be able to meet their funding commitments if they experience shortages of capital and liquidity or if they experience excessive volumes of borrowing requests within a short period of time.

On June 1, 2016, we assumed $1.729 billion of debt in the Progressive Waste acquisition consisting of $1.659 billion of amounts outstanding under Progressive Waste's prior Amended and Restated Credit Agreement, dated as of June 30, 2015, among Progressive Waste, Bank of America, N.A., acting through its Canada branch, as global agent, Bank of America, N.A., as the U.S. agent, and the other lenders and financial institutions party thereto (the "2015 Progressive Waste Credit Agreement"), $64.0 million of tax-exempt bonds and $5.8 million of other long-term debt.

On June 1, 2016, we terminated the 2015 Progressive Waste Credit Agreement. Also on June 1, 2016, Old Waste Connections terminated a Revolving Credit and Term Loan Agreement, dated as of January 26, 2015, by and among Old Waste Connections, Bank of America, N.A., as the administrative agent and swing line lender and letter of credit issuer, and certain lenders and other financial institutions party thereto (the "2015 Old Waste Connections Credit Agreement," and together with the 2015 Progressive Waste Credit Agreement, the "Prior Credit Agreements").

On June 1, 2016, we also entered into several financing agreements, including the Credit Agreement with Bank of America, N.A., acting through its Canada Branch, as global agent, the swing line lender and letter of credit issuer, Bank of America, N.A., as the U.S. Agent and an letter of credit issuer, the lenders (the "Lenders") and any other financial institutions from time to time party thereto, and a Master Note Purchase Agreement (as amended, restated, amended and restated, assumed, supplemented or modified from time to time, the "2016 NPA") with certain accredited institutional investors, as more fully described below. Proceeds from the borrowings under the Credit Agreement were used initially to refinance our indebtedness under the Prior Credit Agreements and for the payment of transaction fees and expenses related to the Progressive Waste acquisition. We used proceeds from the sale of the 2016 Notes to refinance existing indebtedness and for general corporate purposes. See Note 8 to the consolidated financial statements included in Item 8 of this Annual Report on Form 10-K for further details on the new debt agreements.

As of December 31, 2016, $1.638 billion under the term loan and $310.6 million under the revolving credit facility were outstanding under our Credit Agreement, exclusive of outstanding standby letters of credit of $247.5 million. Our Credit Agreement matures in June 2021.

Contractual Obligations

As of December 31, 2016, we had the following contractual obligations:

	Payments Due by Period (amounts in thousands of U.S. dollars)				
Recorded Obligations	**Total**	**Less Than 1 Year**	**1 to 3 Years**	**3 to 5 Years**	**Over 5 Years**
Long-term debt	$ 3,632,692	$ 1,650	$ 243,938	$ 2,200,776	$ 1,186,328
Cash interest payments	584,594	104,358	205,379	148,825	126,032
Contingent consideration	71,925	21,612	4,631	11,279	34,403
Final capping, closure and post-closure	1,448,334	19,119	23,772	5,050	1,400,393

Long-term debt payments include:

1) $310.6 million in principal payments due June 2021 related to our revolving credit facility under our Credit Agreement. We may elect to draw amounts on our Credit Agreement in either U.S. dollar base rate loans or LIBOR loans or Canadian dollar Canadian prime rate loans or Bankers' Acceptance loans. At December 31, 2016, $7.4 million of the outstanding borrowings drawn under the revolving credit facility were in Canadian-based Canadian prime rate loans, which bear interest at the Canadian prime rate plus the applicable Canadian prime rate margin (for a total rate of 2.95% at December 31, 2016) and $303.1 million of the outstanding borrowings drawn under the revolving credit facility were in Canadian-based Bankers' Acceptance loans, which bear interest at the Canadian Dollar Offered Rate plus the applicable acceptance fee (for a total rate of 2.13% at December 31, 2016).

2) $1.638 billion in principal payments due June 2021 related to our term loan under our Credit Agreement. Outstanding amounts on the term loan can be either base rate loans or LIBOR loans. At December 31, 2016, all amounts outstanding under the term loan were in LIBOR loans which bear interest at the LIBOR rate plus the applicable LIBOR margin (for a total rate of 1.97% at December 31, 2016).

3) $50.0 million in principal payments due 2018 related to our 2018 Notes. Holders of the 2018 Notes may require us to purchase their notes in cash at a purchase price of 100% of the principal amount of the 2018 Notes plus accrued and unpaid interest and the LIBOR breakage amount, if any, upon a change in control, as defined in the master note purchase agreement. The 2018 Notes bear interest at a rate of 4.00%.

4) $175.0 million in principal payments due 2019 related to our 2019 Notes. Holders of the 2019 Notes may require us to purchase their notes in cash at a purchase price of 100% of the principal amount of the 2019 Notes plus accrued and unpaid interest and the LIBOR breakage amount, if any, upon a change in control, as defined in the master note purchase agreement. The 2019 Notes bear interest at a rate of 5.25%.

5) $100.0 million in principal payments due 2021 related to our 2021 Notes. Holders of the 2021 Notes may require us to purchase their notes in cash at a purchase price of 100% of the principal amount of the 2021 Notes plus accrued and unpaid interest and the LIBOR breakage amount, if any, upon a change in control, as defined in the master note purchase agreement. The 2021 Notes bear interest at a rate of 4.64%.

6) $150.0 million in principal payments due 2021 related to our new 2021 Notes. Holders of the new 2021 Notes may require us to purchase their notes in cash at a purchase price of 100% of the principal amount of the new 2021 Notes plus accrued and unpaid interest and the LIBOR breakage amount, if

any, upon a change in control, as defined in the master note purchase agreement. The new 2021 Notes bear interest at a rate of 2.39%.

7) $125.0 million in principal payments due 2022 related to our 2022 Notes. Holders of the 2022 Notes may require us to purchase their notes in cash at a purchase price of 100% of the principal amount of the 2022 Notes plus accrued and unpaid interest and the LIBOR breakage amount, if any, upon a change in control, as defined in the master note purchase agreement. The 2022 Notes bear interest at a rate of 3.09%.

8) $200.0 million in principal payments due 2023 related to our 2023 Notes. Holders of the 2023 Notes may require us to purchase their notes in cash at a purchase price of 100% of the principal amount of the 2023 Notes plus accrued and unpaid interest and the LIBOR breakage amount, if any, upon a change in control, as defined in the master note purchase agreement. The 2023 Notes bear interest at a rate of 2.75%.

9) $375.0 million in principal payments due 2025 related to our 2025 Notes. Holders of the 2025 Notes may require us to purchase their notes in cash at a purchase price of 100% of the principal amount of the 2025 Notes plus accrued and unpaid interest and the LIBOR breakage amount, if any, upon a change in control, as defined in the master note purchase agreement. The 2025 Notes bear interest at a rate of 3.41%.

10) $400.0 million in principal payments due 2026 related to our 2026 Notes. Holders of the 2026 Notes may require us to purchase their notes in cash at a purchase price of 100% of the principal amount of the 2026 Notes plus accrued and unpaid interest and the LIBOR breakage amount, if any, upon a change in control, as defined in the master note purchase agreement. The 2026 Notes bear interest at a rate of 3.03%.

11) $95.4 million in principal payments related to our tax-exempt bonds, which bear interest at variable rates (ranging between 0.77% and 0.80% at December 31, 2016). The tax-exempt bonds have maturity dates ranging from 2018 to 2039.

12) $14.2 million in principal payments related to our notes payable to sellers and other third parties. Our notes payable to sellers and other third parties bear interest at rates between 3.00% and 24.81% at December 31, 2016, and have maturity dates ranging from 2017 to 2036.

The following assumptions were made in calculating cash interest payments:

1) We calculated cash interest payments on the Credit Agreement using the LIBOR rate plus the applicable LIBOR margin and the Canadian Dollar Offered Rate plus the applicable acceptance fee at December 31, 2016. We assumed the Credit Agreement is paid off when it matures in June 2021.

2) We calculated cash interest payments on our interest rate swaps using the stated interest rate in the swap agreement less the LIBOR rate through the expiration of the term of the swaps.

Contingent consideration payments include $51.8 million recorded as liabilities in our consolidated financial statements at December 31, 2016, and $20.1 million of future interest accretion on the recorded obligations.

The estimated final capping, closure and post-closure expenditures presented above are in current dollars.

	Amount of Commitment Expiration Per Period (amounts in thousands of U.S. dollars)				
Unrecorded Obligations[1]	**Total**	**Less Than 1 Year**	**1 to 3 Years**	**3 to 5 Years**	**Over 5 Years**
Operating leases	$ 162,152	$ 26,820	$ 38,766	$ 27,130	$ 69,436
Unconditional purchase obligations	52,141	42,640	9,501	-	-

(1) We are party to operating lease agreements and unconditional purchase obligations as discussed in Note 10 to the consolidated financial statements included in Item 8 of this Annual Report on Form 10-K. These lease agreements and purchase obligations are established in the ordinary course of our business and are designed to provide us with access to facilities and products at competitive, market-driven prices. At December 31, 2016, our unconditional purchase obligations consisted of multiple fixed-price fuel purchase contracts under which we have 22.3 million gallons remaining to be purchased for a total of $52.1 million. The current fuel purchase contracts expire on or before December 31, 2018. These arrangements have not materially affected our financial position, results of operations or liquidity during the year ended December 31, 2016, nor are they expected to have a material impact on our future financial position, results of operations or liquidity.

We have obtained standby letters of credit as discussed in Note 8 to the consolidated financial statements included in Item 8 of this Annual Report on Form 10-K and financial surety bonds as discussed in Note 10 to the consolidated financial statements included in Item 8 of this Annual Report on Form 10-K. These standby letters of credit and financial surety bonds are generally obtained to support our financial assurance needs and landfill and E&P operations. These arrangements have not materially affected our financial position, results of operations or liquidity during the year ended December 31, 2016, nor are they expected to have a material impact on our future financial position, results of operations or liquidity.

From time to time, we evaluate our existing operations and their strategic importance to us. If we determine that a given operating unit does not have future strategic importance, we may sell or otherwise dispose of those operations. Although we believe our reporting units would not be impaired by such dispositions, we could incur losses on them.

New Accounting Pronouncements

See Note 1 to the consolidated financial statements included in Item 8 of this Annual Report on Form 10-K for a description of the new accounting standards that are applicable to us.

Non-GAAP Financial Measures

Adjusted Free Cash Flow

We present adjusted free cash flow, a non-GAAP financial measure, supplementally because it is widely used by investors as a valuation and liquidity measure in the solid waste industry. Management uses adjusted free cash flow as one of the principal measures to evaluate and monitor the ongoing financial performance of our operations. We define adjusted free cash flow as net cash provided by operating activities, plus proceeds from disposal of assets, plus or minus change in book overdraft, plus excess tax benefit associated with equity-based compensation, less capital expenditures for property and equipment and distributions to noncontrolling interests. We further adjust this calculation to exclude the effects of items management believes impact the ability to assess the operating performance of our business. This measure is not a substitute for, and should be used in conjunction with, GAAP liquidity or financial measures. Other companies may calculate adjusted free cash flow differently. Our adjusted free cash flow for the years ended December 31, 2016, 2015 and 2014, are calculated as follows (amounts in thousands of U.S. dollars):

	Years Ended December 31,		
	2016	2015	2014
Net cash provided by operating activities	$ 795,312	$ 576,999	$ 545,077
Less: Change in book overdraft	(1,305)	(89)	(11)
Plus: Proceeds from disposal of assets	4,604	2,883	9,421
Plus: Excess tax benefit associated with equity-based compensation	5,196	2,069	7,518

Less: Capital expenditures for property and equipment	(344,723)	(238,833)	(241,277)
Less: Distributions to noncontrolling interests	(3)	(42)	(371)
Adjustments:			
Payment of contingent consideration recorded in earnings [(a)]	493	-	1,074
Transaction-related expenses [(b)]	45,228	-	-
Severance-related and other expenses [(c)]	82,526	-	-
Tax effect [(d)]	(36,384)	-	-
Adjusted free cash flow	$ 550,944	$ 342,987	$ 321,431

(a) Reflects the addback of acquisition-related payments for contingent consideration that were recorded as expenses in earnings and as a component of cash flows from operating activities as the amounts paid exceeded the fair value of the contingent consideration recorded at the acquisition date.

(b) Reflects the addback of acquisition-related transaction costs, including excise tax payments, related to the Progressive Waste acquisition.

(c) Reflects the addback of severance-related expenses and other items, including certain professional fees, in connection with the Progressive Waste acquisition.

(d) The aggregate tax effect of footnotes (a) through (c) is calculated based on the applied tax rates for the respective periods.

Adjusted EBITDA

We present adjusted EBITDA, a non-GAAP financial measure, supplementally because it is widely used by investors as a performance and valuation measure in the solid waste industry. Management uses adjusted EBITDA as one of the principal measures to evaluate and monitor the ongoing financial performance of our operations. We define adjusted EBITDA as net income (loss) attributable to Waste Connections, plus net income attributable to noncontrolling interests, plus or minus income tax provision (benefit), plus interest expense, plus depreciation and amortization expense, plus closure and post-closure accretion expense, plus or minus any loss or gain on impairments and other operating items, plus other expense, less other income, plus foreign currency transaction loss, less foreign currency transaction gain. We further adjust this calculation to exclude the effects of other items management believes impact the ability to assess the operating performance of our business. This measure is not a substitute for, and should be used in conjunction with, GAAP financial measures. Other companies may calculate adjusted EBITDA differently. Our adjusted EBITDA for the years ended December 31, 2016, 2015 and 2014, are calculated as follows (amounts in thousands of U.S. dollars):

	Years Ended December 31,		
	2016	**2015**	**2014**
Net income (loss) attributable to Waste Connections	$ 246,540	$ (95,764)	$ 232,525
Plus: Net income attributable to noncontrolling interests	781	1,070	802
Plus (less): Income tax provision (benefit)	114,044	(31,592)	152,335
Plus: Interest expense	92,709	64,236	64,674
Plus: Depreciation and amortization	463,912	269,434	257,944
Plus: Closure and post-closure accretion	8,936	3,978	3,627
Plus: Impairments and other operating items	27,678	494,492	4,091
Plus (less): Other expense (income), net	(655)	518	(1,067)
Less: Foreign currency transaction gain	(1,121)	-	-
Adjustments:			
Plus: Transaction-related expenses (a)	47,842	4,235	2,147
Plus: Pre-existing Progressive Waste share-based grants (b)	14,289	-	-
Plus: Severance-related and other expenses (c)	44,336	-	-
Plus: Synergy bonus (d)	11,798	-	-
Adjusted EBITDA	$ 1,071,089	$ 710,607	$ 717,078

(a) Reflects the addback of acquisition-related transaction costs, including excise tax payments related to the Progressive Waste acquisition.

(b) Reflects share-based compensation costs, including changes in fair value, associated with share-based awards granted by Progressive Waste outstanding at the time of the Progressive Waste acquisition.

(c) Reflects the addback of severance-related expenses and other items, including certain professional fees, in connection with the Progressive Waste acquisition.

(d) Reflects the addback of bonuses accrued pursuant to the Company's Synergy Bonus Program adopted on July 19, 2016 in connection with the Progressive Waste acquisition.

Adjusted Net Income and Adjusted Net Income per Diluted Share

We present adjusted net income attributable to Waste Connections and adjusted net income per diluted share attributable to Waste Connections, both non-GAAP financial measures, supplementally because they are widely used by investors as a valuation measure in the solid waste industry. Management uses adjusted net income attributable to Waste Connections and adjusted net income per diluted share attributable to Waste Connections as one of the principal measures to evaluate and monitor the ongoing financial performance of our operations. We provide adjusted net income attributable to Waste Connections to exclude the effects of items management believes impact the comparability of operating results between periods. Adjusted net income attributable to Waste Connections has limitations due to the fact that it excludes items that have an impact on our financial condition and results of operations. Adjusted net income attributable to Waste Connections and adjusted net income per diluted share attributable to Waste Connections are not a substitute for, and should be used in conjunction with, GAAP financial measures. Other companies may calculate these non-GAAP financial measures differently. Our adjusted net income attributable to Waste Connections and adjusted net income per diluted share attributable to Waste Connections for the years ended December 31, 2016, 2015 and 2014, are calculated as follows (amounts in thousands of U.S. dollars, except per share amounts):

	Years Ended December 31,		
	2016	**2015**	**2014**
Reported net income (loss) attributable to Waste Connections	$ 246,540	$ (95,764)	$ 232,525
Adjustments:			
Amortization of intangibles [(a)]	70,312	29,077	27,000
Impairments and other operating items [(b)]	27,678	494,492	4,091
Transaction-related expenses [(c)]	47,842	4,235	2,147
Pre-existing Progressive Waste share-based grants [(d)]	14,289	-	-
Severance-related and other expenses [(e)]	44,336	-	-
Synergy bonus [(f)]	11,798	-	-
Tax effect [(g)]	(69,581)	(182,945)	(12,747)
Impact of deferred tax adjustments [(h)]	1,964	(4,198)	1,220
Adjusted net income attributable to Waste Connections	$ 395,178	$ 244,897	$ 254,236
Diluted earnings (loss) per common share attributable to Waste Connections' common shareholders:			
Reported net income (loss)	$ 1.60	$ (0.78)	$ 1.86
Adjusted net income	$ 2.57	$ 1.98	$ 2.04
Shares used in the per share calculations:			
Reported diluted shares	154,054,331	123,491,931	124,787,421
Adjusted diluted shares [(i)]	154,054,331	123,871,636	124,787,421

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(a) Reflects the elimination of the non-cash amortization of acquisition-related intangible assets.
(b) Reflects the addback of impairments and other operating items.
(c) Reflects the addback of acquisition-related transaction costs, including excise tax payments related to the Progressive Waste acquisition.
(d) Reflects share-based compensation costs, including changes in fair value, associated with share-based awards granted by Progressive Waste outstanding at the time of the Progressive Waste acquisition.
(e) Reflects the addback of severance-related and other items, including certain professional fees, in connection with the Progressive Waste acquisition.
(f) Reflects the addback of bonuses accrued pursuant to the Company's Synergy Bonus Program adopted on July 19, 2016 in connection with the Progressive Waste acquisition.

(g) The aggregate tax effect of the adjustments in footnotes (a) through (f) is calculated based on the applied tax rates for the respective periods.

(h) Reflects (1) a change in 2016 in the geographical apportionment of our deferred tax liabilities resulting from the Progressive Waste acquisition, (2) the elimination in 2015 of an increase to the income tax benefit primarily associated with a decrease in our deferred tax liabilities resulting from the impairment of assets in our E&P segment that impacted the geographical apportionment of our state income taxes, and (3) the elimination in 2014 of an increase to the income tax provision associated with an increase in our deferred tax liabilities resulting from the enactment of New York State's 2014-2015 Budget Act on March 31, 2014.

(i) Reflects reported diluted shares adjusted for shares that were excluded from the reported diluted shares calculation due to reporting a net loss during the year ended December 31, 2015.

Inflation

Other than volatility in fuel prices and labor costs in certain markets, inflation has not materially affected our operations in recent years. Consistent with industry practice, many of our contracts allow us to pass through certain costs to our customers, including increases in landfill tipping fees and, in some cases, fuel costs. Therefore, we believe that we should be able to increase prices to offset many cost increases that result from inflation in the ordinary course of business. However, competitive pressures or delays in the timing of rate increases under our contracts may require us to absorb at least part of these cost increases, especially if cost increases exceed the average rate of inflation. Management's estimates associated with inflation have an impact on our accounting for landfill liabilities.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

In the normal course of business, we are exposed to market risk, including changes in interest rates and prices of certain commodities. We use hedge agreements to manage a portion of our risks related to interest rates and fuel prices. While we are exposed to credit risk in the event of non-performance by counterparties to our hedge agreements, in all cases such counterparties are highly rated financial institutions and we do not anticipate non-performance. We do not hold or issue derivative financial instruments for trading purposes. We monitor our hedge positions by regularly evaluating the positions at market and by performing sensitivity analyses over the unhedged fuel and variable rate debt positions.

At December 31, 2016, our derivative instruments included 12 interest rate swap agreements that effectively fix the interest rate on the applicable notional amounts of our variable rate debt as follows (dollars in thousands of U.S. dollars):

Date Entered	Notional Amount	Fixed Interest Rate Paid*	Variable Interest Rate Received	Effective Date	Expiration Date
December 2011	$ 175,000	1.600%	1-month LIBOR	February 2014	February 2017
April 2014	$ 100,000	1.800%	1-month LIBOR	July 2014	July 2019
May 2014	$ 50,000	2.344%	1-month LIBOR	October 2015	October 2020
May 2014	$ 25,000	2.326%	1-month LIBOR	October 2015	October 2020
May 2014	$ 50,000	2.350%	1-month LIBOR	October 2015	October 2020
May 2014	$ 50,000	2.350%	1-month LIBOR	October 2015	October 2020
April 2016	$ 100,000	1.000%	1-month LIBOR	February 2017	February 2020
June 2016	$ 75,000	0.850%	1-month LIBOR	February 2017	February 2020
June 2016	$ 150,000	0.950%	1-month LIBOR	January 2018	January 2021
June 2016	$ 150,000	0.950%	1-month LIBOR	January 2018	January 2021
July 2016	$ 50,000	0.900%	1-month LIBOR	January 2018	January 2021
July 2016	$ 50,000	0.890%	1-month LIBOR	January 2018	January 2021

* Plus applicable margin.

Under derivatives and hedging guidance, the interest rate swap agreements are considered cash flow hedges for a portion of our variable rate debt, and we apply hedge accounting to account for these instruments. The notional amounts and all other significant terms of the swap agreements are matched to the provisions and terms of the variable rate debt being hedged.

We have performed sensitivity analyses to determine how market rate changes will affect the fair value of our unhedged floating rate debt. Such an analysis is inherently limited in that it reflects a singular, hypothetical set of assumptions. Actual market movements may vary significantly from our assumptions. Fair value sensitivity is not necessarily indicative of the ultimate cash flow or earnings effect we would recognize from the assumed market rate movements. We are exposed to cash flow risk due to changes in interest rates with respect to the unhedged floating rate balances owed at December 31, 2016 and 2015, of $1.594 billion and $771.4 million, respectively, including floating rate debt under our Credit Agreement and floating rate tax-exempt bond obligations. A one percentage point increase in interest rates on our variable-rate debt as of December 31, 2016 and 2015, would decrease our annual pre-tax income by approximately $15.9 million and $7.7 million, respectively. All of our remaining debt instruments are at fixed rates, or effectively fixed under the interest rate swap agreements described above; therefore, changes in market interest rates under these instruments would not significantly impact our cash flows or results of operations, subject to counterparty default risk.

The market price of diesel fuel is unpredictable and can fluctuate significantly. We purchase approximately 63.7 million gallons of fuel per year; therefore, a significant increase in the price of fuel could adversely affect our business and reduce our operating margins. To manage a portion of this risk, we periodically enter into fuel hedge agreements related to forecasted diesel fuel purchases.

At December 31, 2016, our derivative instruments included four fuel hedge agreements as follows:

Date Entered	Notional Amount (in gallons per month)	Diesel Rate Paid Fixed (per gallon)	Diesel Rate Received Variable	Effective Date	Expiration Date
May 2015	300,000	$ 3.2800	DOE Diesel Fuel Index*	January 2016	December 2017
May 2015	200,000	$ 3.2750	DOE Diesel Fuel Index*	January 2016	December 2017
July 2016	500,000	$ 2.4988	DOE Diesel Fuel Index*	January 2017	December 2017
July 2016	1,000,000	$ 2.6345	DOE Diesel Fuel Index*	January 2018	December 2018

*If the national U.S. on-highway average price for a gallon of diesel fuel, or average price, as published by the U.S. Department of Energy, exceeds the contract price per gallon, we receive the difference between the average price and the contract price (multiplied by the notional number of gallons) from the counterparty. If the average price is less than the contract price per gallon, we pay the difference to the counterparty.

Under derivatives and hedging guidance, the fuel hedges are considered cash flow hedges for a portion of our forecasted diesel fuel purchases, and we apply hedge accounting to account for these instruments.

We have performed sensitivity analyses to determine how market rate changes will affect the fair value of our unhedged diesel fuel purchases. Such an analysis is inherently limited in that it reflects a singular, hypothetical set of assumptions. Actual market movements may vary significantly from our assumptions. Fair value sensitivity is not necessarily indicative of the ultimate cash flow or earnings effect we would recognize from the assumed market rate movements. For the year ending December 31, 2017, we expect to purchase approximately 63.7 million gallons of fuel, of which 33.6 million gallons will be purchased at market prices, 18.1 million gallons will be purchased under our fixed price fuel purchase contracts and 12.0 million gallons are hedged at a fixed price under our fuel hedge agreements. With respect to the approximately 33.6 million gallons of unhedged fuel we expect to purchase in 2017 at market prices, a $0.10 per gallon increase in the price of fuel over the year would decrease our pre-tax income during this period by approximately $3.4 million.

We market a variety of recyclable materials, including cardboard, office paper, plastic containers, glass bottles and ferrous and aluminum metals. We own and operate 71 recycling operations and sell other collected recyclable materials to third parties for processing before resale. To reduce our exposure to commodity price risk with respect to recycled materials, we have adopted a pricing strategy of charging collection and processing fees for recycling volume collected from third parties. In the event of a decline in recycled commodity prices, a 10% decrease in average recycled commodity prices from the average prices that were in effect during the year ended December 31, 2016 and 2015, would have had an $8.6 million and $4.6 million impact on revenues for the year ended December 31, 2016 and 2015, respectively.