

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, 2022 filed on SEDAR on February 16, 2023 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 our consolidated financial statements and the related notes included elsewhere in this Annual Report on Form 10-K.

We make statements in this Annual Report on Form 10-K that are forward-looking in nature. These include:

- Statements regarding our landfills, including capacity, duration, special projects, demand for and pricing of recyclables, landfill alternatives and related capital expenditures;
- Discussion of competition, loss of contracts, price increases and additional exclusive and/or long-term collection service arrangements;
- Forecasts of cash flows necessary for operations and free cash flow to reduce leverage as well as our ability to draw on our credit facility and access the capital markets to refinance or expand;
- Statements regarding our ability to access capital resources or credit markets at all or on favorable terms;
- Plans for, and the amount of, certain capital expenditures for our existing and newly acquired properties and equipment;
- Statements regarding fuel, oil and natural gas demand, prices, and price volatility;
- Assessments of regulatory developments and potential changes in environmental, health, safety and tax laws and regulations; and
- Other statements on a variety of topics such as the COVID-19 pandemic, inflation, credit risk of customers, seasonality, labor/pension costs and labor union activity, operational and safety risks, acquisitions, litigation results, goodwill impairments, insurance costs and cybersecurity threats.

These statements can be identified by the use of forward-looking terminology such as “believes,” “expects,” “intends,” “may,” “might,” “will,” “could,” “should” or “anticipates,” or the negative thereof or comparable terminology, or by discussions of strategy.

Our business and operations are subject to a variety of risks and uncertainties and, consequently, actual results may differ materially from those projected by any forward-looking statements. Factors that could cause actual results to differ from those projected include, but are not limited to, those listed under the heading “ITEM 1A. Risk Factors” and elsewhere in this Annual Report on Form 10-K.

There may be additional risks of which we are not presently aware or that we currently believe are immaterial that could have an adverse impact on our business. We make no commitment to revise or update any forward-looking statements to reflect events or circumstances that may change, unless required under applicable securities laws.

Industry Overview

The solid waste industry is local and highly competitive in nature, requiring substantial labor and capital resources. We 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 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, including as a result of macroeconomic and geopolitical conditions, which may impact levels of exploration and production activity, with a corresponding impact to our E&P waste activity. Most recently, in 2022, sustained increases in prices of crude oil as a result of inflationary pressures, the uncertainty associated with the Ukrainian conflict and any related bans on oil sales from Russia or supply chain disruptions as recently experienced contributed to increased levels of drilling activity and demand for our E&P waste services. Conversely, in 2020 and 2021, a significant decline in oil prices driven by both surplus production and supply, as well as the decrease in demand caused by factors including the COVID-19 pandemic, resulted in decreased levels of E&P drilling activity and a corresponding decrease in demand for our E&P waste services. Additionally, across the industry there was uncertainty regarding future demand for oil and related services, as noted by several energy companies, many of whom are customers of our E&P waste services. These energy companies wrote down the values of their oil and gas assets in anticipation of the potential for the decarbonization of their energy product mix given an increased global focus on reducing greenhouse gases and addressing climate change. At that time, the uncertainty regarding global demand had a significant impact on the investment and operating plans of our E&P waste customers in the basins where we operate.

If the prices of crude oil and natural gas substantially decline, it could lead to declines in the level of drilling activity and demand for our E&P waste services, which could result in the recognition of additional impairment charges on our intangible assets and property and equipment associated with our E&P waste operations. See the section Impairments of Property and Equipment and Finite-Lived Intangible Assets in Note 3, “Summary of Significant Accounting Policies,” of our consolidated financial statements included in Item 8 of this Annual Report on Form 10-K for a discussion of the impairment charges recorded during the years ended December 31, 2021 and 2020.

Executive Overview

We are an integrated solid waste services company that provides non-hazardous waste collection, transfer and disposal services, along with resource recovery primarily through recycling and renewable fuels generation, in mostly exclusive and secondary markets across 43 states in the U.S. and six provinces in Canada. Waste Connections also provides E&P waste services in several basins across the U.S., as well as intermodal services for the movement of cargo and solid waste containers in the Pacific Northwest.

We generally 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 non-hazardous E&P waste treatment, recovery and disposal services.

The COVID-19 Pandemic’s impact on our Results of Operations

March 11, 2022 marked the two-year anniversary of COVID-19 being declared a global pandemic by the World Health Organization. The related economic disruptions largely associated with closures or restrictions put into effect following the onset of the COVID-19 pandemic in the first quarter of 2020 resulted in declines in solid waste commercial collection, transfer station and landfill volumes, and roll off activity. Throughout the remaining fiscal year 2020 and during 2021, solid waste revenue and reported volumes largely reflected the pace and shape of the closures and subsequent

reopening activity, with the timing and magnitude of recovery varying by market. Most of the impacts to solid waste volumes associated with the pandemic have largely abated, with landfill volumes and roll off pulls returning to pre-pandemic levels. In certain markets, commercial collection volumes have not returned to pre-pandemic levels. The COVID-19 pandemic also contributed to a decline in demand for and the value of crude oil, which impacted E&P drilling activity and resulted in lower E&P waste revenue during 2020 and 2021. During 2022, E&P waste revenue increased on higher levels of drilling activity in several of the major basins.

Since the onset of the COVID-19 pandemic, protecting the health, welfare and safety of our employees has been our top priority. Recognizing the potential for financial hardship and other challenges, we have looked to provide a safety net for our employees on issues of income and family health. To that end, since the onset of the pandemic through year-end 2022, we incurred over \$50 million in incremental COVID-19-related costs, primarily supplemental pay and benefits for frontline employees, including approximately \$10 million during 2022.

As a result of the COVID-19 pandemic and subsequent reopening activity, we have also experienced an impact to our operating costs as a result of factors including supply chain disruptions and labor constraints, as demand has recovered and competition has increased. As a result, we have incurred incremental costs associated with higher wages, increased overtime as a result of higher turnover, and increased reliance on third party services.

The impact of the COVID-19 pandemic on our business, results of operations, financial condition and cash flows in future periods will depend largely on future developments, including the duration and spread of the outbreak in the U.S. and Canada, the rate of vaccinations, the severity of COVID-19 variants, the actions to contain such coronavirus variants, and how quickly and to what extent normal economic and operating conditions can resume.

2022 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 2022 increased 17.2% to \$7.212 billion from \$6.151 billion in 2021. Acquisitions closed during, or subsequent to, the prior year, net of divestitures, accounted for \$552.0 million in incremental revenues in 2022. Excluding the impact of such acquisitions, revenues increased 8.3% due predominantly to higher internal growth in solid waste. Solid waste internal growth was positive 7.4%, due to higher price increases and higher surcharges, partially offset by lower volumes and lower recycled commodities. Pricing growth was 9.2%, with core pricing up 7.7%, plus materials and environmental surcharges of positive 1.5%. Volumes decreased by 1.1% due primarily to the purposeful non-renewal of two residential hauling contracts, and decreases in the value of recycled commodities resulted in a 0.7% decrease to internal solid waste growth. Higher E&P waste activity resulted in a 1.2% increase to overall growth, and increases in landfill gas sales, including renewable energy credits, contributed 0.2% to overall growth.

Net income attributable to Waste Connections increased 35.2% to \$835.7 million in 2022, from \$618.0 million in 2021. In 2022, adjusted earnings before interest, taxes, depreciation and amortization, or adjusted EBITDA, a non-GAAP financial measure (refer to page 73 of this Annual Report on Form 10-K for a definition and reconciliation to Net income attributable to Waste Connections), increased 15.7% to \$2.221 billion, from \$1.919 billion in 2021. As a percentage of revenue, adjusted EBITDA decreased from 31.2% in 2021, to 30.8% in 2022. This 0.40 percentage point decrease reflects a 0.50 percentage point decrease from the margin dilutive impact of acquisitions completed during the period, as price-led organic growth in solid waste and higher E&P waste activity offset the impacts of lower recycled commodity values and continued inflationary pressures. Adjusted net income attributable to Waste Connections, a non-GAAP financial measure

(refer to page 74 of this Annual Report on Form 10-K for a definition and reconciliation to Net income attributable to Waste Connections), in 2022 increased 16.4% to \$985.3 million from \$846.6 million in 2021.

Adjusted Free Cash Flow

Net cash provided by operating activities increased 19.1% to \$2.022 billion in 2022, from \$1.698 billion in 2021. Capital expenditures for property and equipment increased from \$744.3 million in 2021 to \$912.7 million in 2022, an increase of \$168.4 million, or 22.6%. Adjusted free cash flow, a non-GAAP financial measure (refer to page 72 of this Annual Report on Form 10-K for a definition and reconciliation to Net cash provided by operating activities), increased by \$155 million to \$1.165 billion in 2022, from \$1.010 billion in 2021. Adjusted free cash flow as a percentage of revenues was 16.2% in 2022, as compared to 16.4% in 2021.

Return of Capital and Distributions to Shareholders

In 2022, we distributed \$668.0 million to shareholders through a combination of cash dividends and share repurchases. We paid \$243.0 million to shareholders through cash dividends declared by our Board of Directors, which also increased the quarterly cash dividend by 10.9%, from \$0.23 to \$0.255 per common share in November 2022. Cash dividends increased \$22.8 million, or 10.4%, from \$220.2 million in 2021 due to a 12.2% increase in the quarterly cash dividend declared by our Board of Directors in October 2021, followed by the additional increase in November 2022 and reflects the reduced share count resulting from repurchases. In 2022, we also repurchased 3.4 million common shares at an aggregate cost of \$425 million pursuant to our Normal Course Issuer Bid, which was renewed in August and which provides for repurchases of up to 12,859,066 shares, being 5% of the shares outstanding as of August 2, 2022. 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. 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, expectations regarding the timing and size of acquisitions, the market price of our common shares, and overall market conditions. We cannot assure as to the amounts or timing of future share repurchases or dividends. We have the ability under our Credit Agreement and Term Loan 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 substantially identically in both our Credit Agreement and Term Loan Agreement, of approximately 2.5x – 3.0x total debt to EBITDA. The Leverage Ratio is a non-GAAP ratio (refer to page 74 of this Annual Report on Form 10-K for more information on this ratio). Higher debt resulting primarily from acquisition outlays in 2022 was partially offset by higher EBITDA in 2022, resulting in an increase in our Leverage Ratio from 2.50x at December 31, 2021 to 2.93x at December 31, 2022. Cash balances decreased from \$147.4 million at December 31, 2021 to \$78.6 million at December 31, 2022, and we had \$1.194 billion of remaining borrowing capacity under our Credit Agreement, which matures in July 2026. In total, we had \$1.163 billion in prepayable debt outstanding at December 31, 2022.

Critical Accounting Estimates and Assumptions

The preparation of financial statements in conformity with GAAP 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.

We believe that of our significant accounting policies, which are described in Note 3 of our consolidated financial statements included in Item 8 of this Annual Report on Form 10-K, the following accounting policies involve a greater degree of judgment and complexity. Accordingly, we believe these are the most critical to fully understand and evaluate our financial condition and results of operations.

Insurance liabilities. We maintain 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 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 income 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 income tax assets and liabilities would change. Based on our deferred income tax liability balance at December 31, 2022, each 0.1 percentage point change to our expected future income tax rates would change our deferred income tax liability balance and income tax expense by approximately \$3.9 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 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, including as a result of inflation, 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 2022 and 2021 "layers" for final capping, closure and post-closure obligations is based on our long-term credit adjusted risk free rate. Our discount rate ranged from 3.25% to 5.50% for 2022 and was 3.25% for 2021. Our long-term inflation rate assumption ranged from 2.25% to 2.75% for 2022 and was 2.25% for 2021. 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.

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.

Goodwill and indefinite-lived intangible assets testing. 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 a segment; or
- current period or expected future operating cash flow losses.

As part of our goodwill impairment test, we estimate the fair value of each of our reporting units using discounted cash flow analyses. Our reporting units consisted of our five geographic solid waste operating segments at December 31, 2022, 2021 and 2020. We compare the fair value of each reporting unit with the carrying value of the net assets assigned to the reporting unit. 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, an impairment charge is recorded for the amount by which the carrying value exceeds its fair value, not to exceed the carrying amount of goodwill. 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.

Discounted cash flow analyses require significant assumptions and estimates about the future operations of each reporting unit and the future discrete cash flows related to each indefinite-lived intangible asset. Significant judgments

inherent in these analyses include the determination of appropriate discount rates, the amount and timing of expected future cash flows, growth rates and income tax rates. In assessing the reasonableness of our determined fair values of our reporting units, we evaluate our results against our current market capitalization. For our impairment testing of our operating segments for the year ended December 31, 2022, we determined that the indicated fair value of each of our reporting units exceeded their carrying value in excess of 200% and, therefore, we did not record an impairment charge. The detailed results of our 2022, 2021 and 2020 impairment tests are described in Note 3 of our consolidated financial statements included in Item 8 of this Annual Report on Form 10-K.

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 the 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 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 solid waste collection business involves the collection of waste from residential, commercial and industrial customers for transport to transfer stations, or directly to landfills or recycling centers. Solid waste collection services include both recurring and temporary customer relationships. The services are performed 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. The standard customer service agreements generally range from one to three years in duration, although some exclusive franchises are for significantly longer periods. Residential collection services are also provided on a subscription basis with individual households.

The fees received for collection services are based primarily on the market, collection frequency and level of service, route density, type and volume or weight of the 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.

Revenue at landfills is primarily generated by charging tipping fees on a per ton and/or per yard basis to third parties based on the volume disposed and the nature of the waste.

Revenue at transfer stations is primarily generated by charging tipping or disposal fees on a per ton and/or per yard basis. The fees charged to third parties are based primarily on the market, type and volume or weight of the waste accepted, the distance to the disposal facility and the cost of disposal.

Many of our landfill and transfer station 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 are primarily generated through the treatment, recovery and disposal of non-hazardous exploration and production waste from vertical and horizontal drilling, hydraulic fracturing, production and clean-up activity, as well as other services.

Our revenues from recycling services result from the sale of recycled commodities, which are generated by offering residential, commercial, industrial and municipal customers recycling services for a variety of recyclable materials, including compost, cardboard, mixed paper, plastic containers, glass bottles and ferrous and aluminum metals. We own and operate recycling operations and market collected recyclable materials to third parties for processing before resale. In some instances, we utilize a third party to market recycled materials. In certain instances, we issue recycling rebates to municipal or commercial customers, which can be based on the price we receive upon the sale of recycled commodities, a fixed contractual rate or other measures. We also receive rebates when we dispose of recycled commodities at third-party facilities.

Other revenues consist primarily of the sale of methane gas and renewable energy credits generated from our MSW landfills and revenues from intermodal services. Intermodal revenue is primarily generated through providing intermodal services for the rail haul movement of cargo and solid waste containers in the Pacific Northwest through a network of intermodal facilities. The fees received for intermodal services are based on negotiated rates and vary depending on volume commitments by the shipper and destination.

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 table disaggregates our revenue by service line for the periods indicated (in thousands of U.S. dollars).

	Years Ended December 31,		
	2022	2021	2020
Commercial	\$ 2,176,295	\$ 1,813,426	\$ 1,610,313
Residential	1,891,108	1,673,819	1,528,217
Industrial and construction roll off	1,183,624	954,181	833,148
Total collection	5,251,027	4,441,426	3,971,678
Landfill	1,328,942	1,233,499	1,146,732
Transfer	1,026,050	859,113	777,754
Recycling	204,876	205,076	86,389
E&P	210,562	138,707	159,438
Intermodal and other	188,471	152,194	118,396
Intercompany	(998,069)	(878,654)	(814,397)
Total	<u>\$ 7,211,859</u>	<u>\$ 6,151,361</u>	<u>\$ 5,445,990</u>

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 2022 were labor, employee benefits, third-party disposal and transportation, vehicle, equipment and property 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 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 lease cost for our administrative offices.

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, permits and other agreements. We use an accelerated or straight-line basis for amortization, depending on the attributes of the related intangibles. 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 and engineering. 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.

Presentation of Results of Operations, Segment Reporting, and Liquidity and Capital Resources

The following discussion and analysis of our Results of Operations, Segment Reporting, and Liquidity and Capital Resources includes a comparison for the year ended December 31, 2022 to the year ended December 31, 2021. A similar discussion and analysis that compares the year ended December 31, 2021 to the year ended December 31, 2020 can be found in Item 7, “Management’s Discussion and Analysis of Financial Condition and Results of Operations” in our Annual Report on Form 10-K for the year ended December 31, 2021.

Results of Operations

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

	Years Ended December 31,			
	2022	% of Revenues	2021	% of Revenues
Revenues	\$ 7,211,859	100.0 %	\$ 6,151,361	100.0 %
Cost of operations	4,336,012	60.1	3,654,074	59.4
Selling, general and administrative	696,467	9.7	612,337	10.0
Depreciation	763,285	10.6	673,730	10.9
Amortization of intangibles	155,675	2.2	139,279	2.3
Impairments and other operating items	18,230	0.2	32,316	0.5
Operating income	1,242,190	17.2	1,039,625	16.9
Interest expense	(202,331)	(2.8)	(162,796)	(2.6)
Interest income	5,950	0.1	2,916	0.0
Other income, net	3,154	0.0	6,285	0.1
Loss on early extinguishment of debt	—	—	(115,288)	(1.9)
Income tax provision	(212,962)	(2.9)	(152,253)	(2.5)
Net income	836,001	11.6	618,489	10.0
Net income attributable to noncontrolling interests	(339)	(0.0)	(442)	(0.0)
Net income attributable to Waste Connections	\$ 835,662	11.6 %	\$ 618,047	10.0 %

Years Ended December 31, 2022 and 2021

Revenues. Total revenues increased \$1.060 billion, or 17.2%, to \$7.212 billion for the year ended December 31, 2022, from \$6.151 billion for the year ended December 31, 2021.

During the year ended December 31, 2022, incremental revenue from acquisitions closed during, or subsequent to, the year ended December 31, 2021, increased revenues by approximately \$563.1 million.

Operations that were divested in 2022 and the full year impact of operations that were divested in 2021, decreased revenues by \$11.1 million for the year ended December 31, 2022.

During the year ended December 31, 2022, the net increase in prices charged to our customers at our existing operations was \$541.7 million, consisting of \$455.8 million of core price increases and surcharges of \$85.9 million.

During the year ended December 31, 2022, we recognized volume losses totaling \$63.2 million, which was comprised of \$51.8 million of declines associated with the aforementioned residential collection contracts, lower post-collection volumes related to transportation shortages, partially offset by increases primarily attributable to commercial and roll off collection.

E&P waste revenues at facilities owned during the years ended December 31, 2022 and 2021 increased \$75.8 million due to increases in overall demand for our E&P waste services resulting from higher demand for crude oil contributing to increases in drilling and production activity levels.

Revenues from sales of recyclable commodities at facilities owned during the years ended December 31, 2022 and 2021 decreased \$45.0 million. Prices for old corrugated cardboard, aluminum, plastics and other paper products increased from the prior period during the six months ended June 30, 2022 before declining during the six months ended December 31, 2022.

A decrease in the average Canadian dollar to U.S. dollar currency exchange rate resulted in a decrease in revenues of \$32.4 million for the year ended December 31, 2022. The average Canadian dollar to U.S. dollar exchange rates on our Canadian revenues were 0.7682 and 0.7982 for the years ended December 31, 2022 and 2021, respectively.

Other revenues increased \$31.6 million during the year ended December 31, 2022, due primarily to a \$14.1 million increase in landfill gas revenues and renewable energy credits, a \$12.1 million increase in intermodal revenues and a \$5.4 million increase in other non-core revenue sources.

Cost of Operations. Total cost of operations increased \$681.9 million, or 18.7%, to \$4.336 billion for the year ended December 31, 2022, from \$3.654 billion for the year ended December 31, 2021. The increase was primarily the result of \$369.4 million of additional operating costs from acquisitions closed during, or subsequent to, the year ended December 31, 2021 and an increase in operating costs at our existing operations of \$337.8 million, assuming foreign currency parity, partially offset by a decrease in operating costs of \$16.9 million resulting from a lower average foreign currency exchange rate in effect during the current period and a decrease of \$8.4 million from operations divested subsequent to the year ended December 31, 2021.

The increase in operating costs of \$337.8 million, assuming foreign currency parity, at our existing operations for the year ended December 31, 2022 consisted of an increase in labor and recurring incentive compensation expenses of \$92.2 million due primarily to employee pay increases, an increase in fuel expense of \$73.1 million due to higher diesel and natural gas prices, an increase in third-party trucking and transportation expenses of \$52.9 million due primarily to increased landfill special waste volumes requiring trucking and transportation services to our landfills and higher rates charged by third-party providers, an increase in truck, container, equipment and facility maintenance and repair expenses of \$43.1 million due primarily to increased collection routes and equipment operating hours and parts and service rate increases, an increase in third-party disposal expenses of \$17.7 million due primarily to rate increases at third-party post-collection sites, an increase in expenses for auto and workers' compensation claims of \$9.1 million due primarily to increased claim severity and inflation-led cost increases, an increase in supplemental compensation to non-management personnel of \$9.0 million to provide financial assistance associated with the impact of the COVID-19 pandemic, an increase in taxes on revenues of \$8.9 million due primarily to increased revenues, an increase in intermodal rail expenses of \$6.1 million due to higher cargo volumes, an increase in expenses for purchasing and processing recyclable commodities of \$4.9 million due to processing expenses charged by third parties increasing as recyclable commodity values decline in certain regulated operating markets, an increase in subcontracted hauling services at our solid waste operations of \$3.8

million due to higher costs charged by third-party providers, an increase in landfill maintenance, environmental compliance and daily cover expenses of \$3.2 million due to increased compliance requirements under our landfill operating permits, an increase in 401(k) matching expenses of \$2.0 million due to higher employee earnings, an increase in property tax expense of \$1.9 million due to higher property value assessments and \$9.9 million of other net expense increases.

Cost of operations as a percentage of revenues increased 0.7 percentage points to 60.1% for the year ended December 31, 2022, from 59.4% for the year ended December 31, 2021. The increase as a percentage of revenues consisted of a 0.7 percentage point increase from higher fuel expense, a 0.6 percentage point increase from higher third-party trucking and transportation expenses, a 0.5 percentage point increase from acquisitions closed during, or subsequent to, the year ended December 31, 2021 having operating margins lower than our company average, and a 0.1 percentage point increase in compensation to non-management personnel for financial assistance associated with the impact of the COVID-19 pandemic, partially offset by a combined 1.2 percentage point decrease from disposal, taxes on revenues, labor and employee benefits due to price-driven revenue increases.

SG&A. SG&A expenses increased \$84.2 million, or 13.7%, to \$696.5 million for the year ended December 31, 2022, from \$612.3 million for the year ended December 31, 2021. The increase was comprised of an increase of \$45.8 million, assuming foreign currency parity, at our existing operations and \$42.3 million from acquisitions closed during, or subsequent to, the year ended December 31, 2021, partially offset by a decrease of \$2.8 million resulting from a lower average foreign currency exchange rate in effect during the current period and a decrease of \$1.1 million from operations divested subsequent to the year ended December 31, 2021.

The increase in SG&A expenses at our existing operations of \$45.8 million, assuming foreign currency parity, for the year ended December 31, 2022 was comprised of a collective increase in travel, meetings, training and community activity expenses of \$22.6 million due to increased travel and social gatherings in the current year period due to a reduction in restrictions associated with the COVID-19 pandemic, an increase in administrative payroll expenses of \$16.4 million due primarily to annual pay increases, an increase in direct acquisition expenses of \$13.6 million due to an increase in acquisition activity in the current period, an increase in equity-based compensation expenses of \$6.2 million associated with our annual recurring grant of restricted share units to our personnel, an increase in software license fees of \$3.7 million associated with new information technology applications, an increase in bad debt costs of \$2.8 million associated with increased revenue, an increase in professional fees of \$1.6 million due primarily to increased legal services, an increase of \$0.8 million resulting from the payment of supplemental bonuses to non-management employees to provide financial assistance associated with the impact of the COVID-19 pandemic and \$4.1 million of other net expense increases, partially offset by a decrease in deferred compensation expenses of \$9.1 million as a result of decreases in the market value of investments to which employee deferred compensation liability balances are tracked, a decrease in accrued recurring cash incentive compensation expense to our management of \$8.6 million, a decrease of \$5.2 million in equity-based compensation expenses associated with the prior year period including adjustments to increase the fair value of our common shares held in our deferred compensation plan by certain key executives as a result of the shares being exchanged for other investment options, and a decrease in equity-based compensation expenses of \$3.1 million associated with changes in our share price resulting in fair value measurement decreases to equity awards accounted for as liabilities that were granted to employees of Progressive Waste prior to June 1, 2016, which are subject to valuation adjustments each period.

SG&A expenses as a percentage of revenues decreased 0.3 percentage points to 9.7% for the year ended December 31, 2022, from 10.0% for the year ended December 31, 2021. The decrease as a percentage of revenues was primarily attributable to lower cash incentive compensation expense, lower deferred compensation expense, acquisitions closed during, or subsequent to, the year ended December 31, 2021 having lower SG&A expenses as a percentage of revenues than our company average and the impact of price-driven revenue increases in our solid waste services, partially offset by increased travel, meetings, training and community activity expenses and higher direct acquisition expenses.

Depreciation. Depreciation expense increased \$89.6 million, or 13.3%, to \$763.3 million for the year ended December 31, 2022, from \$673.7 million for the year ended December 31, 2021. The increase was comprised of an increase in depreciation and depletion expense of \$62.4 million from acquisitions closed during, or subsequent to, the year ended December 31, 2021, an increase in depreciation expense of \$24.5 million from the impact of additions to our fleet and equipment purchased to support our existing operations and an increase in depletion expense of \$9.2 million resulting from

increased landfill special waste and E&P volumes and higher landfill development costs increasing our per ton landfill depletion rates, partially offset by a decrease of \$3.4 million resulting from a lower average foreign currency exchange rate in effect during the current period, and a decrease in depreciation and depletion expense of \$3.1 million from operations divested subsequent to the year ended December 31, 2021.

Depreciation expense as a percentage of revenues decreased 0.3 percentage points to 10.6% for the year ended December 31, 2022, from 10.9% for the year ended December 31, 2021. The decrease as a percentage of revenues was primarily attributable to the impact of price-driven revenue increases in our solid waste services.

Amortization of Intangibles. Amortization of intangibles expense increased \$16.4 million, or 11.8%, to \$155.7 million for the year ended December 31, 2022, from \$139.3 million for the year ended December 31, 2021. The increase was the result of \$37.7 million from intangible assets acquired in acquisitions closed during, or subsequent to, the year ended December 31, 2021, partially offset by a decrease of \$20.5 million from certain intangible assets becoming fully amortized subsequent to December 31, 2021 and a decrease of \$0.8 million resulting from a lower average foreign currency exchange rate in effect during the current period.

Amortization of intangibles expense as a percentage of revenues decreased 0.1 percentage points to 2.2% for the year ended December 31, 2022, from 2.3% for the year ended December 31, 2021. The decrease as a percentage of revenues was attributable to the impact of price-driven revenue increases in our solid waste services.

Impairments and Other Operating Items. Impairments and other operating items decreased \$14.1 million, to net losses totaling \$18.2 million for the year ended December 31, 2022, from net losses totaling \$32.3 million for the year ended December 31, 2021.

The net losses of \$18.2 million recorded during the year ended December 31, 2022 consisted of \$10.8 million of charges to write off the carrying cost of certain contracts that were not, or are not expected to be, renewed prior to the original estimated termination date and an \$8.4 million lawsuit judgment accrual, partially offset by \$1.0 million of other net gains.

The net losses of \$32.3 million recorded during the year ended December 31, 2021 consisted of \$18.7 million of impairment charges to property and equipment and intangible assets at three of our E&P waste operations, \$4.9 million of charges to terminate or write off the carrying cost of certain contracts that were not, or are not expected to be, renewed prior to the original estimated termination date, a \$4.6 million loss resulting from property and equipment damaged in a facility fire, \$2.8 million of adjustments to increase the carrying value of certain contingent consideration liabilities, \$1.5 million of losses on property and equipment disposals and \$1.8 million of other net charges, partially offset by \$2.0 million of gains from the disposal of assets at two non-strategic operating locations.

Operating Income. Operating income increased \$202.6 million, or 19.5%, to \$1.242 billion for the year ended December 31, 2022, from \$1.040 billion for the year ended December 31, 2021.

The increase in our operating income for the year ended December 31, 2022 was due primarily to price increases for our solid waste services, operating income contributions from increased sales of renewable energy credits associated with the generation of landfill gas, operating income generated from acquisitions closed during, or subsequent to, the year ended December 31, 2021 and an increase in earnings at our E&P waste operations.

Operating income as a percentage of revenues increased 0.3 percentage points to 17.2% for the year ended December 31, 2022, from 16.9% for the year ended December 31, 2021. The increase in operating income as a percentage of revenues was comprised of a 0.3 percentage point decrease in impairments and other operating items, a 0.3 percentage point decrease in depreciation expense, a 0.3 percentage point decrease in SG&A expense and a 0.1 percentage point decrease in amortization expense, partially offset by a 0.7 percentage point increase in cost of operations.

Interest Expense. Interest expense increased \$39.5 million, or 24.3%, to \$202.3 million for the year ended December 31, 2022, from \$162.8 million for the year ended December 31, 2021. The increase was primarily attributable to an increase of \$53.3 million from the issuance of \$2.75 billion of senior unsecured notes during, or subsequent to, the year ended

December 31, 2021, an increase of \$13.9 million due to an increase in the average borrowings outstanding under our Credit Agreement and Term Loan Agreement and an increase of \$9.8 million from higher interest rates on borrowings outstanding under our Credit Agreement, partially offset by a decrease of \$37.1 million from the repayment of \$1.75 billion of senior unsecured notes during the year ended December 31, 2021 and \$0.4 million of other net decreases.

Interest Income. Interest income increased \$3.1 million to \$6.0 million for the year ended December 31, 2022, from \$2.9 million for the year ended December 31, 2021. The increase was primarily attributable to higher reinvestment rates, partially offset by lower average cash balances in the current period.

Other Income, Net. Other income, net decreased \$3.1 million, to \$3.2 million for the year ended December 31, 2022, from \$6.3 million for the year ended December 31, 2021.

Other income of \$3.2 million recorded during the year ended December 31, 2022 consisted of income from transactions primarily as a result of the impact from changes in foreign currency exchange rates of \$7.0 million related to the decrease in the Canadian dollar to the U.S. dollar exchange rate in the period, and \$1.4 million of other income, partially offset by \$5.2 million from a decline in the value of investments purchased to fund our employee deferred compensation obligations.

Other income of \$6.3 million recorded during the year ended December 31, 2021 consisted of \$3.8 million of income earned on investments purchased to fund our employee deferred compensation obligations, a \$1.4 million adjustment to decrease certain non-acquisition accrued liabilities recorded in prior periods, an increase in foreign currency transaction gains of \$0.7 million attributable to the impact of an increase in the Canadian dollar to U.S. dollar exchange rate during the period and a \$0.4 million increase in other net income sources.

Loss on Early Extinguishment of Debt. Loss on early extinguishment of debt was \$115.3 million for the year ended December 31, 2021 and consisted of the payment of a make-whole premium and the write-off of remaining unamortized loan fees associated with the early repayment of the outstanding senior notes under our master note purchase agreements.

Income Tax Provision. Income taxes increased \$60.7 million, to \$213.0 million for the year ended December 31, 2022, from \$152.3 million for the year ended December 31, 2021. Our effective tax rate for the year ended December 31, 2022 was 20.3%. Our effective tax rate for the year ended December 31, 2021 was 19.8%.

The income tax provision for the year ended December 31, 2022 included a benefit of \$2.7 million from share-based payment awards being recognized in the income statement when settled, as well as a portion of our internal financing being taxed at effective rates substantially lower than the U.S. federal statutory rate.

The income tax provision for the year ended December 31, 2021 included a benefit of \$2.1 million from share-based payment awards being recognized in the income statement when settled, as well as a portion of our internal financing being taxed at effective rates substantially lower than the U.S. federal statutory rate.

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.

Segment Reporting

We manage our operations through the following five geographic solid waste operating segments: Eastern, Southern, Western, Central and Canada. Our five geographic solid waste operating segments comprise our reportable segments. 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 loss on early extinguishment of debt. 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. Each operating segment is responsible for managing several vertically integrated operations, which are comprised of districts.

Summarized financial information for our reportable segments are shown in the following tables in thousands of U.S. dollars and as a percentage of total segment revenue for the periods indicated:

Years Ended December 31, 2022	Revenue	EBITDA	EBITDA Margin	Depreciation and Amortization
Eastern	\$ 1,890,705	\$ 486,649	25.7 %	\$ 281,178
Southern	1,667,778	497,832	29.9 %	198,506
Western	1,484,632	445,894	30.0 %	159,899
Central	1,228,120	424,621	34.6 %	152,154
Canada	940,624	349,403	37.1 %	118,388
Corporate ^(a)	—	(25,019)	—	8,835
	<u>\$ 7,211,859</u>	<u>\$ 2,179,380</u>	<u>30.2 %</u>	<u>\$ 918,960</u>

Years Ended December 31, 2021	Revenue	EBITDA	EBITDA Margin	Depreciation and Amortization
Eastern	\$ 1,521,288	\$ 404,493	26.6 %	\$ 239,130
Southern	1,446,746	394,982	27.3 %	188,977
Western	1,280,188	405,778	31.7 %	129,988
Central	1,046,416	359,434	34.3 %	134,078
Canada	856,723	339,859	39.7 %	111,458
Corporate ^(a)	—	(19,596)	—	9,378
	<u>\$ 6,151,361</u>	<u>\$ 1,884,950</u>	<u>30.6 %</u>	<u>\$ 813,009</u>

- (a) The majority of Corporate expenses are allocated to the five operating segments. Direct acquisition expenses, expenses associated with common shares held in the deferred compensation plan exchanged for other investment options and share-based compensation expenses associated with Progressive Waste share-based grants outstanding at June 1, 2016 that were continued by the Company are not allocated to the five operating segments and comprise the net EBITDA for our Corporate segment for the periods presented.

A reconciliation of segment EBITDA to Income before income tax provision is included in Note 17 to the consolidated financial statements included in Item 8 of this Annual Report on Form 10-K.

Significant changes in revenue, EBITDA and depreciation, depletion and amortization for our reportable segments for the year ended December 31, 2022, compared to the year ended December 31, 2021, are discussed below.

Eastern

Revenue increased \$369.4 million to \$1.891 billion for 2022, from \$1.521 billion for 2021, due to price increases, contributions from acquisitions and increased landfill gas sales attributable to higher volumes produced, partially offset by decreased post-collection volumes, decreased residential collection volumes, and lower prices for recyclable commodities.

EBITDA increased \$82.1 million to \$486.6 million, or a 25.7% EBITDA margin for 2022, from \$404.5 million, or a 26.6% EBITDA margin for 2021. The decrease in our EBITDA margin was due primarily to increased diesel fuel expenses, increased third-party trucking and transportation expenses, increased corporate overhead allocations and increased travel, meetings, training and community activity expenses, partially offset by benefits from price-led revenue increases and the impact of acquisitions having higher EBITDA margins than our segment average.

Depreciation, depletion and amortization expense increased \$42.1 million, to \$281.2 million for 2022, from \$239.1 million for 2021, due to assets acquired in acquisitions, additions to our fleet and equipment and higher depletion expense due to higher landfill development costs increasing our per ton landfill depletion rates.

Southern

Revenue increased \$221.0 million to \$1.668 billion for 2022, from \$1.447 billion for 2021, due to solid waste price increases, increased E&P waste revenues attributable to increases in drilling and production activity levels resulting in increases in the demand for our E&P waste services and contributions from acquisitions, partially offset by lower residential collection volumes due to the purposeful non-renewal of a collection contract subsequent to December 31, 2021, a decrease resulting from the divestiture of certain non-strategic operating locations and lower post-collection volumes.

EBITDA increased \$102.8 million to \$497.8 million, or a 29.9% EBITDA margin for 2022, from \$395.0 million, or a 27.3% EBITDA margin for 2021. The increase in our EBITDA margin was due to increased earnings at our E&P operations, the purposeful non-renewal of a residential contract, and price-led increases in solid waste revenue, partially offset by increased diesel and natural gas fuel expenses, the impact of acquisitions having lower EBITDA margins than our segment average, increased travel, meetings, training and community activity expenses and increased legal expenses.

Depreciation, depletion and amortization expense increased \$9.5 million, to \$198.5 million for 2022, from \$189.0 million for 2021, due to assets acquired in acquisitions, additions to our fleet and equipment and higher depletion expense due to increased landfill volumes and higher landfill development costs increasing our per ton landfill depletion rates, partially offset by a decrease resulting from the divestiture of certain non-strategic operating locations and a reduction in amortization expense associated with the loss of a large residential collection contract.

Western

Revenue increased \$204.4 million to \$1.485 billion for 2022, from \$1.280 billion for 2021, due to contributions from acquisitions, price increases, increased collection volumes, higher prices during the first six months in the comparable periods for recyclable commodities and increased intermodal revenue, partially offset by lower prices for recyclable commodities during the last six months in the comparable period.

EBITDA increased \$40.1 million to \$445.9 million, or a 30.0% EBITDA margin for 2022, from \$405.8 million, or a 31.7% EBITDA margin for 2021. The decrease in our EBITDA margin was due to increased diesel and natural gas fuel expenses, increased third-party trucking and transportation expenses, increased cost of recyclable commodities expenses, increased labor and recurring incentive compensation expenses and increased travel, meetings, training and community activity expenses, partially offset by benefits from price-led increases in revenue.

Depreciation, depletion and amortization expense increased \$29.9 million, to \$159.9 million for 2022, from \$130.0 million for 2021, due to assets acquired in acquisitions and additions to our fleet and equipment.

Central

Revenue increased \$181.7 million to \$1.228 billion for 2022, from \$1.046 billion for 2021, due to price increases, contributions from acquisitions, higher landfill and residential collection volumes and higher prices during the first six months in the comparable periods for recyclable commodities, partially offset by lower prices for recyclable commodities during the last six months in the comparable period.

EBITDA increased \$65.2 million to \$424.6 million, or a 34.6% EBITDA margin for 2022, from \$359.4 million, or a 34.3% EBITDA margin for 2021. The increase in our EBITDA margin was due to the benefits from price-led increases in revenue, partially offset by acquisitions having EBITDA margins lower than our segment average and increased diesel and natural gas fuel expenses.

Depreciation, depletion and amortization expense increased \$18.1 million, to \$152.2 million for 2022, from \$134.1 million for 2021, due to assets acquired in acquisitions, additions to our fleet and equipment and higher depletion expense due to higher landfill development costs increasing our per ton landfill depletion rates.

Canada

Revenue increased \$83.9 million to \$940.6 million for 2022, from \$856.7 million for 2021, due to price increases, contributions from acquisitions, higher commercial and roll off collection volumes, higher prices for renewable energy credits associated with the generation of landfill gas and higher prices during the first six months in the comparable periods for recyclable commodities, partially offset by a decrease in the average foreign currency exchange rate in effect during the comparable reporting periods, lower residential collection volumes due to the purposeful non-renewal of a collection contract subsequent to December 31, 2021, lower landfill volumes, lower prices for recyclable commodities during the last six months in the comparable period and the divestiture of a non-strategic operating location.

EBITDA increased \$9.5 million to \$349.4 million, or a 37.1% EBITDA margin for 2022, from \$339.9 million, or a 39.7% EBITDA margin for 2021. The decrease in our EBITDA margin was due to acquisitions having EBITDA margins lower than our segment average, increased diesel fuel expenses, increased disposal expenses, increased employee benefits expenses, increased subcontracted hauling services, increased travel, meetings, training and community activity expenses, partially offset by benefits from price-led increases in revenue and the purposeful non-renewal of a collection contract.

Depreciation, depletion and amortization expense increased \$6.9 million, to \$118.4 million for 2022, from \$111.5 million for 2021, due to assets acquired in acquisitions and additions to our fleet and equipment, partially offset by a decrease in depletion expense due to lower landfill disposal volumes, a decrease resulting from the divestiture of a non-strategic operating location and a decrease in the average foreign currency exchange rate in effect during the comparable reporting periods.

Corporate

EBITDA decreased \$5.4 million, to a loss of \$25.0 million for 2022, from a loss of \$19.6 million for 2021. The decrease was due to increased travel, meetings, training and community activity expenses, increased direct acquisition expenses, increased employee payroll expense, increased software license fees and the payment of supplemental bonuses to non-management employees to provide financial assistance associated with the impact of the COVID-19 pandemic, partially offset by decreased equity-based compensation expenses, decreased deferred compensation expenses, decreased cash incentive compensation expense to our management and decreased allocations of corporate overhead expenses to our segments.

Liquidity and Capital Resources

The following table sets forth certain cash flow information for the years ended December 31, 2022 and 2021 (in thousands of U.S. dollars):

	2022	2021
Net cash provided by operating activities	\$ 2,022,492	\$ 1,698,229
Net cash used in investing activities	(3,087,171)	(1,693,482)
Net cash provided by (used in) financing activities	1,028,463	(499,496)
Effect of exchange rate changes on cash, cash equivalents and restricted cash	(2,035)	(25)
Net decrease in cash, cash equivalents and restricted cash	(38,251)	(494,774)
Cash, cash equivalents and restricted cash at beginning of year	219,615	714,389
Cash, cash equivalents and restricted cash at end of year	<u>\$ 181,364</u>	<u>\$ 219,615</u>

Operating Activities Cash Flows

For the year ended December 31, 2022, net cash provided by operating activities was \$2.022 billion. For the year ended December 31, 2021, net cash provided by operating activities was \$1.698 billion. The \$324.4 million increase was due primarily to the following:

- 1) *Increase in earnings* — Our increase in net cash provided by operating activities was favorably impacted by \$192.1 million from an increase in net income, excluding depreciation, amortization of intangibles, share-based compensation, adjustments to and payments of contingent consideration recorded in earnings and loss on disposal of assets, impairments and early extinguishment of debt, due primarily to price increases, earnings from acquisitions, earnings generated from an increase in landfill gas revenues and renewable energy credits and an increase in earnings at our E&P waste operations.
- 2) *Accounts payable and accrued liabilities* — Our increase in net cash provided by operating activities was favorably impacted by \$94.2 million from accounts payable and accrued liabilities as changes in accounts payable and accrued liabilities resulted in an increase to operating cash flows of \$164.8 million for the year ended December 31, 2022, compared to an increase to operating cash flows of \$70.6 million for the year ended December 31, 2021. The increase for the year ended December 31, 2022 was due primarily to increases in operating expenses during the period which remained as outstanding obligations at December 31, 2022, the timing of processing year-end payments to vendors for capital expenditures and increased accrued interest due to the timing of interest payments for our senior unsecured notes issued subsequent to December 31, 2021, partially offset by the payment of deferred payroll taxes. The increase for the year ended December 31, 2021 was due primarily to increases in operating expenses during the period which remained as outstanding obligations at December 31, 2021.
- 3) *Deferred income taxes* — Our increase in net cash provided by operating activities was favorably impacted by \$75.8 million from deferred income taxes as changes in deferred income taxes resulted in an increase to operating cash flows of \$93.5 million for the year ended December 31, 2022, compared to an increase to operating cash flows of \$17.7 million for the year ended December 31, 2021. The increase for the year ended December 31, 2022 was primarily attributable to tax benefits resulting from the divestiture of certain non-strategic E&P disposal operating locations. The increase in deferred taxes for the year ended December 31, 2021 was primarily due to accelerated tax depreciation from vehicles, equipment and containers.
- 4) *Deferred revenue* — Our increase in net cash provided by operating activities was favorably impacted by \$10.5 million from deferred revenue as changes in deferred revenue resulted in an increase to operating cash flows of \$42.2 million for the year ended December 31, 2022, compared to an increase to operating cash flows of \$31.7 million for the year ended December 31, 2021. For both comparative periods, deferred revenue increased due to price increases on our advanced billed residential and commercial collection services.
- 5) *Prepaid expenses* — Our increase in net cash provided by operating activities was favorably impacted by \$7.5 million from prepaid expenses as changes in prepaid expenses resulted in a decrease to operating cash flows of \$0.7 million for the year ended December 31, 2022, compared to a decrease to operating cash flows of \$8.2 million for the year ended December 31, 2021. The decrease for the year ended December 31, 2022 was due primarily to increases from payments of annual insurance premiums, payments of annual information system licenses and higher parts and fuel inventory, partially offset by a decrease in prepaid income tax payments. The decrease for the year ended December 31, 2021 was due primarily to increases in prepaid income tax payments and prepaid vendor payments.
- 6) *Accounts receivable* — Our increase in net cash provided by operating activities was unfavorably impacted by \$45.9 million from accounts receivable as changes in accounts receivable resulted in a decrease to operating cash flows of \$100.5 million for the year ended December 31, 2022, compared to a decrease to operating cash flows of \$54.7 million for the year ended December 31, 2021. The decrease for the years ended December 31, 2022 and 2021 was due to increases in revenues, which remained as outstanding receivables at year end.
- 7) *Other long-term liabilities* — Our increase in net cash provided by operating activities was unfavorably impacted by \$14.7 million from other long-term liabilities as changes in other long-term liabilities resulted in a decrease to operating cash flows of \$14.0 million for the year ended December 31, 2022, compared to an increase to operating cash flows of \$0.7 million for the year ended December 31, 2021. The decrease for the year ended December 31, 2022 was due primarily to decreased employee deferred compensation liabilities at year end.

As of December 31, 2022, we had a working capital deficit of \$395.0 million, including cash and equivalents of \$78.6 million. Our working capital decreased \$195.0 million from a working capital deficit of \$200.0 million at December 31, 2021 including cash and equivalents of \$147.4 million, due primarily to a decrease in cash balances and increases in accounts payable and deferred revenue, partially offset by increased accounts receivable, increased inventory balances, and higher prepaid expenses. To date, we have experienced no loss or lack of access to our cash and equivalents; however, we can provide no assurances that access to our cash and 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 increased \$1.394 billion to \$3.087 billion for the year ended December 31, 2022, from \$1.693 billion for the year ended December 31, 2021. The significant components of the increase included the following:

- 1) An increase in cash paid for acquisitions of \$1.246 billion;
- 2) An increase in capital expenditures at operations owned in the comparable periods of \$103.5 million due to increases in land and buildings and landfill site costs; and
- 3) An increase in capital expenditures at operations acquired during the comparative periods of \$64.9 million due to expenditures for landfill site costs, trucks, equipment and containers; less
- 4) A decrease in cash paid for investments in noncontrolling interests of \$25.0 million resulting from a 2021 expenditure that did not reoccur in 2022; and
- 5) A decrease in proceeds from disposal of assets of \$12.1 million due to lower disposal of non-strategic assets to provide funding toward new capital expenditures.

Financing Activities Cash Flows

Net cash provided by financing activities increased \$1.528 billion to \$1.028 billion for the year ended December 31, 2022, from net cash used in financing activities of \$499.5 million for the year ended December 31, 2021. The significant components of the increase included the following:

- 1) An increase from the net change in long-term borrowings of \$1.522 billion in which long-term borrowings increased \$1.745 billion during the year ended December 31, 2022 and increased \$222.2 million during the year ended December 31, 2021; and
- 2) An increase from premiums paid on early extinguishment of debt of \$110.6 million resulting from the repayment in September 2021 of all of our outstanding senior notes under our master note purchase agreements; less
- 3) A decrease from higher payments to repurchase our common shares of \$86.0 million due to an increased volume of shares repurchased; and
- 4) A decrease from higher cash dividends paid of \$22.8 million due primarily to an increase in our average quarterly dividend rate for the year ended December 31, 2022 to \$0.236 per share, from \$0.211 per share for the year ended December 31, 2021.

On July 26, 2022, our Board of Directors approved, subject to receipt of regulatory approvals, the annual renewal of our normal course issuer bid, or the NCIB, to purchase up to 12,859,066 of our common shares during the period of August 10, 2022 to August 9, 2023 or until such earlier time as the NCIB is completed or terminated at our option. 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 Executive Vice President and Chief Financial Officer 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 our common shares and overall market conditions. All common shares purchased under the NCIB will be immediately cancelled following their repurchase. Information regarding our NCIB plan can be found under the section Normal Course Issuer Bid in Note 14, “Shareholders’ Equity,” of our consolidated financial statements included in Item 8 of this Annual Report on Form 10-K and is incorporated herein by reference.

The Board of Directors of the Company authorized the initiation of a quarterly cash dividend in October 2010 and has increased it on an annual basis. In November 2022, we announced that our Board of Directors increased our regular quarterly cash dividend by \$0.025, from \$0.230 to \$0.255 per share. Cash dividends of \$243.0 million and \$220.2 million were paid during the years ended December 31, 2022 and 2021, respectively. We cannot assure as to the amounts or timing of future dividends.

We made \$882.0 million in capital expenditures for property and equipment, net of proceeds from disposal of assets, during the year ended December 31, 2022, and we expect to make total capital expenditures for property and equipment of \$895 million in 2023, net of proceeds from disposal of assets. We intend to fund our planned 2023 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 land and solid 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.

We have a revolving credit and term loan agreement (as amended, restated, amended and restated, supplemented or otherwise modified from time to time, the “Credit Agreement”) with Bank of America, N.A., acting through its Canada Branch, as the global agent, the swing line lender and a letter of credit issuer, Bank of America, N.A., as the U.S. Agent and a letter of credit issuer, the other lenders named therein (the “Lenders”) and any other financial institutions from time to time party thereto. There are no subsidiary guarantors under the Credit Agreement. The Credit Agreement has a scheduled maturity date of July 30, 2026, which may be extended further upon agreement by Lenders holding at least 50% of the commitments and credit extensions outstanding, with respect to their respective commitments and credit extensions outstanding. Any Lender that does not agree to an extension of the maturity date shall not be so extended with respect to their commitments and credit extensions.

As of December 31, 2022, \$650.0 million under the term loan and \$614.7 million under the revolving credit facility were outstanding under the Credit Agreement, exclusive of outstanding standby letters of credit of \$41.8 million. We also had \$85.3 million of letters of credit issued and outstanding at December 31, 2022 under a facility other than the Credit Agreement. We did not have any amounts outstanding under our master note purchase agreements.

Pursuant to the terms and conditions of a Master Note Purchase Agreement dated as of June 1, 2016 (as amended, restated, amended and restated, supplemented or otherwise modified from time to time, the “2016 NPA”) between us and certain accredited institutional investors, we issued senior unsecured notes (the “2016 Private Placement Notes”) consisting of (i) \$150.0 million of senior notes due June 1, 2021 (the “June 2021 Private Placement Notes”), (ii) \$200.0 million of senior notes due June 1, 2023, (iii) \$150.0 million of senior notes due April 20, 2024, (iv) \$400.0 million of senior notes due June 1, 2026 and (v) \$250.0 million of senior notes due April 20, 2027.

Pursuant to the terms and conditions of a Master Note Purchase Agreement dated as of July 15, 2008 (as amended, restated, amended and restated, assumed, supplemented or otherwise modified from time to time, the “2008 NPA”) between us and certain accredited institutional investors, we issued senior unsecured notes (the “2008 Private Placement Notes” and together with the 2016 Private Placement Notes, the “Private Placement Notes”) consisting of (i) \$100.0 million of senior notes due April 1, 2021 (the “April 2021 Private Placement Notes” and together with the June 2021 Private Placement Notes, the “2021 Private Placement Notes”), (ii) \$125.0 million of senior notes due August 20, 2022 and (iii) \$375.0 million of senior notes due August 20, 2025.

We repaid at maturity the 2021 Private Placement Notes and repaid the other Private Placement Notes in connection with the Offering (defined below) in September 2021.

On November 16, 2018, we completed an underwritten public offering of \$500.0 million aggregate principal amount of our 4.25% Senior Notes due December 1, 2028 (the “2028 Senior Notes”). The 2028 Senior Notes were issued under the Indenture, dated as of November 16, 2018 (as amended, restated, amended and restated, supplemented or otherwise modified from time to time, the “Indenture”), by and between the Company and U.S. Bank National Association, as trustee (the “Trustee”), as supplemented through the First Supplemental Indenture, dated as of November 16, 2018.

On April 16, 2019, we completed an underwritten public offering of \$500.0 million aggregate principal amount of our 3.50% Senior Notes due May 1, 2029 (the “2029 Senior Notes”). The 2029 Senior Notes were issued under the Indenture, as supplemented through the Second Supplemental Indenture, dated as of April 16, 2019.

On January 23, 2020, we completed an underwritten public offering of \$600.0 million aggregate principal amount of 2.60% Senior Notes due February 1, 2030 (the “2030 Senior Notes”). The 2030 Senior Notes were issued under the Indenture, as supplemented through the Third Supplemental Indenture, dated as of January 23, 2020.

On March 13, 2020, we completed an underwritten public offering of \$500.0 million aggregate principal amount of 3.05% Senior Notes due April 1, 2050 (the “2050 Senior Notes”). The 2050 Senior Notes were issued under the Indenture, as supplemented through the Fourth Supplemental Indenture, dated as of March 13, 2020.

On September 20, 2021, we completed an underwritten public offering (the “Offering”) of \$650.0 million aggregate principal amount of 2.20% Senior Notes due January 15, 2032 (the “2032 Senior Notes”) and \$850.0 million aggregate principal amount of 2.95% Senior Notes due January 15, 2052 (the “2052 Senior Notes”). The 2032 Senior Notes and the 2052 Senior Notes were issued under the Indenture, as supplemented through the Fifth Supplemental Indenture, dated as of September 20, 2021.

In connection with the Offering, we exercised our right to repay the \$1.500 billion of Private Placement Notes then outstanding governed by the 2008 NPA and the 2016 NPA. We repaid the Private Placement Notes then outstanding, including the \$110.6 million make-whole premium, with the net proceeds from the Offering and borrowings under the revolving credit facility provided under our Credit Agreement. We recorded \$115.3 million to Loss on early extinguishment of debt during the year ended December 31, 2021 due to the repayment of the Private Placement Notes and associated make-whole premium and related fees.

On March 9, 2022, we completed an underwritten public offering of \$500.0 million aggregate principal amount of 3.20% Senior Notes due June 1, 2032 (the “New 2032 Senior Notes”). The New 2032 Senior Notes were issued under the Indenture, as supplemented through the Sixth Supplemental Indenture, dated as of March 9, 2022.

On August 18, 2022, we completed an underwritten public offering of \$750.0 million aggregate principal amount of 4.20% Senior Notes due January 15, 2033 (the “2033 Senior Notes” and, together with the 2028 Senior Notes, the 2029 Senior Notes, the 2030 Senior Notes, the 2032 Senior Notes, the New 2032 Senior Notes, the 2050 Senior Notes and the 2052 Senior Notes, the “Senior Notes”). The 2033 Senior Notes were issued under the Indenture, as supplemented through the Seventh Supplemental Indenture, dated as of August 18, 2022.

We pay interest on the Senior Notes semi-annually in arrears. The Senior Notes are our senior unsecured obligations, ranking equally in right of payment with our existing and future unsubordinated debt and senior to any of our future subordinated debt. The Senior Notes are not guaranteed by any of our subsidiaries.

On October 31, 2022, we, as borrower, Bank of America, N.A., as administrative agent, and the other lenders from time to time party thereto (the “New TL Lenders”) entered into that certain Term Loan Agreement (as amended, restated, supplemented or otherwise modified from time to time, the “Term Loan Agreement”), pursuant to which the New TL Lenders made loans to us in an aggregate stated principal amount of \$800.0 million. We used substantially all of the proceeds of borrowings under the Term Loan Agreement to repay revolving borrowings under the Credit Agreement. Amounts borrowed under the Term Loan Agreement and repaid or prepaid may not be reborrowed. The Term Loan Agreement has a scheduled maturity date of July 30, 2026.

See Note 11 to the consolidated financial statements included in Item 8 of this Annual Report on Form 10-K for further details on the debt agreements.

Contractual Obligations

As of December 31, 2022, we had the following contractual obligations:

Recorded Obligations	Payments Due by Period				
	(amounts in thousands of U.S. dollars)				
	Total	Less Than 1 Year	1 to 3 Years	3 to 5 Years	Over 5 Years
Long-term debt	\$ 6,963,401	\$ 6,759	\$ 17,748	\$ 2,076,331	\$ 4,862,563
Cash interest payments	\$ 2,516,432	\$ 256,586	\$ 523,604	\$ 379,935	\$ 1,356,307
Contingent consideration	\$ 98,781	\$ 60,092	\$ 3,224	\$ 3,224	\$ 32,241
Operating leases	\$ 230,784	\$ 40,499	\$ 59,390	\$ 41,845	\$ 89,050
Final capping, closure and post-closure	\$ 1,627,130	\$ 11,926	\$ 36,925	\$ 12,945	\$ 1,565,334

Long-term debt payments include:

- 1) \$614.7 million in principal payments due July 2026 related to our revolving credit facility under our Credit Agreement. Advances are available under the Credit Agreement in U.S. dollars and Canadian dollars and bear interest at fluctuating rates (See Note 11). At December 31, 2022, \$391.0 million of the outstanding borrowings drawn under the revolving credit facility were in U.S. Term SOFR rate loans, bearing interest at a total rate of 5.42% on such date. At December 31, 2022, \$223.7 million of the outstanding borrowings drawn under the revolving credit facility were in Canadian-based bankers' acceptances, bearing interest at a total rate of 5.74% on such date.
- 2) \$650.0 million in principal payments due July 2026 related to our term loan under our Credit Agreement. Outstanding amounts on the term loan can be either base rate loans or Term SOFR loans. At December 31, 2022, all amounts outstanding under the term loan were in Term SOFR loans which bear interest at the Term SOFR rate plus the applicable margin (for a total rate of 5.42% on such date).
- 3) \$800.0 million in principal payments due July 2026 related to our term loan under our Term Loan Agreement. Outstanding amounts on the term loan can be either base rate loans or Term SOFR loans. At December 31, 2022, all amounts outstanding under the term loan were in Term SOFR loans which bear interest at the Term SOFR rate plus the applicable margin (for a total rate of 5.42% on such date).
- 4) \$500.0 million in principal payments due 2028 related to our 2028 Senior Notes. The 2028 Senior Notes bear interest at a rate of 4.25%.
- 5) \$500.0 million in principal payments due 2029 related to our 2029 Senior Notes. The 2029 Senior Notes bear interest at a rate of 3.50%.
- 6) \$600.0 million in principal payments due 2030 related to our 2030 Senior Notes. The 2030 Senior Notes bear interest at a rate of 2.60%.
- 7) \$650.0 million in principal payments due 2032 related to our 2032 Senior Notes. The 2032 Senior Notes bear interest at a rate of 2.20%.
- 8) \$500.0 million in principal payments due 2032 related to our New 2032 Senior Notes. The New 2032 Senior Notes bear interest at a rate of 3.20%.
- 9) \$750.0 million in principal payments due 2033 related to our 2033 Senior Notes. The 2033 Senior Notes bear interest at a rate of 4.20%.

- 10) \$500.0 million in principal payments due 2050 related to our 2050 Senior Notes. The 2050 Senior Notes bear interest at a rate of 3.05%.
- 11) \$850.0 million in principal payments due 2052 related to our 2052 Senior Notes. The 2052 Senior Notes bear interest at a rate of 2.95%.
- 12) \$37.2 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 2.42% and 10.35% at December 31, 2022, and have maturity dates ranging from 2024 to 2036.
- 13) \$11.5 million in principal payments related to our financing leases. Our financing leases bear interest at rates between 1.89% and 2.16% at December 31, 2022, and have expiration dates ranging from 2026 to 2027.

The following assumptions were made in calculating cash interest payments:

- 1) We calculated cash interest payments on the Credit Agreement using the Term SOFR rate plus the applicable Term SOFR margin, the base rate plus the applicable base rate margin, the Canadian Dollar Offered Rate plus the applicable acceptance fee and the Canadian prime rate plus the applicable prime rate margin at December 31, 2022. We assumed the Credit Agreement is paid off when it matures in July 2026.
- 2) We calculated cash interest payments on the Term Loan Agreement using the Term SOFR rate plus the applicable Term SOFR margin at December 31, 2022. We assumed the Term Loan Agreement is paid off when it matures in July 2026.
- 3) We calculated cash interest payments on our interest rate swaps using the stated interest rate in the swap agreement less the Term SOFR rate through the earlier expiration of the term of the swaps or the term of the credit facility.

Contingent consideration payments include \$81.4 million recorded as liabilities in our consolidated financial statements at December 31, 2022, and \$17.4 million of future interest accretion on the recorded obligations.

We are party to operating lease agreements and finance leases as discussed in Note 7 to the consolidated financial statements included in Item 8 of this Annual Report on Form 10-K. These lease agreements are established in the ordinary course of our business and are designed to provide us with access to facilities and equipment at competitive, market-driven prices.

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
Unconditional purchase obligations	\$ 184,918	\$ 149,858	\$ 35,060	\$ —	\$ —

- (1) We are party to unconditional purchase obligations as discussed in Note 13 to the consolidated financial statements included in Item 8 of this Annual Report on Form 10-K. These purchase obligations are established in the ordinary course of our business and are designed to provide us with access to products at competitive, market-driven prices. At December 31, 2022, our unconditional purchase obligations consisted of multiple fixed-price fuel purchase contracts under which we have 57.9 million gallons remaining to be purchased for a total of \$184.9 million. The current fuel purchase contracts expire on or before December 31, 2024. These arrangements have not materially affected our financial position, results of operations or liquidity during the year ended December 31, 2022, 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 11 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 13 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 waste operations. These arrangements have not materially affected our financial position, results of operations or liquidity during the year ended December 31, 2022, 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 2 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 or minus change in book overdraft, plus proceeds from disposal of assets, 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, 2022, 2021 and 2020, are calculated as follows (amounts in thousands of U.S. dollars):

	Years Ended December 31,		
	2022	2021	2020
Net cash provided by operating activities	\$ 2,022,492	\$ 1,698,229	\$ 1,408,521
Plus (less): Change in book overdraft	(1,076)	(367)	1,096
Plus: Proceeds from disposal of assets	30,676	42,768	19,084
Less: Capital expenditures for property and equipment	(912,677)	(744,315)	(597,053)
Adjustments:			
Payment of contingent consideration recorded in earnings ^(a)	2,982	520	10,371
Cash received for divestitures ^(b)	(5,671)	(17,118)	(10,673)
Transaction-related expenses ^(c)	30,825	30,771	9,803
Pre-existing Progressive Waste share-based grants ^(d)	286	397	5,770
Tax effect ^(e)	(2,993)	(1,287)	(5,021)
Adjusted free cash flow	<u>\$ 1,164,844</u>	<u>\$ 1,009,598</u>	<u>\$ 841,898</u>

(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 elimination of cash received in conjunction with the divestiture of certain operations.

(c) Reflects the addback of acquisition-related transaction costs and the settlement of an acquired tax liability.

(d) Reflects the cash settlement of pre-existing Progressive Waste share-based awards during the period.

(e) The aggregate tax effect of footnotes (a) through (d) 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 attributable to Waste Connections, plus or minus net income (loss) attributable to noncontrolling interests, plus income tax provision, plus interest expense, less interest income, 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 loss on early extinguishment of debt. 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, 2022, 2021 and 2020, are calculated as follows (amounts in thousands of U.S. dollars):

	Years Ended December 31,		
	2022	2021	2020
Net income attributable to Waste Connections	\$ 835,662	\$ 618,047	\$ 204,677
Plus (less): Net income (loss) attributable to noncontrolling interests	339	442	(685)
Plus: Income tax provision	212,962	152,253	49,922
Plus: Interest expense	202,331	162,796	162,375
Less: Interest income	(5,950)	(2,916)	(5,253)
Plus: Depreciation and amortization	918,960	813,009	752,404
Plus: Closure and post-closure accretion	16,253	14,497	15,095
Plus: Impairments and other operating items	18,230	32,316	466,718
Plus (less): Other expense (income), net	(3,154)	(6,285)	1,392
Plus: Loss on early extinguishment of debt	—	115,288	—
Adjustments:			
Plus: Transaction-related expenses ^(a)	24,933	11,318	9,803
Plus: Fair value changes to equity awards ^(b)	86	8,393	5,536
Adjusted EBITDA	<u>\$ 2,220,652</u>	<u>\$ 1,919,158</u>	<u>\$ 1,661,984</u>

(a) Reflects the addback of acquisition-related transaction costs.

(b) Reflects fair value accounting changes associated with certain equity awards.

Adjusted Net Income Attributable to Waste Connections and Adjusted Net Income per Diluted Share Attributable to Waste Connections

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, 2022, 2021 and 2020, are calculated as follows (amounts in thousands of U.S. dollars, except per share amounts):

	Years Ended December 31,		
	2022	2021	2020
Reported net income attributable to Waste Connections	\$ 835,662	\$ 618,047	\$ 204,677
Adjustments:			
Amortization of intangibles ^(a)	155,675	139,279	131,302
Impairments and other operating items ^(b)	18,230	32,316	466,718
Transaction-related expenses ^(c)	24,933	11,318	9,803
Fair value changes to equity awards ^(d)	86	8,393	5,536
Loss on early extinguishment of debt ^(e)	—	115,288	—
Tax effect ^(f)	(49,312)	(78,041)	(153,758)
Tax items ^(g)	—	—	31,508
Adjusted net income attributable to Waste Connections	<u>\$ 985,274</u>	<u>\$ 846,600</u>	<u>\$ 695,786</u>
Diluted earnings per common share attributable to Waste Connections' common shareholders:			
Reported net income	\$ 3.24	\$ 2.36	\$ 0.78
Adjusted net income	<u>\$ 3.82</u>	<u>\$ 3.23</u>	<u>\$ 2.64</u>

(a) Reflects the elimination of the non-cash amortization of acquisition-related intangible assets.

(b) Reflects adjustments for impairments and other operating items.

(c) Reflects the addback of acquisition-related transaction costs.

(d) Reflects fair value accounting changes associated with certain equity awards.

(e) Reflects the make-whole premium and related fees associated with the early termination of \$1.5 billion in senior notes.

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

(g) In 2020, reflects the impact of a portion of our 2019 inter-entity payments no longer being deductible for tax purposes due to the finalization of tax regulations on April 7, 2020 under Internal Revenue Code Section 267A and an increase in deferred tax liabilities resulting from the E&P impairment.

Leverage Ratio

The Leverage Ratio is calculated by dividing our Consolidated Total Funded Debt by Consolidated EBITDA (each as defined substantially identically in our Credit Agreement and Term Loan Agreement). The Leverage Ratio is based on EBITDA, a non-GAAP financial measure. We present this ratio because it is used for the purposes of calculating financial covenants under our Credit Agreement and Term Loan Agreement. Management also uses this ratio as one of the principal measures to evaluate and monitor the indebtedness of the Company relative to its ability to generate income to service such debt. The Leverage Ratio is not a substitute for, and should be used in conjunction with, GAAP financial ratios. Other companies may calculate leverage ratios differently.

Inflation

In the current environment, we have seen inflationary pressures resulting from higher fuel, materials and labor costs in certain markets and higher resulting third-party costs in areas such as brokerage, repairs and construction. 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. To the extent that there are decreases in fuel costs, in some cases, a portion of these reductions are passed through to customers in the form of lower fuel and material surcharges. 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 certain of 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, prices of certain commodities and foreign currency exchange rate risks. We use hedge agreements to manage a portion of our risks related to interest rates. 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 under current market conditions. 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 variable rate debt positions.

At December 31, 2022, our derivative instruments included five 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 ^(b)	Notional Amount	Fixed Interest Rate Paid ^(a)	Variable Interest Rate Received	Effective Date	Expiration Date
August 2017	\$ 200,000	2.1230 %	1-month Term SOFR	November 2022	October 2025
August 2017	\$ 150,000	1.7720 %	1-month Term SOFR	November 2022	February 2023
June 2018	\$ 200,000	2.8480 %	1-month Term SOFR	November 2022	October 2025
June 2018	\$ 200,000	2.8284 %	1-month Term SOFR	November 2022	October 2025
December 2018	\$ 200,000	2.7715 %	1-month Term SOFR	November 2022	July 2027

(a) Plus applicable margin.

(b) In October 2022, we amended the reference rate in all of our outstanding interest rate swap contracts to replace One-Month LIBOR with One-Month Term SOFR and certain credit spread adjustments. We did not record any gains or losses upon the conversion of the reference rates in these interest rate swap contracts, and we believe these amendments will not have a material impact on our consolidated financial statements.

On September 28, 2020, we terminated four of our interest rate swaps with notional amounts totaling \$400.0 million, which would have expired in January 2021. As a result of terminating these interest rate swaps, we made total cash payments of \$0.9 million to the counterparties of the swap agreements.

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, 2022 and 2021, of \$1.115 billion and \$603.9 million, respectively, including floating rate

debt under our Credit Agreement and Term Loan Agreement. A one percentage point increase in interest rates on our variable-rate debt as of December 31, 2022 and 2021, would decrease our annual pre-tax income by approximately \$11.1 million and \$6.0 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. Because of the volume of fuel we purchase each year, 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, and we also enter into fixed price fuel purchase contracts. At December 31, 2022, we had no fuel hedge agreements in place; however, we have entered into fixed price diesel fuel purchase contracts for 2023 as described below.

For the year ending December 31, 2023, we expect to purchase approximately 89.2 million gallons of diesel fuel, of which 47.1 million gallons will be purchased at market prices and 42.1 million gallons will be purchased under our fixed price diesel fuel purchase contracts. We have performed sensitivity analyses to determine how market rate changes will affect the fair value of our unhedged, market rate 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. With respect to the approximately 47.1 million gallons of unhedged diesel fuel we expect to purchase in 2023 at market prices, a \$0.10 per gallon increase in the price of diesel fuel over the year would decrease our pre-tax income during this period by approximately \$4.7 million.

We market a variety of recyclable materials, including compost, cardboard, mixed paper, plastic containers, glass bottles and ferrous and aluminum metals. We own and operate recycling operations and market collected recyclable materials to third parties for processing before resale. Where possible, 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 years ended December 31, 2022 and 2021, would have had a \$19.7 million and \$19.6 million impact on revenues for the years ended December 31, 2022 and 2021, respectively.

We have operations in Canada and, where significant, we have quantified and described the impact of foreign currency translation on components of income, including operating revenue and operating costs. However, the impact of foreign currency has not materially affected our results of operations in 2022 or 2021. A \$0.01 change in the Canadian dollar to U.S. dollar exchange rate would impact our annual revenue and EBITDA by approximately \$13.0 million and \$5.0 million, respectively.