

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION**
Washington, D.C. 20549
Form 10-K

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

For the fiscal year ended December 31, 2023

or

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

For the transition period from _____ to _____

Commission file number: 1-14267

REPUBLIC SERVICES, INC.

(Exact Name of Registrant as Specified in its Charter)

Delaware		
<i>(State or Other Jurisdiction of Incorporation or Organization)</i>		
18500 North Allied Way		
Phoenix, Arizona		
<i>(Address of Principal Executive Offices)</i>		

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

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

[illegible]

Securities registered pursuant to Section 12(g) of the Act: None

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

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

Note – Checking the box above will not relieve any registrant required to file reports pursuant to Section 13 or 15(d) of the Exchange Act from their obligations under those Sections.

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

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

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

Large accelerated filer <input checked="" type="checkbox"/>	Accelerated filer <input type="checkbox"/>	Smaller reporting company <input type="checkbox"/>	Emerging growth company <input type="checkbox"/>
Non-accelerated filer <input type="checkbox"/>			

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

Indicate by check mark whether the registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report. ☒

If securities are registered pursuant to Section 12(b) of the Act, indicate by check mark whether the financial statements of the registrant included in the filing reflect the correction of an error to previously issued financial statements. ☐

Indicate by check mark whether any of those error corrections are restatements that required a recovery analysis of incentive-based compensation received by any of the registrant's executive officers during the relevant recovery period pursuant to §240.10D-1(b). ☐

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

As of June 30, 2023, the aggregate market value of the shares of the Common Stock held by non-affiliates of the registrant was \$48.4 billion.

As of February 13, 2024, the registrant had outstanding 314,610,579 shares of Common Stock (excluding treasury shares of 6,156,951).

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the Registrant's Proxy Statement relative to the 2024 Annual Meeting of Shareholders are incorporated by reference in Part III hereof.

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Unless the context requires otherwise, all references in this Form 10-K to Republic, the Company, we, us and our refer to Republic Services, Inc. and its consolidated subsidiaries.

PART I

ITEM 1. BUSINESS

Overview

Republic is one of the largest providers of environmental services in the United States, as measured by revenue. We operate across the United States and Canada through 364 collection operations, 246 transfer stations, 74 recycling centers, 207 active landfills, 3 treatment, recovery and disposal facilities, 22 treatment, storage and disposal facilities (TSDF), 6 salt water disposal wells, 12 deep injection wells, and 1 polymer center. We are engaged in 76 landfill gas-to-energy and other renewable energy projects and had post-closure responsibility for 126 closed landfills.

We believe the total addressable North American environmental services market in which we operate generates approximately \$114 billion of annual revenue, which includes the \$83 billion United States and Canada recycling and waste industry and \$31 billion of the broader environmental solutions industry. Within our recycling and waste business, we prioritize investments in market verticals with above average growth rates and higher return profiles. Environmental solutions remains fragmented which provides consolidation opportunities to drive scale. We believe we will be able to further expand our addressable market into other segments of the environmental services industry over time by leveraging our differentiated capabilities, including (1) customer zeal, (2) digital and (3) sustainability.

We operate throughout North America, but the physical collection and recycling or disposal of material is very much a local business and the dynamics and opportunities differ in each of the markets we serve. By combining local operating management with standardized business practices, we drive greater overall operating efficiency across the Company while maintaining day-to-day operating decisions at the local level, closest to the customer.

Our purpose-driven vision is to partner with customers to create a more sustainable world. We believe that our products and services are valuable to our customers and essential for long-term sustainability.

We further believe our focus on and commitment to sustainability allows us to attract and retain the best talent, win more customers, increase customer loyalty and, ultimately, drive higher revenue and profits.

Foundational Elements

Our strategy is designed to generate profitable growth by sustainably managing our customers' needs, and it is underpinned by three foundational elements – (1) our market position, (2) our operating model and (3) our people and talent agenda.

Market Position

Our goal is to develop the best vertically integrated market position to enable us to build density and improve returns. We strive to have a leading market position in each of the markets we serve, or have a clear path toward how we will achieve a leading market position over time. In situations where we cannot establish a leading market position, or where operations are not generating acceptable returns, we may decide to divest certain assets and reallocate resources to other markets.

We have a robust market planning process to identify opportunities to grow internally through capital investments and infrastructure development and externally through acquisitions and public-private partnerships. Additionally, our market planning process allows us to analyze market conditions and proactively adjust to trends as they emerge, including the effects of legislation, demographic shifts and changes in the market and the competitive landscape.

Internal Growth

- **Volume Growth** - We believe volumes are driven by population growth, household formation and new business formation. Volume growth through increases in our customer base and service offerings is the most capital efficient method to grow our business. We seek to obtain long-term contracts for collecting recyclable, solid waste and industrial waste material under residential collection contracts with municipalities, exclusive franchise agreements, small-container and large-container contracts and environmental solutions service contracts. We also look to enter into long-term disposal and recycling contracts with municipalities and other third parties. By obtaining such long-term agreements, we can grow our contracted revenue base at a rate consistent with the underlying economic growth in these markets. In addition, by securing long-term agreements, we are better able to help ensure we earn an appropriate return on the capital deployed.

- **Price Increases** - We seek to secure price increases necessary to offset increased costs, improve our operating margins and earn an appropriate return on our substantial investments in vehicles, equipment, recycling centers, transfer stations, TSDFs, deep well injection facilities, landfills, and other post-collection infrastructure.
- **Expansion of Recycling Capabilities** - Based on the most recent United States Environmental Protection Agency (EPA) data, approximately 32% of municipal solid waste is recycled and/or composted. We expect that percentage to increase over the long-term as communities enhance and expand their recycling programs for their residents. As a key player in the circular economy, we are strategically focused on expanding recycling volume through innovative material handling processes and programs to help our customers achieve their goals related to sustainability and environmentally sound waste practices while also generating an appropriate return. In 2023, we completed construction at our first Polymer Center in Las Vegas, Nevada. The Polymer Center is a vertical integration that will advance circularity for plastics and help us manage the plastics stream from curbside collection to delivery of recycled content for consumer packaging. The Polymer Center will enable us to produce food-grade drop-in substitutes for virgin plastics, while allowing us to expand recycling of plastics across North America. In 2023, we announced the development of Blue Polymers, a joint-venture with Ravago JV Holdings, LLC, creating vertical integration that will further advance circularity by acquiring all olefins produced by the Polymer Centers to further process and manufacture custom blended pellets for food-grade and non-food-grade packaging. We will continue to look for opportunities to expand or enhance our recycling capabilities in markets where customers are demanding these services, demonstrating a willingness to pay and where we can earn an appropriate return on our investment.
- **Infrastructure Development** - We seek to identify opportunities to further our position as a vertically integrated service provider in markets where we are not fully integrated. Our goal is to create market-specific, vertically integrated operations typically consisting of one or more collection operations, recycling centers, transfer stations, TSDFs, deep well injection facilities, and landfills. Where appropriate, we seek to obtain permits to build transfer stations, recycling centers and landfills that would vertically integrate our waste services or expand the service areas for our existing disposal sites. Additionally, we seek opportunities to expand and permit new airspace at our existing landfills in order to replace airspace consumed. Development projects, while generally less capital intensive than acquisitions, typically require extensive permitting efforts that can take years to complete with no assurance of success. We undertake development projects when we believe there is a reasonable probability of success and where reasonably priced acquisition opportunities are not available. Through landfill and fleet innovation, recycling and circularity of key materials and renewable energy production, we are committed to continuous development of environmentally responsible operations that increase our efficiency as well as our ability to partner with customers to create a more sustainable world.

External Growth

- **Acquisitions and Public-Private Partnerships** - Our acquisition growth strategy focuses primarily on acquiring privately held recycling and waste companies and environmental solutions businesses that complement our existing business platform. We believe our ability to successfully complete these acquisitions is enhanced by the challenges facing many privately-held companies, including increasing competition in the environmental services industry, increasing capital requirements due to changes in regulatory requirements and technology and the limited number of exit strategies for privately-held companies. We also evaluate stand-alone opportunities to acquire businesses and/or facilities that are being divested by other publicly-owned companies.

We continue to invest in value-enhancing acquisitions in existing markets. Given our free cash flow, availability under our credit facilities and our ability to access the public capital markets, we have the financial flexibility to make additional acquisitions that will complement our existing business platform, including larger acquisitions if the right opportunities present themselves. For instance, during the second quarter of 2022, we acquired US Ecology, Inc. (US Ecology), a leading provider of environmental solutions, offering treatment, recycling and disposal of hazardous, non-hazardous and specialty waste.

We also focus on growth through public-private partnerships, which include the recycling and waste operations and facilities of municipal and other local governments. We believe over time we have an opportunity to acquire operations and facilities from municipalities and other local governments as they seek to raise capital and/or reduce risk.

We realize synergies from consolidating businesses into our existing operations, whether through acquisitions or public-private partnerships, which allows us to reduce capital expenditures and expenses associated with truck routing, personnel, fleet maintenance, inventories and back-office administration.

Operating Model

Our operating model allows us to deliver a consistent, high-quality service to all our customers through the Republic Way: *One Way. Everywhere. Every Day*. This approach of developing standardized processes with rigorous controls and tracking allows us to leverage our scale and deliver durable operational excellence. The Republic Way is the key to harnessing the best of what we do as operators and translating that across all facets of our business. Key elements of our operating model are our organizational structure, safety, fleet automation, compressed natural gas vehicles, fleet electrification and standardized maintenance.

Organizational Structure

A key enabler of the Republic Way operating model is our organizational structure that fosters a high performance culture by maintaining 360-degree accountability and full profit and loss responsibility with local management, supported by a functional structure to provide subject matter expertise. This structure allows us to take advantage of our scale by coordinating functionally across all of our markets, while empowering local management to respond to unique market dynamics.

Through this operating model, we have rolled out several productivity and cost control initiatives designed to deliver the best service possible to our customers in an efficient and environmentally sound way.

Our senior management evaluates, oversees and manages the financial performance of our operations through three field groups, referred to as Group 1, Group 2 and Group 3. Group 1 is our recycling and waste business operating primarily in geographic areas located in the western United States. Group 2 is our recycling and waste business operating primarily in geographic areas located in the southeastern and mid-western United States, the eastern seaboard of the United States and Canada. Group 3 is our environmental solutions business operating in geographic areas located across the United States and Canada. These groups each provide integrated environmental services, including but not limited to collection, transfer, recycling and disposal.

Safety

Republic is dedicated to the safety of our employees, customers and the communities we serve. We have a dedicated team of safety professionals at our corporate headquarters and in our field operations, led by our Vice President of Safety who reports directly to our Chief Operating Officer. Due to the nature of our industry, we make safety a top priority and we recognize and reward employees for outstanding safety records. Over the past 10 years, our safety performance (based on OSHA recordable rates) has been 33% better than the industry average. Our *Think, Choose, Live* slogan encapsulates our everyday safety messaging to our employees to: *Think* about what you are doing, *Choose* the safe answer and *Live* to go home to your family. With the phrase printed on numerous items, including hard hats and the equipment our employees use, there are constant reminders for employees to go home in the same condition in which they came to work. Our goal is to ensure every one of our employees returns home safely each night.

Through our Safety Amplified program, we are providing more tools and driving greater awareness to help our teams better execute our safety standards. Regular training, multifaceted programs and strategic partnerships are key components to this program. It is simple by design and comprised of actions and activities that ensure safety is embedded in all we do. The program includes six initiatives to help us achieve our goal to have zero employee fatalities and reduce our OSHA Total Recordable Incident Rate.

- **Focus Together:** This effort is the very core of our safety program and is designed to help frontline employees eliminate the six most common types of serious incidents.
- **Lead Together:** We provide best-in-class communication channels and advanced training techniques for all frontline supervisors and managers to help them guide their teams.
- **Partner Together:** Staying safe requires involvement by employees at all levels. We've increased leadership visits with frontline employees and supervisors to support each divisions' safety goals.
- **Celebrate Together:** We take pride in recognizing employees who demonstrate a relentless commitment to safety. Employees with the best driving records are eligible for the industry's most prestigious award, the National Waste & Recycling Association's Driver of the Year. Republic drivers have won 70% of the Driver of the Year awards issued for the large truck category since 2009. In addition, our best drivers are recognized and rewarded with competing in our National Road-EO competition.
- **Analyze Together:** We analyze real-time data to make short- and long-term decisions and identify opportunities for improvement. Examples include analysis of roadway awareness training, data mapping and other employee protection and preparedness insights.
- **Innovate Together:** We employ the latest technologies in our fleet, including automation, rear cameras, in-cab backup alarms and event recording systems, and we take a data-driven approach to support our employees. We're also

working with equipment manufacturers to incorporate safety elements such as seat belt alarms, blind spot awareness, lane departure alarms and other potentially lifesaving equipment in our fleet.

We believe our Safety Amplified program provides additional benefits for our Company and stakeholders including:

- further strengthening relationships within the communities we service;
- enhancing customer trust;
- streamlining operational processes and increasing productivity;
- delivering a reputational advantage, including positioning our Company as an employer-of-choice;
- building and sustaining a safety culture in all areas of our business; and
- contributing to employee engagement.

For more information regarding our safety performance, refer to our Sustainability Accounting Standards Board (SASB) report, which can be found at republicservices.com/sustainability. The information contained on our website shall not be deemed incorporated by reference in this Annual Report on Form 10-K or in any other filing we make under the Securities Exchange Act of 1934, as amended (Exchange Act).

Fleet Automation

Approximately 77% of our residential routes have been converted to automated single-driver trucks. By converting our residential routes to automated service, we reduce labor costs, improve driver productivity, decrease emissions and create a safer work environment for our employees. Additionally, communities using automated vehicles generally have higher participation rates in recycling programs, thereby complementing our initiative to expand our recycling capabilities.

Compressed Natural Gas (CNG) Vehicles

Approximately 20% of our recycling and waste collection fleet operates on CNG and approximately 13% of our replacement recycling and waste vehicle purchases during 2023 were CNG vehicles. We believe using CNG vehicles provides us with a competitive advantage in communities with strict clean emission initiatives that focus on protecting the environment. Although upfront capital costs are higher, using CNG vehicles reduces our overall fleet operating costs through lower fuel expenses. As of December 31, 2023, we operated 45 CNG fueling stations.

Fleet Electrification

We believe we are taking a leadership position in electric technology innovation for our recycling and waste collection fleet. This is a critical step toward reducing our environmental impact through lower fleet emissions. We believe it will also improve our total cost of ownership while providing a competitive advantage in certain communities. We are partnering with multiple manufacturers to pilot electric-powered recycling and waste trucks. As electric vehicle technology continues to develop, we expect to further deploy electrification to our fleet.

Standardized Maintenance

Based on an industry trade publication, we operate the fifth largest vocational fleet in the United States. As of December 31, 2023, our average fleet age in years, by line of business, was as follows:

	Approximate Number of Vehicles	Approximate Average Age
Residential	7,200	7.6
Small-container	5,300	7.1
Large-container	4,700	9.2
Total	17,200	7.9

OneFleet, our standardized vehicle maintenance program, enables us to use best practices for fleet management, truck care and maintenance. Through standardization of core functions, we believe we can minimize variability in our maintenance processes, resulting in higher vehicle quality and a lower environmental footprint while extending the average service life of our fleet. Additionally, our focus on preventative maintenance is improving the reliability of our fleet and enabling us to provide superior service to our customers, differentiating us from our competition.

People and Talent Agenda

Being human-centered is at the core of our robust people and talent agenda. We strive to maintain an environment that attracts and retains the best talent. Our approximately 41,000 full-time employees are a critical component in successfully executing our

strategy and running our operations. We work hard to remain a company where the best people, with exceptional talents and diverse backgrounds, can thrive and foster a culture of caring where people feel respected, supported and encouraged to bring their best selves to work every day.

We are dedicated to driving our people and talent agenda, which includes (1) representing the diversity of the communities we serve and sustaining a safe and inclusive culture, (2) maintaining a highly engaged workforce, (3) developing our talent through learning and development experiences and (4) offering rewards that attract and retain the best workforce. We review key progress metrics such as engagement and turnover and regularly report on these metrics to our Board of Directors. This level of reporting holds all of our leaders accountable for the continued growth and development of our people.

Inclusion and Diversity

We believe the composite strength of our employees' ideas, built on their unique experiences and backgrounds, is essential to our ability to meet and anticipate our customers' needs. We are proud of the diversity of our frontline workforce, as it closely represents the demographics of the communities we serve. We continue to improve representation of diverse groups across all levels of the Company. Our commitment to inclusion and diversity starts at the top of our organization, as outlined in our Mission of Supporting an Inclusive Culture (MOSAIC), established in 2013 and supported by the MOSAIC Council. The MOSAIC Council consists of leaders from across the Company who serve as ambassadors and thought partners for inclusion and diversity. This enables us to continue to develop new strategies and activities that are tied to the needs of our employees, customers and business with the goal of creating an even more inclusive work environment and diverse workforce.

We support inclusion and connectivity for our diverse populations through our Business Resource Groups (BRG) and focus on the involvement of our field locations in all of our BRGs, including Women of Republic, VALOR (Veterans, Advocacy, Learning, Outreach and Recruiting), UNIDOS and the Black Employee Network. In January 2023, we launched a new BRG called PRISM in support of the LGBTQ+ community.

Employee Engagement

We believe an engaged workforce is a key element of our success as engaged employees deliver better customer service and are more productive. We measure employee engagement through a third-party survey, assessing employee sentiment on a variety of topics such as pride for the Company, job satisfaction and intention to stay. Our data reinforces that business units with a highly engaged workforce experience less turnover. We also found that employees whose leaders are highly inclusive are more likely to speak up and share their perspective. Regularly hearing from our employees allows us to understand how to support and strengthen an exceptional employee experience. Our goal is to achieve and maintain employee engagement scores at or above 88 by 2030. Our employee engagement score was 86 in 2023, which is above a national benchmark by seven points. Approximately 99% of our employees participated in the engagement survey process in October 2023, which represented an all-time high participation rate and is 24% higher than the national benchmark. Employee engagement is a core part of our business strategy, which is why we compensate our General Managers, in part, on their employee engagement scores. This reinforces our commitment for leaders to listen and take action on employee feedback and helps to ensure that our leaders are held accountable and rewarded for their efforts to drive a more engaged workforce.

Talent Development

We are committed to providing our employees with opportunities to develop throughout their careers. Our programs, including new hire onboarding and new leader assimilation, reinforce our Company values, expectations and business approach. We relaunched our successful Leadership Fundamentals program in 2022, targeting field leaders. With a goal of reaching all leaders through this program, approximately 1,000 leaders completed this training in 2023, with approximately 1,000 more slated to participate in 2024. Targeted development experiences support the growth of people in key roles, including Driver Training, Technician Training, Supervisor Training, Sales Acceleration and General Manager Onboarding, among others. We believe these programs provide the fundamental skills necessary to be successful across roles. Additionally, to meet the specific needs of the business, we opened a comprehensive Technical Training Institute in April 2021 where we train and develop our technicians.

Our leadership programs are a critical part of growing our people. We remain focused on attracting, hiring and developing early career leaders. Our rotational training and development programs, including our General Manager Acceleration Program (GMAP) and Leadership Trainee Program, help us attract, develop and advance a diverse and talented pool of individuals from across our organization. Our Executive Leadership team sponsors these programs, providing visibility and support for the career advancement of our high-potential talent across the organization. Since the beginning of these programs in 2017, 84 leaders have graduated into leadership positions. Additionally, our MBA intern program, with 35 participants since 2019, introduces strong talent to the organization and is a path of opportunity into the GMAP program. We have found that these programs and experiences help ensure that the next generation of leaders build the necessary skills and experiences to be successful in their roles today and in the future.

We continue to leverage innovative training methods using mixed mediums to deliver trainings and instruction to our employees across the country. We remain committed to expanding employee participation in learning programs that are relevant to our business strategy and contribute to career advancement for our employees.

Compensation and Benefits

We offer compensation and benefits that help improve our employees' overall financial, physical and emotional wellbeing, as well as recognize hard work with opportunities to grow. Our commitment to paying market competitive wages enables us to attract and hire talent all across the country, including an expansion of many opportunities to work remotely. Our approach to paying for performance supports our focus on pay equity. Our compensation packages are designed to provide employees with a stable and livable wage and growth potential. Our focus on wellness also provides our employees with access to preventative care, advice on financial planning and support for mental health, contributing to our efforts to provide a total rewards package that improves and enhances the lives of our employees

Differentiating Capabilities

To effectively execute our strategic plan, we prioritize the development and investment in capabilities that will differentiate us in the marketplace. These capabilities include – (1) customer zeal, (2) digital and (3) sustainability.

Customer Zeal

The goal of customer zeal is to drive customer loyalty by offering differentiated products and services specifically designed to meet our customers' needs. We offer a broad set of environmental services across the United States and Canada as the sole provider, which we believe sets us apart in the industry. Customers appreciate our track record of safe and environmentally compliant operations, with the expertise to manage complex waste streams. We believe our value proposition increases customer loyalty and willingness to pay for our differentiated offerings. Customer zeal is a cultural commitment to enable and empower our employees to own their role in the customer experience.

To help our sales team identify specific customer needs and configure the right offering, we use a Priority Based Selling (PBS) technique and our Capture pricing tool nationwide.

- PBS enables us to identify and segment customers' buying priorities and attract customers that are willing to pay for enhanced offerings.
- Capture is a cloud-based pricing tool that creates a more professional sales experience, helps realize better pricing levels at the point of sale and provides enhanced controls over the price quoting process.

We continue to expand our offering of products and services to meet customer demand for a single provider for their environmental service needs. We have made progress on this front, primarily through acquisitions, including the acquisition of US Ecology in May 2022. US Ecology is a leading provider of environmental solutions, offering treatment, recycling and disposal of hazardous, non-hazardous and specialty waste. For services that we don't provide, we fulfill demand through our alliance partnerships while maintaining the customer facing relationship.

To help ensure a consistent customer experience, we have invested in our customer service capabilities and our centralized Customer Experience function. This modern technology provides our customer services employees with the tools and capabilities they need to provide better levels of service through a variety of communication channels. The standardized approach enhances the customer experience and provides us a platform to reduce the cost to service our customers.

To help ensure our efforts are making an impact and building customer loyalty, we solicit feedback from our customers, including Net Promoter ScoreSM, so that every General Manager receives recent, relevant feedback that allows him or her the ability to reach out to customers directly and address issues immediately.

Digital

The goal of prioritizing our digital capabilities is to allow us to provide a consistent experience across our business. We believe investments in our digital platforms enable our customers to do business with us through more channels and with better access to information, ultimately driving increased customer loyalty.

By increasing the ease of use and functionality of our web-based market presence, we believe we enhance customer satisfaction, interaction and connectivity while lowering our costs. These tools reinforce to our customers that they can rely on us to handle their recycling and waste service needs in a way that is easy and convenient for them.

- Our website and mobile app are online account management tools, allowing customers access to their accounts and our services.

- Our e-commerce sales channel allows customers to secure services on a real-time basis, provides capabilities to meet our customers' evolving buying preferences and provides a lower cost sales channel.

We are leveraging technology to digitally connect our customers, drivers, dispatchers, supervisors and trucks via our "RISE" dispatch platform and in-cab technology. We are utilizing an agile iterative approach to the development and multi-year roll-out of this technology to ensure durable adoption and an appropriate return on our investment. With the roll-out of this technology we are improving productivity through more real-time routing information and data visualization tools, increasing customer connectivity and enabling automated service verification communications and enhancing the employee experience by providing better tools and technology designed around employee interaction.

We are also in the early stages of deploying advanced technology on recycling and waste collection routes that utilizes cameras to identify recycling contamination and overfilled containers. We expect this technology will reduce recycling contamination over time and drive incremental revenue.

Sustainability

The goal of our differentiating sustainability capabilities is to provide our customers with sustainable solutions that support a cleaner, safer and healthier world. We have long been a leader in environmental services and sustainability. We introduced our Elements of Sustainability, the foundation of our sustainability platform, in 2014. Our elements, Safety, Talent, Climate Leadership and Communities, are deeply integrated into our business and anchor our ambitious 2030 sustainability goals.

Our Board of Directors' Sustainability & Corporate Responsibility Committee has oversight responsibility with respect to our sustainability performance, our corporate responsibilities and our role as a socially responsible organization. The Committee meets at least quarterly to be updated on progress and conducts a formal comprehensive review of the Company's performance in these areas on an annual basis.

Our 2030 Sustainability Goals

As we grow, so does our opportunity to make a meaningful, positive impact on the environment and society. Our ambitious 2030 goals are aligned with the UN Sustainable Development Goals⁽¹⁾ and our greenhouse gas reduction goal is aligned with The Paris Agreement. Each goal is aligned with one of the Company's elements of sustainability. Together they are designed to significantly benefit the environment and society, while enhancing the foundation and profitability of our business for the long-term.

- *Safety Amplified:* Achieve zero annual employee fatalities
- *Incident Reduction:* Reduce OSHA Total Recordable Incident Rate (TRIR) to 2.0 or less by 2030
- *Engaged Workforce:* Achieve and maintain employee engagement scores at or above 88 by 2030
- *Science Based Target:* Reduce absolute Scope 1 and 2 greenhouse gas emissions 35% by 2030⁽²⁾, approved by SBTi⁽³⁾, with an interim goal of achieving a 10% reduction by 2025
- *Circular Economy:* Increase recovery of key materials by 40% on a combined basis by 2030⁽²⁾
- *Renewable Energy:* Increase beneficial reuse of biogas by 50% by 2030⁽²⁾
- *Charitable Giving:* Create sustainable neighborhoods through strong community partnerships for 45 million people by 2030⁽²⁾

We believe that reducing our impact on the planet and improving the quality of life for its inhabitants are the right things to do, and they are also necessary actions to ensure a vibrant future for our organization.

Refer to our Sustainability Report for our progress toward our 2030 sustainability goals, and refer to our full suite of climate-related sustainability reporting for updates regarding our progress toward our climate goals, including the Task Force on Climate-Related Financial Disclosures (TCFD), SASB, Global Reporting Initiative (GRI) and CDP Climate Change, all of which can be found at republicservices.com/sustainability/reporting. The information contained on our website shall not be deemed incorporated by reference in this Annual Report on Form 10-K or in any other filing we make under the Exchange Act.

(1) We have aligned our 2030 goals with the following UN Sustainable Development Goals: (3) Good Health and Well-being, (7) Affordable Clean Energy, (8) Decent Work and Economic Growth, (10) Reduced Inequalities, (11) Sustainable Cities and Communities, (12) Responsible Consumption and Production and (13) Climate Action.

(2) Targets are relative to the 2017 baseline year.

(3) SBTi, or Science Based Targets initiative, is a collaboration between CDP, the United Nations Global Compact (UNGC), World Resources Institute (WRI) and the World Wide Fund for Nature (WWF).

Cash Utilization Strategy

We take a consistent and balanced approach to capital allocation to drive long-term, sustainable value for our shareholders. The predictability of our free cash flows allows us to efficiently execute our capital allocation strategy, which includes investing in acquisitions and returning free cash flow to our shareholders through dividends and share repurchases. We are committed to an efficient capital structure and maintaining our investment grade credit ratings on our senior debt, which was rated BBB+ by Standard & Poor's Ratings Services, A- by Fitch Ratings, Inc. and Baa1 by Moody's Investors Service, Inc. Such ratings have allowed us, and should continue to allow us, to readily access capital markets at competitive rates.

We manage our free cash flow by ensuring that capital expenditures and operating asset levels are appropriate in light of our existing business and growth opportunities and by closely managing our working capital.

Dividends

In July 2023, our Board of Directors approved an increase in the quarterly dividend to \$0.535 per share, which represents an increase of approximately 8% over the prior year. Over the last five years, our dividends have increased at a compounded annual growth rate of 5.7%. We expect to continue paying quarterly cash dividends and may consider additional dividend increases if we believe they will enhance shareholder value.

Share Repurchases

In October 2020, our Board of Directors approved a \$2.0 billion share repurchase authorization effective starting January 1, 2021, and extending through December 31, 2023. In October 2023, our Board of Directors approved a \$3.0 billion share repurchase authorization effective starting January 1, 2024, and extending through December 31, 2026. Share repurchases under the current program may be made through open market purchases or privately negotiated transactions in accordance with applicable federal securities laws. While the Board of Directors has approved the program, the timing of any purchases, the prices and the number of shares of common stock to be purchased will be determined by our management, at its discretion, and will depend upon market conditions and other factors. The share repurchase program may be extended, suspended or discontinued at any time. On a quarterly basis, our Board of Directors reviews the parameters around which we repurchase our shares. Refer to *Item 5. Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities* for repurchase authority remaining as of December 31, 2023.

Shareholder Value

We are committed to creating long-term shareholder value by generating consistent earnings and cash flow growth while continually improving returns on invested capital. Our incentive compensation programs are aligned with these objectives at all levels of management. We have an active shareholder outreach program and routinely interact with shareholders on a number of matters, including environmental, social, governance, talent and executive compensation.

Management Team

We believe that building and blending a diverse team of strong industry veterans, along with talented people from other industries who bring unique skill sets, will contribute to what we call our Composite Strength. Composite Strength combines the vast, varied experience and capability of both strong environmental services industry veterans and talented people from other industries. Additionally, Composite Strength helps ensure the continuity of leadership and preservation of institutional knowledge, while also bringing in skills and new ideas from other companies outside of our industry - many of them from leading companies.

Jon Vander Ark was named Chief Executive Officer in 2021. Since joining Republic in 2013, Mr. Vander Ark has held management roles of increasing responsibility, including Executive Vice President, Chief Marketing Officer, Executive Vice President, Operations, Executive Vice President, Chief Operating Officer, President and his current role as President and Chief Executive Officer. Prior to joining the Company, he served as a partner at McKinsey & Company's Detroit office, managing clients across a variety of industries, including transportation, logistics, manufacturing and consumer products.

Brian Bales was named Executive Vice President, Chief Development Officer in February 2015. Mr. Bales has been with Republic for over 20 years, serving as Executive Vice President, Business Development from December 2008 to February 2015 and Vice President, Corporate Development from 1998 to December 2008. Prior to his time at Republic, Mr. Bales held roles of increasing responsibility in finance and business development for Ryder System, Inc. from 1993 to 1998 and served as chief financial officer for EDIFEX & VTA Communications from 1988 through 1993. Prior to that, Mr. Bales was an accountant for PwC (formerly Price Waterhouse) from 1986 to 1988. Mr. Bales serves on the Board of Directors of RB Global, Inc.

Gregg Brummer was named Executive Vice President, Chief Operating Officer in August 2023. Prior to his current role, Mr. Brummer served as Senior Vice President, Operations from June 2019 to August 2023 where he was responsible for maximizing field performance, ensuring superior service delivery, executing the operating plan, and achieving financial and

operational results across the Company. Mr. Brummer joined the Company in January 2014 as Area President, a role he held until June 2019. Prior to joining the Company, Mr. Brummer was a Regional Vice President as well as General Manager at BlueLinx Corporation and held various leadership positions at Georgia Pacific Corporation.

Brian DelGhiaccio was named Executive Vice President, Chief Financial Officer in June 2020. Mr. DelGhiaccio has over 20 years of experience in a variety of roles of increasing responsibility. He was named Executive Vice President and Chief Transformation Officer in June 2019. Before that, Mr. DelGhiaccio served as Vice President, Investor Relations from 2012 to 2014, progressed to Senior Vice President, Finance from 2014 to 2017 and then to Senior Vice President, Business Transformation in 2017. Prior to his time at Republic, Mr. DelGhiaccio worked in the audit practice of Arthur Andersen. Mr. DelGhiaccio serves on the Board of Directors of Aramark.

Catharine D. Ellingsen was named Executive Vice President, Chief Legal Officer, Chief Ethics & Compliance Officer and Corporate Secretary in June 2016. Ms. Ellingsen has over 20 years of experience with Republic in a variety of roles of increasing responsibility. She was named Managing Corporate Counsel in January 2003, Director, Legal and Associate General Counsel in January 2005 and Vice President and Deputy General Counsel in June 2007. Ms. Ellingsen was named Senior Vice President, Human Resources in August 2011 and served in that position until June 2016. Before joining the Company, Ms. Ellingsen was an attorney at Steptoe & Johnson LLP from 1996 to 2001 and at Bryan Cave LLP from 1993 to 1996. Ms. Ellingsen serves on the Board of Directors of Daseke, Inc.

Amanda Hodges was named Executive Vice President, Chief Marketing Officer in November 2020. In this role, Ms. Hodges oversees marketing, communications, product development, customer engagement and revenue management for the Company. Prior to joining Republic, Ms. Hodges spent 15 years in leadership roles for Dell Technologies, most recently serving as Senior Vice President of North America Marketing and the Global Customer Briefing Program. Before joining Dell, Ms. Hodges worked as a consultant for McKinsey & Company.

Courtney Rodriguez was named Executive Vice President, Chief Human Resources Officer in March 2023. In this role, she is responsible for all aspects of the Company's talent strategy, including talent acquisition and retention, learning and development, and total rewards. Prior to joining Republic, Ms. Rodriguez served as Senior Vice President, Global HR, for Dell Technologies. She has over 20 years of HR experience, including frontline, customer operations, culture transformation and M&A support. Ms. Rodriguez started her career in finance as a senior auditor for Arthur Andersen before moving to Dell as a financial analyst.

Our local and area management teams have extensive industry experience in growing, operating and managing environmental services companies and have substantial experience in their local geographic markets. This allows us to quickly respond to and meet our customers' needs and stay in touch with local businesses and municipalities. We believe our strong area management teams allow us to effectively and efficiently drive our initiatives and help ensure consistency throughout the organization. Our area management teams and area presidents have extensive authority and responsibility over operations within their respective geographic markets. As a result of retaining experienced managers with extensive knowledge of and involvement in their local communities, we are proactive in anticipating customers' needs and adjusting to changes in our markets. We also seek to implement the best practices of our various business units throughout our operations to continue improving our operations and our operating margins.

Comprehensive Environmental Services

We serve customers with a strong, vertically-integrated operating platform and offer a complete set of products and services, including the collection and processing of recyclable, solid waste and industrial waste materials; transportation and disposal of non-hazardous and hazardous waste streams; and other environmental solutions. We offer a wide array of products and services with a proven track record in safety, compliance and environmental stewardship.

Recycling & Waste Services

We have a strong, national, vertically-integrated operating platform that allows us to compete more effectively and efficiently in the local markets in which we operate. Where appropriate, we seek to achieve a high rate of internalization by controlling material streams from the point of collection through recycling processing or disposal. During the year ended December 31, 2023, approximately 68% of the total solid waste volume we collected was disposed at landfills we own or operate (internalization). Our fully integrated markets generally have a lower cost of operations and more favorable cash flows than our markets that are not fully integrated. Through acquisitions, landfill operating agreements and other market development activities, we create market-specific, vertically-integrated operations typically consisting of one or more collection operations, transfer stations and landfills. We also operate recycling centers in markets where diversion of waste is a priority, customers are willing to pay for the service and we can earn an appropriate return on our investment.

Collection Services

We provide residential, small-container and large-container collection services through 364 collection operations. In 2023, approximately 69% of our total revenue was derived from our collection business, of which approximately 19% of our total revenue related to residential services, approximately 30% related to small-container services and approximately 20% related to large-container services.

Our residential collection business involves the curbside collection of material for transport to transfer stations, or directly to landfills, recycling centers, or organics processing facilities. We typically perform residential collection services under contracts with municipalities, which we generally secure through competitive bids, which give us exclusive rights to service all or a portion of the homes in the municipalities. These contracts usually range in duration from one to five years, although some of our exclusive franchises are for significantly longer periods. We also perform residential services on a subscription basis, in which individual households contract directly with us. The fees received for subscription residential collection are based primarily on the market, collection frequency, type of service, the distance to the disposal facility and the cost of disposal. In general, subscription residential collection fees are paid quarterly in advance by the customers receiving the service.

In our small-container business, we supply our customers with recycling and waste containers of varying sizes. We typically perform small-container collection services under one- to three-year service agreements, and fees are determined based on a number of factors including the market, collection frequency, type of equipment furnished, type and volume or weight of the material collected, transportation costs and the cost of processing or disposal. Our small-container services are typically offered to small business complexes, multi-family housing and strip malls and include industries such as restaurants, retail, real-estate and professional and other services.

Our large-container collection business includes both recurring and temporary customer relationships. For the recurring portion, we supply our customers with recycling and waste containers of varying sizes and rent compactors to large generators of material. We typically perform the collection services under one- to three-year service agreements, and fees are determined based on a number of factors including the market, collection frequency, type of equipment furnished, type and volume or weight of the material collected, transportation costs and the cost of disposal. Our recurring large-container services are typically offered to larger facilities, hotels and office buildings and include industries such as manufacturing, retail, hospitality, professional and other services.

For the temporary portion of our large-container collection business, the majority of the material relates to construction and demolition activities and is typically event-driven. We provide temporary collection services on a contractual basis with terms ranging from a single pickup to one-year or longer.

Transfer Services

We own or operate 246 transfer stations. Revenue at our transfer stations is primarily generated by charging tipping or disposal fees, which accounted for approximately 5% of our revenue during 2023. Our collection operations deposit material at these transfer stations, as do other private and municipal haulers, for compaction and transfer to disposal sites or recycling centers. Transfer stations provide collection operations with a cost-effective means to consolidate material and reduce transportation costs while providing our landfills with an additional mechanism to extend their geographic reach.

When our own collection operations use our transfer stations, this improves internalization by allowing us to retain fees we would otherwise pay to third-party disposal sites. It also allows us to manage costs associated with material disposal because: (1) transfer trucks have larger capacities than collection trucks, allowing us to deliver more material to the landfill or processing center in each trip; (2) material is accumulated and compacted at strategically located transfer stations to increase efficiency; and (3) we can retain volume by managing the material to one of our own landfills or processing centers rather than to a competitor's.

Recycling Processing Services

We own or operate 74 recycling centers. These centers generate revenue through the processing and sale of old corrugated containers (OCC), old newsprint (ONP), aluminum, glass and other materials, which accounted for approximately 2% of our total revenue during 2023. Approximately 82% of our total recycling center volume is fiber based and includes OCC, ONP and other mixed paper. During 2023, we processed and sold 2.0 million tons, excluding glass and organics, from our recycling centers. An additional 2.0 million tons were collected by us and delivered to third parties. We are investing in innovative recycling technology and have expanded our organics operations to help customers meet their diversion goals. We processed 1.1 million and sold 0.2 million tons of organic materials, respectively, from our recycling centers in 2023.

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

In certain instances, we issue recycling rebates to our municipal or large-container customers, which can be based on the price we receive upon the final sale of recycled commodities, a fixed contractual rate or other measures. We also receive rebates when we dispose of recycled commodities at third-party processing facilities.

We have met increased consumer demand for recycling services by integrating recycling components across our collection service offerings. Our goal is to provide a complete material stream management solution to our customers in a vertically integrated, environmentally sustainable way.

We continue to invest in proven technologies to control costs and to simplify and streamline recycling for our customers. For example, robotics and advanced sorting equipment, such as disk screens, magnets and optical sorters, identify and separate different kinds of paper, metals, plastics and other materials to increase efficiency and maximize our recycling efforts.

Landfill Services

We own or operate 207 active landfills. Our landfill tipping fees charged to third parties accounted for approximately 11% of our revenue during 2023. As of December 31, 2023, we had estimated permitted acres of 40,659 and estimated total available disposal capacity of 5.1 billion in-place cubic yards. The in-place capacity of our landfills is subject to change based on engineering factors, requirements of regulatory authorities, our ability to continue to operate our landfills in compliance with applicable regulations and our ability to successfully renew operating permits and obtain expansion permits at our sites. Some of our landfills accept non-hazardous special waste, including utility ash, asbestos and contaminated soils.

Most of our active landfill sites have the potential for expanded disposal capacity beyond the currently permitted acreage. We monitor the availability of permitted disposal capacity at each of our landfills and evaluate whether to pursue an expansion at a given landfill based on estimated future waste volumes and prices, market needs, remaining capacity and the likelihood of obtaining an expansion. To satisfy future disposal demand, we are seeking to expand permitted capacity at certain landfills; however, all proposed or future expansions may not be permitted.

We also have responsibility for 126 closed landfills, for which we have associated closure and post-closure obligations.

Environmental Solutions

We have the capabilities to address the complex environmental and sustainability needs of our customers. Our environmental solutions offerings include collection, treatment, consolidation, disposal and recycling of hazardous and non-hazardous waste; field and industrial services; equipment rental; emergency response and standby services; and in-plant services. Environmental solutions volume is generated by the daily operations of industrial, petrochemical and refining facilities and oil and natural gas exploration and production sites, including maintenance, plant turnarounds and capital projects. Volume also is generated by private and government funded projects including site remediation, redevelopment or emergency spill response. In 2023, approximately 11% of our revenue was derived from environmental solutions.

Waste Treatment & Disposal

We own or operate 6 active hazardous waste landfills, 9 active energy waste landfills, 3 treatment, recovery and disposal facilities, 22 treatment, storage and disposal facilities, 6 salt water disposal wells and 12 deep injection wells. We recycle, treat and dispose of hazardous and non-hazardous industrial wastes. The waste handled include substances which are classified as “hazardous” because of their corrosive, ignitable, reactive or toxic properties and other wastes subject to federal, state and provincial environmental regulation. The waste we handle comes in solid, liquid and sludge form and can be received in a variety of containerized and bulk forms and transported to our facilities by truck and rail.

We also operate thermal desorption units that recover oil and metal bearing catalyst from refinery and other organic and oil-based waste. The recycled oil and recycled catalyst are sold to third parties.

Field Services

Our field services include a wide range of specialty and total waste management services provided to refineries, chemical plants, manufacturing plants and other government, commercial and industrial facilities either on-site or at our network of facilities. These services include industrial cleaning and maintenance, retail services, lab pack, site remediation, equipment cleaning and maintenance services, specialty equipment rental, transportation and emergency response.

As an integral part of our services, we employ highly trained staff and operate a network of service centers that characterize, package and collect hazardous and non-hazardous wastes from customers and transport such wastes to and between our facilities for treatment or bulking for shipment to final disposal locations.

Sustainability Innovation

We are uniquely positioned to offer products and services to address the complex sustainability needs of our customers. Our sustainability innovation product and service offerings include operations that allow for greater material circularity and support decarbonization. Demand for post-consumer content in consumer packaging and low carbon energy alternatives continues to increase. We are able to invest independently or through joint ventures to create solutions for the evolving marketplace.

Circularity

In 2023, we completed construction at our first Polymer Center in Las Vegas, Nevada. The Polymer Center represents the first time a single U.S. company will manage the plastics stream through an integrated process from curbside collection of recycled material to production and delivery of high-quality recycled content for consumer packaging. Rigid plastics – polyethylene terephthalate (PET), high-density polyethylene (HDPE) and polypropylene (PP) – collected from residential and commercial customers and sorted at local recycling facilities will be delivered to the Polymer Center for secondary processing. The facility is expected to produce more than 100 million pounds per year of recycled plastic, including 100% post-consumer PET flake delivered to the food-grade marketplace to enable bottle-to-bottle circularity. In addition, HDPE and PP packaging such as detergent jugs or butter tubs, which today are collected in multicolored bundles, can be separated by plastic type and color. We anticipate opening at least three more centers to provide national coverage and further drive circularity, with the Indianapolis Polymer Center construction scheduled to be completed in late 2024.

In 2023, we announced the creation of Blue Polymers, LLC, a joint venture with Ravago, creating vertical integration that will further advance circularity in the plastics industry. The Blue Polymers facilities will utilize recycled HDPE and PP from our Polymer Centers to create custom recycled resins for consumer packaging and other applications. The process is expected to convert HDPE and PP into fully formulated products for use in both food-grade and non-food-grade sustainable applications. Four Blue Polymers facilities are planned to open over the next four years, beginning in 2025. Once operational, these facilities are expected to produce a combined 300 million pounds per year of recycled plastics. Products are expected to include custom-blended and compounded materials for individual customers to help them achieve their sustainability goals and comply with federal, state or local requirements for recycled content.

Decarbonization

Our customers are increasingly looking for decarbonization solutions, and Republic is leveraging our network of landfills to meet that need. Republic is committed to harnessing landfill gas, a natural byproduct of decomposing waste, and converting it to energy. More than 87% of our landfill acreage is covered by gas collection systems. Collecting and converting landfill gas into renewable energy provides economic and environmental benefits, including reducing fugitive greenhouse gas emissions. As of December 31, 2023, we operated 76 landfill gas-to-energy projects. The majority of these projects were developed and are owned by a third party, where we earn a royalty based on renewable energy sold. We have more than 50 landfill gas-to-renewable natural gas (RNG) projects in development that are expected to begin operation in the coming years. The majority of the development portfolio is part of a joint venture with Archaea Energy, a bp company, in which Republic is a minority equity owner. RNG is a low-carbon, pipeline-quality fuel that's fully interchangeable with fossil fuel-derived natural gas; it can be used as a transportation fuel in commercial fleets, including our own.

We also are producing renewable energy at our landfills through solar projects we host at eight sites, which generate clean electricity for local communities.

Other Services

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

Competition

We operate in a competitive industry. Competition in the environmental services industry comes from a few other large, national publicly-owned companies, several regional publicly- and privately-owned companies and thousands of small privately-owned companies. In any given market, competitors may have larger operations and greater resources. In addition, we compete with municipalities that maintain material collection or disposal operations. These municipalities may have financial advantages due to the availability of tax revenue and greater opportunities for tax-exempt financing.

We compete for collection accounts primarily based on our product offering, quality of service and price. From time-to-time, our competitors reduce the price of their services in an effort to expand market share or to win a competitively bid municipal contract.

Our ability to maintain and increase prices in certain markets may be impacted by our competitors' pricing policies. This may have an effect on our future revenue and profitability.

Seasonality and Severe Weather

Our operating revenues tend to be somewhat higher in the summer months, primarily due to higher volumes of construction and demolition waste. The volumes of large-container and residential recycling and waste in certain regions of the country also tend to increase during the summer months. Our second and third quarter revenues and results of operations typically reflect this seasonality.

We provide essential environmental services in the communities we serve and our operations can be adversely affected by periods of inclement or severe weather and natural disasters, which could increase the volume of material collected under our existing contracts (without corresponding compensation), delay the collection and disposal of material, reduce the volume of material delivered to our disposal sites or delay the construction or expansion of our landfill sites and other facilities and may increase with the physical impacts of climate change. The impacts from adverse weather and natural disasters have the potential to last several months and to affect several facilities. We have business continuity plans in place for severe weather, natural disasters and other emergencies—hurricanes, tornadoes, flooding, winter storms, earthquakes and wildfires, among others—to help limit disruptions in our operations and help ensure the continuity of our services. Our operations can also be favorably affected by severe weather and natural disasters, which could increase the volume of material in situations where we are able to charge for our additional services. Refer to our TCFD Report for more information on climate impacts and our risk management strategies, available at investor.republicservices.com/sustainability. The information contained on our website shall not be deemed incorporated by reference in this Annual Report on Form 10-K or in any other filing we make under the Exchange Act.

Regulation

Our facilities and operations are subject to a variety of federal, state, provincial and local requirements that regulate, among other things, the environment, public health, safety, zoning and land use. Operating and other permits, licenses and other approvals generally are required for landfills and transfer stations, recycling centers, certain waste collection vehicles, fuel storage tanks and other equipment and facilities that we own or operate. These permits are subject to denial, revocation, modification and renewal in certain circumstances. Any revocation, modification or denial of permits could have a material adverse effect on us. Federal, state and local laws and regulations vary, but generally govern wastewater or storm water discharges, air emissions, the handling, transportation, treatment, storage and disposal of hazardous and non-hazardous waste and the remediation of contamination associated with the release or threatened release of hazardous substances. These laws and regulations provide governmental authorities with strict powers of enforcement, which include the ability to revoke or decline to renew any of our operating permits, obtain injunctions, or impose fines or penalties in the event of violations, including criminal penalties. The United States EPA and various other federal, state, provincial and local authorities administer these regulations. Regulations with respect to hazardous waste are particularly relevant for our Group 3 reportable segment that provides treatment, recycling and disposal of hazardous waste.

In order to comply with these regulations, we must incur substantial capital expenditures relating to our vehicles, landfills, transfer stations, recycling centers and other assets, and in connection with our capping, closure, post-closure and environmental remediation activities. Compliance with existing and future legal and regulatory requirements, including changes relating to per- and polyfluoroalkyl substances (commonly referred to as PFAS) and other chemicals of emerging concern, and limitations or bans on disposal of certain types of wastes or on the transportation of waste, could increase our costs to operate or require additional capital expenditures.

A decrease in regulation may lower barriers to entry for our competitors. Further, we compete with counties and municipalities that operate their own collection and disposal facilities, have the benefits of tax revenue and greater opportunities for tax-exempt financing.

We strive to conduct our operations in compliance with applicable laws, regulations and permits. However, from time to time we have been issued citations or notices from governmental authorities that have resulted in the need to expend funds for remedial work and related activities at various landfills and other facilities or in the need to expend funds for fines, penalties or settlements. Citations and notices may be issued in the future, notwithstanding our strong regulatory compliance efforts. We have established final capping, closure, post-closure and remediation reserves that we believe, based on currently available information, will be adequate to cover our current estimates of regulatory costs; however, actual costs may exceed our reserves.

Federal Regulation

The following summarizes the primary federal, environmental and occupational health and safety-related statutes that affect our facilities and operations:

- *The Solid Waste Disposal Act, including the Resource Conservation and Recovery Act (RCRA)*. RCRA establishes a framework for regulating the handling, transportation, treatment, storage and disposal of hazardous and non-hazardous solid waste, and requires states to develop programs to ensure the safe disposal of solid waste in sanitary landfills.

Subtitle C of RCRA establishes a framework for regulating the disposal of hazardous waste, and Subtitle D of RCRA establishes a framework for regulating the disposal of municipal solid waste. Regulations under Subtitle C set requirements for hazardous waste generators, transporters and treatment, storage and disposal facilities. Regulations under Subtitle D currently include minimum comprehensive solid waste management criteria and guidelines, including location restrictions, facility design and operating criteria, final capping, closure and post-closure requirements, financial assurance standards, groundwater monitoring requirements and corrective action standards. The EPA may authorize states to implement certain hazardous waste requirements of Subtitle C, and if a state program does not exist, the EPA directly implements the hazardous waste requirements. Nearly all of the states in which we operate have implemented permit programs pursuant to RCRA and Subtitles C and D. These state permit programs may include landfill requirements that are more stringent than those of Subtitles C and D. Our failure to comply with any of these environmental requirements at any of our locations may lead to temporary or permanent loss of an operating permit, which would result in costs in connection with securing new permits, reduced revenue from lost operational time and increased third party disposal costs.

All of our planned landfill expansions and new landfill development projects have been engineered to meet or exceed Subtitles C and D requirements, as applicable. Operating and design criteria for existing operations have been modified to comply with these regulations. Compliance with Subtitles C and D regulations has resulted in increased capital expenditures and operating costs and may in the future require substantial additional expenditures in addition to other costs normally associated with our waste management activities.

- *The Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA).* CERCLA, among other things, provides for the cleanup of sites from which there is a release or threatened release of a hazardous substance into the environment. CERCLA may impose strict joint and several liability for the costs of cleanup and for damages to natural resources upon current owners and operators of a site, parties who were owners or operators of a site at the time the hazardous substances were disposed of, parties who transported the hazardous substances to a site and parties who arranged for the disposal of the hazardous substances at a site. Under the authority of CERCLA and its implementing regulations, detailed requirements apply to the manner and degree of investigation and remediation of facilities and sites where hazardous substances have been or are threatened to be released into the environment. Liability under CERCLA is not dependent on the existence or disposal of only hazardous wastes, but also can be based upon the existence of small quantities of more than 700 substances currently characterized by the EPA as hazardous, many of which are found in common household waste. The EPA may also designate additional substances as hazardous; in 2022, the EPA issued a proposed rule that would designate certain PFAS as hazardous substances. Among other things, CERCLA authorizes the federal government to investigate and remediate sites at which hazardous substances have been or are threatened to be released into the environment, or to order persons potentially liable for the cleanup of the hazardous substances to do so themselves. In addition, the EPA has established a National Priorities List of sites at which hazardous substances have been, or are threatened to be, released and which require investigation or cleanup.

CERCLA liability is strict liability. It can be founded upon the release or threatened release, even as a result of unintentional, non-negligent or lawful action, of hazardous substances, including very small quantities of such substances. Thus, even if we have never knowingly transported or received hazardous substances, it is possible that hazardous substances have been deposited or released at landfills or other facilities that we presently or historically have owned or operated, or at properties owned by third parties to which we have transported waste. Therefore, we could be liable under CERCLA for the cost of cleaning up, or protecting against the release of, such hazardous substances at such sites and for damages to natural resources, even if those substances were deposited at our facilities before we acquired or operated them. The costs of a CERCLA cleanup can be very expensive and can include the costs of disposing of hazardous substances at appropriately-licensed facilities. Given the difficulty of obtaining insurance for environmental impairment liability, any such liability could have a material effect on our business, financial condition, results of operations and cash flows.

- *The Federal Water Pollution Control Act of 1972 (the Clean Water Act).* This act regulates the discharge of pollutants from a variety of sources, including solid waste disposal sites, into streams, rivers and other waters of the United States. Runoff from our landfills and transfer stations that is discharged into surface waters through discrete conveyances must be covered by discharge permits that generally require us to conduct sampling and monitoring, and, under certain circumstances, to reduce the quantity of pollutants in those discharges. Storm water discharge regulations under the Clean Water Act require a permit for certain construction activities and for runoff from industrial operations and facilities, which may affect our operations. If a landfill or transfer station discharges wastewater through a sewage system to a publicly-owned treatment works, the facility must comply with discharge limits imposed by that treatment works. In addition,

states may adopt groundwater protection programs under the Clean Water Act or the Safe Drinking Water Act that could affect the manner in which our landfills monitor and control their waste management activities.

Furthermore, if development at any of our facilities alters or affects wetlands, we may be required to secure permits before such development starts. In these situations, permitting agencies may require mitigation of wetland impacts.

- *The Clean Air Act.* The Clean Air Act imposes limitations on emissions from various sources, including landfills. In 1996, the EPA promulgated regulations that require large municipal solid waste landfills to install landfill gas monitoring systems along with landfill gas control systems unless emissions are below established thresholds. These regulations apply to landfills that commenced construction, reconstruction or modification on or after May 30, 1991, and, principally, to landfills that can accommodate 2.5 million cubic meters or more of municipal solid waste. The regulations apply whether the landfills are active or closed. The date by which each affected landfill must have a gas collection and control system installed and made operational varies depending on calculated emission rates at the landfill. In July 2016, the EPA issued final amendments to its regulations that require large landfills that commenced construction, reconstruction, or modification on or after July 17, 2014 to capture additional landfill gas to reduce emissions of methane and certain non-methane gases, which are recognized as greenhouse gases. In a separate rule finalized at the same time, the EPA issued updates to its 1996 Emission Guidelines to reduce emissions of landfill gas from existing active landfills. Both actions were part of the Obama Administration's Climate Action Plan - Strategy to Reduce Methane Emissions. As part of the Biden Administration's focus on climate change, the EPA has taken further steps to implement these regulations. These and other efforts to curtail the emission of greenhouse gases and to ameliorate the effect of climate change may require our landfills to deploy more stringent emission controls and monitoring systems, with resulting capital or operating costs. Many state regulatory agencies also currently require monitoring systems for the collection and control of certain landfill gas. Certain of these state agencies are also implementing greenhouse gas control regulations that would also apply to landfill gas emissions. See Item 1A, *Risk Factors – Regulation of greenhouse gas emissions and other governmental regulations could impose costs on our operations, the magnitude of which is difficult to estimate*, in this Annual Report on Form 10-K.

In addition, our vehicle fleet also may become subject to higher efficiency standards or other carbon-emission restrictions. Over the past decade, the EPA and the National Highway Traffic Safety Administration (NHTSA) have adopted regulations mandating the reduction of vehicle tail pipe emissions as a means of reducing greenhouse gas emissions. The regulations take the form of fuel economy standards. The EPA and the NHTSA have developed fuel economy standards in two vehicle categories: (1) passenger automobiles and light-duty trucks (collectively, light-duty vehicles); and (2) heavy-duty trucks, including solid waste collection vehicles and tractor trailers. We own and operate vehicles in both categories. For light-duty vehicles, in May 2010 the EPA and the NHTSA finalized fuel economy standards for model years 2012 through 2016. In October 2011, the EPA and the NHTSA initiated a second round of rulemaking for light-duty vehicles for model years 2017 through 2025. In 2018, the EPA and the NHTSA proposed to revise the light-duty vehicle standards for model years 2021 through 2024 to make them less stringent; final action on the proposal occurred in 2020 but has been challenged in court. In 2021, the EPA issued a rule further setting the standards for model years 2023 to 2026, making them more stringent; that rule has also been challenged in court. In August 2011, the EPA and the NHTSA finalized standards for heavy-duty trucks, including solid waste collection vehicles and tractor trailers, for model years 2014 through 2018. In August 2016, the EPA and the NHTSA jointly issued additional regulations that would impose more stringent standards for heavy-duty vehicles through model-year 2027. In August 2021, the EPA announced its intent to move forward with a Clean Trucks Plan, which would involve setting emissions standards for model years 2027 and beyond; the EPA released a proposed rule on March 28, 2022 and issued a final rule on December 20, 2022. In 2023, NHTSA released proposed rules for 2027-2032 light-duty vehicles and 2030-2035 heavy-duty pickups and vans, and EPA released a proposed rule for 2027-2032 light and medium duty vehicles.

- *The Occupational Safety and Health Act of 1970 (OSHA).* This act authorizes the Occupational Safety and Health Administration of the United States Department of Labor to promulgate occupational safety and health standards. A number of these standards, including standards for notices of hazardous chemicals and the handling of asbestos, apply to our facilities and operations.

State and Local Regulation

Each state in which we operate has its own laws and regulations governing solid waste disposal, water and air pollution, and, in most cases, releases and cleanup of hazardous substances and liabilities for such matters. States also have adopted regulations governing the design, operation, maintenance and closure of landfills and transfer stations. Some counties, municipalities and other local governments have adopted similar laws and regulations. In addition, our operations may be affected by the trend in many states toward requiring solid waste reduction and recycling programs. For example, several states have enacted laws that require counties or municipalities to adopt comprehensive plans to reduce, through solid waste planning, composting, recycling or other

programs, the volume of solid waste deposited in landfills. Additionally, laws and regulations restricting the disposal of certain waste in solid waste landfills, including yard waste, food waste, newspapers, beverage containers, unshredded tires,

lead-acid batteries, electronic wastes and household appliances, have been adopted in several states and are being considered in others. Some jurisdictions have enacted or are considering enacting “extended producer responsibility” regulations, which are designed to obligate producers to fund the post-use life cycle of their products by providing recycling programs for their products. State and municipal governments also have enacted or may enact “organic diversion” regulations that require food waste to be managed separately from the other waste streams, similar to the rules recently enacted in California. Several states have also enacted or are considering “minimum recycled content” regulations mandating certain minimum post-consumer recycled content in certain types of packaging, including California. Legislative and regulatory measures to mandate or encourage waste reduction and recycling also have been considered, or are under consideration by, the United States Congress and the EPA. These regulations may present new opportunities to offer sustainable environmental services to our customers but may require investment of time, effort and money to be able to offer these new solutions and expose us to additional regulatory requirements and competition from others offering these services.

To construct, operate and expand a landfill, we must obtain one or more construction or operating permits, as well as zoning and land use approvals. These permits and approvals may be burdensome to obtain and to comply with, are often opposed by neighboring landowners and citizens’ groups, may be subject to periodic renewal, and are subject to denial, modification, non-renewal and revocation by the issuing agency. Significant compliance disclosure obligations often accompany these processes. In connection with our acquisition of existing landfills, we may be required to spend considerable time, effort and money to bring the acquired facilities into compliance with applicable requirements and to obtain the permits and approvals necessary to increase their capacity.

Canadian Hazardous Waste Regulation

Certain of our Group 3 operations and facilities are subject to, among other regulations, Canadian hazardous waste regulations. The Canadian federal government regulates issues within federal jurisdiction, including activities that cross provincial boundaries or affect Canada’s relations with other nations. The Canadian provinces also have jurisdiction over environmental matters within their respective boundaries, including primary responsibility for regulation and management of hazardous waste.

The main federal laws governing hazardous waste management are the Canadian Environmental Protection Act, 1999 (CEPA) and the Transportation of Dangerous Goods Act, 1992. Environment and Climate Change Canada (ECCC) is the federal agency with responsibility for environmental matters. CEPA charges ECCC and Health Canada with the protection of human health and the environment and seeks to control the production, importation and use of substances in Canada and their impact on the environment. The Cross-border Movement of Hazardous Waste and Hazardous Recyclable Material Regulations under CEPA control the transboundary movement of hazardous waste and hazardous recyclable materials. These regulations require that anyone proposing to export or import hazardous waste or hazardous recyclable materials or transport them through Canada notify ECCC and obtain a permit to do so.

Certain of our facilities are subject to the Québec Environment Quality Act, the Ontario Environmental Protection Act or the Alberta Environmental Protection and Enhancement Act and their respective regulations. These statutes and regulations regulate the generation, collection, characterization, documentation, transport, storage, treatment, recovery and disposal of hazardous wastes, establish the requirements for waste management facilities and waste transportation systems and govern actual or potential releases of contaminants in the environment, such as air emissions and soil, groundwater and surface water contamination issues.

Hazardous waste transporters are required to hold permits to operate under the provincial statutes and regulations and are also subject to safety documentation and reporting requirements under provincial law and the federal Transportation of Dangerous Goods Act, 1992.

Maritime Regulations

Our Group 3 operations own and use 37 vessels registered under the United States flag. Accordingly, we are subject to various United States federal, state and local statutes and regulations governing the ownership, operation and maintenance of our vessels. Our United States-flag vessels are subject to the direct jurisdiction of the United States Coast Guard, the United States Customs and Border Protection and the United States Maritime Administration as well as other federal and state agencies. We are also subject to international laws and conventions and the local laws of foreign jurisdictions where we operate.

A portion of the operations of our standby services business within Group 3 is conducted in the United States coastwise trade. This is a protected market that is subject to United States cabotage laws that impose certain restrictions on the ownership and operation of vessels in the United States coastwise trade. These laws are principally contained in 46 U.S.C. Chapters 121, 505 and 551 and the related regulations, which are commonly referred to collectively as the “Jones Act.” The Jones Act restricts transportation of merchandise by water or by land and water, either directly or via a foreign port, between points in the United States and certain of its island territories. Subject to limited exceptions, the Jones Act requires that vessels engaged in United States coastwise trade be owned and operated by United States citizens within the meaning of the Jones Act, be built in and

registered under the laws of the United States and manned by predominantly United States Citizen crews. We have compliance mechanisms in place designed to assist with monitoring and maintaining compliance with the ownership requirements of the Jones Act.

All of our offshore vessels are subject to either United States or international safety and classification standards and sometimes both. United States-flag vessels, barges and crew boats are required to undergo periodic inspections pursuant to United States Coast Guard regulations.

We are also subject to a number of safety, security and environmental laws and regulations, including the International Ship and Port Facility Security Code (ISPS Code), an amendment to the International Convention for the Safety of Life at Sea (SOLAS) as implemented in the Maritime Transportation and Security Act of 2002 to align United States regulations with those of SOLAS and the ISPS Code. The ISPS Code provides that owners or operators of certain vessels and facilities must provide security and security plans for their vessels and facilities and obtain appropriate certification of compliance. Under the ISPS Code, we perform worldwide security assessments, risk analyses and develop vessel and required port facility security plans to enhance safe and secure vessel and facility operations. Additionally, we have developed security annexes for those United States-flag vessels that transit or work in waters designated as high risk by the United States Coast Guard pursuant to the latest revision of Marsec Directive 104-6.

Other Regulations

Some of our facilities and operations are subject to the Toxic Substances Control Act of 1976 (TSCA) and the Atomic Energy Act of 1954, as amended (AEA). TSCA regulates the treatment, storage and disposal of polychlorinated biphenyls and asbestos. The AEA assigns the United States Nuclear Regulatory Commission (USNRC) regulatory authority over receipt, possession, use and transfer of certain radioactive materials, including disposal. The USNRC has adopted regulations for licensing commercial low-level radioactive waste regulated under the AEA for disposal and has delegated regulatory authority to certain states, including states where one or more of our facilities are located. The USNRC and United States Department of Transportation regulate the transport of radioactive materials. Shippers must comply with both the general requirements for hazardous materials transportation and specific requirements for transporting radioactive materials.

Many of our facilities own and operate underground storage tanks that are generally used to store petroleum-based products. These tanks can be subject to federal, state and local laws and regulations that mandate their periodic testing, upgrading, closure and removal. In the event of leaks or releases from these tanks, these regulations require that polluted groundwater and soils be remediated. If underground storage tanks we own or operate leak, we could be liable for response costs and, if the leakage migrates onto the property of others, we could be liable for damages to third parties. We are unaware of facts indicating that issues of compliance with regulations related to underground storage tanks will have a material adverse effect on our consolidated financial condition, results of operations or cash flows.

With regard to our solid waste transportation operations, we are subject to the jurisdiction of the Surface Transportation Board and are regulated by the Federal Highway Administration, Office of Motor Carriers and by regulatory agencies in states that regulate such matters. Various state and local government authorities have adopted, or are considering adopting, laws and regulations that would restrict the transportation of solid waste across state, county, or other jurisdictional lines. In 1978, the United States Supreme Court ruled that a law that restricts the importation of out-of-state solid waste is unconstitutional; however, states have attempted to distinguish proposed laws from those involved in and implicated by that ruling. In 1994, the United States Supreme Court ruled that a flow control law, which attempted to restrict solid waste from leaving its place of generation, imposes an impermissible burden upon interstate commerce and is unconstitutional. In 2007, however, the United States Supreme Court upheld the right of a local government to direct the flow of solid waste to a publicly-owned and publicly-operated waste facility. A number of county and other local jurisdictions have enacted ordinances or other regulations restricting the free movement of solid waste across jurisdictional boundaries. Other governments may enact similar regulations in the future. These regulations may cause a decline in volumes of waste delivered to our landfills or transfer stations and may increase our costs of disposal, thereby adversely affecting our operations and our financial results.

We are engaged in 76 landfill gas-to-energy and other renewable energy projects. The production of renewable fuel through certain of these projects is incentivized by the federal Renewable Fuel Standard (RFS) program, which was authorized under the Energy Policy Act of 2005 and expanded through the Energy Independence and Security Act of 2007. Oil refiners and importers are required through the RFS program to blend specified volumes of renewable transportation fuels with gasoline or buy credits, known as renewable identification numbers (RINs), from renewable fuel producers. The amount of RIN credits generated by each gallon of renewable fuel depends on the process and feedstock used to create the specific renewable fuel. There is a market for RINs and, as we and/or our partners produce RFS-compliant renewable fuel, RINs are generated and sold to parties purchasing such RINs to achieve compliance with the RFS program.

Climate and Sustainability Trends

Jurisdictions have been updating climate policies toward the goal of reporting and reducing greenhouse gas (GHG) emissions through a broad range of sustainability initiatives. We believe reducing our impact on the planet and improving the quality of life of its inhabitants are the right things to do, and have committed to heightened emissions reduction goals. Taking into account the challenges associated with quantifying environmental services emissions precisely, we evaluate and offer strategic opportunities to provide our customers with sustainable solutions to reduce their GHG emissions as new regulatory and business developments related to concerns about climate change arise. As a provider of a highly regulated public service, we recognize the importance of broad stakeholder engagement in these endeavors, and we actively seek opportunities for discussion on more sustainable materials management practices. In addition, we cooperate with and support initiatives at the federal and state level in support of legislation that encourages sustainable practices including the production and use of renewable, low-carbon fuels and electricity and the processing of recyclables and organics.

We have long been a leader in sustainability as it relates to environmental services and strive to maintain this reputation. Our sustainability commitments, as well as our progress toward our current goals, are published in our Sustainability Report and accompanying reports and can be found at investor.republicservices.com/sustainability. The information contained on our website shall not be deemed incorporated by reference in this Annual Report on Form 10-K or in any other filing we make under the Exchange Act.

Liabilities Established for Landfill and Environmental Costs

We have established reserves for landfill and environmental costs, which include landfill site final capping, closure and post-closure costs. We periodically reassess such costs based on various methods and assumptions regarding landfill airspace and the technical requirements of Subtitles C and D of RCRA, and we adjust our amortization rates used to expense final capping, closure and post-closure costs accordingly. Based on current information and regulatory requirements, we believe that our recorded reserves for such landfill and environmental expenditures are adequate; however, environmental laws may change, and our recorded reserves may not be adequate to cover requirements under existing or new environmental laws and regulations, future changes or interpretations of existing laws and regulations, or adverse environmental conditions previously unknown to us. Refer to the *Material Cash Requirements and Intended Uses of Cash* section of our Management's Discussion and Analysis of Financial Condition and Results of Operations contained in Part II, Item 7 of this Annual Report on Form 10-K and to Note 2, *Summary of Significant Accounting Policies*, to our audited consolidated financial statements in Part II, Item 8 of this Annual Report on Form 10-K for further information.

Liability Insurance and Bonding

The nature of our business exposes us to the possible risk of liabilities arising out of our operations, including damages to the environment, property, employees or the general public, or those resulting from cyber incidents. We focus on operating safely and prudently, but occasionally we receive claims, alleging damages, negligence or other wrongdoing in the planning or performance of work, which resulted in harm to the environment, property, employees or the general public. These liabilities can be significant. We also could be subject to fines and civil and criminal penalties in connection with alleged violations of regulatory requirements. We maintain various policies of insurance that, subject to limitations, exclusions, or deductibles, provide coverage for these types of claims. While we believe the amount of insurance is appropriate for our type of business, such insurance may not be adequate, in scope or amount, in the event of a major loss, and we may be exposed to uninsured liabilities that could have a material adverse effect on our consolidated financial condition, results of operations or cash flows. We may choose not to continue to maintain the insurance should market conditions in the insurance industry make such coverage cost prohibitive.

Accruals for deductibles are based on claims filed and actuarial estimates of claims development and claims incurred but not reported. Due to the variable condition of the insurance market, we have experienced, and may experience in the future, increased deductible retention levels and increased premiums or unavailability of insurance. As we assume more risk through higher retention levels, we may experience more variability in our insurance reserves and expense.

In the normal course of business, we also purchase surety bonds, insurance policies, letters of credit, or marketable securities deposits in connection with, among other things, municipal residential collection contracts, financial assurance for closure and post-closure of landfills, environmental remediation, environmental permits and business licenses and permits as a financial guarantee of our performance.

Availability of Reports and Other Information

Our corporate website is republicservices.com. We make available on that website, free of charge, access to our Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K, Proxy Statements on Schedule 14A and amendments

to those materials filed or furnished with the Securities and Exchange Commission (SEC) pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934. We make such materials available as soon as reasonably practicable after

we electronically submit them to the SEC. Our corporate website also contains our Certificate of Incorporation, Bylaws, Corporate Governance Guidelines, Code of Ethics and Conduct, Political Contributions Policy, Human Rights Policy and Charters of the Audit Committee, Management Development and Compensation Committee, Nominating and Corporate Governance Committee and Sustainability and Corporate Responsibility Committee of the Board of Directors. In addition, the SEC makes available at its website (sec.gov), free of charge, reports, proxy statements and other information regarding issuers, such as us, that file electronically with the SEC. Information on our website or the SEC website is not part of this Annual Report on Form 10-K. We intend to satisfy the disclosure requirements under Item 5.05 of Form 8-K and applicable New York Stock Exchange (NYSE) rules regarding amendments to or waivers of our Code of Ethics by posting this information on our website at republicservices.com.

ITEM 1A. RISK FACTORS

Disclosure Regarding Forward-Looking Statements

This Annual Report on Form 10-K contains certain forward-looking information about us that is intended to be covered by the safe harbor for “forward-looking statements” provided by the Private Securities Litigation Reform Act of 1995. Forward-looking statements are statements that are not historical facts. Words such as “guidance,” “expect,” “will,” “may,” “anticipate,” “plan,” “estimate,” “project,” “intend,” “should,” “can,” “likely,” “could,” “outlook” and similar expressions are intended to identify forward-looking statements. Among other sections of this Form 10-K, the Risk Factors and Management’s Discussion and Analysis of Financial Condition and Results of Operations include forward-looking statements. These statements include statements about our plans, strategies and prospects. Forward-looking statements are not guarantees of performance. These statements are based upon the current beliefs and expectations of our management and are subject to risk and uncertainties that could cause actual results to differ materially from those expressed in, or implied or projected by, the forward-looking information and statements. Although we believe that the expectations reflected in the forward-looking statements are reasonable, such expectations may not prove to be correct. Among the factors that could cause actual results to differ materially from the expectations expressed in the forward-looking statements are:

- general economic and market conditions, including inflation and changes in fuel, interest rates, labor, risk, health insurance and other variable costs that generally are not within our control, and our exposure to credit and counterparty risk;
- fluctuations in prices for recycled commodities that we sell to customers;
- whether our estimates and assumptions concerning critical accounting issues are correct or appropriate, including estimates and assumptions concerning selected balance sheet accounts, income tax accounts, final capping, closure, post-closure and remediation costs, available airspace, projected costs and expenses related to our landfills and property and equipment, fair values of acquired assets and liabilities assumed in our acquisitions and labor, fuel rates and economic and inflationary trends;
- competition and demand for services in the environmental services industry;
- price increases to our customers, which may not be adequate to offset the impact of increased costs, including labor, third-party disposal and fuel and may cause us to lose volume;
- our ability to manage growth and execute our growth strategy;
- our compliance with, and future changes in, environmental and flow control regulations and our ability to obtain approvals from regulatory agencies in connection with operating and expanding our landfills and other facilities;
- the impact on us of our substantial indebtedness, including on our ability to obtain financing on acceptable terms to finance our operations and growth strategy and to operate within the limitations imposed by financing arrangements;
- our ability to retain our investment grade ratings for our debt;
- our dependence on key personnel;
- our dependence on large, long-term collection, transfer and disposal contracts;
- the capital intensive nature of our business, which may consume cash in excess of cash flow from operations;
- exposure to liabilities or losses, to the extent not adequately covered by insurance, which could result in substantial expenses;
- risks associated with undisclosed liabilities of acquired businesses;

- risks associated with pending and future legal proceedings, including litigation, audits or investigations brought by or before any governmental body;
- severe weather conditions, including those brought about by climate change, which could impair our financial results by causing increased costs, loss of revenue, reduced operational efficiency or disruptions to our operations;
- compliance with existing and future legal and regulatory requirements, including changes relating to PFAS and other chemicals of emerging concern and limitations or bans on disposal of certain types of wastes or on the transportation of waste, which could limit our ability to conduct or grow our business, increase our costs to operate or require additional capital expenditures;
- our ability to achieve reduction in our greenhouse gas emissions and our other sustainability goals;
- safety and operational risks, including the risk of personal injury to our employees or third parties;
- potential increases in our costs if we are required to provide additional funding to any multiemployer pension plan to which we contribute or if a withdrawal event (including our voluntary withdrawal, which we consider from time to time, or the mass withdrawal of all contributing employers from any underfunded multiemployer pension plan) occurs with respect to any such plan;
- the negative impact on our operations of union organizing campaigns, work stoppages or labor shortages;
- the negative effect that trends toward requiring recycling, waste reduction at the source and prohibiting the disposal of certain types of wastes could have on volumes of waste going to landfills;
- changes by the Financial Accounting Standards Board or other accounting regulatory bodies to generally accepted accounting principles or policies;
- the impact of United States and international tax laws and regulations on our business;
- risks related to interruptions and breaches of our information technology systems that could adversely affect, or temporarily disable, all or a portion of our operations or have a negative effect on our infrastructure;
- the negative impact that a cyber-security incident could have on our business and our relationships with customers and employees; and
- acts of war, riots or terrorism, including the continuing war on terrorism, as well as actions taken or to be taken by the United States or other governments as a result of further acts or threats of terrorism and the impact of these acts on economic, financial and social conditions in the United States.

The risks included here are not exhaustive. Refer to the Risk Factors in this Item 1A for further discussion regarding our exposure to risks. You should be aware that any forward-looking statement in this Annual Report on Form 10-K and the documents incorporated herein by reference or elsewhere, speaks only as of the date on which we make it. Additionally, new risk factors emerge from time to time and it is not possible for us to predict all such risk factors, or to assess the impact such risk factors might have on our business or the extent to which any factor or combination of factors may cause actual results to differ materially from those contained in any forward-looking statements. You should not place undue reliance on any forward-looking statement. Except to the extent required by applicable law or regulation, we undertake no obligation to update or publish revised forward-looking statements to reflect events or circumstances after the date of this Annual Report on Form 10-K and the documents incorporated by reference, as the case may be, or to reflect the occurrence of unanticipated events.

Risks Related to Our Business and Operations

The environmental services industry is highly competitive and includes competitors that may have greater financial and operational resources, flexibility to reduce prices or other competitive advantages that could make it difficult for us to compete effectively.

We principally compete with large national waste management companies, numerous municipalities and numerous regional and local companies. Competition for collection accounts is typically based on the quality of services, ease of doing business and/or price. Competition for disposal business is primarily based on geographic location, quality of operations and price. One of our competitors may have greater financial and operational resources than we do. Further, many counties and municipalities that operate their own collection and disposal facilities have the benefits of tax revenue and greater opportunities for tax-exempt financing. Our ability to obtain solid waste volume for our landfills also may be limited by the fact that some major collection operations also own or operate landfills to which they send their waste. In certain markets in which we do not own or operate a landfill, our collection operations may have difficulty competing effectively. We are also subject to risks associated with contracts

awarded by municipalities and other entities through competitive bidding. For example, we may not be the successful bidder, we may need to lower our price in order to win or retain a contract, and our competitors may have lower financial

expectations that permit them to reduce their prices in order to win a contract. If we were to lose market share or if we were to lower prices to address competitive issues, it could negatively impact our consolidated financial condition, results of operations and cash flows.

Increases in the cost of fuel or petrochemicals increase our operating expenses, and we may not be able to recover such cost increases from our customers.

We depend on fuel purchased in the open market to operate our collection and transfer trucks and other equipment used for collection, transfer, disposal and other environmental services. Fuel prices are unpredictable and fluctuate significantly based on events beyond our control, including geopolitical developments, actions by the Organization of the Petroleum Exporting Countries and other oil and gas producers, changes in refinery operations, supply and demand for oil and gas, war, terrorism and unrest in oil-producing countries, adverse weather and regional production patterns. Due to contractual or market factors, we may not be able to offset increased fuel costs resulting from such volatility through fuel recovery fees. Our fuel costs were \$541.6 million in 2023, or 3.6% of revenue, compared to \$631.1 million in 2022, or 4.7% of revenue.

At current consumption levels, a twenty-cent per gallon change in the price of diesel fuel changes our fuel costs by approximately \$27 million on an annual basis. Offsetting these changes in fuel expense would be changes in our fuel recovery fee charged to our customers. At current participation rates, we believe a twenty-cent per gallon change in the price of diesel fuel changes our fuel recovery fee by approximately \$36 million. A substantial rise or drop in fuel costs could materially affect our revenue and cost of operations.

Over the last decade, regulations have been adopted mandating changes in the composition of fuels for motor vehicles. The renewable fuel standards that the EPA sets annually affect the type of fuel our motor vehicle fleet uses. It is difficult to predict the quantity of renewable fuel volumes that the EPA will mandate for future years. These regulations are one of many factors that may affect the cost of the fuel we use.

Part of our fleet of vehicles is powered by CNG and we also operate CNG fueling stations. We have invested higher upfront capital costs in order to purchase and support our CNG vehicles and fueling stations in order to reduce our overall fleet operating costs through lower fuel expenses and to create a competitive advantage in communities that focus on protecting the environment. CNG is not yet widely adopted in North America. As the CNG industry develops, new regulations, the availability of alternative fuel technologies, fluctuations in the price or availability of CNG or reductions in tax incentives for the use of CNG vehicles could substantially affect our revenue and costs of operations and reduce the benefits sought by investing in CNG vehicles and fueling stations.

Our operations also require the use of products (such as liners at our landfills) whose costs may vary with the price of petrochemicals. An increase in the price of petrochemicals could increase the cost of those products, which would increase our operating and capital costs. Petrochemical prices, and hence our operating and capital costs, may be further affected by regulatory efforts to reduce greenhouse gases from the industries that produce such petrochemicals. We are also susceptible to increases in fuel recovery fees from our vendors.

Fluctuations in prices for recycled commodities that we sell to customers may adversely affect our consolidated financial condition, results of operations and cash flows.

We purchase or collect and process recyclable materials such as paper, cardboard, plastics, aluminum and other metals for sale to third parties. Our results of operations may be affected by changing prices or market requirements for recyclable materials. The resale and purchase prices of, and market demand for, recyclable materials are volatile due to changes in economic conditions and numerous other factors beyond our control. For instance, in 2017 the Chinese government imposed strict limits on the import of recyclable materials, including by restricting the amount of contaminants allowed in imported recycled paper. These limitations significantly decreased the global demand for recyclable materials and resulted in lower commodity prices. Significant price fluctuations or increased operating costs may affect our consolidated financial condition, results of operations and cash flows. In 2023, approximately 82% of our recycling center volume was fiber based and included OCC, ONP and other mixed paper.

At current volumes and mix of materials, we believe a \$10 per ton change in the price of recycled commodities change both annual revenue and operating income by approximately \$10 million. Accordingly, a substantial rise or drop in recycled commodity prices could materially affect our revenue and operating income. Although we have entered into hedging agreements to help offset volatility in recycled commodity prices in the past, we may not enter into these agreements in the future.

Acute and chronic weather events, including those brought about by climate change, may adversely impact our operations and increase the costs of collection, transfer, disposal and other environmental services we provide.

Our operations could be adversely impacted by extreme weather events, changing weather patterns and rising mean temperature and sea levels, some of which we are already experiencing. For example, we have operations in multiple states that are affected by hurricanes and we have seen the impact of storms and associated flooding in our day-to-day operations and our infrastructure. Changing weather patterns and rising temperatures are expected to result in more severe heat waves, fires, storms and other extreme weather events. Any of these factors could increase the volume of material collected or processed under our existing contracts (without corresponding compensation), impede our employees' and equipment's ability to operate, disrupt our supply chain, delay the development of landfill capacity, or reduce the volume of material generated by our customers. In addition, adverse weather conditions may result in the temporary suspension of our operations, which can significantly affect our operating results in the affected regions during those periods.

The environmental services industry is a capital-intensive industry and our capital expenditures may exceed current expectations, which could require us to obtain additional funding for our operations or impair our ability to grow our business.

Our ability to remain competitive and to grow our business largely depends on our cash flow from operations and access to capital. If our capital efficiency programs cannot offset the effect of inflation and business growth, it may be necessary to increase the amount we spend. Additionally, if we make acquisitions or further expand our operations, the amount we spend on capital, capping, closure, post-closure, environmental remediation and other items will increase. Our cash needs also will increase if the expenditures for capping, closure, post-closure and remediation activities increase above our current estimates, which may occur over a long period due to changes in federal, state, provincial, or local government requirements and other factors beyond our control. Increases in expenditures would negatively impact our cash flows.

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

We cannot assure you that we will be able to obtain or maintain the permits required for our operations because permits to operate new landfills, transfer stations and other facilities, or to expand the permitted capacity of existing landfills, increase acceptable volume at transfer stations or otherwise increase the capabilities of our facilities, have become more difficult and expensive to obtain and maintain. Permits often take years to obtain as a result of numerous hearings and compliance requirements with regard to zoning, environmental and other regulations. These permits are also often subject to resistance from citizen or other groups and other political pressures. Local communities and citizen groups, adjacent landowners, governmental agencies and others may oppose the issuance of a permit or approval we may need, allege violations of the permits under which we currently operate or laws or regulations to which we are subject, or seek to impose liability on us for environmental damage. Such actions could also create risks related to our reputation, which may limit our ability to do business. Responding to these challenges has, at times, increased our costs and extended the time associated with establishing new landfills, transfer stations and other facilities and expanding existing facilities. In addition, failure to receive regulatory and zoning approval may prohibit us from establishing new landfills, transfer stations and other facilities, or expanding existing facilities. Our failure to obtain the required permits to operate our landfills, transfer stations and other facilities could have a material adverse effect on our consolidated financial condition, results of operations and cash flows. In addition, we may have to dispose collected waste at landfills operated by our competitors or haul the waste long distances at a higher cost to one of our other landfills, either of which could significantly increase our waste disposal costs.

If we do not appropriately estimate landfill capping, closure, post-closure and remediation costs, our consolidated financial condition and results of operations may be adversely affected.

A landfill must be closed and capped, and post-closure maintenance commenced, once the landfill's permitted capacity is reached and additional capacity is not authorized. Further, we undertake remediation activities at some of our solid waste facilities. We have significant financial obligations relating to capping, closure, post-closure and remediation costs at our existing owned or operated landfills, and will have material financial obligations with respect to any future owned or operated landfills. We establish accruals for the estimated costs associated with capping, closure, post-closure and remediation obligations. We could underestimate such costs and our financial obligations for capping, closure, post-closure or remediation costs could exceed the amounts accrued or amounts otherwise receivable pursuant to trust funds established for this purpose. Additionally, if a landfill must be closed earlier than expected or its remaining airspace is reduced for any other reason, the accruals for capping, closure, post-closure and remediation could be required to be accelerated. If our capping, closure, post-closure or remediation costs exceed the amounts accrued, or if such accruals are required to be accelerated, this could have a material adverse effect on our consolidated financial condition, results of operations and cash flows.

Alternatives to landfill disposal could reduce our disposal volumes and cause our revenues and operating results to decline.

Most of the states in which we operate landfills require counties and municipalities to formulate comprehensive plans to reduce the volume of solid waste deposited in landfills through waste planning, composting, recycling or other programs. Some state and local governments mandate waste reduction at the source and prohibit the disposal of certain types of wastes, such as yard waste, at landfills. Further, many of our customers voluntarily are diverting waste to alternatives to landfill disposal, such as recycling and composting, while also working to reduce the amount of waste they generate. Many of the largest companies in the United States are setting zero-waste goals in which they strive to send no waste to landfills and some jurisdictions have enacted or are considering waste reduction regulations such as extended producer responsibility, organic diversion and minimum recycled content regulations. Although such actions help to protect our environment and reduce the impact of waste on climate change, they have reduced, and will in the future reduce, the volume of waste going to landfills and may affect the prices that we can charge for landfill disposal. Accordingly, we may not be able to operate our landfills at their current volumes or charge current prices for landfill disposal services due to possible decreases in demand for such services. If we cannot expand our service offerings and grow lines of business to service waste streams that do not go to landfills and to provide services for customers that wish to reduce waste entirely, this could have a negative effect on our consolidated financial condition, results of operations and cash flows. Further, even if we can develop such service offerings and lines of business, disposal alternatives nonetheless could have a negative effect on our consolidated financial condition, results of operations and cash flows.

We could incur charges to income, which could be material, if landfill and transfer station site development projects or expansion projects are not completed, or certain other events occur.

In accordance with the accounting principles generally accepted in the United States of America (U.S. GAAP), we capitalize certain expenditures relating to the development and expansion of landfills, transfer stations and other projects. If a facility or operation is permanently shut down or determined to be impaired, or a development, expansion or other project is not completed or is determined to be impaired, we will charge against earnings any unamortized capitalized expenditures relating to such facility or project that we are unable to recover through sale, transfer or otherwise. We also carry a significant amount of goodwill on our consolidated balance sheets, which we must assess for impairment annually, and more frequently in the case of certain triggering events. We may incur charges against earnings in accordance with this policy, or other events may cause impairments. Such charges could have a material adverse effect on our results of operations.

The business and assets we operate expose us to safety, operational and other risks, including the risk of personal injury to our employees or third parties.

The provision of environmental services, including the operation of our facilities, a substantial fleet of trucks and other waste-related assets, involves risks. These risks include, among others, the risk of truck accidents, equipment defects, malfunctions and failures, improper use of dangerous equipment, the release of hazardous substances, fire and explosion, any of which could result in environmental liability, personal injury, loss of life, business interruption or property damage or destruction. While we carry insurance to cover many contingencies, and seek to minimize our exposure to these risks through maintenance, training and compliance programs, any substantial losses could have a material adverse effect on our business, results of operations and financial condition.

We may be subject to work stoppages and other workforce effects, which could increase our operating costs and disrupt our operations.

As of December 31, 2023, approximately 23% of our workforce was covered by collective bargaining agreements. If our union-represented employees engage in strikes, work stoppages or other slowdowns, we could experience a significant disruption of our operations and an increase in our operating costs, which could have an adverse effect on our consolidated financial condition, results of operations and cash flows. We have experienced interrupted service when our union-represented employees have engaged in strikes and work stoppages in the past, and we would expect the same to occur as a result of any future strikes or work stoppages. Additional groups of employees may seek union representation in the future which could result in increased operating costs. If a greater percentage of our workforce becomes union-represented, our consolidated financial condition, results of operations and cash flows could be adversely impacted due to the potential for increased operating costs.

We may not be able to achieve reduction of our greenhouse gas emissions and our other sustainability goals.

Climate change and other sustainability matters are embedded in our core value and vision. As part of our strategic long-term plans to address sustainability, among other sustainability goals, we are committed to reducing our absolute Scope 1 and Scope 2 greenhouse gas emissions 35% by 2030 relative to the 2017 baseline year. The execution of our plans and achievement of our goals are subject to risks and uncertainties, including our ability to develop, obtain, license or scale the innovations, technologies and modeling and measurement tools that may be necessary to achieve our plans and the availability, cost and

benefits of materials and infrastructure associated with our sustainability projects, such as our CNG vehicles, fleet electrification, recycling, circularity of key materials, landfill gas-to-energy and other renewable energy projects.

In addition, increasing governmental and societal attention to sustainability matters, including expanding mandatory and voluntary reporting, diligence and disclosure on topics such as climate change, waste production, water usage, talent management and risk oversight, could expand the nature, scope and complexity of matters that we are required to control, assess and report. These and other rapidly changing laws, regulations, policies and related interpretations, as well as increased enforcement actions by various governmental and regulatory agencies, create challenges for us. If we are unable to continue to meet these challenges and comply with all laws, regulations, policies and related interpretations, and meet the sustainability values, standards and metrics that we set for ourselves, it could negatively impact our reputation and our business results.

Risks Related to our Legal and Regulatory Environment

We are subject to costly environmental and flow-control regulations and requirements that may affect our operating margins, restrict our operations and subject us to additional liability.

Complying with laws and regulations governing the collection, treatment, storage, transfer and disposal of material, air quality and emissions of greenhouse gases, water quality and the remediation of contamination associated with the release of hazardous substances is costly. Laws and regulations often require us to, among other things, enhance or replace our equipment and to modify landfill operations or initiate final closure of a landfill. We may not be able to implement price increases sufficient to offset the costs of complying with these laws and regulations. In addition, environmental regulatory changes, including those relating to per- and polyfluoroalkyl substances (commonly referred to as PFAS) and other chemicals of emerging concern, could accelerate or increase expenditures for capping, closure, post-closure and environmental and remediation activities at our waste facilities and obligate us to spend sums in addition to those presently accrued for such purposes, which could have a negative effect on our consolidated financial position, results of operations and cash flows. For example, the EPA has indicated it is considering listing certain PFAS as hazardous substances under CERCLA, which if finalized could trigger additional obligations or liabilities under CERCLA or other laws and regulations. Further, under certain municipal and other agreements, we are subject to landfill diversion requirements that if not met, subject us to liquidated damages and other costs and expenses, the result of which could adversely affect our business, reputation and operating margins.

Our Group 3 operations and facilities also are subject to Canadian environmental laws and regulations, including federal and provincial regulations governing the management of hazardous waste, as well as various treaties, laws and regulations governing the ownership, operation and maintenance of maritime vessels used in the business. Our Group 3 operations are also subject to federal statutes regulating the treatment, storage and disposal of certain radioactive materials.

Our business is and will continue to be affected by state, county, provincial, or local laws or regulations that restrict the transportation of solid waste across state, county, provincial, or other jurisdictional lines or that direct the flow of waste to a specified facility or facilities. Such laws and regulations could negatively affect our operations, resulting in declines in landfill volumes and increased costs of alternate disposal.

Regulation of greenhouse gas emissions and other governmental regulations could impose costs on our operations, the magnitude of which is difficult to estimate.

Efforts to curtail the emission of greenhouse gases and to ameliorate the effects of climate change continue to progress. Our landfill operations emit anthropogenic methane, identified as a greenhouse gas, and our vehicle fleet emits, among other things, carbon dioxide, which also is a greenhouse gas. While passage of comprehensive, federal climate change legislation appears unlikely in the near term, we expect any such legislation, if enacted, to impose costs on our operations, which could be material.

Absent comprehensive federal legislation to control greenhouse gas emissions, the EPA has taken certain actions administratively under its existing Clean Air Act authority. The EPA is compelled to issue rules by the United States Supreme Court's April 2007 *Massachusetts v. EPA* ruling that greenhouse gases are pollutants for purposes of the Clean Air Act and the EPA's December 2009 finding that continued emissions of greenhouse gases endanger human health and welfare. With respect to our light- and heavy-duty vehicle fleet, the EPA has finalized regulations limiting greenhouse gas emissions and increasing fuel economy standards. The EPA and the NHTSA have finalized such regulations applicable to light-duty vehicles through model year 2025. In 2018, the EPA and the NHTSA proposed to revise the light-duty vehicle standards for model years 2021 through 2024 to make them less stringent; final action on the proposal took place in 2020 but has been challenged in court. On August 16, 2016, the EPA and the NHTSA issued additional regulations that would impose more stringent standards for heavy-duty vehicles through model-year 2027. For further discussion, see Item 1. *Business – Regulation – Federal Regulation – The Clean Air Act*, in this Annual Report on Form 10-K. These standards and further federal efforts to curtail greenhouse gas emissions and to increase the fuel efficiency of

light-duty and heavy-duty vehicles could have a material adverse effect on our consolidated financial condition, results of operations and cash flows.

With regard to greenhouse gas emissions from our landfills, on July 14, 2016, the EPA issued amendments to its regulations that require large landfills that commenced construction, reconstruction or modification on or after July 17, 2014 to capture additional landfill gas to reduce emissions of methane and certain non-methane gases, which are recognized as greenhouse gases. In a separate action finalized that same day, the EPA issued updates to its 1996 Emission Guidelines to reduce emissions of landfill gas from existing active landfills. As part of the Biden Administration focus on climate change, the EPA has taken further steps to implement these regulations. These regulations, or an amended version of them that eventually goes into effect, may require our landfills to deploy more stringent emission controls and monitoring systems, with resulting capital or operating costs. The application of these or other greenhouse gas regulations to our landfills could have a material adverse effect on our landfill operations and on our consolidated financial condition, results of operations and cash flows. We cannot predict what other actions or regulations the current administration may undertake that would affect our industry.

In Canada, the federal Greenhouse Gas Pollution Pricing Act imposes a carbon pricing system for industry in provinces and territories that have not implemented carbon pricing systems of their own or, in the opinion of the federal government, have implemented carbon pricing systems that do not align with the federal benchmark requirements. This federal system imposes a carbon levy to the sale of fuel and sets out an output-based pricing system that applies to industrial emitters that meet certain criteria set out in the statute and its regulations, which creates a price incentive for industrial emitters to reduce greenhouse gas emissions by establishing a regulatory trading system for industry. The carbon levy on fuel is administered by the Canada Revenue Agency and is a carbon tax that applies to the sale of 22 different types of fuel as set out in the statute and its regulations. As of 2024, the Fuel Charge is \$80 per ton of CO₂e and will increase to \$170 per ton by 2030. Both direct and indirect costs associated with compliance with this and other greenhouse gas legislation could have a material adverse effect on our consolidated financial condition, results of operations and cash flows, including material increases to our capital or operating costs related to matters such as infrastructure upgrades or increased fuel costs.

We may incur losses from liabilities that are not covered by our insurance. Changes in insurance markets also may impact our financial results.

We may incur liabilities or suffer losses arising from our operations or properties that resulted in harm to the environment, property, employees or the general public. We maintain insurance for these liabilities and losses, including high deductibles for our environmental liability insurance coverage. If we were to incur substantial liability or loss in connection with these contingencies, our insurance coverage may be inadequate to cover such liability or loss. This could have a material adverse effect on our consolidated financial condition, results of operations and cash flows.

Also, due to the variable condition of the insurance market, we have experienced, and may experience in the future, increased insurance retention levels and increased premiums or unavailability of insurance. As we assume more risk for insurance through higher retention levels, we may experience more variability in our insurance reserves and expense.

Despite our efforts, we may incur additional liability under environmental laws in excess of amounts presently known and accrued.

We are a potentially responsible party at many sites under CERCLA, which provides for the remediation of contaminated facilities and imposes strict, joint and several liability for the cost of remediation on current owners and operators of a facility at which there has been a release or a threatened release of a hazardous substance. CERCLA liability also extends to parties who were site owners and operators at the time hazardous substances were disposed and on persons who arrange for the disposal of such substances at the facility (e.g., generators of the waste and transporters who selected the disposal site). Hundreds of substances are defined as hazardous under CERCLA and their presence, even in minute amounts, can result in substantial liability.

Notwithstanding our efforts to comply with applicable environmental laws, we may have additional liability under environmental laws in excess of our current reserves because, among other things, hazardous substances may be present in waste collected by us or disposed of in our landfills (or in waste collected, transported or disposed of in the past by businesses we have acquired), environmental laws or regulations may change, or there may be adverse environmental conditions that develop or were otherwise previously unknown to us. Environmental liabilities in excess of our current reserves could have a material adverse effect on our consolidated financial position, results of operations and cash flows.

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

We are and will continue to be involved in lawsuits, regulatory inquiries and governmental and other legal proceedings. Many of these matters raise complicated factual and legal issues and are subject to uncertainties. The timing of the final resolutions to lawsuits, regulatory inquiries and governmental and other legal proceedings is uncertain. Further, the possible outcomes or

resolutions to these matters could include adverse judgments, fines or settlements, any of which could require substantial payments and adversely affect our consolidated financial condition, results of operations and cash flows.

For example, we incur costs to defend against litigation brought by government agencies and private parties who allege we are in violation of our permits and applicable environmental laws and regulations, or who assert claims alleging nuisance, environmental damage, personal injury or property damage. As a result, we may be required to pay fines or judgments or implement corrective measures, or we may have our permits and licenses modified or revoked. A significant judgment against us or settlement, the loss of a significant permit or license, or the imposition of a significant fine could have a material adverse effect on our consolidated financial condition, results of operations and cash flows. We establish accruals for our estimates of the costs associated with lawsuits, regulatory, governmental and other legal proceedings. We could underestimate such accruals. Such shortfalls could result in significant unanticipated charges to income.

Changes to federal renewable fuel policies could affect our financial performance in that sector as a renewable fuel producer and impact our projected future investments.

We are engaged in 76 landfill gas-to-energy and other renewable energy projects. The production of renewable fuel through certain of these projects is incentivized by the federal Renewable Fuel Standard (RFS) program. Oil refiners and importers are required through the RFS program to blend specified volumes of renewable transportation fuels with gasoline or buy RINs from renewable fuel producers. RIN prices generally respond to administrative actions, decisions and/or regulations from the EPA, including the issuance of an annual renewable volumetric obligation, as well as fluctuations in supply and demand. Changes in the RFS market, the structure of the RFS program or RIN prices and demand may impact the financial performance of the projects developed to capture and treat gas and could impact or alter our projected future investments.

Risks Related to Financial Strategy and Indebtedness

We have substantial indebtedness, which may limit our financial flexibility.

As of December 31, 2023, we had approximately \$13 billion in principal value of debt and finance leases outstanding. This amount of indebtedness and our debt service requirements may limit our financial flexibility to access additional capital and make capital expenditures and other investments in our business, to withstand economic downturns and interest rate increases, to plan for or react to changes in our business and our industry and to comply with the financial and other covenants of our debt instruments. Further, our ability to comply with these financial and other covenants may be affected by changes in economic or business conditions or other events that are beyond our control. If we do not comply with these covenants, we may be required to take actions such as reducing or delaying capital expenditures, reducing or eliminating dividends or stock repurchases, selling assets, restructuring or refinancing all or part of our existing debt, or seeking additional equity capital.

We may be unable to maintain our credit ratings or execute our financial strategy.

Our ability to execute our financial strategy depends in part on our ability to maintain investment grade ratings on our debt. The credit rating process is contingent upon a number of factors, many of which are beyond our control. We may not be able to maintain our investment grade ratings in the future. If we were unable to do so, our interest expense would increase and our ability to obtain financing on favorable terms may be adversely affected.

Our financial strategy also depends on our ability to generate sufficient cash flow to reinvest in our existing business, fund internal growth, acquire other environmental services businesses, pay dividends, repurchase stock and take other actions to enhance shareholder value. We may not succeed in executing our broad-based pricing initiatives, and we may not generate sufficient cash flow to execute our financial strategy, pay cash dividends at our present rate, or increase them, or be able to continue our share repurchase program.

Weakness in the United States economy may expose us to credit risk for amounts due from governmental entities, large national accounts, industrial customers and others.

Weakness in the United States economy can reduce the amount of taxes collected by various governmental entities. We provide services to a number of these entities, including numerous municipalities. These governmental entities may suffer financial difficulties resulting from a decrease in tax revenue and may ultimately be unable or unwilling to pay amounts owed to us. In addition, weakness in the economy may cause other customers, including our large national accounts, or industrial or environmental services clients, to suffer financial difficulties and ultimately to be unable or unwilling to pay amounts owed to us. This could negatively impact our consolidated financial condition, results of operations and cash flows.

Our consolidated financial statements are based on estimates and assumptions that may differ from actual results. The liabilities we record based on such estimates and assumptions may not be adequate to cover the costs we ultimately will face.

Our consolidated financial statements have been prepared in accordance with U.S. GAAP and necessarily include amounts based on management's estimates. Actual results may differ from these amounts. Significant items requiring management to make subjective or complex judgments that are inherently uncertain include the recoverability of long-lived assets, the depletion

and amortization of landfill development costs, accruals for final capping, closure and post-closure costs, valuation allowances for accounts receivable and deferred tax assets, liabilities for potential litigation, claims and assessments and liabilities for environmental remediation, multiemployer pension plans, employee benefit plans, deferred taxes, uncertain tax positions, insurance and our estimates of the fair values of assets acquired and liabilities assumed in any acquisition. The liabilities recorded for items such as these may not be adequate to cover the costs we ultimately will face.

Our obligation to fund multiemployer pension plans to which we contribute, or our withdrawal from such plans, may have an adverse effect on us.

We participate in multiemployer pension plans that generally provide retirement benefits to participants of contributing employers. We do not administer these plans and generally are not represented on the boards of trustees of these plans. The Pension Protection Act enacted in 2006 (the PPA) requires under-funded pension plans to improve their funding ratios. Based on the information available to us, we believe that some of the multiemployer plans to which we contribute are either critical or endangered as those terms are defined in the PPA. We cannot presently determine the amount of additional funding, if any, we may be required to make to these plans. However, plan assessments could have a material adverse effect on our results of operations or cash flows for a given period.

Further, under current law, upon the termination of a multiemployer pension plan, or in the event of a withdrawal by us (which we consider from time to time) or a mass withdrawal of contributing employers (each, a Withdrawal Event), we would be required to make payments to the plan for our proportionate share of the plan's unfunded vested liabilities. We cannot assure you that there will not be a Withdrawal Event with respect to any of the multiemployer pension plans to which we contribute or that, in the event of such a Withdrawal Event, the amounts we would be required to contribute would not have a material adverse effect on our consolidated financial condition, results of operations and cash flows.

For additional discussion and detail regarding multiemployer pension plans see Note 12, *Employee Benefit Plans*, of the notes to our audited consolidated financial statements in Part II, Item 8 of this Annual Report on Form 10-K.

The costs of providing for pension benefits and related funding requirements are subject to changes in pension fund values and fluctuating actuarial assumptions and may have a material adverse effect on our consolidated financial condition, results of operations and cash flows.

We sponsor a defined benefit pension plan that is funded with trustee assets invested in a diversified portfolio of debt and equity securities. Our costs for providing such benefits and related funding requirements are subject to changes in the market value of plan assets. Our pension expenses and related funding requirements are also subject to various actuarial calculations and assumptions, which may differ materially from actual results due to changing market and economic conditions, interest rates and other factors. A significant increase in our pension obligations and funding requirements could have a material adverse effect on our consolidated financial condition, results of operations and cash flows.

Risks Related to Our Growth Strategy

We may be unable to manage our growth effectively.

Our growth strategy places significant demands on our financial, operational and management resources. To continue our growth, we may need to add administrative, managerial and other personnel, and may need to make additional investments in operations and systems. We may not be able to find and train qualified personnel, or do so on a timely basis, or to expand or otherwise modify our operations and systems to the extent, and in the time, required.

We may be unable to execute our acquisition growth strategy.

Our ability to execute our growth strategy depends in part on our ability to identify and acquire desirable acquisition candidates and on our ability to successfully integrate acquired operations into our business. The integration of our operations with those of acquired companies may present significant challenges to our management. In addition, competition for acquisition candidates may prevent us from acquiring certain acquisition candidates. Thus, we cannot assure you that:

- desirable acquisition candidates exist or will be identified;
- we will be able to acquire any of the candidates identified;
- we will effectively integrate and manage companies we acquire; or
- any acquisitions will be profitable or accretive to our earnings.

If any of these factors force us to alter our growth strategy, our growth prospects could be adversely affected.

Businesses we acquire may have undisclosed liabilities.

Our due diligence investigations of acquisition candidates may fail to discover certain undisclosed liabilities. If we acquire a company with undisclosed liabilities such as environmental, remediation or contractual liabilities, as a successor owner we may be responsible for such undisclosed liabilities. We try to minimize our exposure to such liabilities by conducting due diligence, by obtaining indemnification from each seller of the acquired companies, by deferring payment of a portion of the purchase price as security for the indemnification, by obtaining representations and warranties insurance and by acquiring only specified assets. However, we may not be able to obtain indemnification, insurance coverage or other security, and such indemnification, insurance coverage or other security obtained may not be enforceable, collectible or sufficient in amount, scope or duration to fully offset any undisclosed liabilities arising from our acquisitions.

Risks Related to Technology and Intellectual Property

Our strategy includes an increasing dependence on technology in our operations. If any of our key technology fails, our business could be adversely affected.

Our operations are increasingly dependent on technology. Our information technology systems are critical to our ability to drive profitable growth through differentiation, continue the implementation of standardized processes and deliver a consistent customer experience. One of our three differentiating capabilities is to enable our customers to do business with us through more channels and with better access to information and, accordingly, we have made substantial investment in our e-commerce platform. Problems with the operation of the information or communication technology systems we use could adversely affect, or temporarily disable, all or a portion of our operations. Inabilities and delays in implementing new systems can also affect our ability to realize projected or expected revenue or cost savings. Further, any systems failures could impede our ability to timely collect and report financial results in accordance with applicable laws.

Emerging technologies, including those that are used to recycle and process waste as an alternative to disposal of waste in landfills, represent risks, as well as opportunities, to our current business model. The costs associated with developing or investing in emerging technologies could require substantial capital and adversely affect our results of operations and cash flows. Delays in the development or implementation of such emerging technologies and difficulties in marketing new products or services based on emerging technologies could have similar negative impacts. Our financial results may suffer if we are not able to develop or license emerging technologies, or if a competitor obtains exclusive rights to an emerging technology that disrupts the current methods used in the environmental services industry.

A cybersecurity incident could negatively impact our business and our relationships with customers.

We use information technology and operational technology assets, including computer and information networks, in substantially all aspects of our business operations. We also use mobile devices, social networking and other online activities to connect with our employees and our customers. Such uses give rise to cybersecurity risks, including security breach, espionage, system disruption, theft and inadvertent release of information. Our business involves the storage and transmission of numerous classes of sensitive and/or confidential information and intellectual property, including customers' personal information, private information about employees and financial and strategic information about us and our business partners. We also rely on a Payment Card Industry compliant third party to protect our customers' credit card information. In connection with our strategy to grow through acquisitions and to pursue new initiatives that improve our operations and cost structure, we are also expanding and improving our information technologies, resulting in a larger technological presence and corresponding exposure to cybersecurity risk. If we fail to assess and identify cybersecurity threats associated with acquisitions and new initiatives, we may become increasingly vulnerable to such threats. Additionally, while we have implemented measures to prevent security breaches and cyber incidents, our preventive measures and incident response efforts may not be entirely effective. Also, the regulatory environment surrounding information security and privacy is increasingly demanding, with the frequent imposition of new and constantly changing requirements. This changing regulatory landscape may cause increasingly complex compliance challenges, which may increase our compliance costs. Any failure to comply with these changing security and privacy laws and regulations could result in significant penalties, fines, legal challenges and reputational harm. The theft, destruction, loss, misappropriation, or release of sensitive and/or confidential information or intellectual property, or interference with our information technology systems or the technology systems of third parties on which we rely, could result in business disruption, negative publicity, brand damage, violation of privacy laws, loss of customers, potential liability and competitive disadvantage.

Other Risks Relevant to Our Business

Price increases may not be adequate to offset the effect of increased costs and may cause us to lose volume.

We seek to secure price increases necessary to offset increased costs, improve our operating margins and earn an appropriate return on our substantial investments in assets such as our landfills. From time to time, our competitors reduce their prices in an effort to expand their market share. Contractual, general economic or market-specific conditions also may limit our ability to

raise prices. For example, many of our contracts have price adjustment provisions that are tied to an index such as the consumer price index. Particularly in a weak or volatile United States economy, our costs may increase in excess of the increase, if any, in the consumer price index. This may continue to be the case even when the United States economy recovers because a recovery in the environmental services industry historically has lagged behind a recovery in the general economy. As a result, we may be unable to offset increases in costs, improve our operating margins and obtain adequate investment returns through price increases. Price increases also might cause us to lose volume to lower-cost competitors.

The loss of key personnel could have a material adverse effect on our consolidated financial condition, results of operations, cash flows and growth prospects.

Our future success depends on the continued contributions of several key employees and officers. The loss of the services of key employees and officers, whether through resignation or other causes, or the inability to attract additional qualified personnel, could have a material adverse effect on our consolidated financial condition, results of operations, cash flows and growth prospects. In some of our markets, we compete with other similar businesses which may drive labor costs or reduce the amount of available qualified personnel.

The introduction of new accounting rules, laws or regulations could adversely impact our reported results of operations.

Complying with new accounting rules, laws or regulations, such as, for example, those related to our asset retirement obligations and environmental liabilities, could adversely impact our results of operations or cause unanticipated fluctuations in our results of operations or financial conditions in future periods.

Weakened or volatile economic conditions have and may continue to harm our industry, business and results of operations.

Our business is directly affected by changes in local, national, global and general economic factors and overall economic activity that are outside of our control, including changes in governmental monetary policies, consumer confidence, slowing economic growth, inflation, pandemics, supply chain issues and interest rates. In recent years, for example, the COVID-19 pandemic, inflation, the Ukraine-Russia conflict, United States-China relations, the Israel-Gaza conflict, monetary policy changes, and the resulting increases in interest rates negatively impacted the economy, disrupted supply chains and created significant volatility and disruption of financial markets. In particular, disruption of the labor market and supply chains related to vehicles, especially trucks and the mechanical and electrical components in order to service them, negatively impacts our ability to provide services. A weak or volatile economy may result in decreases in volumes, which adversely affects our revenues. In addition, we have certain fixed costs (e.g., facility expense associated with long-term leases, depreciation expense and accretion expense), which may be difficult to adjust quickly to match declining volume levels. Consumer uncertainty and the loss of consumer confidence may decrease overall economic activity and thereby limit the amount of services we provide. Additionally, a decline in volumes may result in increased competitive pricing pressure and increased customer turnover, resulting in lower revenue and increased operating costs. Operating in an environment of worsening economic conditions could have a material adverse effect on our consolidated financial condition, results of operations and cash flows. Further, recovery in the environmental services industry historically has lagged behind recovery in the general economy. Accordingly, we cannot assure you that an improvement in general economic conditions will result in an immediate, or any, improvement in our consolidated financial condition, results of operations or cash flows.

ITEM 1B. UNRESOLVED STAFF COMMENTS

None.

ITEM 1C. CYBERSECURITY

Cybersecurity Risk Management and Strategy

Republic's technology and cybersecurity programs are crucial to maintaining secure operations, which enable us to deliver on our promise to customers and maintain stakeholder trust. Our Cybersecurity organization, led by our Chief Information Security Officer (CISO), is responsible for establishing, implementing and executing our cybersecurity program and strategy. Our CISO has over 20 years of information technology, information technology audit, and cybersecurity experience, and is involved in assessing the latest developments in cybersecurity, including potential threats and innovative risk management techniques.

Our cybersecurity program is a critical component of our enterprise risk management process overseen by our Board of Directors, and we have integrated cybersecurity-related risks into our overall enterprise risk management framework. Additionally, cybersecurity-related risks are included in the risk universe that the risk management function evaluates to assess top risks to the enterprise on an annual basis.

Our Cybersecurity organization proactively identifies, manages, and mitigates cyber risk in a variety of ways, including but not limited to:

- a. A formal enterprise-wide cybersecurity policy and related standards;
- b. Cybersecurity training and employee phishing simulations;
- c. Scheduled and ad hoc internal and external penetration tests;
- d. Cyber incident response, IT disaster recovery, and business continuity plans;
- e. Cybersecurity assessments and remediation planning as part of our M&A due diligence process;
- f. Identity and access management controls;
- g. Third-party risk assessment and management for vendors and third-party service providers; and
- h. Cyber incident tabletop exercises for our Board of Directors and management.

A primary element of our cybersecurity program is the implementation of controls that are aligned with industry guidelines and applicable regulations to identify threats, deter attacks, and protect our information security assets. We have procedures in place for selecting and managing our relationships with third-party service providers and other business partners, including to monitor compliance with our agreements and regulatory and legal requirements. We also actively engage with industry participants and intelligence and law enforcement communities as part of our continuing efforts to evaluate and enhance the effectiveness of our information security policies and procedures.

Our cybersecurity program is designed based on the concepts of control maturity and control efficacy. For control maturity, our cybersecurity program is aligned to the National Institute of Standards and Technology (NIST) Cybersecurity Framework (CSF) and is assessed annually by an independent third party against our yearly control maturity targets in the context of current cyber threat and industry trends. The NIST CSF assessment results are used to validate the progress made against the current year maturity targets, inform the program's strategic priorities and establish maturity targets for the following year. These assessment results are provided to our Audit Committee and our Board of Directors on an annual basis.

For control efficacy, the cybersecurity program leverages a variety of metrics and measurements to demonstrate whether the control objectives are being consistently achieved within the target range. Monthly security operation (SecOps) reviews are utilized to monitor metric trends and root causes to determine potential capability improvements. The monthly SecOps reviews and related actions are aggregated into a subset of key metrics reviewed quarterly by the Audit Committee.

Cybersecurity Governance

Our Audit Committee oversees the management of our cybersecurity risk exposures and the steps management has taken to monitor and control such exposures. At each quarterly meeting, the Audit Committee receives an update from our CISO and other members of management on relevant topics, including cybersecurity program maturity progress, new capabilities implemented, penetration testing results, key cyber risk metrics (e.g., simulated phishing testing and vulnerability management) and notable incidents or events should they occur. On an annual basis, our Board of Directors meets with our CISO and our third-party cybersecurity consultant to review our cybersecurity strategy and the results of our NIST CSF assessment. In accordance with our cybersecurity incident response plan, our Board is promptly informed of potentially material cybersecurity incidents, including with respect to our third-party service providers.

Although we have experienced cybersecurity incidents from time to time that have not had a material adverse effect on our business, financial condition, or results of operations, there can be no assurance that a cyber-attack, security breach, or other cybersecurity incident will not have a material adverse effect on us in the future. For a discussion regarding risks from cybersecurity threats that have or are reasonably likely to affect the company, see our risk factors, including the risk factors titled "Our strategy includes an increasing dependence on technology in our operations. If any of our key technology fails, our business could be adversely affected." and "A cybersecurity incident could negatively impact our business and our relationships with customers." in Item 1A of this Annual Report on Form 10-K.

ITEM 2. PROPERTIES

Our corporate office is located at 18500 North Allied Way, Phoenix, Arizona 85054, where we currently lease approximately 150,000 square feet of office space.

Our principal property and equipment consists of land, landfills, buildings, vehicles and equipment. We own or lease real property in the United States and Canada where we conduct operations. As of December 31, 2023, we operated across the United States and Canada through 364 collection operations, 246 transfer stations, 74 recycling centers, 207 active landfills, 3 treatment, recovery

and disposal facilities, 22 treatment, storage and disposal facilities (TSDF), 6 salt water disposal wells and 12 deep injection wells. In the aggregate, our active solid waste landfills total 118,010 acres, including 40,659 permitted acres.

We are engaged in 76 landfill gas-to-energy and other renewable energy projects and had post-closure responsibility for 126 closed landfills. We believe that our property and equipment are adequate for our current needs.

ITEM 3. LEGAL PROCEEDINGS

General Legal Proceedings

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

As used in the immediately following paragraph, the term *legal proceedings* refers to litigation and similar claims against us and our subsidiaries, excluding: (1) ordinary course accidents, general commercial liability and workers' compensation claims, which are covered by insurance programs, subject to customary deductibles, and which, together with self-insured employee health care costs, are discussed in Note 7, *Other Liabilities*, to our audited consolidated financial statements in Part II, Item 8 of this Annual Report on Form 10-K; and (2) environmental remediation liabilities, which totaled \$485.4 million at December 31, 2023 and which are discussed in Note 8, *Landfill and Environmental Costs*, to our audited consolidated financial statements in Part II, Item 8 of this Annual Report on Form 10-K.

We accrue for legal proceedings when losses become probable and reasonably estimable. We have recorded an aggregate accrual of approximately \$18 million relating to our outstanding legal proceedings as of December 31, 2023. As of the end of each applicable reporting period, we review each of our legal proceedings and, where it is probable that a liability has been incurred, we accrue for all probable and reasonably estimable losses. Where we are able to reasonably estimate a range of losses we may incur with respect to a matter, we record an accrual for the amount within the range that constitutes our best estimate. If we are able to reasonably estimate a range but no amount within the range appears to be a better estimate than any other, we use the amount that is the low end of such range. If we had used the high ends of such ranges, our aggregate potential liability would be approximately \$11 million higher than the amount recorded as of December 31, 2023.

Legal Proceedings over Certain Environmental Matters Involving Governmental Authorities with Possible Sanctions of \$1,000,000 or More

Item 103 of the SEC's Regulation S-K requires disclosure of certain environmental matters when a governmental authority is a party to the proceedings and the proceedings involve potential monetary sanctions unless we reasonably believe the monetary sanctions will not equal or exceed a threshold which we determine is reasonably designed to result in disclosure of any such proceeding that is material to our business or financial condition. We have determined such disclosure threshold to be \$1,000,000. We have no matters to disclose in accordance with that requirement.

ITEM 4. MINE SAFETY DISCLOSURES

None.

PART II

ITEM

5. MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

Market Information, Holders and Dividends

The principal market for our common stock is the New York Stock Exchange, and it is traded under the symbol RSG.

There were 490 holders of record of our common stock at February 13, 2024, which does not include beneficial owners for whom Cede & Co. or others act as nominees.

In January 2024, our Board of Directors declared a regular quarterly dividend of \$0.535 per share for shareholders of record on January 2, 2024. We expect to continue to pay quarterly cash dividends, and we may consider increasing our dividends if we believe it will enhance shareholder value.

We have the ability under our credit facilities to pay dividends and repurchase our common stock if we are in compliance with the financial covenants in our credit facilities. As of December 31, 2023, we were in compliance with those financial covenants.

Issuer Purchases of Equity Securities

The following table provides information relating to our purchases of shares of our common stock during the three months ended December 31, 2023:

	Total Number of Shares Purchased (a)	Average Price Paid per Share (a) (d)	Total Number of Shares Purchased as Part of Publicly Announced Program (b)	Dollar Value of Shares that May Yet Be Purchased Under the Program (c) (d)
October 1 – 31	500,160	\$ 142.69	500,160	\$ 1,282,578,751
November 1 – 30	—	\$ —	—	\$ 1,282,578,751
December 1 – 31	—	\$ —	—	\$ 1,282,578,751
	<u>500,160</u>		<u>500,160</u>	

- (a) In October 2020, our Board of Directors approved a \$2.0 billion share repurchase authorization effective starting January 1, 2021 and extending through December 31, 2023. In October 2023, our Board of Directors approved a \$3.0 billion share repurchase authorization effective starting January 1, 2024 and extending through December 31, 2026. Share repurchases under the program may be made through open market purchases or privately negotiated transactions in accordance with applicable federal securities laws. While the Board of Directors has approved the program, the timing of any purchases, the prices and the number of shares of common stock to be purchased will be determined by our management, at its discretion, and will depend upon market conditions and other factors. The share repurchase program may be extended, suspended or discontinued at any time. As of December 31, 2023, there were no repurchased shares pending settlement.
- (b) The total number of shares purchased as part of the publicly announced program were all purchased pursuant to the October 2020 authorization.
- (c) Shares that may be purchased under the program exclude shares of common stock that may be surrendered to satisfy statutory minimum tax withholding obligations in connection with the vesting of restricted stock units and performance stock units issued to employees.
- (d) The average price paid per share, total repurchase costs and approximate maximum dollar value of the shares that may yet be purchased under the plans or programs exclude a 1% excise tax.

Recent Sales of Unregistered Securities

There were no sales of unregistered securities during the three months ended December 31, 2023.

Performance Graph

The following graph compares the performance of our common stock to the Standard & Poor’s 500 Stock Index (S&P 500 Index) and the Dow Jones Waste & Disposal Services Index (DJ W&DS Index). The graph covers the period from December 31, 2018 to December 31, 2023 and assumes that the value of the investment in our common stock and in each index was \$100 as of December 31, 2018 and that all dividends were reinvested.

The following performance graph and related information shall not be deemed "soliciting material" or to be "filed" with the SEC, nor shall such information be incorporated by reference into any future filing under the Securities Act of 1933 or the Securities Exchange Act of 1934, each as amended, except to the extent that we specifically incorporate it by reference into such filing.

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Indexed Returns for the Years Ended December 31,																	
	2018		2019		2020		2021		2022		2023						
Republic Services, Inc.	\$	100.00		\$	126.61		\$	203.89		\$	191.32					\$	247.98
S&P 500 Index	\$	100.00		\$	131.49		\$	200.37		\$	164.08					\$	207.21
DJ W&DS Index	\$	100.00		\$	135.09		\$	201.25		\$	190.37					\$	224.24

Note: Prepared by Zacks Investment Research, Inc. Used with permission. All rights reserved. Copyright 1980-2024.

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Index data: Copyright Dow Jones, Inc. Used with permission. All rights reserved.

ITEM 6. [RESERVED]

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

You should read the following discussion in conjunction with our audited consolidated financial statements and the notes thereto included in Part II, Item 8 of this Annual Report on Form 10-K. This discussion may contain forward-looking statements that anticipate results that are subject to uncertainty. We discuss in more detail various factors that could cause actual results to differ from expectations in Part I, Item 1A, Risk Factors in this Annual Report on Form 10-K.

For further discussion regarding our results of operations for the year ended December 31, 2022 as compared to the year ended December 31, 2021, refer to Part II, Item 7. *Management's Discussion and Analysis of Financial Condition and Results of Operations*, in our Annual Report on [Form 10-K for the fiscal year ended December 31, 2022](#).

Recent Developments

2024 Financial Guidance

In 2024, we will focus on pricing in excess of cost inflation, driving profitable volume growth, investing in sustainability to improve the environment and drive growth, investing in value-creating acquisitions and advancing technology to improve productivity and increase customer retention. Specific guidance follows:

Revenue

We expect revenue to be in the range of \$16.100 billion to \$16.200 billion. We expect an increase in average yield of approximately 5.5% to 6.0% and volume growth to be in a range of 0.0% to 0.5%. Average yield on related business revenue is expected to be in a range of 6.5% to 7.0%.

Adjusted Diluted Earnings per Share

The following is a summary of anticipated adjusted diluted earnings per share for the year ending December 31, 2024 compared to the actual adjusted diluted earnings per share for the year ended December 31, 2023. Adjusted diluted earnings per share is not a measure determined in accordance with U.S. GAAP:

	(Anticipated) Year Ending December 31, 2024	(Actual) Year Ended December 31, 2023
Diluted earnings per share	\$ 5.86 to 5.92	\$ 5.47
Restructuring charges	0.08	0.08
Gain on business divestitures and impairments, net	—	(0.03)
Adjustment to withdrawal liability for multiemployer pension funds	—	0.01
US Ecology, Inc. acquisition integration and deal costs	—	0.08
Adjusted diluted earnings per share	\$ 5.94 to 6.00	\$ 5.61

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

The guidance set forth above constitutes forward-looking information and is not a guarantee of future performance. The guidance is based upon the current beliefs and expectations of our management and is subject to significant risk and uncertainties that could cause actual results to differ materially from those shown above. See Item 1A. *Risk Factors - Disclosure Regarding Forward-Looking Statements*.

Overview

Republic is one of the largest providers of environmental services in the United States, as measured by revenue. As of December 31, 2023, we operated across the United States and Canada through 364 collection operations, 246 transfer stations, 74 recycling

centers, 207 active landfills, 3 treatment, recovery and disposal facilities, 22 treatment, storage and disposal facilities (TSDF), 6 salt water disposal wells, 12 deep injection wells and 1 polymer center. We are engaged in 76 landfill gas-to-energy and other renewable energy projects and had post-closure responsibility for 126 closed landfills.

Revenue for the year ended December 31, 2023 increased by 10.8% to \$14,964.5 million compared to \$13,511.3 million in 2022. This change in revenue is due to increased volume of 0.5%, average yield of 6.1%, acquisitions, net of divestitures of

4.8%, and environmental solutions revenue of 0.1%, partially offset by decreased recycling processing and commodity sales of 0.5% and fuel recovery fees of 0.2%

The following table summarizes our revenue, costs and expenses for the years ended December 31, 2023 and 2022 (in millions of dollars and as a percentage of revenue):

	2023				2022			
Revenue	\$	14,964.5	100.0	%	\$	13,511.3	100.0	%
Expenses:								
Cost of operations		8,942.2	59.8			8,205.0	60.7	
Depreciation, amortization and depletion of property and equipment		1,368.4	9.1			1,245.6	9.2	
Amortization of other intangible assets		66.3	0.4			53.9	0.4	
Amortization of other assets		66.7	0.5			52.1	0.4	
Accretion		97.9	0.7			89.6	0.7	
Selling, general and administrative		1,608.7	10.8			1,454.3	10.8	
Adjustment to withdrawal liability for multiemployer pension funds		4.5	—			(1.6)	—	
Gain on business divestitures and impairments, net		(3.6)	—			(6.3)	—	
Restructuring charges		33.2	0.2			27.0	0.2	
Operating income	\$	2,780.2	18.5	%	\$	2,391.7	17.6	%

Our pre-tax income was \$2,191.5 million for the year ended December 31, 2023, compared to \$1,831.5 million in 2022. Our net income attributable to Republic Services, Inc. was \$1,731.0 million, or \$5.47 per diluted share, for 2023, compared to \$1,487.6 million, or \$4.69 per diluted share, for 2022.

During 2023 and 2022, we recorded a number of charges, other expenses and benefits that impacted our pre-tax income, tax impact, net income attributable to Republic Services, Inc. (net income – Republic) and diluted earnings per share as noted in the following table (in millions, except per share data). Additionally, see our *Results of Operations* section of this *Management's Discussion and Analysis of Financial Condition and Results of Operations* for a discussion of other items that impacted our earnings during the years ended December 31, 2023 and 2022. For comparative purposes, prior year amounts have been

reclassified to conform to current year presentation.

	Year Ended December 31, 2023											Year Ended December 31, 2022									
	Pre-tax Income		Tax Impact ⁽³⁾		Net Income - Republic		Diluted Earnings per Share			Pre-tax Income		Tax Impact ⁽³⁾		Net Income - Republic		Diluted Earnings per Share					
As reported	\$	2,191.5		\$	460.5		\$	1,731.0		\$	5.47		\$	1,831.5		\$	343.9				
Restructuring charges		33.2			8.7		24.5		0.08				27.0				7.1				
Loss on extinguishment of debt and other related costs ⁽¹⁾		0.2			—		0.2		—				—				—				
Gain on business divestitures and impairments, net		(3.6)			5.1		(8.7)		(0.03)				(6.3)				(2.5)				
Adjustment to withdrawal liability for multiemployer pension funds ⁽²⁾		4.5			1.2		3.3		0.01				(1.6)				(0.4)				
US Ecology, Inc. acquisition integration and deal costs		33.5			8.7		24.8		0.08				77.3				17.0				
Total adjustments		67.8			23.7		44.1		0.14				96.4				21.2				
As adjusted	\$	2,259.3		\$	484.2		\$	1,775.1		\$	5.61		\$	1,927.9		\$	365.1				

(1) The aggregate impact to adjusted diluted earnings per share totals to less than \$0.01 for the year ended December 31, 2023.

(2) The aggregate impact to adjusted diluted earnings per share totals to less than \$0.01 for the year ended December 31, 2022.

(3) The income tax effect related to our adjustments includes both current and deferred income tax impact and is individually calculated based on the statutory rates applicable to each adjustment.

We believe that presenting adjusted pre-tax income, adjusted tax impact, adjusted net income – Republic, and adjusted diluted earnings per share, which are not measures determined in accordance with U.S. GAAP, provide an understanding of operational activities before the financial impact of certain items. We use these measures, and believe investors will find them helpful, in understanding the ongoing performance of our operations separate from items that have a disproportionate impact on our results for a particular period. We have incurred comparable charges and costs in prior periods, and similar types of adjustments can

reasonably be expected to be recorded in future periods. Our definitions of adjusted pre-tax income, adjusted tax impact, adjusted net income – Republic, and adjusted diluted earnings per share may not be comparable to similarly titled measures presented by other companies. Further information on each of these adjustments is included below.

Restructuring charges. In 2023 and 2022, we incurred restructuring charges of \$33.2 million and \$27.0 million, respectively. Of the 2023 charges, \$9.5 million related to the early termination of certain leases and \$23.7 million related to the redesign of our asset management, and customer and order management software systems. The 2022 charges primarily related to the redesign of our general ledger, budgeting and procurement enterprise resource planning systems, which was completed with the systems being placed into production in 2022. We paid \$39.4 million and \$19.8 million during 2023 and 2022, respectively, related to these restructuring efforts.

In 2024, we expect to incur restructuring charges of approximately \$35 million, primarily related to the redesign of our asset management, and customer and order management software systems. Substantially all of these restructuring charges will be recorded in our corporate entities and other segment.

Loss on extinguishment of debt and other related costs. During 2023, we incurred a loss on the early extinguishment of debt related to the early repayment of a portion of our Term Loan Facility. We incurred non-cash charges related to the proportional share of unamortized deferred issuance costs of \$0.2 million. During 2022, we did not incur any losses on extinguishment of debt.

Gain on business divestitures and impairments, net. During 2023, we recorded a net gain on business divestitures and impairments of \$3.6 million. During 2022, we recorded a net gain of \$6.3 million related to business divestitures and asset impairments.

Adjustment to withdrawal liability for multiemployer pension funds. During 2023, we recorded a charge to earnings of \$4.5 million for a withdrawal event at multiemployer pension funds to which we contribute. During 2022, we recorded a net reduction of \$1.6 million related to the remeasurement of withdrawal costs liabilities from multiemployer pension plans. As we obtain updated information regarding multiemployer pension funds, the factors used in deriving our estimated withdrawal liabilities will be subject to change, which may adversely impact our reserves for withdrawal costs.

US Ecology, Inc. acquisition integration and deal costs. In 2023 and 2022, we incurred acquisition integration and deal costs of \$33.5 million and \$77.3 million, respectively, in connection with the acquisition of US Ecology, which included certain costs to close the acquisition and integrate the business, including stock compensation expense for unvested awards at closing as well as severance and change-in-control payments. The acquisition closed on May 2, 2022, and our integration of the business was substantially complete as of December 31, 2023.

Results of Operations

Revenue

We generate revenue by providing environmental services to our customers, including the collection and processing of recyclable materials, the collection, treatment, consolidation, transfer and disposal of hazardous and non-hazardous waste and other environmental solutions. Our residential, small-container and large-container collection operations in some markets are based on long-term contracts with municipalities. Certain of our municipal contracts have annual price escalation clauses that are tied to changes in an underlying base index such as a consumer price index. We generally provide small-container and large-container collection services to customers under contracts with terms up to three years. Our transfer stations and landfills generate revenue from disposal or tipping fees charged to third parties. Our recycling centers generate revenue from tipping fees charged to third parties and the sale of recycled commodities. Our revenue from environmental solutions primarily consists of (1) fees we charge for the collection, treatment, transfer and disposal of hazardous and non-hazardous waste, (2) field and industrial services, (3) equipment rental, (4) emergency response and standby services, (5) in-plant services, such as transportation and logistics, including at our TSDFs and (6) in-plant services such as high-pressure cleaning, tank cleaning, decontamination, remediation, transportation, spill cleanup and emergency response at refineries, chemical, steel and automotive plants and other governmental, commercial and industrial facilities. Other non-core revenue consists primarily of revenue from National Accounts, which represents the portion of revenue generated from nationwide or regional contracts in markets outside our operating areas where the associated material handling is subcontracted to local operators. Consequently, substantially all of this revenue is offset with related subcontract costs, which are recorded in cost of operations.

The following table reflects our revenue by service line for the years ended December 31, 2023 and 2022 (in millions of dollars and as a percentage of revenue):

	2023				2022			
Collection:								
Residential	\$	2,822.7		18.9 %	\$	2,642.6		19.5 %
Small-container		4,438.4		29.7		3,945.7		29.2
Large-container		2,922.4		19.5		2,701.1		20.0
Other		69.4		0.4		53.9		0.4
Total collection		10,252.9		68.5		9,343.3		69.1
Transfer		1,699.1				1,574.5		
Less: intercompany		(933.7)				(849.8)		
Transfer, net		765.4		5.1		724.7		5.4
Landfill		2,885.4				2,681.7		
Less: intercompany		(1,206.0)				(1,131.9)		
Landfill, net		1,679.4		11.2		1,549.8		11.5
Environmental solutions		1,701.4				1,262.1		
Less: intercompany		(76.5)				(53.9)		
Environmental solutions, net		1,624.9		10.9		1,208.2		8.9
Other:								
Recycling processing and commodity sales		312.3		2.1		359.1		2.7
Other non-core		329.6		2.2		326.2		2.4
Total other		641.9		4.3		685.3		5.1
Total revenue	\$	14,964.5		100.0 %	\$	13,511.3		100.0 %

The following table reflects changes in components of our revenue, as a percentage of total revenue, for the years ended December 31, 2023 and 2022:

	2023		2022	
Average yield	6.1	%	5.2	%
Fuel recovery fees	(0.2)		2.6	
Total price	5.9		7.8	
Volume	0.5		2.4	
Change in workdays	—		(0.1)	
Recycling processing and commodity sales	(0.5)		(0.6)	
Environmental solutions	0.1		0.5	
Total internal growth	6.0		10.0	
Acquisitions / divestitures, net	4.8		9.6	
Total	10.8	%	19.6	%
Core price	7.4	%	6.7	%

Average yield is defined as revenue growth from the change in average price per unit of service, expressed as a percentage. Core price is defined as price increases to our customers and fees, excluding fuel recovery, net of price decreases to retain customers. We also measure changes in average yield and core price as a percentage of related-business revenue, defined as total revenue excluding recycled commodities, fuel recovery fees and environmental solutions revenue to determine the effectiveness of our pricing strategies.

The following table reflects average yield, core price and volume as a percentage of related-business revenue for the years ended December 31, 2023 and 2022:

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During 2023, we experienced the following changes in our revenue as compared to 2022:

- Average yield increased revenue by 6.1% due to positive pricing changes in all our collection and disposal lines of business.
- The fuel recovery fee program, which mitigates our exposure to increases in fuel prices, decreased revenue by 0.2%, primarily due to a decrease in fuel prices compared to 2022, partially offset by an increase of total revenue subject to the fuel recovery fees.
- Volume increased revenue by 0.5% during 2023 as compared to 2022 primarily due to volume growth in our landfill and our small container collection lines of business, partially offset by a decrease in volume in our large container and residential collections lines of business and our transfer line of business. The volume increase in our landfill line of business is primarily attributable to increased special waste and solid waste volumes, partially offset by a decrease in volume in our construction and demolition line of business.
- Recycling processing and commodity sales decreased revenue by 0.5% primarily due to a decrease in overall commodity prices as compared to 2022. The average price for recycled commodities, excluding glass and organics for 2023 was \$117 per ton compared to \$170 per ton for 2022.

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

- During 2023, environmental solutions revenue increased by 0.1% primarily due to price increases, partially offset by a decrease in exploration and production-related volumes due to a decline in rig counts.
- Acquisitions, net of divestitures, increased revenue by 4.8%, reflecting the results of our continued growth strategy of acquiring environmental services companies that complement and expand our existing business platform.

Cost of Operations

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

The following table summarizes the major components of our cost of operations for the years ended December 31, 2023 and 2022 (in millions of dollars and as a percentage of revenue):

	2023				2022			
Labor and related benefits	\$	2,993.9		20.0 %	\$	2,702.9		20.0 %
Transfer and disposal costs		1,056.3		7.1		992.9		7.3
Maintenance and repairs		1,388.3		9.3		1,228.4		9.1
Transportation and subcontract costs		1,171.0		7.8		1,086.5		8.0
Fuel		541.6		3.6		631.1		4.7
Disposal fees and taxes		347.9		2.3		342.3		2.5
Landfill operating costs		333.0		2.2		283.2		2.1
Risk management		385.2		2.6		321.4		2.4
Other		725.0		4.9		616.0		4.6
Subtotal		8,942.2		59.8		8,204.7		60.7
US Ecology, Inc. acquisition integration and deal costs		—		—		0.3		—
Total cost of operations	\$	8,942.2		59.8 %	\$	8,205.0		60.7 %

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

Our cost of operations increased in aggregate dollars for the year ended December 31, 2023 compared to the same period in 2022 as a result of the following:

- Labor and related benefits increased in aggregate dollars due to higher hourly and salaried wages as a result of annual merit increases and volume-related growth. Acquisition-related growth also contributed to the increase in labor and related benefits.
- Transfer and disposal costs increased in aggregate dollars primarily due to acquisition-related growth and as a result of higher collection volumes.

During both 2023 and 2022, approximately 68% of the total solid waste volume we collected was disposed at landfill sites that we own or operate (internalization).

- Maintenance and repairs expense increased due to higher hourly wages as a result of annual merit increases, an increase in third-party maintenance, parts inflation, and volume-related growth. Acquisition-related growth also contributed to the increase in maintenance and repairs expense.
- Transportation and subcontract costs increased in aggregate dollars in 2023 due to an increase in transportation rates as compared to 2022. Acquisition-related growth also contributed to the increase in transportation and subcontract costs.
- Our fuel costs decreased due to a decrease in the average diesel fuel cost per gallon. The national average diesel fuel cost per gallon for 2023 was \$4.21 compared to \$4.99 for 2022.

At current consumption levels, we believe a twenty-cent per gallon change in the price of diesel fuel would change our fuel costs by approximately \$27 million per year. Offsetting these changes in fuel expense would be changes in our fuel recovery fee charged to our customers. At current participation rates, we believe a twenty-cent per gallon change in the price of diesel fuel would change our fuel recovery fee by approximately \$36 million per year.

- Disposal fees and taxes increased in aggregate dollars in 2023 primarily due to increased royalties and host fees from an increase in volume at certain landfills as compared to 2022.
- Landfill operating costs increased during 2023 primarily due to increased leachate treatment, transportation and disposal costs due in part to increased rainfall in select geographic regions, landfill gas and other maintenance costs as well as favorable remediation adjustments recorded during 2022 which did not recur in 2023.

- Risk management expenses increased primarily due to unfavorable actuarial development in our auto liability claims as well as higher premium costs.
- Other costs of operations increased during 2023 due to increased occupancy and facility related expenses, acquisition-related activity and higher third-party truck and equipment rental expense to support higher volumes.

Depreciation, Amortization and Depletion of Property and Equipment

The following table summarizes depreciation, amortization and depletion of property and equipment for the years ended December 31, 2023 and 2022 (in millions of dollars and as a percentage of revenue):

	2023				2022			
Depreciation and amortization of property and equipment	\$	897.5	6.0	%	\$	811.9	6.0	%
Landfill depletion and amortization		470.9	3.1			433.7	3.2	
Depreciation, amortization and depletion expense	\$	1,368.4	9.1	%	\$	1,245.6	9.2	%

Depreciation and amortization of property and equipment increased primarily due to assets added through acquisitions.

Landfill depletion and amortization expense increased in aggregate dollars due to higher landfill disposal volumes primarily driven by special waste and solid waste volumes as well as an increase in our overall average depletion rates. Additionally, we recognized certain favorable amortization adjustments related to our asset retirement obligations in 2022 that did not recur in 2023.

Amortization of Other Intangible Assets

Expenses for amortization of other intangible assets were \$66.3 million, or 0.4% of revenue, for the year ended December 31, 2023, compared to \$53.9 million, or 0.4% of revenue, for 2022. Amortization expense increased due to additional assets acquired as a result of our business acquisitions.

Amortization of Other Assets

Our other assets primarily relate to the prepayment of fees and capitalized implementation costs associated with cloud-based hosting arrangements. Expenses for amortization of other assets were \$66.7 million, or 0.5% of revenue, for the year ended December 31, 2023, compared to \$52.1 million, or 0.4% of revenue, for 2022.

Accretion Expense

Accretion expense was \$97.9 million, or 0.7% of revenue, and \$89.6 million, or 0.7% of revenue, for the years ended December 31, 2023 and 2022, respectively. Accretion expense increased in aggregate dollars due to acquired asset retirement obligations.

Selling, General and Administrative Expenses

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

The following table summarizes our selling, general and administrative expenses for the years ended December 31, 2023 and 2022 (in millions of dollars and as a percentage of revenue):

	2023				2022			
Salaries and related benefits	\$	1,050.4	7.0	%	\$	937.9	7.0	%
Provision for doubtful accounts		53.2	0.4			41.5	0.3	
Other		471.6	3.1			397.9	2.9	
Subtotal		1,575.2	10.5			1,377.3	10.2	
US Ecology, Inc. acquisition integration and deal costs		33.5	0.2			77.0	0.6	
Total selling, general and administrative expenses	\$	1,608.7	10.7	%	\$	1,454.3	10.8	%

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

The most significant items affecting our selling, general and administrative expenses during 2023 as compared to 2022 are summarized below:

- Salaries and related benefits increased primarily due to higher wages and benefits resulting from annual merit increases as well as higher management incentive expense as a result of outperforming our annual incentive metrics. Acquisition-related growth also contributed to the growth in salaries and related benefits in aggregate dollars.
- Provision for doubtful accounts increased primarily due to acquisition-related activity. As of December 31, 2023, our days sales outstanding were 42.0, or 30.9 days net of deferred revenue, compared to 43.3, or 31.8 days net of deferred revenue, as of December 31, 2022.
- Other selling, general and administrative expenses increased for the year ended December 31, 2023, largely due to both an increase in meeting and travel costs and acquisition-related growth.
- During the year ended December 31, 2023, we incurred \$33.5 million of acquisition integration and deal costs within selling, general and administration expense in connection with the acquisition of US Ecology. The 2023 costs primarily related to the integration of certain software systems as well as rebranding of the business, while the 2022 costs included certain costs to close the acquisition.

Adjustment to Withdrawal Liability for Multiemployer Pension Funds

During the year ended December 31, 2023, we recorded a \$4.5 million charge related to the withdrawal from a certain multiemployer pension plan. As we obtain updated information regarding multiemployer pension funds, the factors used in deriving our estimated withdrawal liabilities will be subject to change, which may adversely impact our reserves for withdrawal costs.

Gain on Business Divestitures and Impairments, Net

We strive to have a leading market position in each of the markets we serve, or have a clear path on how we will achieve a leading market position over time. Where we cannot establish a leading market position, or where operations are not generating acceptable returns, we may decide to divest certain assets and reallocate resources to other markets. Business divestitures could result in gains, losses or impairment charges that may be material to our results of operations in a given period.

During the years ended December 31, 2023 and 2022, we recorded a net gain on business divestitures and impairments of \$3.6 million and \$6.3 million, respectively.

Restructuring Charges

In 2023 and 2022, we incurred restructuring charges of \$33.2 million and \$27.0 million, respectively. Of the 2023 charges, \$9.5 million is related to the early termination of certain leases and \$23.7 million related to the redesign of our asset management, and customer and order management software systems. The 2022 charges primarily related to the redesign of our general ledger, budgeting and procurement enterprise resource planning systems, which was completed with the systems being placed into production in 2022. We paid \$39.4 million and \$19.8 million during 2023 and 2022, respectively, related to these restructuring efforts.

In 2024, we expect to incur restructuring charges of approximately \$35 million, primarily related to the redesign of our customer billing and asset management software systems. Substantially all of these restructuring charges will be recorded in our corporate entities and other segment.

Interest Expense

The following table provides the components of interest expense, including accretion of debt discounts and accretion of discounts primarily associated with environmental and risk insurance liabilities assumed in acquisitions for the years ended December 31, 2023 and 2022 (in millions of dollars):

	2023		2022	
Interest expense on debt	\$	430.2	\$	329.0
Non-cash interest		85.8		71.6
Less: capitalized interest		(7.8)		(5.0)
Total interest expense	\$	508.2	\$	395.6

Total interest expense for 2023 increased compared to 2022 primarily due to additional outstanding debt on our term loan and revolving lines of credit used to fund the purchase of US Ecology and higher interest rates on our floating rate debt. The increase attributable to our fixed rate debt is primarily due to the issuance of additional senior notes used to refinance amounts outstanding under our term loan and revolving lines of credit and for general corporate purposes.

Cash paid for interest, excluding net swap settlements for our fixed-to-floating and floating-to-fixed interest rate swaps, was \$422.9 million and \$311.5 million for the years ended December 31, 2023 and 2022, respectively.

As of December 31, 2023, we had \$2,232.2 million of floating rate debt including floating rate swap contracts. If interest rates increased or decreased by 100 basis points on our variable rate debt, annualized interest expense and net cash payments for interest would increase or decrease by approximately \$20 million.

Income Taxes

Our provision for income taxes was \$460.1 million and \$343.9 million for 2023 and 2022, respectively. Our effective tax rate, exclusive of non-controlling interests, for the years ended December 31, 2023 and 2022 was 21.0% and 18.8%, respectively. Net cash paid for income taxes was approximately \$343 million and \$185 million for the years ended December 31, 2023 and 2022, respectively.

During 2023, we acquired non-controlling interests in limited liability companies established to own renewable energy assets that qualified for investment tax credits under Section 48 of the Internal Revenue Code. We account for these investments using the equity method of accounting and recognize our share of income or loss and other reductions in the value of our investment in loss from unconsolidated equity method investments within our consolidated statements of income. For further discussion regarding our equity method accounting, see Note 3, *Business Acquisitions, Investments and Restructuring Charges*. Our 2023 tax provision reflects a benefit of \$86.9 million due to the tax credits related to these investments.

In addition, during 2023 we resolved IRS examinations for our tax years 2014 - 2018 that, in the aggregate, reduced our tax provision by approximately \$20.8 million.

Our 2022 tax provision was reduced by approximately \$139 million related to the tax credits from our non-controlling interest in limited liability companies established to own renewable energy assets.

We have deferred tax assets related to state net operating loss carryforwards with an estimated tax effect of \$64.5 million available as of December 31, 2023. These state net operating loss carryforwards expire at various times between 2024 and 2043. We believe that it is more likely than not that the benefit from some of our state net operating loss carryforwards will not be realized due to limitations on these loss carryforwards in certain states. In recognition of this risk, as of December 31, 2023, we have provided a valuation allowance of \$43.4 million.

For additional discussion and detail regarding our income taxes, see Note 11, *Income Taxes*, of the notes to our audited consolidated financial statements in Part II, Item 8 of this Annual Report on Form 10-K.

Reportable Segments

Our senior management evaluates, oversees and manages the financial performance of our operations through three field groups, referred to as Group 1, Group 2 and Group 3. Group 1 is our recycling and waste business operating primarily in geographic areas located in the western United States. Group 2 is our recycling and waste business operating primarily in geographic areas located in the southeastern and mid-western United States, the eastern seaboard of the United States, and Canada. Group 3 is our environmental solutions business operating primarily in geographic areas located across the United States and Canada. These groups are presented below as our reportable segments, which each provide integrated environmental services, including but not limited to collection, transfer, recycling and disposal.

Corporate entities and other include legal, tax, treasury, information technology, risk management, human resources, closed landfills and other administrative functions. National Accounts revenue included in Corporate entities and other represents the portion of revenue generated from nationwide and regional contracts in markets outside our operating areas where the associated material handling is subcontracted to local operators. Consequently, substantially all of this revenue is offset with related subcontract costs, which are recorded in cost of operations. Revenue and overhead costs of Corporate entities and other are either specifically assigned or allocated on a rational and consistent basis among our reportable segments to calculate Adjusted EBITDA by reportable segment.

Adjusted EBITDA is the single financial measure our chief operating decision maker (CODM) uses to evaluate operating segment profitability and determine resource allocations. Summarized financial information regarding our reportable segments for the years ended December 31, 2023 and 2022 (in millions of dollars and as a percentage of revenue in the case of adjusted EBITDA margin) follows. For totals as well as further detail regarding our reportable segments and the adjustments used to calculate gross Adjusted EBITDA for each segment, see Note 15, *Segment Reporting*, of the notes to our audited consolidated financial statements in Part II, Item 8 of this Annual Report on Form 10-K.

|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|

(1) The Recycling & Waste Subtotal represents the combined results of our Group 1 and Group 2 reportable segments.

Significant changes in the revenue and Adjusted EBITDA of our reportable segments for 2023 compared to 2022 are discussed below.

Group 1

Adjusted EBITDA in Group 1 increased from \$1,967.4 million for the year ended December 31, 2022 to \$2,134.7 million for the year ended December 31, 2023.

The most significant items impacting adjusted EBITDA in Group 1 during the year ended December 31, 2023 compared to the year ended December 31, 2022 include:

- Net revenue for the year ended December 31, 2023 increased 9.4% from 2022 due to an increase in average yield in all lines of business and volume in our collection and landfill lines of business, partially offset by volume declines in our transfer line of business. The increase in landfill volume was attributable to an increase in special waste, solid waste and construction and demolition volumes. Revenue also increased due to acquisition-related growth.
- Cost of operations increased due to an increase in labor and third party maintenance costs due to inflationary pressures. The unfavorable impact was partially offset by decreases in fuel costs due to a decrease in average fuel cost per gallon.

Group 2

Adjusted EBITDA in Group 2 increased from \$1,750.8 million for the year ended December 31, 2022 to \$1,964.0 million for the year ended December 31, 2023.

The most significant items impacting adjusted EBITDA in Group 2 during the year ended December 31, 2023 compared to the year ended December 31, 2022 include:

- Net revenue for the year ended December 31, 2023 increased 7.5% from 2022 due to an increase in average yield in all lines of business. Additionally, volume increased in our landfill and small-container collection lines of business, partially offset by declines in our large-container and residential collection lines of business. The increase in landfill volume was primarily attributable to an increase in special waste volume, which was partially offset by a decline in solid waste, and construction and demolition volumes. Revenue also increased due to acquisition-related growth.
- Cost of operations increased due to an increase in labor and maintenance costs due to inflationary pressures. The unfavorable impact was partially offset by decreases in fuel costs due to a decrease in average fuel cost per gallon.

Group 3

Adjusted EBITDA in Group 3 increased from \$211.1 million for the year ended December 31, 2022 to \$348.4 million for the year ended December 31, 2023.

The most significant items impacting adjusted EBITDA in Group 3 during the year ended December 31, 2023 compared to the year ended December 31, 2022 include:

- Revenue for the year ended December 31, 2023 increased due to acquisition-related growth, specifically the acquisition of US Ecology. We closed the acquisition of US Ecology in May 2022. Revenue was also impacted by favorable pricing.
- In 2023, we continued to realize cost synergies associated with the US Ecology acquisition.

Landfill and Environmental Matters

Our landfill costs include daily operating expenses, costs of capital for cell development, costs for final capping, closure and post-closure and the legal and administrative costs of ongoing environmental compliance. Daily operating expenses include leachate treatment, transportation and disposal costs, methane gas and groundwater monitoring and system maintenance costs, interim cap maintenance costs and costs associated with applying daily cover materials. We expense all indirect landfill development costs as they are incurred. We use life cycle accounting and the units-of-consumption method to recognize certain direct landfill costs related to landfill development. In life cycle accounting, certain direct costs are capitalized and charged to depletion expense based on the consumption of cubic yards of available airspace. These costs include all costs to acquire and construct a site, including excavation, natural and synthetic liners, construction of leachate collection systems, installation of methane gas collection and monitoring systems, installation of groundwater monitoring wells and other costs associated with acquiring and developing the site. Obligations associated with final capping, closure and post-closure are capitalized and amortized on a units-of-consumption basis as airspace is consumed.

Cost and airspace estimates are developed at least annually by engineers. Our operating and accounting personnel use these estimates to adjust the rates we use to expense capitalized costs. Changes in these estimates primarily relate to changes in cost estimates, available airspace, inflation and applicable regulations. Changes in available airspace include changes in engineering estimates, changes in design and changes due to the addition of airspace lying in expansion areas that we believe have a probable likelihood of being permitted. Changes in engineering estimates typically include modifications to the available disposal capacity of a landfill based on a refinement of the capacity calculations resulting from updated information.

Available Airspace

As of December 31, 2023, we owned or operated 207 active landfills with total available disposal capacity estimated to be 5.1 billion in-place cubic yards. For these landfills, the following table reflects changes in capacity and remaining capacity, as measured in cubic yards of airspace as of December 31, 2023.

	Balance as of December 31, 2022	New Expansions Undertaken	Landfills Acquired, Net of Divestitures	Permits Granted / New Sites, Net of Closures	Airspace Consumed	Changes in Engineering Estimates
Cubic yards (in millions):						
Permitted airspace	4,816.8	—	39.6	47.4	(85.9)	3.4
Probable expansion airspace	197.5	124.5	—	(39.3)	—	—
Total cubic yards (in millions)	5,014.3	124.5	39.6	8.1	(85.9)	3.4
Number of sites:						
Permitted airspace	206	—	3	(2)		
Probable expansion airspace	13	3	—	(2)		

The following table reflects changes in capacity and remaining capacity for these landfills, as measured in cubic yards of airspace, as of December 31, 2022.

	Balance as of December 31, 2021	New Expansions Undertaken	Landfills Acquired, Net of Divestitures	Permits Granted / New Sites, Net of Closures	Airspace Consumed	Changes in Engineering Estimates
Cubic yards (in millions):						
Permitted airspace	4,826.7	—	75.2	3.3	(85.0)	(3.4)
Probable expansion airspace	186.0	14.6	—	(3.1)	—	—
Total cubic yards (in millions)	5,012.7	14.6	75.2	0.2	(85.0)	(3.4)
Number of sites:						
Permitted airspace	198	—	10	(2)		
Probable expansion airspace	11	3	—	(1)		

Total available disposal capacity represents the sum of estimated permitted airspace plus an estimate of probable expansion airspace. Engineers develop these estimates at least annually using information provided by annual aerial surveys. Before airspace included in an expansion area is determined to be probable expansion airspace and, therefore, included in our calculation of total available disposal capacity, it must meet all of our expansion criteria. See Note 2, *Summary of Significant Accounting Policies*, and Note 8, *Landfill and Environmental Costs*, of the notes to our audited consolidated financial statements in Item 8 of this Annual Report on Form 10-K for further information. Also see our *Critical Accounting Judgments and Estimates* section of this Management's Discussion and Analysis of Financial Condition and Results of Operations.

As of December 31, 2023, 14 of our landfills met all of our criteria for including their probable expansion airspace in their total available disposal capacity. At projected annual volumes, these 14 landfills have an estimated remaining average site life of 52 years, including probable expansion airspace. The average estimated remaining life of all of our landfills is 57 years. We have other expansion opportunities that are not included in our total available airspace because they do not meet all of our criteria for treatment as probable expansion airspace.

The following table reflects the estimated operating lives of our active landfill sites based on available and probable disposal capacity using current annual volumes as of December 31, 2023:

	Number of Sites without Probable Expansion Airspace	Number of Sites with Probable Expansion Airspace	Total Sites	Percent of Total
0 to 5 years	21	—	21	10.1 %
6 to 10 years	22	—	22	10.6
11 to 20 years	31	5	36	17.4
21 to 40 years	50	4	54	26.1
41+ years	69	5	74	35.8
Total	193	14	207	100.0 %

Final Capping, Closure and Post-Closure Costs

As of December 31, 2023, accrued final capping, closure and post-closure costs were \$1,937.2 million, of which \$72.4 million were current and \$1,864.8 million were long-term as reflected in our consolidated balance sheets in accrued landfill and environmental costs included in Part II, Item 8 of this Annual Report on Form 10-K.

Remediation and Other Charges for Landfill Matters

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

For a description of our significant remediation matters, see Note 8, *Landfill and Environmental Costs*, of the notes to our audited consolidated financial statements in Part II, Item 8 of this Annual Report on Form 10-K.

Investment in Landfills

As of December 31, 2023, we expect to spend an estimated additional \$11.2 billion on existing landfills, primarily related to cell construction and environmental structures, over their remaining lives. Our total expected investment, excluding non-depletable land, estimated to be \$15.9 billion, or \$3.12 per cubic yard, is used in determining our depletion and amortization expense based on airspace consumed using the units-of-consumption method.

The following table reflects our future expected investment as of December 31, 2023 (in millions):

	Balance as of December 31, 2023	Expected Future Investment	Total Expected Investment
Non-depletable landfill land	\$ 200.0	\$ —	\$ 200.0
Landfill development costs	9,911.2	11,182.5	21,093.7
Construction-in-progress – landfill	350.4	—	350.4
Accumulated depletion and amortization	(5,516.2)	—	(5,516.2)
Net investment in landfill land and development costs	\$ 4,945.4	\$ 11,182.5	\$ 16,127.9

The following table reflects our net investment in our landfills, excluding non-depletable land, and our depletion, amortization and accretion expense for the years ended December 31, 2023 and 2022:

	2023		2022	
Number of landfills owned or operated	207		206	
Net investment, excluding non-depletable land (in millions)	\$	4,745.4	\$	4,873.6
Total estimated available disposal capacity (in millions of cubic yards)	5,104.0		5,014.3	
Net investment per cubic yard	\$	0.93	\$	0.97
Landfill depletion and amortization expense (in millions)	\$	470.9	\$	433.7
Accretion expense (in millions)	97.9		89.6	
	568.8		523.3	
Airspace consumed (in millions of cubic yards)	85.9		85.0	
Depletion, amortization and accretion expense per cubic yard of airspace consumed	\$	6.62	\$	6.16

During 2023 and 2022, our average compaction rate was approximately 2,000 pounds per cubic yard based primarily on a three-year historical moving average.

Property and Equipment

The following tables reflect the activity in our property and equipment accounts for the year ended December 31, 2023 (in millions of dollars):

Gross Property and Equipment												
	Balance as of December 31, 2022		Capital Additions		Retirements		Acquisitions, Net of Divestitures		Non-Cash Additions for Asset Retirement Obligations		Adjustments for Asset Retirement Obligations	
Land	\$	779.7	\$	4.1	\$	(2.4)	\$	95.5	\$	—	\$	—
Landfill development costs		9,574.2		9.0		(13.5)		(137.7)		61.4		40.2
Vehicles and equipment		9,465.3		748.7		(347.5)		160.6		—		—
Buildings and improvements		1,704.6		77.8		(13.8)		63.2		—		—
Construction-in-progress - landfill		358.3		440.0		—		(38.6)		—		—
Construction-in-progress - other		358.6		455.8		—		28.0		—		—
Total	\$	22,240.7	\$	1,735.4	\$	(377.2)	\$	171.0	\$	61.4	\$	40.2

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The following tables reflect the activity in our property and equipment accounts for the year ended December 31, 2022 (in millions of dollars):

Gross Property and Equipment												
	Balance as of December 31, 2021		Capital Additions		Retirements		Acquisitions, Net of Divestitures		Non-Cash Additions for Asset Retirement Obligations		Adjustments for Asset Retirement Obligations	
Land	\$	694.9	\$	2.4	\$	(1.7)	\$	85.0	\$	—	\$	—
Landfill development costs		8,539.6		14.5		—		590.4		60.1		20.2
Vehicles and equipment		8,576.9		759.6		(272.6)		300.0		—		—
Buildings and improvements		1,508.4		57.9		(10.0)		126.9		—		—
Construction- in-progress - landfill		279.3		390.9		—		38.6		—		—
Construction- in-progress - other		182.9		338.0		(0.2)		(1.1)		—		—
Total	\$	19,782.0	\$	1,563.3	\$	(284.5)	\$	1,139.8	\$	60.1	\$	20.2

Accumulated Depreciation, Amortization and Depletion												
	Balance as of December 31, 2021		Additions Charged to Expense		Retirements		Acquisitions, Net of Divestitures		Adjustments for Asset Retirement Obligations		Impairments, Transfers and Other Adjustments	
Landfill development costs	\$	(4,625.6)	\$	(440.1)	\$	—	\$	(1.6)	\$	5.7	\$	2.7
Vehicles and equipment		(5,231.6)		(735.9)		265.7		7.6		—		14.3
Buildings and improvements		(692.7)		(79.4)		6.9		0.6		—		6.7
Total	\$	(10,549.9)	\$	(1,255.4)	\$	272.6	\$	6.6	\$	5.7	\$	23.7

Liquidity and Capital Resources

Cash and Cash Equivalents

The following is a summary of our cash and cash equivalents and restricted cash and marketable securities balances as of December 31:

[illegible]

Our restricted cash and marketable securities include amounts pledged to regulatory agencies and governmental entities as financial guarantees of our performance under certain collection, landfill and transfer station contracts and permits, and relating to our final capping, closure and post-closure obligations at our landfills as well as restricted cash and marketable securities related to our insurance obligations.

The following table summarizes our restricted cash and marketable securities as of December 31:

[illegible]

Material Cash Requirements and Intended Uses of Cash

We expect existing cash, cash equivalents, restricted cash and marketable securities, cash flows from operations and financing activities to continue to be sufficient to fund our operating activities and cash commitments for investing and financing activities for at least the next 12 months and thereafter for the foreseeable future. Our known current- and long-term uses of cash include, among other possible demands: (1) capital expenditures and leases, (2) acquisitions, (3) dividend payments, (4) repayments to service debt and other long-term obligations, (5) payments for asset retirement obligations and environmental liabilities and (6) share repurchases.

Capital Expenditures and Leases

We make investments in property and equipment primarily to allow for growth of our service offerings. These investments are largely concentrated in vehicles and equipment and costs to construct our landfills. We expect to receive between \$1.760 billion to \$1.800 billion of property and equipment, net of proceeds from the sale of property and equipment, in 2024.

We lease property and equipment in the ordinary course of business under various lease agreements. The most significant lease obligations are for real property and equipment specific to our industry, including property operated as a landfill or transfer station and operating equipment. As of December 31, 2023, the amount of total future lease payments under operating and finance leases was \$290.4 million and \$433.6 million, respectively. For additional detail regarding our lease obligations, see Note 10, *Leases*, of the notes to our audited consolidated financial statements in Part II, Item 8 of this Annual Report on Form 10-K.

Acquisitions

Our acquisition growth strategy focuses primarily on acquiring privately held recycling and waste companies and environmental solutions businesses that complement our existing business platform. We continue to invest in value-enhancing acquisitions in existing markets.

We expect to invest at least \$500 million in acquisitions in 2024.

Dividend Payments

In October 2023 our Board of Directors approved a quarterly dividend of \$0.535 per share. Aggregate cash dividends declared were \$650.0 million for the year ended December 31, 2023. As of December 31, 2023, we recorded a quarterly dividend payable of \$168.3 million to shareholders of record at the close of business on January 2, 2024, which was paid on January 13, 2024.

Debt and other long-term obligations

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

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

In May 2022, we entered into a commercial paper program for the issuance and sale of unsecured commercial paper in an aggregate principal amount not to exceed \$500.0 million outstanding at any one time (the Commercial Paper Cap). In August 2022, the Commercial Paper Cap was increased to \$1.0 billion, and in October 2023, was subsequently increased to \$1.5 billion. The weighted average interest rate for borrowings outstanding as of December 31, 2023 was 5.508% with a weighted average maturity of approximately 18 days. In the event of a failed re-borrowing, we currently have availability under our Credit Facility (as defined below) to fund the amounts borrowed under the commercial paper program until they are re-borrowed successfully. Accordingly, we have classified these borrowings as long-term in our consolidated balance sheet as of December 31, 2023.

As of December 31, 2023, the total principal value of our debt was \$12.9 billion, of which \$932.3 million is due in 2024.

We have several agreements that require us to dispose of a minimum number of tons at third-party disposal facilities. Under these put-or-pay agreements, we must pay for agreed-upon minimum volumes regardless of the actual number of tons placed at the facilities.

Our unconditional purchase commitments have varying expiration dates, with some extending through the remaining life of the respective landfill. Future minimum payments under unconditional purchase commitments consist primarily of (1) disposal related agreements, which include fixed or minimum royalty payments, host agreements and take-or-pay and put-or-pay

agreements and (2) other obligations including committed capital expenditures and consulting service agreements. As of December 31, 2023, such purchase commitments, which do not qualify for recognition on our Consolidated Balance Sheets, amount to \$974.3 million, of which \$205.2 million was short-term.

For additional detail regarding our debt and known contractual and other obligations, see Note 9, *Debt*, and Note 19, *Commitments and Contingencies*, of the notes to our audited consolidated financial statements in Part II, Item 8 of this Annual Report on Form 10-K.

Asset Retirement Obligations and Environmental Liabilities

We have future obligations for final capping, closure and post-closure costs with respect to the landfills we own or operate as set forth in applicable landfill permits. As of December 31, 2023, our future obligations for final capping, closure and post-closure costs totaled \$1.9 billion, of which \$72.4 million was short-term.

Additionally, we are subject to an array of laws and regulations relating to the protection of the environment, and we remediate sites in the ordinary course of our business. Our environmental remediation liabilities primarily include costs associated with remediating groundwater, surface water and soil contamination, as well as controlling and containing methane gas migration and the related legal costs. As of December 31, 2023, our environmental liabilities totaled \$485.4 million, of which \$69.2 million was short-term.

For additional detail regarding our asset retirement obligations and environmental liabilities, see Note 8, *Landfill and Environmental Costs*, of the notes to our audited consolidated financial statements in Part II, Item 8 of this Annual Report on Form 10-K.

Share Repurchases

In October 2020, our Board of Directors approved a \$2.0 billion share repurchase authorization effective starting January 1, 2021 and extending through December 31, 2023. In October 2023, our Board of Directors approved a \$3.0 billion share repurchase authorization effective starting January 1, 2024 and extending through December 31, 2026. Share repurchases under the current program may be made through open market purchases or privately negotiated transactions in accordance with applicable federal securities laws. While the Board of Directors has approved the program, the timing of any purchases, the prices and the number of shares of common stock to be purchased will be determined by our management, at its discretion, and will depend upon market conditions and other factors. The share repurchase program may be extended, suspended or discontinued at any time. As of December 31, 2023, the remaining authorized purchase capacity under our October 2023 repurchase program was \$3.0 billion.

Summary of Cash Flow Activity

The major components of changes in cash flows for 2023 and 2022 are discussed in the following paragraphs. The following table summarizes our cash flow from operating activities, investing activities and financing activities for the years ended December 31, 2023 and 2022 (in millions of dollars):

	2023			2022		
Net cash provided by operating activities	\$	3,617.8		\$	3,190.0	
Net cash used in investing activities	\$	(3,666.8)		\$	(4,423.0)	
Net cash provided by (used in) financing activities	\$	61.9		\$	1,344.2	

Cash Flows Provided by Operating Activities

The most significant items affecting the comparison of our operating cash flows for 2023 and 2022 are summarized below.

Changes in assets and liabilities, net of effects from business acquisitions and divestitures, decreased our cash flow from operations by \$90.6 million in 2023, compared to a decrease of \$231.0 million during the same period in 2022, primarily as a result of the following:

- Our accounts receivable, exclusive of the change in allowance for doubtful accounts and customer credits, increased \$71.3 million during 2023, due to the timing of billings net of collections, compared to a \$198.8 million increase in the same period in 2022. As of December 31, 2023, our days sales outstanding were 42.0, or 30.9 days net of deferred revenue, compared to 43.3, or 31.8 days net of deferred revenue, as of December 31, 2022.
- Our prepaid expenses and other assets increased \$29.8 million in 2023 compared to an \$83.8 million increase in 2022, primarily attributable to changes in our prepaid taxes due to timing of our estimated tax payments and an increase in costs

associated with cloud-based hosting arrangements. Cash paid for income taxes was \$343 million and \$185 million for 2023 and 2022, respectively. Income taxes paid in 2023 and 2022 reflected benefits from tax credits from our continuing investments in renewable energy.

- Our accounts payable increased \$82.8 million during 2023 compared to a \$106.4 million increase during 2022, due to the timing of payments.
- Cash paid for capping, closure and post-closure obligations was \$60.8 million during 2023 compared to \$64.6 million for 2022. The decrease in cash paid for capping, closure and post-closure obligations is primarily due to the timing of capping and post-closure payments at certain of our landfill sites.
- Cash paid for remediation obligations was \$0.2 million higher during 2023 compared to 2022.

In addition, cash paid for interest was \$422.9 million and \$311.5 million, excluding net swap settlements for our fixed to floating interest rate swaps, for 2023 and 2022, respectively.

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

Cash Flows Used in Investing Activities

The most significant items affecting the comparison of our cash flows used in investing activities for 2023 and 2022 are summarized below:

- Capital expenditures during 2023 were \$1,631.1 million as compared to \$1,454.0 million for 2022.
- Proceeds from sales of property and equipment during 2023 were \$29.2 million as compared to \$32.8 million for 2022.
- During 2023 and 2022, we used \$2,065.3 million and \$3,038.5 million, respectively, for acquisitions and investments, net of cash acquired, including the cash used for the acquisition of US Ecology in 2022. During 2023 and 2022, we received \$6.4 million and \$50.6 million from business divestitures, respectively.

We intend to finance capital expenditures and acquisitions through cash on hand, restricted cash held for capital expenditures, cash flows from operations, our revolving credit facilities and tax-exempt bonds and other financings.

Cash Flows Used in Financing Activities

The most significant items affecting the comparison of our cash flows used in financing activities for 2023 and 2022 are summarized below:

- During 2023, we issued \$2,200.0 million of senior notes for cash proceeds, net of discounts and fees, of \$2,172.3 million. We issued no senior notes during 2022. Net payments of notes payable and long-term debt were \$1,189.7 million during 2023, compared to net proceeds of \$2,164.6 million in 2022. For a more detailed discussion, see the *Financial Condition* section of this Management's Discussion and Analysis of Financial Condition and Results of Operations.
- During 2023, we repurchased 1.8 million shares of our stock for \$261.8 million. During 2022, we repurchased 1.6 million shares of our stock for \$203.5 million.
- In July 2023, our Board of Directors approved an increase in our quarterly dividend to \$0.535 per share. Dividends paid were \$638.1 million and \$592.9 million in 2023 and 2022, respectively.
- During 2023 and 2022, cash paid for purchase price holdback releases and contingent purchase price related to acquisitions was \$19.6 million and \$9.6 million, respectively.

Financial Condition

Debt Obligations

As of December 31, 2023, we had \$932.3 million of principal debt maturing within the next 12 months, which includes certain finance lease obligations. All of our tax-exempt financings are remarketed either quarterly or semiannually by remarketing agents to effectively maintain a variable yield, with the exception of one tax-exempt financing with an initial remarketing period of 10 years. The holders of the bonds can put them back to the remarketing agents at the end of each interest period. If the remarketing agent is unable to remarket our bonds, the remarketing agent can put the bonds to us. In the event of a failed remarketing, as of December 31, 2023, we had availability under our \$3.5 billion unsecured revolving credit facility to fund these bonds until they are remarketed successfully. In the event of a failed re-borrowing under our commercial paper program, we currently have availability under our Credit Facility to fund the amounts borrowed under the commercial paper program until they are re-borrowed successfully. Accordingly, we have classified these tax-exempt financings and commercial paper program borrowings as long-term in our consolidated balance sheet as of December 31, 2023.

For further discussion of the components of our overall debt, see Note 9, *Debt*, of the notes to our audited consolidated financial statements in Part II, Item 8 of this Annual Report on Form 10-K.

Credit Facilities

Uncommitted Credit Facility

In January 2022, we entered into a \$200.0 million unsecured uncommitted revolving credit facility (the Uncommitted Credit Facility). The Uncommitted Credit Facility bears interest at an annual percentage rate to be agreed upon by both parties. Borrowings under the Uncommitted Credit Facility can be used for working capital, letters of credit and other general corporate purposes. The agreement governing our Uncommitted Credit Facility requires us to comply with certain covenants. The Uncommitted Credit Facility may be terminated by either party at any time. As of December 31, 2023 and 2022, we had no borrowings outstanding under our Uncommitted Credit Facility.

The Credit Facility

In August 2021, we entered into a \$3.0 billion unsecured revolving credit facility (the Credit Facility). Borrowings under the Credit Facility mature in August 2026. As permitted by the Credit Facility, we have the right to request two one-year extensions of the maturity date, but none of the lenders are committed to participate in such extension. The Credit Facility also includes a feature that allows us to increase availability, at our option, by an aggregate amount of up to \$1.0 billion through increased commitments from existing lenders or the addition of new lenders. In October 2023, we completed an upsize of the Credit Facility to \$3.5 billion.

In February 2023, we entered into Amendment No. 1 to the Credit Facility (the Credit Facility Amendment) to add our subsidiary, USE Canada Holdings, Inc. (the Canadian Borrower), as an additional borrower under the Credit Facility. The Credit Facility Amendment provides that the aggregate of (i) all loans to the Canadian Borrower and (ii) all loans denominated in Canadian dollars cannot exceed \$1.0 billion (the Canadian Sublimit). The Canadian Sublimit is part of, and not in addition to, the aggregate commitments under the Credit Facility.

Borrowings under the Credit Facility in United States dollars bear interest at a Base Rate, a daily floating SOFR or a term SOFR plus a current applicable margin of 0.910% based on our Debt Ratings (all as defined in the Credit Facility agreement). The Canadian dollar-denominated loans bear interest based on the Canadian Prime Rate or the Canadian Dollar Offered Rate plus a current applicable margin of 0.910% based on our Debt Ratings. As of December 31, 2023, \$201.5 million was outstanding against the Canadian Sublimit, with an average interest rate of 6.364%.

The Credit Facility is subject to facility fees based on applicable rates defined in the Credit Facility agreement and the aggregate commitment, regardless of usage. The Credit Facility can be used for working capital, capital expenditures, acquisitions, letters of credit and other general corporate purposes. The Credit Facility agreement requires us to comply with financial and other covenants. We may pay dividends and repurchase common stock if we are in compliance with these covenants.

We had \$297.1 million and \$250.0 million outstanding under our Credit Facility as of December 31, 2023 and 2022, respectively. We had \$336.5 million and \$347.6 million of letters of credit outstanding under our Credit Facility as of December 31, 2023 and 2022, respectively. We also had \$495.3 million and \$1.0 billion of principal borrowings outstanding (net of related discount on issuance) under our commercial paper program as of December 31, 2023 and 2022, respectively. As a result, availability under our Credit Facility was \$2,371.2 million and \$1,402.4 million as of December 31, 2023 and 2022, respectively.

Financial and Other Covenants

The Credit Facility requires us to comply with financial and other covenants. To the extent we are not in compliance with these covenants, we cannot pay dividends or repurchase common stock. Compliance with covenants also is a condition for any incremental borrowings under the Credit Facility, and failure to meet these covenants would enable the lenders to require repayment of any outstanding loans (which would adversely affect our liquidity). Additionally, if we are not in compliance with these covenants, we could not use the availability under our Credit Facility to fund borrowings we currently make under our commercial paper program, if there is a failed reborrowing under that program. The Credit Facility provides that our total debt to EBITDA ratio may not exceed 3.75 to 1.00 as of the last day of any fiscal quarter. In the case of an "elevated ratio period", which may be elected by us if one or more acquisitions during a fiscal quarter involve aggregate consideration in excess of \$200.0 million (the Trigger Quarter), the total debt to EBITDA ratio may not exceed 4.25 to 1.00 during the Trigger Quarter and for the three fiscal quarters thereafter. The Credit Facility also provides that there may not be more than two elevated ratio periods during the term of the Credit Facility agreement. As of December 31, 2023, our total debt to EBITDA ratio was approximately 2.9 compared to the 3.75 maximum allowed. As of December 31, 2023, we were in compliance with all other covenants under our Credit Facility.

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

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

Term Loan Facility

On April 29, 2022, we entered into a \$1.0 billion unsecured Term Loan Facility (Term Loan Facility), which will mature on April 29, 2025. The Term Loan Facility bears interest at a base rate or a forward-looking SOFR, plus an applicable margin based on our debt ratings. The current interest rate for borrowings outstanding as of December 31, 2023 was 6.256%. We may prepay, without penalty, all or any part of the borrowings under the Term Loan Facility at any time.

On May 2, 2022, we completed the acquisition of US Ecology using proceeds from the Term Loan Facility and borrowings under the Credit Facility.

We had \$500.0 million and \$1.0 billion of borrowings outstanding under the Term Loan Facility as of December 31, 2023 and 2022, respectively.

Commercial Paper Program

In May 2022, we entered into a commercial paper program for the issuance and sale of unsecured commercial paper in an aggregate principal amount not to exceed \$500.0 million outstanding at any one time (the Commercial Paper Cap). In August 2022, the Commercial Paper Cap was increased to \$1.0 billion, and in October 2023, was subsequently increased to \$1.5 billion. The weighted average interest rate for borrowings outstanding as of December 31, 2023 was 5.508% with a weighted average maturity of approximately 18 days.

We had \$496.0 million and \$1.0 billion principal value of commercial paper issued and outstanding under the program as of December 31, 2023 and 2022, respectively. In the event of a failed re-borrowing, we currently have availability under our Credit Facility (as defined above) to fund amounts currently borrowed under the commercial paper program until they are re-borrowed successfully. Accordingly, we have classified these borrowings as long-term in our consolidated balance sheet as of December 31, 2023 and 2022.

Senior Notes and Debentures

In March 2023, we issued \$400.0 million of 4.875% senior notes due 2029 (the Existing 2029 Notes) and \$800.0 million of 5.000% senior notes due 2034 (the 2034 Notes, and together, the Notes). The Notes are unsecured and unsubordinated and rank equally with our other unsecured obligations. We used the proceeds from the Notes for general corporate purposes, including the repayment of a portion of amounts outstanding under the Uncommitted Credit Facility, the Commercial Paper Program, the Credit Facility, and the Term Loan Facility. As a result of the Term Loan Facility repayment, we incurred a non-cash loss on the early extinguishment of debt related to the ratable portion of unamortized deferred issuance costs of \$0.2 million.

In December 2023, we issued an additional \$350.0 million of 4.875% senior notes due 2029 (the New 2029 Notes, and together with the Existing 2029 Notes, the 2029 Notes). After giving effect to the issuance of the New 2029 Notes, \$750.0 million in aggregate principal amount of the 2029 Notes is outstanding. The New 2029 Notes are fungible with the Existing 2029 Notes, and taken together, the 2029 Notes are treated as a single series.

In December 2023, we also issued \$650.0 million of 5.000% senior notes due 2033 (the 2033 Notes). Similar to the Notes above, the proceeds of these new senior notes were used for general corporate purposes, including the repayment of a portion of amounts outstanding under the Uncommitted Credit Facility, the Commercial Paper Program, the Credit Facility, and the Term Loan Facility.

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

Derivative Instruments and Hedging Relationships

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

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

For a description of our derivative contracts and hedge accounting, see Note 9, *Debt*, to our audited consolidated financial statements included in Part II, Item 8 of this Annual Report on Form 10-K.

Tax-Exempt Financings

As of December 31, 2023, we had \$1,280.6 million of certain variable rate tax-exempt financings outstanding, with maturities ranging from 2024 to 2053. As of December 31, 2022, we had \$1,182.0 million of certain variable rate tax-exempt financings outstanding, with maturities ranging from 2023 to 2051.

Finance Leases

As of December 31, 2023, we had finance lease liabilities of \$251.3 million with maturities ranging from 2024 to 2063. As of December 31, 2022, we had finance lease liabilities of \$247.5 million with maturities ranging from 2023 to 2063.

Credit Ratings

Our continued access to the debt capital markets and to new financing facilities, as well as our borrowing costs, depend on multiple factors, including market conditions, our operating performance and maintaining strong credit ratings. As of December 31, 2023, our credit ratings were BBB+, Baa1 and A- by Standard & Poor's Ratings Services, Moody's Investors Service and Fitch Ratings, Inc., respectively. If our credit ratings were downgraded, especially any downgrade to below investment grade, our ability to access the debt markets with the same flexibility that we have experienced historically, our cost of funds and other terms for new debt issuances could be adversely impacted.

Off-Balance Sheet Arrangements

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

Seasonality and Severe Weather

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

Contingencies

For a description of our commitments and contingencies, see Note 8, *Landfill and Environmental Costs*, Note 11, *Income Taxes* and Note 19, *Commitments and Contingencies*, to our audited consolidated financial statements included in Part II, Item 8 of this Annual Report on Form 10-K.

Financial Assurance

We must provide financial assurance to governmental agencies and a variety of other entities under applicable environmental regulations relating to our landfill operations for capping, closure and post-closure costs, and related to our performance under certain collection, landfill and transfer station contracts. We satisfy these financial assurance requirements by providing surety bonds, letters of credit, or insurance policies (Financial Assurance Instruments), or trust deposits, which are included in restricted cash and marketable securities and other assets in our consolidated balance sheets. The amount of the financial assurance

requirements for capping, closure and post-closure costs is determined by applicable state environmental regulations. The financial assurance requirements for capping, closure and post-closure costs may be associated with a portion of the landfill

or the entire landfill. Generally, states require a third-party engineering specialist to determine the estimated capping, closure and post-closure costs that are used to determine the required amount of financial assurance for a landfill. The amount of financial assurance required can, and generally will, differ from the obligation determined and recorded under U.S. GAAP. The amount of the financial assurance requirements related to contract performance varies by contract. Additionally, we must provide financial assurance for our insurance program and collateral for certain performance obligations. We do not expect a material increase in financial assurance requirements during 2024, although the mix of Financial Assurance Instruments may change.

These Financial Assurance Instruments are issued in the normal course of business and are not classified as indebtedness. Because we currently have no liability for the Financial Assurance Instruments, they are not reflected in our consolidated balance sheets; however, we record capping, closure and post-closure liabilities and insurance liabilities as they are incurred.

Critical Accounting Judgments and Estimates

Our consolidated financial statements have been prepared in accordance with U.S. GAAP and necessarily include certain estimates and judgments made by management. The following is a list of accounting policies that we believe are the most critical in understanding our consolidated financial position, results of operations and cash flows and that may require management to make subjective or complex judgments about matters that are inherently uncertain. Our critical accounting estimates are those estimates that involve a significant level of uncertainty at the time the estimate was made, and changes in them have had or are reasonably likely to have a material effect on our financial condition or results of operations. Accordingly, actual results could differ materially from our estimates. We base our estimates on past experience and other assumptions that we believe are reasonable under the circumstances, and we evaluate these estimates on an ongoing basis. Such critical accounting policies, estimates and judgments are applicable to all of our operating segments.

We have noted examples of the estimates that are subject to uncertainty in the accounting for these areas below.

Landfill Accounting

Landfill operating costs are treated as period expenses and are not discussed further in this section.

Our landfill assets and liabilities fall into the following two categories, each of which requires accounting judgments and estimates:

- Landfill development costs that are capitalized as an asset.
- Landfill retirement obligations relating to our capping, closure and post-closure liabilities that result in a corresponding landfill retirement asset.

We use life-cycle accounting and the units-of-consumption method to recognize landfill development costs over the life of the site. In life-cycle accounting, all current and future capitalized costs to acquire and construct a site are calculated and charged to expense based on the consumption of cubic yards of available airspace. Obligations associated with final capping, closure and post-closure are also capitalized and amortized on a units-of-consumption basis as airspace is consumed. Cost and airspace estimates are developed at least annually by engineers.

Landfill Development Costs

As of December 31, 2023 and 2022, we had net landfill development costs of \$4,745.4 million and \$4,873.6 million, respectively. Changes in these estimates may be sensitive to changes in cost estimates, inflation and applicable regulations.

Site permits. To develop, construct and operate a landfill, we must obtain permits from various regulatory agencies at the local, state and federal levels. The permitting process requires an initial site study to determine whether the location is feasible for landfill operations. The initial studies are reviewed by our environmental management group and then submitted to the regulatory agencies for approval. During the development stage we capitalize certain costs that we incur after site selection but before the receipt of all required permits if we believe that it is probable that the site will be permitted.

These estimates are subject to uncertainty attributable to:

- Changes in legislative or regulatory requirements may cause changes to the landfill site permitting process. These changes could make it more difficult and costly to obtain and maintain a landfill permit.
- Studies performed could be inaccurate, which could result in the denial or revocation of a permit and changes to accounting assumptions. Conditions could exist that were not identified in the study, which may make the location not feasible for a landfill and could result in the denial of a permit. Denial or revocation of a permit could impair the recorded value of the landfill asset.

- Actions by neighboring parties, private citizen groups or others to oppose our efforts to obtain, maintain or expand permits could result in denial, revocation or suspension of a permit, which could adversely impact the economic viability of the landfill and could impair the recorded value of the landfill. As a result of opposition to our obtaining a permit, improved technical information as a project progresses, or changes in the anticipated economics associated with a project, we may decide to reduce the scope of, or abandon, a project, which could result in an asset impairment.

Technical landfill design. Upon receipt of initial regulatory approval, technical landfill designs are prepared. The technical designs, which include the detailed specifications to develop and construct all components of the landfill including the types and quantities of materials that will be required, are reviewed by our environmental management group. The technical designs are submitted to the regulatory agencies for approval. Upon approval of the technical designs, the regulatory agencies issue permits to develop and operate the landfill.

These estimates are subject to uncertainty attributable to:

- Changes in legislative or regulatory requirements may require changes in the landfill technical designs. These changes could make it more difficult and costly to meet new design standards.
- Technical design requirements, as approved, may need modifications at some future point in time.
- Technical designs could be inaccurate and could result in increased construction costs, difficulty in obtaining a permit or the use of rates to recognize the amortization of landfill development costs and asset retirement obligations that are not appropriate.

Permitted and probable landfill disposal capacity. Included in the technical designs are factors that determine the ultimate disposal capacity of the landfill. These factors include the area over which the landfill will be developed, such as the depth of excavation, the height of the landfill elevation and the angle of the side-slope construction. The disposal capacity of the landfill is calculated in cubic yards. This measurement of volume is then converted to a disposal capacity expressed in tons based on a site-specific expected density to be achieved over the remaining operating life of the landfill.

These estimates are subject to uncertainty attributable to:

- Estimates of future disposal capacity may change as a result of changes in legislative or regulatory design requirements.
- The density of waste may vary due to variations in operating conditions, including waste compaction practices, site design, climate and the nature of the waste.
- Capacity is defined in cubic yards but waste received is measured in tons. The number of tons per cubic yard varies by type of waste and our rate of compaction.

Development costs. The types of costs that are detailed in the technical design specifications generally include excavation, natural and synthetic liners, construction of leachate collection systems, installation of methane gas collection systems and monitoring probes, installation of groundwater monitoring wells, construction of leachate management facilities and other costs associated with the development of the site. We review the adequacy of our cost estimates on an annual basis by comparing estimated costs with third-party bids or contractual arrangements, reviewing the changes in year-over-year cost estimates for reasonableness, and comparing our resulting development cost per acre with prior period costs. These development costs, together with any costs incurred to acquire, design and permit the landfill, including capitalized interest, are recorded to the landfill asset on the balance sheet as incurred.

These estimates are subject to uncertainty attributable to:

- Actual future costs of construction materials and third-party labor could differ from the costs we have estimated because of the level of demand and the availability of the required materials and labor. Technical designs could be altered due to unexpected operating conditions, regulatory changes or legislative changes.

Landfill development asset amortization. To match the expense related to the landfill asset with the revenue generated by the landfill operations, we amortize the landfill development asset over its operating life on a per-ton basis as waste is accepted at the landfill. The landfill asset is fully amortized at the end of a landfill's operating life. The per-ton rate is calculated by dividing the sum of the landfill development asset net book value plus estimated future development costs (as described above) for the landfill, by the landfill's estimated remaining disposal capacity. The expected future development costs are not inflated or discounted, but rather expressed in nominal dollars. This rate is applied to each ton accepted at the landfill to arrive at amortization expense for the period.

Amortization rates may be sensitive to the original cost basis of the landfill, including acquisition costs, which in turn is determined by geographic location and market values. We secure significant landfill assets through business acquisitions and

value them at the time of acquisition based on fair value. Amortization rates are also influenced by site-specific engineering and cost factors.

These estimates are subject to uncertainty attributable to:

- Changes in our future development cost estimates or our disposal capacity will normally result in a change in our amortization rates and will impact amortization expense prospectively. An unexpected significant increase in estimated costs or reduction in disposal capacity could affect the ongoing economic viability of the landfill and result in asset impairment.

On at least an annual basis, we update the estimates of future development costs and remaining disposal capacity for each landfill. These costs and disposal capacity estimates are reviewed and approved by senior operations management annually. Changes in cost estimates and disposal capacity are reflected prospectively in the landfill amortization rates that are updated annually. See our *Results of Operations* section in this Management's Discussion and Analysis of Financial Condition and Results of Operations for discussion on changes to our landfill depletion and amortization.

Landfill Asset Retirement Obligations

We have two types of retirement obligations related to landfills: (1) capping and (2) closure and post-closure. As of December 31, 2023 and 2022, our asset retirement obligations related to capping, closure and post-closure were \$1,937.2 million and \$1,786.4 million, respectively. Changes in these estimates may be sensitive to changes in available airspace, cost estimates, inflation, our credit-adjusted, risk-free interest rate and applicable regulations.

Obligations associated with final capping activities that occur during the operating life of the landfill are recognized on a units-of-consumption basis as airspace is consumed within each discrete capping event. Obligations related to closure and post-closure activities that occur after the landfill has ceased operations are recognized on a units-of-consumption basis as airspace is consumed throughout the entire life of the landfill. Landfill retirement obligations are capitalized as the related liabilities are recognized and amortized using the units-of-consumption method over the airspace consumed within the capping event or the airspace consumed within the entire landfill, depending on the nature of the obligation. All obligations are initially measured at estimated fair value. Fair value is calculated on a present value basis using an inflation rate and our credit-adjusted, risk-free rate in effect at the time the liabilities were incurred. Future costs for final capping, closure and post-closure are developed at least annually by engineers, and are inflated to future value using estimated future payment dates and inflation rate projections.

Landfill capping. As individual areas within each landfill reach capacity, we must cap and close the areas in accordance with the landfill site permit. These requirements are detailed in each landfill's technical design, which is reviewed and approved by the regulatory agency issuing the landfill site permit.

Closure and post-closure. Closure costs are costs incurred after a landfill stops receiving waste, but prior to being certified as closed. After the entire landfill has reached capacity and is certified closed, we must continue to maintain and monitor the site for a post-closure period, which generally extends for 30 years. Costs associated with closure and post-closure requirements generally include maintenance of the site, the monitoring of methane gas collection systems and groundwater systems and other activities that occur after the site has ceased accepting waste. Costs associated with post-closure monitoring generally include groundwater sampling, analysis and statistical reports, third-party labor associated with gas system operations and maintenance, transportation and disposal of leachate and erosion control costs related to the final cap.

Landfill retirement obligation liabilities and assets. Estimates of the total future costs required to cap, close and monitor each landfill as specified by the landfill permit are updated annually. The estimates include inflation, the specific timing of future cash outflows and the anticipated waste flow into the capping events. Our cost estimates are inflated to the period of performance using an estimate of inflation, which is updated annually and is based upon the ten year average consumer price index (2.0% in 2023 and 1.9% in 2022).

The present value of the remaining capping costs for specific capping events and the remaining closure and post-closure costs for each landfill are recorded as incurred on a per-ton basis. These liabilities are incurred as disposal capacity is consumed at the landfill.

Capping, closure and post-closure liabilities are recorded in layers and discounted using our credit-adjusted risk-free rate in effect at the time the obligation is incurred (5.3% in 2023 and 4.2% in 2022).

Retirement obligations are increased each year to reflect the passage of time by accreting the balance at the weighted average credit-adjusted risk-free rate that was used to calculate each layer of the recorded liabilities. This accretion is charged to operating expenses. Actual cash expenditures reduce the asset retirement obligation liabilities as they are made.

Corresponding retirement obligation assets are recorded for the same value as the additions to the capping, closure and post-closure liabilities. The retirement obligation assets are amortized to expense on a per-ton basis as disposal capacity is consumed. The per-ton rate is calculated by dividing the sum of each of the recorded retirement obligation asset's net book

value and expected future additions to the retirement obligation asset by the remaining disposal capacity. A per-ton rate is determined for each separate capping event based on the disposal capacity relating to that event. Closure and post-closure per-ton rates are based on the total disposal capacity of the landfill.

These estimates are subject to uncertainty attributable to:

- Changes in legislative or regulatory requirements, including changes in capping, closure activities or post-closure monitoring activities, types and quantities of materials used, or term of post-closure care, could cause changes in our cost estimates.
- Changes in the landfill retirement obligation due to changes in the anticipated waste flow, changes in airspace compaction estimates or changes in the timing of expenditures for closed landfills and fully incurred but unpaid capping events are recorded in results of operations prospectively. This could result in unanticipated increases or decreases in expense.
- Actual timing of disposal capacity utilization could differ from projected timing, causing differences in timing of when amortization and accretion expense is recognized for capping, closure and post-closure liabilities.
- Changes in inflation rates could impact our actual future costs and our total liabilities.
- Changes in our capital structure or market conditions could result in changes to the credit-adjusted risk-free rate used to discount the liabilities, which could cause changes in future recorded liabilities, assets and expense.
- Amortization rates could change in the future based on the evaluation of new facts and circumstances relating to landfill capping design, post-closure monitoring requirements, or the inflation or discount rate.

On an annual basis, we update our estimates of future capping, closure and post-closure costs and of future disposal capacity for each landfill. Revisions in estimates of our costs or timing of expenditures are recognized immediately as increases or decreases to the capping, closure and post-closure liabilities and the corresponding retirement obligation assets. Changes in the assets result in changes to the amortization rates which are applied prospectively, except for fully incurred capping events and closed landfills, where the changes are recorded immediately in results of operations since the associated disposal capacity has already been consumed. See our *Results of Operations* section in this Management's Discussion and Analysis of Financial Condition and Results of Operations for discussion on changes to our landfill depletion and amortization.

Permitted and probable disposal capacity. Disposal capacity is determined by the specifications detailed in the landfill permit. We classify this disposal capacity as permitted. We also include probable expansion disposal capacity in our remaining disposal capacity estimates, thus including additional disposal capacity being sought through means of a permit expansion. Probable expansion disposal capacity has not yet received final approval from the applicable regulatory agencies, but we have determined that certain critical criteria have been met and that the successful completion of the expansion is probable. We have developed six criteria that must be met before an expansion area is designated as probable expansion airspace. We believe that satisfying all of these criteria demonstrates a high likelihood that expansion airspace that is incorporated in our landfill costing will be permitted. However, because some of these criteria are judgmental, they may exclude expansion airspace that will eventually be permitted or include expansion airspace that will not be permitted. In either of these scenarios, our amortization, depletion and accretion expense could change significantly. Our internal criteria to classify disposal capacity as probable expansion airspace are as follows:

- We own the land associated with the expansion airspace or control it pursuant to an option agreement;
- We are committed to supporting the expansion project financially and with appropriate resources;
- There are no identified fatal flaws or impediments associated with the project, including political impediments;
- Progress is being made on the project;
- The expansion is attainable within a reasonable time frame; and
- We believe it is likely we will receive the expansion permit.

After successfully meeting these criteria, the disposal capacity that will result from the planned expansion is included in our remaining disposal capacity estimates. Additionally, for purposes of calculating landfill amortization and capping, closure and post-closure rates, we include the incremental costs to develop, construct, close and monitor the related probable expansion disposal capacity.

These estimates are subject to uncertainty attributable to:

- We may be unsuccessful in obtaining permits for probable expansion disposal capacity because of the failure to obtain the final local, state, provincial, or federal permits or due to other unknown reasons. If we are unsuccessful in

obtaining permits for probable expansion disposal capacity, or the disposal capacity for which we obtain approvals is less than what was estimated, both our estimated total costs and disposal capacity will be reduced, which generally increases the rates we charge for landfill amortization and capping, closure and post-closure accruals. An unexpected decrease in disposal capacity could also cause an asset impairment.

Environmental Liabilities

We are subject to an array of laws and regulations relating to the protection of the environment, and we remediate sites in the ordinary course of our business. Under current laws and regulations, we may be responsible for environmental remediation at sites that we either own or operate, including sites that we have acquired, or sites where we have (or a company that we have acquired has) delivered waste. Our environmental remediation liabilities primarily include costs associated with remediating groundwater, surface water and soil contamination, as well as controlling and containing methane gas migration and the related legal costs. To estimate our ultimate liability at these sites, we evaluate several factors, including the nature and extent of contamination at each identified site, the required remediation methods, timing of expenditures, the apportionment of responsibility among the potentially responsible parties and the financial viability of those parties. We accrue for costs associated with environmental remediation obligations when such costs are probable and reasonably estimable in accordance with accounting for loss contingencies. We periodically review the status of all environmental matters and update our estimates of the likelihood of and future expenditures for remediation as necessary. Changes in the liabilities resulting from these reviews are recognized currently in earnings in the period in which the adjustment is known. Adjustments to estimates are reasonably possible in the near term and may result in changes to recorded amounts. With the exception of those obligations assumed in certain business combinations, environmental obligations are recorded on an undiscounted basis. Environmental obligations assumed in certain business combinations are initially estimated on a discounted basis, and accreted to full value over time through charges to interest expense. Adjustments arising from changes in amounts and timing of estimated costs and settlements may result in increases or decreases in these obligations and are calculated on a discounted basis as they were initially estimated on a discounted basis. These adjustments are charged to operating income when they are known. We perform a comprehensive review of our environmental obligations annually and also review changes in facts and circumstances associated with these obligations at least quarterly. See our *Results of Operations* section in this Management's Discussion and Analysis of Financial Condition and Results of Operations for discussion on our remediation adjustments. We have not reduced the liabilities we have recorded for recoveries from other potentially responsible parties or insurance companies. As of December 31, 2023 and 2022, we had \$485.4 million and \$487.5 million of environmental liabilities, respectively. Changes in these estimates may be sensitive to changes in cost estimates, timing of estimated costs and settlements, inflation, our credit-adjusted, risk-free interest rate and applicable regulations.

These estimates are subject to uncertainty attributable to:

- We cannot determine with precision the ultimate amounts of our environmental remediation liabilities. Our estimates of these liabilities require assumptions about uncertain future events. Thus, our estimates could change substantially as additional information becomes available regarding the nature or extent of contamination, the required remediation methods, timing of expenditures, the final apportionment of responsibility among the potentially responsible parties identified, the financial viability of those parties and the actions of governmental agencies or private parties with interests in the matter. The actual environmental costs may exceed our current and future accruals for these costs, and any adjustments could be material.
- Actual amounts could differ from the estimated liabilities as a result of changes in estimated future litigation costs to pursue the matter to ultimate resolution.
- An unanticipated environmental liability that arises could result in a material charge to our consolidated statements of income.

Insurance Reserves and Related Costs

Our insurance policies for workers' compensation, commercial general liability, commercial auto liability and environmental liability are high deductible, or retention programs. The deductibles, or retentions, range from \$3 million to \$10 million. The employee-related health benefits are also subject to a high-deductible insurance policy. Accruals for deductibles or retentions are based on claims filed and actuarial estimates of claims development and claims incurred but not reported. As of December 31, 2023 and 2022, our insurance reserves were \$565.4 million and \$502.6 million, respectively. Changes in these estimates may be sensitive to changes in the frequency, severity and settlement amount of claims.

These estimates are subject to uncertainty attributable to:

- Incident rates, including frequency and severity and other actuarial assumptions could change causing our current and future actuarially determined obligations to change, which would be reflected in our consolidated statements of income in the period in which such adjustment is known.

- Recorded reserves may not be adequate to cover the future payment of claims. Adjustments, if any, to estimates recorded resulting from ultimate claim payments would be reflected in the consolidated statements of income in the periods in which such adjustments are known.
- The settlement costs to discharge our obligations, including legal and health care costs, could increase or decrease causing current estimates of our insurance reserves to change.

New Accounting Standards

For a description of new accounting standards that may affect us, see Note 2, *Summary of Significant Accounting Policies*, of the notes to our audited consolidated financial statements in Part II, Item 8 of this Annual Report on Form 10-K.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Interest Rate Risk

Our major market risk exposure of our financial instruments is changing interest rates in the United States and fluctuations in SOFR. We intend to manage interest rate risk through the use of a combination of fixed and floating rate debt. The carrying value of our variable rate debt approximates fair value because interest rates are variable and, accordingly, approximates current market rates for instruments with similar risk and maturities. The fair value of our debt is determined as of the balance sheet date and is subject to change. We have historically entered into multiple swap agreements designated as cash flow hedges to manage exposure to fluctuations in interest rates on our variable rate debt.

The table below provides information about certain of our market-sensitive financial instruments and constitutes a forward-looking statement.

	Expected Maturity Date										
	2024	2025	2026	2027	2028	Thereafter					
Fixed rate debt:											
Amount outstanding (in millions)	\$ 911.6	\$ 864.5	\$ 511.0	\$ 660.6	\$ 811.4	\$ 6,622.2					
Variable rate debt:											
Amount outstanding (in millions)	\$ 20.7	\$ 500.0	\$ 874.9	\$ —	\$ 30.0	\$ 1,012.5					

The fixed and variable rate debt amounts above exclude the remaining non-cash discounts, premiums and adjustments to fair value totaling \$129.7 million.

As of December 31, 2023, we had \$2,232.2 million of principal floating rate debt and interest rate swap contracts with a notional value of \$350.0 million. If interest rates increased or decreased by 100 basis points on our variable rate debt, annualized interest expense and net cash payments for interest would increase or decrease by approximately \$20 million. This analysis does not reflect the effect that interest rates would have on other items, such as new borrowings and the impact on the economy. See Note 9, *Debt*, of the notes to our audited consolidated financial statements in Part II, Item 8 of this Form 10-K for further information regarding how we manage interest rate risk.

Fuel Price Risk

Fuel costs represent a significant operating expense. When economically practical, we may enter into new fuel hedges, renew contracts, or engage in other strategies to mitigate market risk. As of December 31, 2023, we had no fuel hedges in place. While we charge fuel recovery fees to a majority of our customers, we are unable to charge such fees to all customers.

At current consumption levels, we believe a twenty-cent per gallon change in the price of diesel fuel would change our fuel costs by approximately \$27 million per year. Offsetting these changes in fuel expense would result in changes in our fuel recovery fee charged to our customers. At current participation rates, we believe a twenty-cent per gallon change in the price of diesel fuel would change our fuel recovery fee by approximately \$36 million per year.

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

Our fuel costs were \$541.6 million during 2023, or 3.6% of revenue, compared to \$631.1 million, or 4.7% of revenue, during 2022.

Commodities Price Risk

We market recovered materials such as old corrugated containers and old newsprint from our recycling centers. Changes in market supply and demand for recycled commodities causes volatility in commodity prices. In prior periods, we have entered into derivative instruments such as swaps and costless collars designated as cash flow hedges to manage our exposure to changes in prices of these commodities. As of December 31, 2023, we had no recycling commodity hedges in place.

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

Revenue from recycling processing and commodity sales during the years ended December 31, 2023 and 2022 was \$312.3 million and \$359.1 million, respectively.

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REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Stockholders and the Board of Directors of Republic Services, Inc.

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Republic Services, Inc. (the Company) as of December 31, 2023 and 2022, the related consolidated statements of income, comprehensive income, stockholders' equity and cash flows for each of the three years in the period ended December 31, 2023, and the related notes (collectively referred to as the "consolidated financial statements"). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company at December 31, 2023 and 2022, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2023, in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of December 31, 2023, based on criteria established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) and our report dated February 28, 2024, expressed an unqualified opinion thereon.

Basis for Opinion

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

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

Critical Audit Matters

The critical audit matters communicated below are matters arising from the current period audit of the financial statements that were communicated or required to be communicated to the audit committee and that: (1) relate to accounts or disclosures that are material to the financial statements and (2) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matters below, providing separate opinions on the critical audit matters or on the accounts or disclosures to which they relate.

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[illegible]

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

Phoenix, Arizona

February 28, 2024

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Stockholders and the Board of Directors of Republic Services, Inc.

Opinion on Internal Control Over Financial Reporting

We have audited Republic Services, Inc.'s internal control over financial reporting as of December 31, 2023, based on criteria established in Internal Control – Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) (the COSO criteria). In our opinion, Republic Services, Inc. (the Company) maintained, in all material respects, effective internal control over financial reporting as of December 31, 2023, based on the COSO criteria.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated balance sheets of Republic Services, Inc. as of December 31, 2023 and 2022, the related consolidated statements of income, comprehensive income, stockholders' equity and cash flows for each of the three years in the period ended December 31, 2023, and the related notes and our report dated February 28, 2024, expressed an unqualified opinion thereon.

As indicated in the accompanying Report of Management on Republic Services, Inc.'s Internal Control over Financial Reporting, management's assessment of and conclusion on the effectiveness of internal control over financial reporting did not include the internal controls of which are included in the 2023 consolidated financial statements of the Company and constituted approximately 1% of revenues for the year ended December 31, 2023. Our audit of internal control over financial reporting of the Company also did not include an evaluation of the internal control over financial reporting of WasteCo Holdings Inc., vertically integrated set of operations acquired from GFL Environmental Inc., Advanced Chemical Transport LLC and Central Texas Refuse.

Basis for Opinion

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

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

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

Definition and Limitations of Internal Control Over Financial Reporting

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

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

/s/ Ernst & Young LLP

Phoenix, Arizona

February 28, 2024

REPUBLIC SERVICES, INC.
CONSOLIDATED BALANCE SHEETS

(in millions, except per share data)

				December 31, 2023				December 31, 2022	
ASSETS									
Current assets:									
Cash and cash equivalents				\$	140.0			\$	143.4
Accounts receivable, less allowance for doubtful accounts and other of \$83.2 and \$51.9, respectively				1,768.4				1,677.2	
Prepaid expenses and other current assets				472.6				536.5	
Total current assets				2,381.0				2,357.1	
Restricted cash and marketable securities				163.6				127.6	
Property and equipment, net				11,350.9				10,744.0	
Goodwill				15,834.5				14,451.5	
Other intangible assets, net				496.2				347.2	
Other assets				1,183.9				1,025.5	
Total assets				\$	31,410.1			\$	29,052.9
LIABILITIES AND STOCKHOLDERS' EQUITY									
Current liabilities:									
Accounts payable				\$	1,411.5			\$	1,221.8
Notes payable and current maturities of long-term debt				932.3				456.0	
Deferred revenue				467.3				443.0	
Accrued landfill and environmental costs, current portion				141.6				132.6	
Accrued interest				104.1				79.0	
Other accrued liabilities				1,171.5				1,058.3	
Total current liabilities				4,228.3				3,390.7	
Long-term debt, net of current maturities				11,887.1				11,329.5	
Accrued landfill and environmental costs, net of current portion				2,281.0				2,141.3	
Deferred income taxes and other long-term tax liabilities, net				1,526.8				1,528.8	
Insurance reserves, net of current portion				348.8				315.1	
Other long-term liabilities				594.6				660.7	
Commitments and contingencies									
Stockholders' equity:									
Preferred stock, par value \$0.01 per share; 50 shares authorized; none issued				—				—	
Common stock, par value \$0.01 per share; 750 shares authorized; 320.7 and 320.3 issued including shares held in treasury, respectively				3.2				3.2	
Additional paid-in capital				2,900.8				2,843.2	
Retained earnings				8,433.9				7,356.3	
Treasury stock, at cost; 6.1 and 4.2 shares, respectively				(783.5)				(504.6)	
Accumulated other comprehensive income, net of tax				(12.1)				(12.1)	
Total Republic Services, Inc. stockholders' equity				10,542.3				9,686.0	
Non-controlling interests in consolidated subsidiary				1.2				0.8	
Total stockholders' equity				10,543.5				9,686.8	
Total liabilities and stockholders' equity				\$	31,410.1			\$	29,052.9

The accompanying notes are an integral part of these financial statements.

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

	Years Ended December 31,					
	2023		2022		2021	
Revenue	\$	14,964.5	\$	13,511.3	\$	11,295.0
Expenses:						
Cost of operations		8,942.2		8,205.0		6,737.7
Depreciation, amortization and depletion		1,501.4		1,351.6		1,185.5
Accretion		97.9		89.6		82.7
Selling, general and administrative		1,608.7		1,454.3		1,195.8
Adjustment to withdrawal liability for multiemployer pension funds		4.5		(1.6)		—
(Gain) loss on business divestitures and impairments, net		(3.6)		(6.3)		0.5
Restructuring charges		33.2		27.0		16.6
Operating income		2,780.2		2,391.7		2,076.2
Interest expense		(508.2)		(395.6)		(314.6)
Loss from unconsolidated equity method investments		(94.3)		(165.6)		(188.5)
Loss on extinguishment of debt		(0.2)		—		—
Interest income		6.5		3.3		2.5
Other income (expense), net		7.5		(2.3)		(0.5)
Income before income taxes		2,191.5		1,831.5		1,575.1
Provision for income taxes		460.1		343.9		282.8
Net income		1,731.4		1,487.6		1,292.3
Net income attributable to non-controlling interests in consolidated subsidiary		(0.4)		—		(1.9)
Net income attributable to Republic Services, Inc.	\$	1,731.0	\$	1,487.6	\$	1,290.4
Basic earnings per share attributable to Republic Services, Inc. stockholders:						
Basic earnings per share	\$	5.47	\$	4.70	\$	4.05
Weighted average common shares outstanding		316.2		316.5		318.8
Diluted earnings per share attributable to Republic Services, Inc. stockholders:						
Diluted earnings per share	\$	5.47	\$	4.69	\$	4.04
Weighted average common and common equivalent shares outstanding		316.7		317.1		319.4
Cash dividends per common share	\$	2.06	\$	1.91	\$	1.77

The accompanying notes are an integral part of these financial statements.

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

	Years Ended December 31,											
	2023			2022			2021					
Net income	\$	1,731.4		\$	1,487.6		\$	1,292.3				
Other comprehensive income (loss), net of tax												
Hedging activity:												
Realized (income) loss reclassified into earnings		(9.3)			1.1			4.6				
Unrealized gain		14.0			8.4			—				
Pension activity:												
Change in funded status of pension plan obligations		(0.3)			(2.0)			(6.8)				
Foreign currency activity:												
Unrealized loss on foreign currency translation		(4.4)			(5.0)			—				
Other comprehensive income (loss), net of tax		—			2.5			(2.2)				
Comprehensive income		1,731.4			1,490.1			1,290.1				
Comprehensive income attributable to non-controlling interests		(0.4)			—			(1.9)				
Comprehensive income attributable to Republic Services, Inc.	\$	1,731.0		\$	1,490.1		\$	1,288.2				

The accompanying notes are an integral part of these financial statements.

REPUBLIC SERVICES, INC.
CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY

(in millions)

[illegible]

The accompanying notes are an integral part of these financial statements.

REPUBLIC SERVICES, INC.
CONSOLIDATED STATEMENTS OF CASH FLOWS

(in millions)

The accompanying notes are an integral part of these financial statements.

REPUBLIC SERVICES, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

1. BASIS OF PRESENTATION

Republic Services, Inc., a Delaware corporation, and its consolidated subsidiaries (also referred to collectively as Republic, the Company, we, us, or our), is one of the largest providers of environmental services in the United States, as measured by revenue. Our senior management evaluates, oversees and manages the financial performance of our operations through three field groups, referred to as Group 1, Group 2 and Group 3. Group 1 is our recycling and waste business operating primarily in geographic areas located in the western United States. Group 2 is our recycling and waste business operating primarily in geographic areas located in the southeastern and mid-western United States, the eastern seaboard of the United States, and Canada. Group 3 is our environmental solutions business operating primarily in geographic areas located across the United States and Canada. These groups represent our reportable segments, which each provide integrated environmental services, including but not limited to collection, transfer, recycling, and disposal. Prior to the third quarter of 2022, our environmental services operating segment, now referred to as our Group 3 reportable segment, was aggregated with Corporate entities and other.

The consolidated financial statements include the accounts of Republic Services, Inc. and its wholly owned and majority owned subsidiaries in accordance with accounting principles generally accepted in the United States of America (U.S. GAAP). We account for investments in entities in which we do not have a controlling financial interest under the equity method of accounting or, for investments that do not meet the criteria to be accounted for under the equity method, we reflect these investments at their fair value when it is readily determinable. If fair value is not readily determinable, we use an alternative measurement approach. All material intercompany accounts and transactions have been eliminated in consolidation.

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

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Management's Estimates and Assumptions

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

Cash and Cash Equivalents

We consider liquid investments with a maturity at the date of acquisition of three months or less to be cash equivalents.

We may have net book credit balances in our primary disbursement accounts at the end of a reporting period. We classify such credit balances as accounts payable in our consolidated balance sheets as checks presented for payment to these accounts are not payable by our banks under overdraft arrangements, and, therefore, do not represent short-term borrowings. As of December 31, 2023 and 2022, there were net book credit balances of \$148.0 million and \$143.5 million, respectively, in our primary disbursement accounts that were classified as accounts payable on our consolidated balance sheets.

Concentration of Credit Risk

Financial instruments that potentially subject us to concentrations of credit risk consist of cash and cash equivalents, trade accounts receivable and derivative instruments. We place our cash and cash equivalents with high quality financial institutions. Such balances may be in excess of FDIC insured limits. To manage the related credit exposure, we continually monitor the credit worthiness of the financial institutions where we have deposits. Concentrations of credit risk with respect to trade accounts receivable are limited due to the wide variety of customers and markets in which we provide services, as well as the dispersion of

our operations across many geographic areas. We provide services to small-container, large-container, municipal and residential and environmental solutions customers primarily in the United States and Canada. We perform ongoing credit

REPUBLIC SERVICES, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)

evaluations of our customers, but generally do not require collateral to support customer receivables. We establish an allowance for doubtful accounts based on various factors including the credit risk of specific customers, age of receivables outstanding, historical trends, economic conditions and other information.

Accounts Receivable, Net

Accounts receivable represents receivables from customers for environmental services, including collection and processing of recyclable materials, collection, transfer and disposal of solid waste and environmental solutions. Our receivables are recorded when billed or when the related revenue is earned and represent claims against third parties that will be settled in cash. The carrying value of our receivables, net of the allowance for doubtful accounts and customer credits, represents their estimated net realizable value.

We establish an allowance for doubtful accounts based on various factors including the age of receivables outstanding, historical trends, economic conditions and other information. We also review outstanding balances on an account-specific basis based on the credit risk of the customer. We determined that all of our accounts receivable share similar risk characteristics. We monitor our credit exposure on an ongoing basis and assess whether assets in the pool continue to display similar risk characteristics. We perform ongoing credit evaluations of our customers, but generally do not require collateral to support customer receivables.

The following table reflects the activity in our allowance for doubtful accounts for the years ended December 31:

	2023		2022		2021	
Balance at beginning of year	\$	51.9	\$	38.5	\$	34.7
Additions charged to expense		53.2		41.5		19.9
Accounts written-off		(21.9)		(28.1)		(16.1)
Balance at end of year	\$	83.2	\$	51.9	\$	38.5

Restricted Cash and Marketable Securities

As of December 31, 2023 and 2022, we had \$163.6 million and \$127.6 million, respectively, of restricted cash and marketable securities, of which \$120.4 million and \$88.5 million, respectively, supports our insurance programs for workers' compensation, commercial general liability and commercial auto liability. Additionally, we obtain funds through the issuance of tax-exempt bonds for the purpose of financing qualifying expenditures at our landfills, transfer stations, collection and recycling centers. The funds are deposited directly into trust accounts by the bonding authorities at the time of issuance. As the use of these funds is contractually restricted, and we do not have the ability to use these funds for general operating purposes, they are classified as restricted cash and marketable securities in our consolidated balance sheets.

In the normal course of business, we may be required to provide financial assurance to governmental agencies and a variety of other entities in connection with, among other things, municipal residential collection contracts, closure or post-closure of landfills, environmental remediation, environmental permits and business licenses and permits as a financial guarantee of our performance. At several of our landfills, we satisfy financial assurance requirements by depositing cash into restricted trust funds or escrow accounts.

Property and Equipment

We record property and equipment at cost. Expenditures for major additions and improvements to facilities are capitalized, while maintenance and repairs are charged to expense as incurred. When property is retired or otherwise disposed, the related cost and accumulated depreciation are removed from the accounts and any resulting gain or loss is reflected in the consolidated statements of income.

REPUBLIC SERVICES, INC.**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)**

We revise the estimated useful lives of property and equipment acquired through business acquisitions to conform with our policies. We depreciate assets over their estimated useful lives using the straight-line method. We assume no salvage value for our depreciable property and equipment. The estimated useful lives of our property and equipment are as follows:

Buildings and improvements	5 - 30 years
Vehicles	5 - 20 years
Landfill equipment	5 - 7 years
Other equipment	3 - 25 years
Furniture and fixtures	3 - 10 years

Landfill development costs also are included in property and equipment. Landfill development costs include direct costs incurred to obtain landfill permits and direct costs incurred to acquire, construct and develop sites, as well as final capping, closure and post-closure assets. These costs are amortized or depleted based on consumed airspace. All indirect landfill development costs are expensed as incurred. For additional information, see Note 8, *Landfill and Environmental Costs*.

Capitalized Interest

We capitalize interest on all landfill cell construction and other construction or development projects. Interest is capitalized on qualified assets while they undergo activities to ready them for their intended use. Capitalization of interest ceases once an asset is placed into service or if construction activity is suspended for more than a brief period of time. Our interest capitalization rate is based on our weighted average cost of indebtedness. Interest capitalized was \$7.8 million for the year ended December 31, 2023 and \$5.0 million for each of the years ended December 31, 2022 and 2021.

Fair Value of Financial Instruments

Our financial instruments include cash and cash equivalents, restricted cash and marketable securities, interest rate hedges and other derivatives, long-term debt, contingent consideration arrangements and assets in our defined benefit pension plan. Accounting standards include disclosure requirements around fair values used for certain financial instruments and establish a fair value hierarchy. The hierarchy prioritizes valuation inputs into three levels based on the extent to which inputs used in measuring fair value are observable in the market. Each fair value measurement is reported in one of three levels:

- Level 1 – inputs are based upon unadjusted quoted prices for identical instruments traded in active markets.
- Level 2 – inputs are based upon quoted prices for similar instruments in active markets, quoted prices for identical or similar instruments in markets that are not active, and model-based valuation techniques for which all significant assumptions are observable in the market or can be corroborated by observable market data for substantially the full term of the assets or liabilities.
- Level 3 – inputs are generally unobservable and typically reflect management’s estimates of assumptions that market participants would use in pricing the asset or liability. The fair values are therefore determined using model-based techniques that include option pricing models, discounted cash flow models and similar techniques.

See Note 12, *Employee Benefit Plans*, and Note 18, *Financial Instruments*, for fair value disclosures related to our defined benefit pension plan investments and financial instruments, respectively.

Investments Other Than Derivatives

Investments other than derivatives primarily include money market funds, common stock, mutual funds, United States government and agency securities, municipal and corporate bonds and foreign government bonds. In general, and where applicable, we use quoted prices in active markets for identical assets or liabilities to determine fair value. This pricing methodology applies to our Level 1 investments, such as money market funds, common stock and certain mutual funds. If quoted prices in active markets for identical assets or liabilities are not available to determine fair value, then we use quoted prices for similar assets and liabilities or inputs other than the quoted prices that are observable either directly or indirectly. These investments are included in Level 2 and consist primarily of corporate bonds, foreign government bonds, real estate investment trusts and certain agency securities.

Derivative Financial Instruments

We use derivative financial instruments to manage our risk associated with changing interest rates by creating offsetting market exposures. In prior periods, we entered into multiple agreements designated as cash flow hedges to lock interest rates in anticipation of future debt issuance. In connection with our acquisition of US Ecology, Inc. (US Ecology), in the second quarter of 2022, we acquired and novated a floating-to-fixed interest rate swap agreement that is designated as a cash flow hedge.

REPUBLIC SERVICES, INC.**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)**

All derivatives are measured at fair value using standard valuation models with assumptions about prices and other relevant information based on those observed in the underlying markets (Level 2 in the fair value hierarchy). These instruments are recognized in the balance sheet as assets or liabilities, as appropriate. The estimated fair values of derivatives used to hedge risks fluctuate over time and should be viewed in relation to the underlying hedged transactions.

For derivatives designated as cash flow hedges, changes in fair value of the effective portions of derivative instruments are reported in stockholders' equity as components of other comprehensive income until the forecasted transaction occurs or is not probable of occurring. When the forecasted transaction occurs or is not probable of occurring, the realized net gain or loss is then recognized in the consolidated statements of income. Changes in fair value of the ineffective portions are recognized currently in earnings.

Landfill and Environmental Costs***Life Cycle Accounting***

We use life-cycle accounting and the units-of-consumption method to recognize certain landfill costs over the life of the site. In life cycle accounting, all current and future capitalized costs to acquire and construct a site are calculated, and charged to expense based on the consumption of cubic yards of available airspace.

Costs and airspace estimates are developed at least annually by engineers. We use these estimates to adjust the rates we use to deplete capitalized costs. Changes in these estimates primarily relate to changes in cost estimates, available airspace, inflation and applicable regulations. Changes in available airspace include, but are not limited to, changes due to the addition of airspace attributable to probable expansion areas, airspace consumed and changes in engineering estimates.

Probable Expansion Airspace

We classify landfill disposal capacity as either permitted (having received the final permit from the applicable regulatory agency) or as probable expansion airspace. Before airspace included in an expansion area is determined to be probable expansion airspace and, therefore, is included in our calculation of total available disposal capacity, all of the following criteria must be met:

- We own the land associated with the expansion airspace or control it pursuant to an option agreement;
- We are committed to supporting the expansion project financially and with appropriate resources;
- There are no identified fatal flaws or impediments associated with the project, including political impediments;
- Progress is being made on the project;
- The expansion is attainable within a reasonable time frame; and
- We believe it is likely the expansion permit will be received.

Upon meeting our expansion criteria, the rates used at each applicable landfill to expense costs to acquire, construct, cap, close and maintain a site during the post-closure period are adjusted to include both the probable expansion airspace and the additional costs to be capitalized or accrued associated with that expansion airspace.

We have identified three steps that landfills generally follow to obtain expansion permits. These steps are as follows:

- Obtaining approval from local authorities;
- Submitting a permit application to state authorities; and
- Obtaining permit approval from state authorities.

We continually monitor our progress toward obtaining permits for each of our sites with probable airspace. If we determine that a landfill expansion area no longer meets our criteria, the probable expansion airspace is removed from the landfill's total available capacity and the rates used at the landfill to deplete costs to acquire, construct, cap, close and maintain a site during the post-closure period are adjusted accordingly. In addition, any amounts capitalized for the probable expansion airspace are charged to expense in the period in which it is determined that the criteria are no longer met.

Capitalized Landfill Costs

Capitalized landfill costs include expenditures for land, permitting, cell construction and environmental structures. Capitalized permitting and cell construction costs are limited to direct costs relating to these activities, including legal, engineering and

construction costs associated with excavation, natural and synthetic liners, construction of leachate collection systems, installation of methane gas collection and monitoring systems, installation of groundwater monitoring wells and other costs

REPUBLIC SERVICES, INC.**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)**

associated with the development of the site. Interest is capitalized on landfill construction projects while the assets are undergoing activities to ready them for their intended use. Capitalized landfill costs also include final capping, closure and post-closure assets and are depleted as airspace is consumed using the units-of-consumption method.

Costs related to acquiring land, excluding the estimated residual value of unpermitted, non-buffer land, and costs related to permitting and cell construction are depleted as airspace is consumed using the units-of-consumption method.

Capitalized landfill costs also may include an allocation of purchase price paid for landfills. For landfills purchased as part of a group of assets, the purchase price assigned to the landfill is determined based on the estimated fair value of the landfill. If the landfill meets our expansion criteria, the purchase price is further allocated between permitted airspace and expansion airspace based on the respective ratios to total available airspace. Landfill purchase price is amortized using the units-of-consumption method over the total available airspace, including probable expansion airspace, where appropriate.

Final Capping, Closure and Post-Closure Costs***Final capping***

We have future obligations for final capping, closure and post-closure costs with respect to the landfills we own or operate as set forth in applicable landfill permits. The permit requirements are based on the Subtitle C and Subtitle D regulations of the Resource Conservation and Recovery Act, as implemented and applied on a state-by-state basis. We define final capping as activities required to permanently cover a portion of a landfill that has been completely filled with waste. Final capping typically includes installing flexible membrane and geosynthetic clay liners, drainage and compact soil layers and topsoil and is constructed over an area of the landfill where total airspace capacity has been consumed and waste disposal operations have ceased. These final capping activities occur in phases as needed throughout the operating life of a landfill as specific areas are filled to capacity and the final elevation for that specific area is reached in accordance with the provisions of the operating permit. We consider final capping events to be discrete activities that are recognized as asset retirement obligations separately from other closure and post-closure obligations. As a result, we use a separate rate per ton for recognizing the principal amount of the liability and related asset associated with each capping event. We amortize the asset recorded pursuant to this approach as waste volume related to the capacity covered by the capping event is placed into the landfill based on the consumption of cubic yards of available airspace.

Closure and post-closure

Closure and post-closure activities occur after the entire landfill ceases to accept waste and closes. These activities involve methane gas control, leachate management and groundwater monitoring, surface water monitoring and control and other operational and maintenance activities that occur after the site ceases to accept waste. Obligations associated with monitoring and controlling methane gas migration and emissions are set forth in applicable landfill permits and these requirements are based on the provisions of the Clean Air Act. The post-closure period generally runs for 30 years after final site closure for municipal solid waste landfills and a shorter period for construction and demolition landfills and inert landfills. We recognize asset retirement obligations and the related amortization expense for closure and post-closure (excluding obligations for final capping) using the units-of-consumption method over the total remaining capacity of the landfill, including probable expansion airspace, where appropriate.

Estimated future expenditures

Estimates of future expenditures for final capping, closure and post-closure are developed at least annually by engineers. Management reviews these estimates and our operating and accounting personnel use them to adjust the rates used to capitalize and amortize these costs. These estimates involve projections of costs that will be incurred during the remaining life of the landfill for final capping activities, after the landfill ceases operations and during the legally required post-closure monitoring period. As of December 31, 2023, we had 126 closed landfills.

Fair value measurements

In general, we engage third parties to perform most of our final capping, closure and post-closure activities. Accordingly, the fair value of these activities is based on quoted and actual prices paid for similar work. We also perform some of our final capping, closure and post-closure activities using internal resources. Where we expect internal resources to be used to fulfill an asset retirement obligation, we add a profit margin to the estimated cost of such services to better reflect their fair value. If we perform these services internally, the added profit margin is recognized as a component of operating income in the period the obligation is settled.

Our estimates of costs to discharge asset retirement obligations for landfills are developed in today's dollars. These costs are inflated each year to reflect a normal escalation of prices up to the year they are expected to be paid. Our inflation rate was

REPUBLIC SERVICES, INC.**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)**

2.0%, 1.9% and 1.7% for the years ended December 31, 2023, 2022 and 2021, respectively, which is primarily based on the ten-year historical moving average increase of the United States Consumer Price Index. These estimated costs are then discounted to their present values using a credit-adjusted, risk-free interest rate.

Changes in assets retirement obligations

A liability for an asset retirement obligation is recognized in the period in which it is incurred and is initially measured at fair value. The offset to the liability is capitalized as part of the carrying amount of the related long-lived asset. Changes in the liabilities due to revisions to estimated future cash flows are recognized by increasing or decreasing the liabilities with the offsets adjusting the carrying amounts of the related long-lived assets, and may also require immediate adjustments to amortization expense in the consolidated statements of income. Upward revisions in the amount of undiscounted estimated cash flows used to record a liability are discounted using the credit-adjusted, risk-free interest rate in effect at the time of the change. Downward revisions in the amount of undiscounted estimated cash flows used to record a liability are discounted using the credit-adjusted, risk-free rate that existed when the original liability was recognized.

Changes in asset retirement obligations due to the passage of time are measured by recognizing accretion expense in a manner that results in a constant effective interest rate being applied to the average carrying amount of the liability. The effective interest rate used to calculate accretion expense is our credit-adjusted, risk-free interest rate in effect at the time the liabilities were recorded.

We review our calculations with respect to landfill asset retirement obligations at least annually. If there is a significant change in the facts and circumstances related to a landfill during the year, we will review our calculations for the landfill as soon as practical after the change has occurred.

Landfill operating expenses

Costs associated with daily maintenance activities and environmental compliance during the operating life of the landfill are expensed as incurred. These costs include, among other things, leachate treatment and disposal, methane gas and groundwater monitoring and systems maintenance, interim cap maintenance, costs associated with the application of daily cover materials and the legal and administrative costs of ongoing environmental compliance.

Environmental Liabilities

We are subject to an array of laws and regulations relating to the protection of the environment, and we remediate sites in the ordinary course of our business. Under current laws and regulations, we may be responsible for environmental remediation at sites that we either own or operate, including sites that we have acquired, or sites where we have (or a company that we have acquired has) delivered waste. Our environmental remediation liabilities primarily include costs associated with remediating groundwater, surface water and soil contamination, as well as controlling and containing methane gas migration and the legal costs related to these remediation efforts. To estimate our ultimate liability at these sites, we evaluate several factors, including the nature and extent of contamination at each identified site, the required remediation methods, timing of expenditures, the apportionment of responsibility among the potentially responsible parties and the financial viability of those parties. We accrue for costs associated with environmental remediation obligations when such costs are probable and reasonably estimable in accordance with accounting for loss contingencies. We periodically review the status of all environmental matters and update our estimates of the likelihood of and future expenditures for remediation as necessary. Changes in the liabilities resulting from these reviews are recognized currently in earnings in the period in which the adjustment is known. Adjustments to estimates are reasonably possible in the near term and may result in changes to recorded amounts. With the exception of those obligations assumed in certain business combinations, environmental obligations are recorded on an undiscounted basis. Adjustments arising from changes in amounts and timing of estimated costs and settlements may result in increases or decreases in these obligations and are calculated on a discounted basis as they were initially estimated on a discounted basis. These adjustments are charged to operating income when they are known. We perform a comprehensive review of our environmental obligations annually and also review changes in facts and circumstances associated with these obligations at least quarterly. We have not reduced the liabilities we have recorded for recoveries from other potentially responsible parties or insurance companies.

Business Combinations

We acquire businesses in the environmental services industry as part of our growth strategy. Businesses are included in the consolidated financial statements from the date of acquisition.

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: (1) the aggregate of the fair value of consideration transferred, the fair value of any non-controlling interest in the acquiree (if any) and the acquisition date fair value of

our previously held equity interest in the acquiree (if any), over (2) the fair value of assets acquired and liabilities assumed. If information about facts and circumstances existing as of the acquisition date is incomplete by the end of the

REPUBLIC SERVICES, INC.**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)**

reporting period in which a business combination occurs, we report provisional amounts for the items for which the accounting is incomplete. The measurement or allocation period ends once we receive the information we are seeking; however, this period will generally not exceed one year from the acquisition date. Any material adjustments recognized during the measurement period will be reflected retrospectively in the consolidated financial statements of the subsequent period. We recognize third-party transaction-related costs as expense in the period in which they are incurred.

Goodwill and Other Intangible Assets

We evaluate goodwill for impairment annually as of October 1st, or when an indicator of impairment exists, at the reporting unit level. Our reporting units are our three field groups: Group 1, Group 2 and Group 3.

We may use both qualitative and quantitative approaches when testing goodwill for impairment. If, after assessing qualitative factors, we determine it is more likely than not that a reporting unit's goodwill is impaired, then we perform a quantitative test for that reporting unit. The quantitative impairment test for goodwill encompasses calculating a fair value of goodwill and comparing the fair value to its carrying value. If the carrying value exceeds the fair value, impairment is recognized for the difference.

As of October 1, 2023, we utilized a qualitative approach and performed an evaluation of circumstances and events impacting our reporting units to determine the likelihood of goodwill impairment. Examples of such events or circumstances include: (1) a significant adverse change in legal factors or in the business climate; (2) an adverse action or assessment by a regulator; (3) a more likely than not expectation that a reporting unit or a significant portion thereof will be sold; (4) continued or sustained losses at a reporting unit; (5) a significant decline in our market capitalization as compared to our book value; or (6) we conclude that we may not recover a significant asset group within the reporting unit. We determined it was more likely than not that the fair values of our reporting units exceeded their carrying amounts. No impairment losses were recorded for goodwill during the years ended December 31, 2023, 2022 or 2021.

Other intangible assets include values assigned to customer relationships, non-compete agreements and trade names and are amortized generally on a straight-line basis over periods ranging from 1 to 15 years.

Asset Impairments

We continually consider whether events or changes in circumstances have occurred that may warrant revision of the estimated useful lives of our long-lived assets (other than goodwill) or whether the remaining balances of those assets should be evaluated for possible impairment. Long-lived assets include, for example, capitalized landfill costs, other property and equipment and identifiable intangible assets.

Events or changes in circumstances that may indicate that an asset may be impaired include the following:

- A significant decrease in the market price of an asset or asset group;
- A significant adverse change in the extent or manner in which an asset or asset group is being used or in its physical condition;
- A significant adverse change in legal factors or in the business climate that could affect the value of an asset or asset group, including an adverse action or assessment by a regulator;
- An accumulation of costs significantly in excess of the amount originally expected for the acquisition or construction of a long-lived asset;
- A current period operating or cash flow loss combined with a history of operating or cash flow losses or a projection or forecast that demonstrates continuing losses associated with the use of a long-lived asset or asset group;
- A current expectation that, more likely than not, a long-lived asset or asset group will be sold or otherwise disposed of significantly before the end of its previously estimated useful life; or
- An impairment of goodwill at a reporting unit.

There are certain indicators listed above that require judgment and understanding of the environmental services industry when applied to landfill development or expansion. For example, a regulator may initially deny a landfill expansion permit application though the expansion permit is ultimately granted. In addition, management may periodically divert waste from one landfill to another to conserve remaining permitted landfill airspace. Therefore, certain events could occur in the ordinary course of business and not necessarily be considered indicators of impairment due to the unique nature of the environmental services industry.

If indicators of impairment exist, the asset or asset group is reviewed to determine whether its recoverability is impaired. We assess the recoverability of the asset or asset group by comparing its carrying value to an estimate (or estimates) of its

REPUBLIC SERVICES, INC.**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)**

undiscounted future cash flows over its remaining life. If the estimated undiscounted cash flows are not sufficient to recover the carrying value of the asset or asset group, we measure an impairment loss as the amount by which the carrying amount of the asset exceeds its fair value. The loss is recorded in the consolidated statements of income in the period in which such impairment is identified. Estimating future cash flows requires significant judgment, and our projections of future cash flows and remaining useful lives may vary materially from actual results.

Insurance Reserves

Our insurance programs for workers' compensation, commercial general and auto liability, environmental and remediation liability and employee-related health care benefits are subject to high deductible insurance policies. Accruals for insurance reserves are based on claims filed and estimates of claims incurred but not reported. We consider our past claims experience, including both frequency and settlement amount of claims, in determining these estimates. It is possible that recorded reserves may not be adequate to fund the future payment of claims. Adjustments, if any, to estimates recorded resulting from ultimate claim payments will be reflected in the consolidated statements of income in the periods in which such adjustments are known. In general, our insurance reserves are recorded on an undiscounted basis; however, the insurance liabilities we assumed in business combinations are recorded at estimated fair value, and therefore have been discounted to present value based on our estimate of the timing of the related cash flows.

Costs Associated with Exit Activities

We record costs associated with exit activities such as employee termination benefits that represent a one-time benefit when management approves and commits to a plan of termination, and communicates the termination arrangement to the employees, or over the future service period, if any. Other costs associated with exit activities may include contract termination costs, including facility and employee relocation costs.

Contingent Liabilities

We are subject to various legal proceedings, claims and regulatory matters, the outcomes of which are subject to significant uncertainty. In general, we determine whether to disclose or accrue for loss contingencies based on an assessment of whether the risk of loss is remote, reasonably possible or probable, and whether it can be reasonably estimated. We assess our potential liability relating to litigation and regulatory matters based on information available to us. Management develops its assessment based on an analysis of possible outcomes under various strategies. We accrue for loss contingencies when such amounts are probable and reasonably estimable. If a contingent liability is only reasonably possible, we disclose the potential range of the loss, if estimable. Contingent liabilities recorded in purchase accounting are recorded at their fair values. These fair values may be different from the values we would have otherwise recorded, had the contingent liability not been assumed as part of an acquisition of a business.

Accumulated Other Comprehensive Income

Accumulated other comprehensive income is a component of stockholders' equity and includes the effective portion of the net changes in fair value of our cash flow hedges, amortization of our interest rate locks, certain adjustments to liabilities associated with our employee defined benefit pension plan liabilities, net of tax, and foreign currency translation adjustments.

Revenue Recognition

We generally provide services under contracts with municipalities or individual customers. Municipal and small-container contracts are generally long-term and often have renewal options. Environmental solutions revenue may be billed in advance of the service being performed, such as the treatment or disposal of the waste. Advance billings are recorded as deferred revenue, and revenue is recognized over the period services are provided.

We recognize revenue when control is transferred to the customer, generally at the time we provide a service. Revenue is measured as the amount of consideration we expect to receive in exchange for providing a service. We make payments to certain of our customers, including payments to our municipal customers or commodity rebates to customers in our recycling business, which reduce the amount of revenue we recognize.

Income Taxes

We account for income taxes under the asset and liability method, which requires the recognition of deferred tax assets and liabilities for the expected future tax consequences of events that have been included in the financial statements. Under this method, we record deferred income taxes to reflect the effects of temporary differences between the carrying amounts of assets and liabilities and their tax bases using enacted tax rates that we expect to be in effect when the taxes are actually paid or recovered.

The effect of a change in tax rates on deferred tax assets and liabilities is recognized in income in the period that includes the enactment date.

REPUBLIC SERVICES, INC.**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)**

We record net deferred tax assets to the extent we believe these assets will more likely than not be realized. In making these determinations, we consider all available positive and negative evidence, including scheduled reversals of deferred tax liabilities, tax planning strategies, projected future taxable income and recent financial operating results. The weight given to the positive and negative evidence is commensurate with the extent such evidence can be objectively verified. If we determine that we would be able to realize a deferred income tax asset in the future in excess of its net recorded amount, we would make an adjustment to the valuation allowance, which would reduce the provision for income taxes.

We record uncertain tax positions in accordance with ASC 740. A tax benefit from an uncertain tax position may be recognized when it is more likely than not that the position will be sustained upon examination, including resolution of any related appeals or litigation processes, based on the technical merits. Income tax positions must meet a more-likely-than-not recognition threshold at the effective date to be recognized.

We recognize interest and penalties related to uncertain tax positions in the provision for income taxes in the accompanying consolidated statements of income. Accrued interest and penalties are included in other accrued liabilities, deferred income taxes and other long-term tax liabilities in the consolidated balance sheets.

We use the flow-through method to account for investment tax credits earned on eligible development expenditures. Under this method, the investment tax credits are recognized as a reduction to income tax expense in the year they are earned.

Defined Benefit Pension Plan

We currently have one qualified defined benefit pension plan, the BFI Retirement Plan (the Plan). The Plan covers certain current and former employees of Allied Waste Industries, LLC (formerly Allied Waste Industries, Inc.) (Allied) in the United States, including some employees subject to collective bargaining agreements. The Plan's benefit formula is based on a percentage of compensation as defined in the Plan document. However, the benefits of all current Plan participants are frozen.

Our pension contributions are made in accordance with funding standards established by the Employee Retirement Income Security Act of 1974 and the Internal Revenue Code, as amended by the Pension Protection Act of 2006. The Plan's assets have been invested as determined by our Employee Benefits Committee. The Employee Benefits Committee reviews and adjusts the Plan's asset allocation as deemed necessary.

The benefit obligation and associated income or expense related to the Plan are determined using annually established assumptions for discount rates, expected rates of return and mortality rates. We determine the discount rate based on a model that matches the timing and amount of expected benefit payments to maturities of high quality bonds priced as of the pension plan measurement date. When that timing does not correspond to a published high-quality bond rate, our model uses an expected yield curve to determine an appropriate current discount rate. The yields on the bonds are used to derive a discount rate for the liability. In developing our expected rate of return assumption, we evaluate long-term expected and historical actual returns on the Plan assets, giving consideration to the asset mix and the anticipated duration of our Plan obligations. The average rate of compensation increase reflects our expectations of average pay increases over the period benefits are earned. Our assumptions are reviewed annually and adjusted as deemed necessary.

Equity-Based Compensation Plans

Compensation expense associated with our restricted share units is recognized ratably over the vesting period, or to the employee's retirement eligible date, if earlier. The fair value of restricted share units is based on the closing market price on the date of the grant.

Compensation expense associated with our performance shares that vest based on future performance targets is measured using the fair value of our common stock at the grant date for the stock-settled, equity classified awards and the fair value of our common stock at the end of each reporting period for the cash-settled, liability classified awards. Compensation expense is recognized ratably over the performance period based on our estimated achievement of the established performance criteria. Compensation expense is only recognized for those awards that we expect to vest, which we estimate based on an assessment of the probability that the performance criteria will be achieved.

Income tax related cash flows resulting from equity-based payments are reported as a component of operating activities.

Share Repurchases

Share repurchases under our share repurchase authorization may be made through open market purchases or privately negotiated transactions at the current market prices. From time-to-time, we return treasury shares acquired through share repurchases to the status of authorized but unissued. Our accounting policy is to deduct the par value from common stock and to reflect any excess of cost over par value as a deduction from additional paid-in capital.

REPUBLIC SERVICES, INC.**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)****Leases**

We lease property and equipment in the ordinary course of business under various lease agreements. The most significant lease obligations are for real property and equipment specific to our industry, including property operated as a landfill or transfer station and operating equipment. Our leases have varying terms. Some may include renewal or purchase options, escalation clauses, restrictions, penalties or other obligations that we consider in determining minimum lease payments. Our lease terms include options to renew the lease when it is reasonably certain that we will exercise the option.

Certain leases require payments that are variable in nature based on volume measurements, e.g. a fixed rate per ton at our landfills. In addition, certain rental payments are adjusted annually based on changes in an underlying base index such as a consumer price index. Variable lease payments are recognized in our consolidated statements of income in the period incurred. Our lease agreements do not contain any material residual value guarantees or material restrictive covenants. We generally account for lease components separately from non-lease components.

Leases are classified as either operating leases or finance leases, as appropriate. Leases with an initial term of 12 months or less are not recorded on our consolidated balance sheet.

Operating Leases

Many of our leases are operating leases. Operating lease classification generally can be attributed to either (1) relatively low fixed minimum lease payments (including, for example, real property lease payments that are not fixed and vary based on the volume of material we receive or process), or (2) minimum lease terms that are shorter than the asset's economic useful life. We expect that, in the ordinary course of business, our operating leases will be renewed, replaced by other leases, or replaced with capital expenditures. We recognize rent expense for these leases on a straight-line basis over the lease term.

We recognize a right-of-use liability and right-of-use asset for leases classified as operating leases in our consolidated balance sheet upon lease commencement. The right-of-use liability represents the present value of the remaining lease payments. An implicit rate is often not readily available for these leases. As such, we use our incremental borrowing rate at the commencement date to determine the present value of the lease payments. Our incremental borrowing rate represents the rate of interest that we would have to pay to borrow on a collateralized basis over a similar term in a similar economic environment. In addition, we recognize a corresponding right-of-use asset, which represents our right to use an underlying asset for the lease term. The right-of-use asset is adjusted for certain favorable or unfavorable leases recognized through acquisition, prepaid or accrued rent, asset impairments and lease incentives, including but not limited to cash incentives, rent abatement or leasehold improvements paid by the lessor.

Finance Leases

We capitalize assets acquired under finance leases at lease commencement and amortize them to depreciation expense over the lesser of the useful life of the asset or the lease term on either a straight-line or a units-of-consumption basis, depending on the asset leased. We record the present value of the related lease payments as a debt obligation. Our finance lease liabilities relate primarily to real property, including certain long-term landfill operating agreements that require minimum lease payments with offsetting finance lease assets recorded as part of the landfill development costs.

Related Party Transactions

It is our policy that transactions with related parties must be on terms that, on the whole, are no less favorable than those that would be available from unaffiliated parties.

New Accounting Pronouncements***Accounting Standards Adopted******Disclosure of Supplier Finance Program Obligations***

In September 2022, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update (ASU) 2022-04, *Liabilities—Supplier Finance Programs (Subtopic 405-50): Disclosure of Supplier Finance Program Obligations*. The ASU requires buyers to disclose information about their supplier finance programs. Interim and annual requirements include the disclosure of outstanding amounts under the obligations as of the end of the reporting period, and annual requirements include a roll-forward of those obligations for the annual reporting period, as well as a description of payment and other key terms of the programs. This update is effective for annual periods beginning after December 15, 2022, and interim periods within those fiscal years, except for the requirement to disclose roll-forward information, which is effective for fiscal years beginning after

REPUBLIC SERVICES, INC.**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)**

December 15, 2023. The adoption of ASU 2022-04 on January 1, 2023 did not have a material impact on our consolidated financial statements.

Through December 31, 2023, certain of our vendors chose to opt into our vendor supply finance agreement. This agreement allows a vendor to choose, on an invoice by invoice basis, to receive an earlier payment instead of a payment based on its original contracted terms (which, depending on the vendor, could extend up to 90 days or longer). As of December 31, 2023 and December 31, 2022, the amounts outstanding under these programs were not material.

Accounting Standards Updates Issued but not yet Adopted as of December 31, 2023***Codification Amendments in Response to the SEC's Disclosure Update and Simplification Initiative***

In October 2023, the FASB issued ASU 2023-06, Disclosure Improvements: *Codification Amendments in Response to the SEC's Disclosure Update and Simplification Initiative* (ASU 2023-06). ASU 2023-06 modifies the disclosure or presentation requirements of a variety of topics, which will allow users to more easily compare entities subject to the SEC's existing disclosures with those entities that were not previously subject to the SEC's requirements, and to align the requirements in the FASB accounting standard codification with the SEC's regulations. The effective date for each amendment will be the date on which the SEC's removal of the related disclosure from Regulation S-X or Regulation S-K becomes effective, with early adoption prohibited. The Company is currently evaluating the provisions of the amendments and the impact on its future consolidated financial statements.

Improvements to Reportable Segment Disclosures

In November 2023, the FASB issued ASU 2023-07, Segment Reporting (Topic 280): *Improvements to Reportable Segment Disclosures* (ASU 2023-07). ASU 2023-07 improves the reportable segment disclosure requirements, primarily through enhanced disclosures about significant segment expenses. The amendments in this update are effective for fiscal years beginning after December 15, 2024. We are currently assessing the effect this guidance may have on our consolidated financial statements.

Improvements to Income Tax Disclosures

In December 2023, the FASB issued ASU 2023-09, Income Taxes (Topic 740): *Improvements to Income Tax Disclosures* (ASU 2023-09). ASU 2023-09 requires entities to provide additional information in the rate reconciliation and additional disclosures about income taxes paid. The amendments in this update are effective for fiscal years beginning after December 15, 2024. We are currently assessing the effect this guidance may have on our consolidated financial statements.

REPUBLIC SERVICES, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)
3. BUSINESS ACQUISITIONS, INVESTMENTS AND RESTRUCTURING CHARGES

We acquired various environmental services businesses during the years ended December 31, 2023 and 2022. The purchase price paid for these business acquisitions and the allocations of the purchase price follows:

	2023		2022	
Purchase price:				
Cash used in acquisitions, net of cash acquired of \$23.2 and \$65.9, respectively	\$	1,756.3	\$	2,668.6
Holdbacks		19.1		17.2
Fair value, future minimum lease payments		0.6		15.6
Total	\$	1,776.0	\$	2,701.4
Allocated as follows:				
Restricted cash	\$	—	\$	0.7
Accounts receivable		67.4		250.7
Prepaid expenses		5.6		15.7
Landfill development costs		49.1		565.4
Property and equipment		374.3		540.0
Operating right-of-use lease assets		14.4		61.1
Interest rate swap		—		29.1
Other assets		0.3		40.7
Inventory		2.9		10.7
Accounts payable		(20.6)		(112.4)
Deferred revenue		(10.6)		(28.2)
Environmental remediation liabilities		(5.7)		(57.5)
Closure and post-closure liabilities		(10.9)		(173.3)
Operating right-of-use lease liabilities		(14.4)		(57.1)
Deferred income tax liabilities		(25.0)		(109.3)
Other liabilities		(12.6)		(58.5)
Fair value of tangible assets acquired and liabilities assumed		414.2		917.8
Excess purchase price to be allocated	\$	1,361.8	\$	1,783.6
Excess purchase price allocated as follows:				
Other intangible assets	\$	203.9	\$	132.9
Goodwill		1,157.9		1,650.7
Total allocated	\$	1,361.8	\$	1,783.6

Certain of the purchase price allocations are preliminary and based on information existing at the acquisition dates. Accordingly, the purchase price allocations are subject to change. For the acquisitions that closed during 2023, we expect that a majority of the goodwill and intangible assets recognized as a result of these acquisitions will be deductible for tax purposes. Excluding the US Ecology acquisition discussed below, substantially all of the goodwill and intangible assets recorded for acquisitions that closed during 2022 are deductible for tax purposes.

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

On May 2, 2022, we acquired all outstanding equity of US Ecology in a transaction valued at \$2.2 billion. US Ecology is a leading provider of environmental solutions offering treatment, recycling and disposal of hazardous, non-hazardous and specialty waste. As

of, June 30, 2023, we finalized the purchase price allocation. We did not step-up the tax basis of the assets recognized in connection with the US Ecology acquisition, and do not expect the goodwill and intangible assets will be deductible for tax purposes.

In 2023 and 2022, we incurred \$33.5 million and \$77.3 million, respectively, of acquisition integration and deal costs in connection with the acquisition of US Ecology. The 2023 costs primarily related to the integration of certain software systems as well as rebranding of the business, and the 2022 costs included certain costs to close the acquisition and integrate the business.

REPUBLIC SERVICES, INC.**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)**

In June 2023, we acquired a vertically-integrated set of operations located primarily in Colorado from GFL Environmental Inc., including recycling, hauling, transfer and landfill operations. The purchase price allocation is preliminary and remains subject to revision as additional information is obtained about the facts and circumstances that existed at the valuation date. The preliminary allocation of purchase price, including the value assigned to tangible and intangible assets acquired as well as certain landfill and environmental liabilities assumed, is based on the best estimates of management and is subject to revision based on the final valuations. We expect our final valuations to be completed in 2024.

In November 2023, we acquired all of the issued and outstanding capital stock or other ownership interests of Advanced Chemical Transport LLC (ACT). ACT's environmental solutions operations are primarily located in the western United States and provide us with additional growth opportunities in our environmental solutions line of business. The purchase price allocation is preliminary and remains subject to revision as additional information is obtained about the facts and circumstances that existed at the valuation date. The preliminary allocation of purchase price, including the value assigned to tangible and intangible assets acquired, is based on the best estimates of management and is subject to revision based on the final valuations. We expect our final valuations to be completed in 2024.

In December 2023, we acquired all of the issued and outstanding membership and other equity interests of Central Texas Refuse, LLC and an affiliate thereof (CTR). CTR's vertically integrated recycling and waste services operations are located in and around Austin, Texas and provide us with the opportunity to re-enter the high growth Austin market. The purchase price allocation is preliminary and remains subject to revision as additional information is obtained about the facts and circumstances that existed at the valuation date. The preliminary allocation of purchase price, including the value assigned to tangible and intangible assets acquired as well as certain landfill and environmental liabilities assumed, is based on the best estimates of management and is subject to revision based on the final valuations. We expect our final valuations to be completed in 2024.

Investments

In 2022, we acquired a non-controlling equity interest in a joint venture with a landfill gas-to-energy developer to construct a number of renewable natural gas projects at our landfills across the United States. As of December 31, 2023 and 2022, we had an investment of approximately \$170 million and \$100 million, respectively, in the joint venture. During the year ended December 31, 2023, we invested approximately \$68 million in the joint venture. The investment is accounted for under the equity method of accounting.

In 2022, we acquired a non-controlling equity interest in a joint venture with Ravago, Blue Polymers, LLC, intended to help create vertical integration in the recycling market, and to further advance circularity by acquiring all olefins produced by the Company's Polymer Centers and produce custom blended pellets for food-grade and non-food-grade packaging. As of December 31, 2023 and 2022, we had an investment of approximately \$19 million and \$10 million, respectively, in the joint venture. During the year ended December 31, 2023 we invested approximately \$9 million in the joint venture. The investment is accounted for under the equity method of accounting.

In 2023 and 2022, we acquired non-controlling equity interests in certain limited liability companies that qualified for investment tax credits under Section 48 of the Internal Revenue Code. In exchange for our non-controlling interests, we made capital contributions of approximately \$222 million and \$205 million, which were recorded to other assets in our December 31, 2023 and 2022 consolidated balance sheets, respectively. During 2023 and 2022, we reduced the carrying value of these investments by approximately \$102 million and \$158 million, respectively, as a result of cash distributions and our share of income and loss pursuant to the terms of the limited liability company agreements. Additionally, our tax provisions reflect benefits of approximately \$87 million and \$139 million for the years end December 31, 2023 and 2022, respectively, due to the tax credits related to these investments. For further discussion of the income tax benefits, refer to Note 11, *Income Taxes*, in Part II, Item 8 of our Annual Report on Form 10-K for the year ended December 31, 2023.

Restructuring Charges

In 2023 and 2022, we incurred restructuring charges of \$33.2 million and \$27.0 million, respectively. Of the 2023 charges, \$9.5 million related to early termination of certain leases and \$23.7 million related to the redesign of our asset management, and customer and order management software systems, and the 2022 charges primarily related to the redesign of our general ledger, budgeting and procurement enterprise resource planning systems which was completed with systems being placed into production in 2022. We paid \$39.4 million and \$19.8 million during 2023 and 2022, respectively, related to these restructuring efforts.

REPUBLIC SERVICES, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)
4. PROPERTY AND EQUIPMENT, NET

A summary of property and equipment, net as of December 31 follows:

	2023		2022	
Land	\$	878.1	\$	779.7
Landfill development costs		9,911.2		9,574.2
Vehicles and equipment		10,231.9		9,465.3
Buildings and improvements		1,921.9		1,704.6
Construction-in-progress – landfill		350.4		358.3
Construction-in-progress – other		553.6		358.6
	\$	23,847.1	\$	22,240.7
Less: accumulated depreciation, depletion and amortization				
Landfill development costs	\$	(5,516.2)	\$	(5,058.9)
Vehicles and equipment		(6,147.7)		(5,679.9)
Buildings and improvements		(832.3)		(757.9)
		(12,496.2)		(11,496.7)
Property and equipment, net	\$	11,350.9	\$	10,744.0

Depreciation, amortization and depletion of property and equipment was \$1,368.4 million, \$1,245.6 million and \$1,111.7 million for the years ended December 31, 2023, 2022 and 2021, respectively.

5. GOODWILL AND OTHER INTANGIBLE ASSETS, NET
Goodwill

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

	Balance as of December 31, 2022		Acquisitions		Divestitures		Adjustments to Acquisitions		Balance as of December 31, 2023	
Group 1	\$	6,637.9	\$	675.4	\$	—	\$	(0.9)	\$	7,312.4
Group 2		6,238.3		208.2		(1.9)		0.9		6,445.5
Group 3		1,575.3		274.3		—		227.0		2,076.6
Total	\$	14,451.5	\$	1,157.9	\$	(1.9)	\$	227.0	\$	15,834.5

	Balance as of December 31, 2021		Acquisitions		Divestitures		Adjustments to Acquisitions		Balance as of December 31, 2022	
Group 1	\$	6,549.7	\$	95.2	\$	—	\$	(7.0)	\$	6,637.9
Group 2		5,994.2		239.0		(3.7)		8.8		6,238.3
Group 3		282.1		1,316.5		(0.3)		(23.0)		1,575.3
Total	\$	12,826.0	\$	1,650.7	\$	(4.0)	\$	(21.2)	\$	14,451.5

Adjustments to acquisitions during the year ended December 31, 2023 primarily related to changes in our valuation of tangible assets acquired and certain environmental liabilities assumed in connection with our acquisition of US Ecology. Adjustments to acquisitions during the year ended December 31, 2022 primarily related to changes in our valuation of tangible and intangible assets as well as certain landfill leases and environmental liabilities assumed as a result of obtaining new information regarding the acquisitions that closed in 2021.

REPUBLIC SERVICES, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)

Other Intangible Assets, Net

Other intangible assets, net, include values assigned to customer relationships, non-compete agreements and trade names, and are amortized over periods ranging from 1 to 15 years. A summary of the activity and balances by intangible asset type follows:

	Gross Intangible Assets						Accumulated Amortization					
	Balance as of December 31, 2022		Acquisitions		Adjustments and Other		Balance as of December 31, 2023		Balance as of December 31, 2022		Additions Charged to Expense	
Customer relationships	\$	1,013.5	\$	197.3	\$	(579.1)	\$	631.7	\$	(709.1)	\$	(53.7)
Non-compete agreements		67.9		4.2		(41.7)		30.4		(50.9)		(6.5)
Other intangible assets		77.0		2.4		(56.2)		23.2		(51.2)		(6.1)
Total	\$	1,158.4	\$	203.9	\$	(677.0)	\$	685.3	\$	(811.2)	\$	(66.3)

	Gross Intangible Assets						Accumulated Amortization					
	Balance as of December 31, 2021		Acquisitions		Adjustments and Other		Balance as of December 31, 2022		Balance as of December 31, 2021		Additions Charged to Expense	
Customer relationships	\$	898.4	\$	109.2	\$	5.9	\$	1,013.5	\$	(666.8)	\$	(42.3)
Non-compete agreements		60.4		7.7		(0.2)		67.9		(44.6)		(6.3)
Other intangible assets		58.0		16.0		3.0		77.0		(45.9)		(5.3)
Total	\$	1,016.8	\$	132.9	\$	8.7	\$	1,158.4	\$	(757.3)	\$	(53.9)

Based on the amortizable intangible assets recorded in the consolidated balance sheet as of December 31, 2023, amortization expense for each of the next five years is estimated as follows:

2024	\$	73.5
2025	\$	68.7
2026	\$	64.9
2027	\$	58.5
2028	\$	55.2

REPUBLIC SERVICES, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)

6. OTHER ASSETS

Prepaid Expenses and Other Current Assets

A summary of prepaid expenses and other current assets as of December 31 follows:

	2023		2022	
Income taxes receivable	\$	126.3	\$	214.0
Prepaid expenses		123.0		114.3
Inventories		97.3		96.6
Other non-trade receivables		63.2		59.8
Reinsurance receivable		35.4		31.9
Prepaid fees for cloud-based hosting arrangements, current		17.0		14.4
Derivative and hedging assets		4.2		—
Other current assets		6.2		5.5
Total	\$	472.6	\$	536.5

Other Assets

A summary of other assets as of December 31 follows:

	2023		2022	
Investments	\$	469.4	\$	281.4
Operating right-of-use lease assets		238.1		275.1
Deferred compensation plan		112.7		100.6
Deferred contract costs and sales commissions		82.5		80.2
Reinsurance receivable		92.1		84.1
Derivative and hedging assets		74.1		105.8
Prepaid fees and capitalized implementation costs for cloud-based hosting arrangements		67.6		51.4
Amounts recoverable for capping, closure and post-closure obligations		21.9		20.5
Deferred financing costs		3.6		5.1
Other		21.9		21.3
Total	\$	1,183.9	\$	1,025.5

REPUBLIC SERVICES, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)

7. OTHER LIABILITIES

Other Accrued Liabilities

A summary of other accrued liabilities as of December 31 follows:

	2023			2022	
Accrued payroll and benefits	\$	350.5		\$	342.6
Insurance reserves, current portion		216.6			187.5
Accrued fees and taxes		182.9			168.5
Accrued dividends		168.3			156.4
Operating right-of-use lease liabilities, current portion		54.8			57.9
Ceded insurance reserves, current portion		35.4			32.0
Accrued professional fees and legal settlement reserves		17.9			8.6
Derivative and hedging liabilities		8.3			1.2
Other		136.8			103.6
Total	\$	1,171.5		\$	1,058.3

Other Long-Term Liabilities

A summary of other long-term liabilities as of December 31 follows:

	2023			2022	
Operating right-of-use lease liabilities	\$	194.9		\$	238.0
Deferred compensation plan liability		114.7			98.6
Ceded insurance reserves		92.1			84.1
Derivative and hedging liabilities		71.3			99.7
Contingent purchase price and acquisition holdbacks		59.1			60.5
Withdrawal liability - multiemployer pension funds		19.6			20.0
Other		42.9			59.8
Total	\$	594.6		\$	660.7

Insurance Reserves

Our liabilities for unpaid and incurred but not reported claims as of December 31, 2023 and 2022 (which include claims for workers' compensation, commercial general and auto liability and employee-related health care benefits) were \$565.4 million and \$502.6 million, respectively, under our risk management program and are included in other accrued liabilities and insurance reserves, net of current portion, in our consolidated balance sheets. While the ultimate amount of claims incurred depends on future developments, we believe the recorded reserves are adequate to cover the future payment of claims; however, it is possible that these recorded reserves may not be adequate to cover the future payment of claims. Adjustments, if any, to estimates recorded resulting from ultimate claim payments will be reflected in our consolidated statements of income in the periods in which such adjustments are known.

The following table summarizes the activity in our insurance reserves for the years ended December 31:

	2023			2022			2021		
Balance at beginning of year	\$	502.6		\$	497.4		\$	449.3	
Additions charged to expense		666.9			568.7			552.4	
Payments		(636.5)			(593.8)			(531.8)	
Accretion expense		0.1			0.2			0.3	
Premium written for third party risk assumed		43.4			35.3			36.5	
Reclassified to ceded insurance reserves		(11.1)			(5.2)			(9.3)	
Balance at end of year		565.4			502.6			497.4	
Less: current portion		(216.6)			(187.5)			(193.5)	
Long-term portion	\$	348.8		\$	315.1		\$	303.9	

REPUBLIC SERVICES, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)

8. LANDFILL AND ENVIRONMENTAL COSTS

As of December 31, 2023, we owned or operated 207 active landfills with total available disposal capacity estimated to be 5.1 billion in-place cubic yards. Additionally, we have post-closure responsibility for 126 closed landfills.

Accrued Landfill and Environmental Costs

A summary of our accrued landfill and environmental liabilities as of December 31 follows:

	2023		2022	
Landfill final capping, closure and post-closure liabilities	\$	1,937.2	\$	1,786.4
Environmental remediation		485.4		487.5
Total accrued landfill and environmental costs		2,422.6		2,273.9
Less: current portion		(141.6)		(132.6)
Long-term portion	\$	2,281.0	\$	2,141.3

Final Capping, Closure and Post-Closure Costs

The following table summarizes the activity in our asset retirement obligation liabilities, which includes liabilities for final capping, closure and post-closure, for the years ended December 31:

	2023		2022		2021	
Asset retirement obligation liabilities, beginning of year	\$	1,786.4	\$	1,507.3	\$	1,346.4
Non-cash additions		61.4		60.1		47.2
Acquisitions, net of divestitures and other adjustments		12.3		173.5		32.1
Asset retirement obligation adjustments		40.1		20.0		58.5
Payments		(60.8)		(64.6)		(59.6)
Accretion expense		97.9		89.6		82.7
Foreign currency translation		(0.1)		0.5		—
Asset retirement obligation liabilities, end of year		1,937.2		1,786.4		1,507.3
Less: Current portion		(72.4)		(75.2)		(68.4)
Long-term portion	\$	1,864.8	\$	1,711.2	\$	1,438.9

We review annually, in the fourth quarter, and update as necessary, our estimates of asset retirement obligation liabilities. As a result, we increased amortization expense by \$5.2 million, \$5.8 million and \$6.9 million for the years ended December 31, 2023, 2022 and 2021, respectively, primarily related to changes in estimates and assumptions concerning the anticipated waste flow, cost and timing of future final capping, closure and post-closure activities.

The expected future payments for final capping, closure and post-closure as of December 31, 2023 follows:

2024	\$	72.4
2025		96.5
2026		91.9
2027		116.7
2028		120.9
Thereafter		7,020.0
	\$	7,518.4

The estimated remaining final capping, closure and post-closure expenditures presented above are not inflated and not discounted and reflect the total estimated future payments for liabilities which include those incurred and recorded as of December 31, 2023 as well as liabilities yet to be incurred over the remaining life of our landfills.

Environmental Remediation Liabilities

We accrue for remediation costs when they become probable and can be reasonably estimated. There can sometimes be a range of reasonable estimates of the costs associated with remediation of a site. In these cases, we use the amount within the range that constitutes our best estimate. If no amount within the range appears to be a better estimate than any other, we use the amount that is at the low end of such range. It is reasonably possible that we will need to adjust the liabilities recorded for

REPUBLIC SERVICES, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)

remediation to reflect the effects of new or additional information, to the extent such information impacts the costs, timing or duration of the required actions. If we used the reasonably possible high ends of our ranges, our aggregate potential remediation liability as of December 31, 2023 would be approximately \$375 million higher than the amounts recorded. Future changes in our estimates of the cost, timing or duration of the required actions could have a material adverse effect on our consolidated financial position, results of operations and cash flows.

The following table summarizes the activity in our environmental remediation liabilities for the years ended December 31:

	2023		2022		2021	
Environmental remediation liabilities, beginning of year	\$	487.5	\$	454.9	\$	462.8
Net additions charged to expense		2.0		2.9		0.5
Payments		(54.9)		(54.7)		(57.1)
Accretion expense (non-cash interest expense)		18.2		17.3		17.1
Acquisitions, net of divestitures and other adjustments		32.6		67.1		31.6
Environmental remediation liabilities, end of year		485.4		487.5		454.9
Less: current portion		(69.2)		(57.4)		(56.1)
Long-term portion	\$	416.2	\$	430.1	\$	398.8

The expected undiscounted future payments for remediation costs as of December 31, 2023 follows:

2024	\$	69.2
2025		65.3
2026		54.7
2027		42.9
2028		29.6
Thereafter		281.0
	\$	542.7

The following is a discussion of certain of our significant remediation matters:

Bridgeton Landfill. During the year ended December 31, 2023, we paid \$13.6 million related to management and monitoring of the remediation area for our closed Bridgeton Landfill in Missouri. We continue to work with state and federal regulatory agencies on our remediation efforts. From time to time, this may require us to modify our future operating timeline and procedures, which could result in changes to our expected liability. As of December 31, 2023, the remediation liability recorded for this site was \$73.6 million, of which approximately \$13.2 million is expected to be paid during 2024. We believe the remaining reasonably possible high end of our range would be approximately \$141 million higher than the amount recorded as of December 31, 2023.

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

REPUBLIC SERVICES, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)

9. DEBT

The carrying value of our credit facilities, finance leases and long-term debt as of December 31, 2023 and 2022 is listed in the following table, and is adjusted for the fair value of interest rate swaps, unamortized discounts, deferred issuance costs and the unamortized portion of adjustments to fair value recorded in purchase accounting. Original issue discounts and adjustments to fair value recorded in purchase accounting are amortized to interest expense over the term of the applicable instrument using the

effective interest method.

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REPUBLIC SERVICES, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)

Future Maturities of Debt

Aggregate principal maturities of notes payable, finance leases and other long-term debt as of December 31, 2023 follow:

2024	\$	932.3
2025		1,364.5
2026		1,385.9
2027		660.6
2028		841.4
Thereafter		7,634.7
	\$	12,819.4

Loss on Extinguishment of Debt and Other Related Costs

In 2023, we incurred a loss on the early extinguishment of debt related to the early repayment of a portion of our Term Loan Facility (as defined below). We incurred non-cash charges related to the proportional share of unamortized deferred issuance costs of \$0.2 million.

Credit Facilities

Uncommitted Credit Facility

In January 2022, we entered into a \$200.0 million unsecured uncommitted revolving credit facility (the Uncommitted Credit Facility). The Uncommitted Credit Facility bears interest at an annual percentage rate to be agreed upon by both parties. Borrowings under the Uncommitted Credit Facility can be used for working capital, letters of credit and other general corporate purposes. The agreement governing our Uncommitted Credit Facility requires us to comply with certain covenants. The Uncommitted Credit Facility may be terminated by either party at any time. As of December 31, 2023 and 2022, we had no borrowings outstanding under our Uncommitted Credit Facility.

The Credit Facility

In August 2021, we entered into a \$3.0 billion unsecured revolving credit facility (the Credit Facility). Borrowings under the Credit Facility mature in August 2026. As permitted by the Credit Facility, we have the right to request two one-year extensions of the maturity date, but none of the lenders are committed to participate in such extensions. The Credit Facility also includes a feature that allows us to increase availability, at our option, by an aggregate amount of up to \$1.0 billion through increased commitments from existing lenders or the addition of new lenders. In October 2023, we completed an upside of the Credit Facility to \$3.5 billion.

In February 2023, we entered into Amendment No. 1 to the Credit Facility (the Credit Facility Amendment) to add our subsidiary, USE Canada Holdings, Inc. (the Canadian Borrower), as an additional borrower under the Credit Facility. The Credit Facility Amendment provides that the aggregate of (i) all loans to the Canadian Borrower and (ii) all loans denominated in Canadian dollars cannot exceed \$1.0 billion (the Canadian Sublimit). The Canadian Sublimit is part of, and not in addition to, the aggregate commitments under the Credit Facility.

Borrowings under the Credit Facility in United States dollars bear interest at a Base Rate, a daily floating SOFR or a term SOFR plus a current applicable margin of 0.910% based on our Debt Ratings (all as defined in the Credit Facility agreement). The Canadian dollar-denominated loans bear interest based on the Canadian Prime Rate or the Canadian Dollar Offered Rate plus a current applicable margin of 0.910% based on our Debt Ratings. As of December 31, 2023, C\$201.5 million was outstanding against the Canadian Sublimit, with an average interest rate of 6.364%.

The Credit Facility is subject to facility fees based on applicable rates defined in the Credit Facility agreement and the aggregate commitment, regardless of usage. The Credit Facility can be used for working capital, capital expenditures, acquisitions, letters of credit and other general corporate purposes. The Credit Facility agreement requires us to comply with financial and other covenants. We may pay dividends and repurchase common stock if we are in compliance with these covenants.

We had \$297.1 million and \$250.0 million outstanding under our Credit Facility as of December 31, 2023 and 2022, respectively. We had \$336.5 million and \$347.6 million of letters of credit outstanding under our Credit Facility as of December 31, 2023 and 2022, respectively. We also had \$495.3 million and \$1.0 billion of principal borrowings outstanding (net of related discount on

issuance) under our commercial paper program as of December 31, 2023 and 2022, respectively. As a result, availability under our Credit Facility was \$2,371.2 million and \$1,402.4 million as of December 31, 2023 and 2022, respectively.

REPUBLIC SERVICES, INC.**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)*****Term Loan Facility***

On April 29, 2022, we entered into a \$1.0 billion Term Loan Facility. The Term Loan Facility will mature on April 29, 2025 and bears interest at a base rate or a forward-looking SOFR, plus an applicable margin based on our debt ratings. The interest rate for borrowings outstanding as of December 31, 2023 was 6.256%. We may prepay, without penalty, all or any part of the borrowings under the Term Loan Facility at any time.

On May 2, 2022, we completed the acquisition of US Ecology using proceeds from the Term Loan Facility and borrowings under the Credit Facility.

We had \$500.0 million and \$1.0 billion of borrowings outstanding under the Term Loan Facility as of December 31, 2023 and 2022, respectively.

Commercial Paper Program

In May 2022, we entered into a commercial paper program for the issuance and sale of unsecured commercial paper in an aggregate principal amount not to exceed \$500.0 million outstanding at any one time (the Commercial Paper Cap). In August 2022, the Commercial Paper Cap was increased to \$1.0 billion, and in October 2023, was increased to \$1.5 billion. The weighted average interest rate for borrowings outstanding as of December 31, 2023 is 5.508% with a weighted average maturity of approximately 18 days.

We had \$496.0 million and \$1.0 billion principal value of commercial paper issued and outstanding under the program as of December 31, 2023 and 2022, respectively. In the event of a failed re-borrowing, we currently have availability under our Credit Facility to fund amounts currently borrowed under the commercial paper program until they are re-borrowed successfully. Accordingly, we have classified these borrowings as long-term in our consolidated balance sheet as of December 31, 2023 and 2022, respectively.

Senior Notes

In March 2023, we issued \$400.0 million of 4.875% senior notes due 2029 (the Existing 2029 Notes) and \$800.0 million of 5.000% senior notes due 2034 (the 2034 Notes, and together, the Notes). The Notes are unsecured and unsubordinated and rank equally with our other unsecured obligations. We used the proceeds from the Notes for general corporate purposes, including the repayment of a portion of amounts outstanding under the Uncommitted Credit Facility, the Commercial Paper Program, the Credit Facility, and the Term Loan Facility. As a result of the Term Loan Facility repayment, we incurred a non-cash loss on the early extinguishment of debt related to the ratable portion of unamortized deferred issuance costs of \$0.2 million.

In December 2023, we issued an additional \$350.0 million of 4.875% senior notes due 2029 (the New 2029 Notes, and together with the Existing 2029 Notes, the 2029 Notes). After giving effect to the issuance of the New 2029 Notes, \$750.0 million in aggregate principal amount of the 2029 Notes is outstanding. The New 2029 Notes are fungible with the Existing 2029 Notes, and taken together, the 2029 Notes are treated as a single series.

In December 2023, we also issued \$650.0 million of 5.000% senior notes due 2033 (the 2033 Notes). Similar to the Notes above, the proceeds of these new senior notes were used for general corporate purposes, including the repayment of a portion of amounts outstanding under the Uncommitted Credit Facility, the Commercial Paper Program, the Credit Facility, and the Term Loan Facility.

Interest Rate Swap and Lock Agreements

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

Fair Value Hedges

During the second half of 2013, we entered into various interest rate swap agreements (the 2013 Interest Rate Swaps) relative to our 4.750% fixed rate senior notes due in May 2023 (4.750% Notes). The goal was to reduce overall borrowing costs and rebalance our debt portfolio's ratio of fixed-to-floating interest rates. These swap agreements settled in May 2023 along with our 4.750% Notes and are no longer included in our consolidated balance sheet.

REPUBLIC SERVICES, INC.**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)**

Contemporaneously with the \$250.0 million partial redemption of the 4.750% Notes in November 2020, we dedesignated the proportional share of these swap agreements as fair value hedges. There was no ineffectiveness recognized in the dedesignation of these fair value hedges. Following the dedesignation, the fair value of these free-standing derivatives was determined using standard valuation models with assumptions about interest rates being based on those observed in underlying markets (Level 2 in the fair value hierarchy). As of December 31, 2022, these free-standing derivatives were reflected at their fair value of a \$1.0 million liability and were included in other accrued liabilities in our consolidated balance sheet. These free-standing derivatives settled and matured in May 2023. For the years ended December 31, 2023, 2022 and 2021, we recognized a gain of \$1.0 million and losses of \$5.0 million and \$4.4 million, respectively, directly in earnings as an adjustment to non-cash interest expense attributable to the change in fair value of the free-standing derivatives.

As of December 31, 2022, the 2013 Interest Rate Swaps that were designated as fair value hedges are reflected at their fair value of a \$1.2 million liability and included in other accrued liabilities in our consolidated balance sheet.

We recognized net interest expense of \$2.2 million and net interest income of \$2.9 million and \$7.9 million, respectively, during 2023, 2022 and 2021, related to net swap settlements for these interest rate swap agreements, which is included in interest expense in our consolidated statements of income.

For the years ended December 31, 2023, 2022 and 2021, we recognized losses of \$2.3 million and gains of \$2.7 million and \$5.2 million, respectively, related to the impact of changes in the benchmark interest rate on the fair value of the hedged senior notes. For the years ended December 31, 2023, 2022 and 2021, we recognized offsetting gains of \$1.2 million and offsetting losses of \$6.0 million and \$5.2 million, respectively, on the related interest rate swaps attributable to changes in the benchmark interest rate. The difference of these fair value changes for the years ended December 31, 2023, 2022 and 2021 was recorded directly in earnings as an adjustment to interest expense in our consolidated statements of income.

For further detail regarding the effect of our fair value hedging on interest expense, see Note 18, *Financial Instruments*, of the notes to our audited consolidated financial statements in Part II, Item 8 of this Annual Report on Form 10-K.

Cash Flow Hedges

We have historically entered into multiple swap agreements designated as cash flow hedges to manage exposure to fluctuations in interest rates in anticipation of planned future issuances of senior notes. Upon the expected issuance of senior notes, we terminate the interest rate locks and settle with our counterparties. These transactions were accounted for as cash flow hedges.

The fair value of our interest rate locks is determined using standard valuation models with assumptions about interest rates being based on those observed in underlying markets (Level 2 in the fair value hierarchy).

As of December 31, 2023 and 2022, our previously terminated interest rate locks were recorded as components of accumulated other comprehensive loss of \$15.9 million and \$21.4 million, respectively, net of tax. The effective portion of the interest rate locks is amortized as an adjustment to interest expense over the life of the issued debt using the effective interest method. During 2023, 2022 and 2021, we recognized losses, net of tax of \$3.8 million, \$4.4 million and \$4.6 million, respectively, as a result of this amortization. Over the next 12 months, we expect to amortize \$2.7 million, net of tax, from accumulated other comprehensive loss to interest expense as a yield adjustment of our senior notes.

In connection with our acquisition of US Ecology, in the second quarter of 2022, we acquired and novated a floating-to-fixed interest rate swap agreement (the 2022 Interest Rate Swap) with an initial effective date of March 6, 2020 and an initial notional amount of \$500 million relative to our Term Loan Facility and an initial fair value of \$29.1 million. The initial fair value is reclassified into earnings as non-cash interest expense on a systematic basis over the life of the interest rate swap. As of December 31, 2023, and 2022, the 2022 Interest Rate Swap has a notional value of \$350 million and \$390 million, respectively. The interest rate swap matures in November 2026. The goal was to reduce overall borrowing costs. Under the terms of the acquired agreement, we pay interest at a fixed interest rate of 0.832% and received interest at floating rates based on changes in LIBOR. The interest rate swap is designated as a cash flow hedge. In May 2022, following the closing of the acquisition, we amended the reference rate from a floating rate based on LIBOR to a SOFR rate. In accordance with ASU 2020-04, the amendment of the reference rate did not result in dedesignation of the cash flow hedge. Changes in the fair value of the interest rate swap are recorded as a component of accumulated other comprehensive loss and are recognized in interest expense in the period in which the payment is settled.

The fair value of our floating-to-fixed swap is determined using standard valuation models with assumptions about interest rates being based on those observed in underlying markets (Level 2 in the fair value hierarchy). As of December 31, 2023 and 2022, the 2022 Interest Rate Swap was recorded at its fair value of \$24.3 million and \$36.0 million, respectively, and is included in other assets in our consolidated balance sheets.

During the years ended December 31, 2023 and 2022, we recognized unrealized gains of \$12.2 million and \$8.4 million, respectively, in accumulated other comprehensive loss for the 2022 Interest Rate Swap. As of December 31, 2023 and 2022, the 2022 Interest Rate Swap was recorded as a gain within accumulated other comprehensive loss of \$4.3 million and \$5.1 million,

REPUBLIC SERVICES, INC.**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)**

respectively, net of tax. The effective portion of the Interest Rate Swap is amortized as an adjustment to interest expense over the life of the instrument using the effective interest method. During the years ended December 31, 2023 and 2022, we recognized gains, net of tax, of \$13.1 million and \$3.3 million, respectively, as a result of this amortization. Over the next 12 months, we expect to amortize approximately \$5 million, net of tax, from accumulated other comprehensive loss related to this instrument as an offset to interest expense in the period in which payments are settled.

For further detail regarding the effect of our cash flow hedging on interest expense, see Note 18, *Financial Instruments*, of the notes to our audited consolidated financial statements in Part II, Item 8 of this Annual Report on Form 10-K.

Derivative Contracts***Extended Interest Rate Locks, Offsetting Interest Rate Swaps***

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

As of December 31, 2023, the fair value of the Extended Interest Rate Locks were assets of \$54.0 million, which were included in prepaid and other current assets and other assets in our consolidated balance sheets. As of December 31, 2022, the fair value of the Extended Interest Rate Locks were assets of \$69.8 million, which were included in other assets in our consolidated balance sheets. As of December 31, 2023, the fair value of the Offsetting Interest Rate Swaps were liabilities of \$78.2 million, which were included in other accrued liabilities and other long-term liabilities in our consolidated balance sheets. As of December 31, 2022, the fair value of the Offsetting Interest Rate Swaps were liabilities of \$99.7 million, which were included in other long-term liabilities in our consolidated balance sheets.

For the year ended December 31, 2023, we recognized a loss of \$15.4 million on the change in fair value of the Extended Interest Rate Locks, with an offsetting gain of \$13.5 million, on the change in fair value of the Offsetting Interest Rate Swaps. For the year ended December 31, 2022, we recognized a gain of \$109.4 million on the change in fair value of the Extended Interest Rate Locks, with an offsetting loss of \$107.3 million, on the change in fair value of the Offsetting Interest Rate Swaps. The changes in fair value were recorded directly in earnings as an adjustment to interest expense in our consolidated statements of income.

Tax-Exempt Financings

As of December 31, 2023, we had \$1,280.6 million of certain variable rate tax-exempt financings outstanding, with maturities ranging from 2024 to 2053. As of December 31, 2022, we had \$1,182.0 million of variable rate tax-exempt financings outstanding, with maturities ranging from 2023 to 2051.

In September 2023, the California Municipal Finance Authority issued, for our benefit, \$100 million of Solid Waste Disposal Revenue Bonds. The proceeds from the issuance, after deferred issuance costs, were used to fund the acquisition, construction, improvement, installation, and/or equipping of certain solid waste disposal facilities located within California. The initial remarketing period for this tax-exempt financing is 10 years. Our remaining tax-exempt financings are remarketed either quarterly or semiannually by remarketing agents to effectively maintain a variable yield. The holders of the bonds can put them back to the remarketing agents at the end of each interest period. If the remarketing agent is unable to remarket our bonds, the remarketing agent can put the bonds to us. In the event of a failed remarketing, we currently have availability under our Credit Facility to fund these bonds until they are remarketed successfully. Accordingly, we classified these borrowings as long-term in our consolidated balance sheets as of December 31, 2023 and 2022.

Finance Leases

As of December 31, 2023, we had finance lease liabilities of \$251.3 million with maturities ranging from 2024 to 2063. As of December 31, 2022, we had finance lease liabilities of \$247.5 million with maturities ranging from 2023 to 2063.

REPUBLIC SERVICES, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)
Interest Paid

Interest paid, excluding net swap settlements for our fair value hedges, was \$422.9 million, \$311.5 million and \$249.4 million for the years ended December 31, 2023, 2022 and 2021, respectively.

10. LEASES

A summary of the lease classification on our consolidated balance sheet as of December 31, 2023 and 2022 follows:

		2023	2022
Assets			
Operating right-of-use lease assets	Other assets	\$ 238.1	\$ 275.1
Finance lease assets	Property and equipment, net	286.7	288.3
Total leased assets		\$ 524.8	\$ 563.4
Liabilities			
Current			
Operating	Other accrued liabilities	\$ 54.8	\$ 57.9
Finance	Notes payable and current maturities of long-term debt	12.9	14.3
Long-term			
Operating	Other long-term liabilities	194.9	238.0
Finance	Long-term debt, net of current maturities	238.4	233.2
Total lease liabilities		\$ 501.0	\$ 543.4

A summary of the lease cost reflected in our consolidated statements of income for the years ended December 31, 2023 and 2022 follow:

		2023	2022
Operating lease cost			
Fixed lease cost	Cost of operations	\$ 60.2	\$ 55.5
Short-term lease cost	Cost of operations	89.5	70.4
Variable lease cost	Cost of operations	26.8	26.6
Finance lease cost			
Amortization of leased assets	Depreciation amortization and depletion	15.6	15.2
Interest on lease liabilities	Interest expense	8.8	12.0
Variable lease cost	Interest expense	21.8	17.4
Total lease cost		\$ 222.7	\$ 197.1

During the years ended December 31, 2023 and 2022, we recognized changes in our operating right-of-use lease liabilities and assets, resulting from the recognition of non-cash lease expense of \$47.8 million and \$46.2 million, respectively.

REPUBLIC SERVICES, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)

As of December 31, 2023, maturities for operating and finance lease liabilities were as follows:

	Operating Leases	Finance Leases	Total
2024	\$ 62.4	\$ 22.4	\$ 84.8
2025	52.7	18.4	71.1
2026	42.9	17.1	60.0
2027	31.8	16.4	48.2
2028	27.9	17.5	45.4
Thereafter	72.7	341.8	414.5
Total lease payments	290.4	433.6	724.0
Less: interest	(40.7)	(182.3)	(223.0)
Present value of lease liabilities	\$ 249.7	\$ 251.3	\$ 501.0

A summary of the weighted-average remaining lease term and weighted-average discount rate as of December 31, 2023 and 2022 follows:

	2023	2022
Weighted-average remaining lease term (years)		
Operating leases	6.9	7.2
Finance leases	27.1	29.6
Weighted-average discount rate		
Operating leases	2.9 %	3.1 %
Finance leases	4.4 %	4.4 %

Supplemental cash flow and other non-cash information for the years ended December 31, 2023 and 2022 follow:

	2023	2022
Cash paid for amounts included in the measurement of lease liabilities		
Operating cash flows from operating leases	\$ 176.5	\$ 151.6
Operating cash flows from finance leases	\$ 30.7	\$ 29.4
Financing cash flows from finance leases	\$ 12.3	\$ 33.6
Leased assets obtained in exchange for new finance lease liabilities	\$ 17.0	\$ 31.7
Leased assets obtained in exchange for new operating lease liabilities	\$ 33.4	\$ 73.9

REPUBLIC SERVICES, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)

11. INCOME TAXES

The components of the provision for income taxes for the years ended December 31 follow:

	2023	2022	2021
Current:			
Federal	\$ 281.2	\$ 72.4	\$ 234.9
State	108.5	81.5	67.3
Deferred:			
Federal	72.3	164.2	(34.1)
State	29.1	16.9	18.6
Uncertain tax positions and interest and other	(31.0)	8.9	(3.9)
Provision for income taxes	\$ 460.1	\$ 343.9	\$ 282.8

The reconciliations of the statutory federal income tax rate to our effective tax rate for the years ended December 31 follow:

	2023	2022	2021
Federal statutory rate	21.0 %	21.0 %	21.0 %
State income taxes, net of federal benefit	4.4	4.6	4.5
Non-deductible expenses	1.2	1.1	1.0
Uncertain tax position taxes and interest	(0.8)	0.2	0.1
Investment tax credits	(4.0)	(7.6)	(8.0)
Other, net	(0.8)	(0.5)	(0.6)
Effective income tax rate	21.0 %	18.8 %	18.0 %

During 2023, we acquired non-controlling interests in limited liability companies established to own renewable energy assets that qualified for investment tax credits under Section 48 of the Internal Revenue Code. We account for these investments using the equity method of accounting and recognize our share of income or loss and other reductions in the value of our investment in loss from unconsolidated equity method investments within our consolidated statements of income. For further discussion regarding our equity method accounting, see Note 3, *Business Acquisitions, Investments and Restructuring Charges*. Our 2023 tax provision reflects a benefit of \$86.9 million due to the tax credits related to these investments.

In addition, during 2023 we resolved IRS examinations for our 2014 to 2018 tax years, that in the aggregate, reduced our tax provision by approximately \$20.8 million.

Our 2022 tax provision was reduced by \$139.0 million related to the tax credits from our non-controlling interests in limited liability companies established to own renewable energy assets.

Our 2021 tax provision was reduced by \$126.0 million related to the tax credits from our non-controlling interests in limited liability companies established to own renewable energy assets.

During 2022, the Inflation Reduction Act (IRA) was signed into law. The IRA, among other things, implemented a 15% minimum tax on financial statement income of certain large corporations, a 1% excise tax on stock repurchases and extended, enhanced and created several tax incentives to promote clean energy. We continue to evaluate the IRA and additional regulations as they are released by the U.S. Treasury. At present, we do not expect the 15% minimum tax to have an impact on the Company. However, we do expect to regularly incur a non-deductible excise tax as we continue to repurchase our shares. This charge is reflected as a component of treasury stock in our consolidated balance sheet.

With respect to various energy credits in the IRA, we expect to benefit in subsequent years for credits related to commercial electric vehicles, carbon capture and renewable natural gas. Additional benefits may be identified as subsequent guidance is released by the U.S. Treasury and/or additional climate technologies are identified or advanced in future years.

We made income tax payments (net of refunds) of \$343.0 million, \$184.7 million and \$300.4 million for 2023, 2022, and 2021, respectively. Income taxes paid in 2023, 2022, and 2021 reflect benefits from tax credits from our continuing investments in renewable energy. For 2023 and 2022 cash taxes paid also reflects benefits from bonus depreciation on qualified assets.

REPUBLIC SERVICES, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)

The components of the net deferred income tax asset and liability as of December 31 follow:

	2023		2022	
Deferred tax liabilities relating to:				
Differences between book and tax basis of property and equipment	\$	(1,229.4)	\$	(1,252.7)
Difference between book and tax basis of intangible assets		(582.8)		(521.7)
Operating right-of-use lease assets		(59.3)		(74.3)
Basis difference due to redemption of partnership interests		(81.8)		(82.0)
Total liabilities	\$	(1,953.3)	\$	(1,930.7)
Deferred tax assets relating to:				
Environmental reserves	\$	235.9	\$	253.0
Accruals not currently deductible		104.6		94.6
Net operating loss carryforwards		75.1		88.5
Difference between book and tax basis of other assets		14.1		14.4
Operating right-of-use lease liabilities		59.9		80.5
Other		17.5		15.2
Total assets		507.1		546.2
Valuation allowance		(48.6)		(43.1)
Net deferred tax asset		458.5		503.1
Net deferred tax liabilities	\$	(1,494.8)	\$	(1,427.6)

Changes in the deferred tax valuation allowance for the years ended December 31 follow:

	2023		2022		2021	
Valuation allowance, beginning of year	\$	43.1	\$	43.7	\$	43.8
Additions charged to provision for income taxes		3.3		1.9		0.4
Deferred tax assets realized or written-off		0.3		(6.4)		0.1
Other, net		1.9		3.9		(0.6)
Valuation allowance, end of year	\$	48.6	\$	43.1	\$	43.7

We have deferred tax assets related to state net operating loss carryforwards. We provide a partial valuation allowance due to uncertainty surrounding the future utilization of these carryforwards in the taxing jurisdictions where the loss carryforwards exist. When determining the need for a valuation allowance, we consider all positive and negative evidence, including recent financial results, scheduled reversals of deferred tax liabilities, projected future taxable income and tax planning strategies. The weight given to the positive and negative evidence is commensurate with the extent such evidence can be objectively verified. We adjust the valuation allowance in the period management determines it is more likely than not that deferred tax assets will or will not be realized.

The majority of our valuation allowance is associated with state loss carryforwards. The realization of our deferred tax asset for state loss carryforwards ultimately depends upon the existence of sufficient taxable income in the appropriate state taxing jurisdictions in future periods. We continue to regularly monitor both positive and negative evidence in determining the ongoing need for a valuation allowance.

We have deferred tax assets related to state net operating loss carryforwards with an estimated tax effect of \$64.5 million available as of December 31, 2023. These state net operating loss carryforwards expire at various times between 2024 and 2043. We believe that it is more likely than not that the benefit from some of our state net operating loss carryforwards will not be realized due to

limitations on these loss carryforwards in certain states. In recognition of this risk, as of December 31, 2023, we have provided a valuation allowance of \$43.4 million.

We are subject to income tax in the United States, as well as income tax in multiple state and foreign jurisdictions. Our compliance with income tax rules and regulations is periodically audited by tax authorities. These authorities may challenge the positions taken in our tax filings. Thus, to provide for certain potential tax exposures, we maintain liabilities for uncertain tax positions for our estimate of the final outcome of the examinations. Our federal statute of limitations is closed for 2018 through 2019 and all years prior to 2015. For tax years 2015 through 2017 we have resolved all open issues with IRS Appeals while the applicable statutes of limitation will expire in early 2024. In addition, we are currently under state examination or administrative review in various jurisdictions for tax years 2012 through 2021.

REPUBLIC SERVICES, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)

The following table summarizes the activity in our gross unrecognized tax benefits for the years ended December 31:

	2023	2022	2021
Balance at beginning of year	\$ 111.0	\$ 101.5	\$ 101.1
Additions for tax positions of current year	1.2	7.1	—
Additions for tax positions of prior years	2.6	2.4	0.5
Reductions for tax positions of prior years	(7.5)	—	(0.1)
Reductions for tax positions resulting from lapse of statute of limitations	(0.1)	—	—
Settlements	(65.7)	—	—
Balance at end of year	\$ 41.5	\$ 111.0	\$ 101.5

During 2023, we settled our 2014-2018 tax years with the Internal Revenue Service. These settlements reduced our gross unrecognized tax benefits by \$65.7 million.

Included in our gross unrecognized tax benefits as of December 31, 2023, 2022 and 2021 are \$32.5 million, \$96.5 million and \$93.6 million, respectively, of unrecognized tax benefits (net of the federal benefit) that, if recognized, would affect our effective income tax rate in future periods. However, we are unable to estimate the resolution of these matters over the next 12 months.

We recognize interest and penalties as incurred within the provision for income taxes in our consolidated statements of income. Related to the unrecognized tax benefits previously noted, we recorded a reduction to interest expense of \$1.3 million during 2023 and, in total as of December 31, 2023, have recognized a liability for penalties of \$0.3 million and interest of \$13.5 million.

During 2022, we recorded interest expense of \$1.1 million and, in total as of December 31, 2022, had recognized a liability for penalties of \$0.3 million and interest of \$15.2 million. During 2021, we recorded interest expense of \$0.8 million and, in total as of December 31, 2021, had recognized a liability for penalties of \$0.3 million and interest of \$13.7 million.

We believe the recorded liabilities for uncertain tax positions are adequate. However, a significant assessment against us in excess of the liabilities recorded could have a material adverse effect on our consolidated financial position, results of operations and cash flows.

12. EMPLOYEE BENEFIT PLANS

Stock-Based Compensation

In October 2020, our Board of Directors amended and restated the Republic Services, Inc. Executive Incentive Plan (the 2021 Plan) to remove references to the performance-based compensation exception that was previously permitted but is no longer applicable under Section 162(m) of the Code. The purposes of the 2021 Plan are to promote the success of the Company; to provide designated Executive Officers with an opportunity to receive incentive compensation dependent upon that success; and to attract, retain and motivate such individuals. We currently have 11.7 million shares of common stock reserved for future grants under the 2021 Plan.

In February 2007, our Board of Directors approved the 2007 Stock Incentive Plan (the 2007 Plan); in May 2007 our shareholders approved the 2007 Plan. In March 2011, our Board of Directors approved the Amended and Restated 2007 Stock Incentive Plan (the Amended and Restated 2007 SIP); in May 2011 our shareholders approved the Amended and Restated 2007 SIP. In March 2013, our Board of Directors approved the Republic Services, Inc. Amended and Restated 2007 Stock Incentive Plan (the Republic Amended and Restated 2007 SIP); in May 2013 our shareholders approved the Republic Amended and Restated 2007 SIP (the 2007 Plan, the Amended and Restated 2007 SIP and the Republic Amended and Restated 2007 SIP are collectively referred to as the Amended and Restated 2007 Stock Incentive Plan). No further awards will be made under the Amended and Restated 2007 Stock Incentive Plan.

REPUBLIC SERVICES, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)
Restricted Stock Units

The following table summarizes restricted stock unit (RSU) activity for the years ended December 31, 2023, 2022 and 2021:

	Number of RSUs (in thousands)	Weighted- Average Grant Date Fair Value per Share	Weighted- Average Remaining Contractual Term (years)	Aggregate Intrinsic Value (in millions)
Unissued as of December 31, 2020	1,212.1	\$ 69.47		
Granted	358.0	\$ 91.21		
Vested and issued	(434.5)	\$ 74.69		
Forfeited	(44.8)	\$ 87.43		
Unissued as of December 31, 2021	1,090.8	\$ 77.19		
Granted	258.8	\$ 122.54		
Vested and issued	(388.4)	\$ 74.34		
Forfeited	(47.5)	\$ 110.92		
Unissued as of December 31, 2022	913.7	\$ 85.43		
Granted	249.7	\$ 133.03		
Vested and issued	(207.8)	\$ 95.24		
Forfeited	(40.4)	\$ 117.54		
Unissued as of December 31, 2023	915.2	\$ 93.35	0.7	\$ 150.9
Vested and unissued as of December 31, 2023	424.9	\$ 64.96		

During the years ended December 31, 2023, 2022 and 2021, we awarded our non-employee directors 20,324, 18,689 and 26,328 RSUs, respectively, which vested upon issuance.

During the years ended December 31, 2023, 2022 and 2021, we awarded 216,610, 226,108 and 312,602 RSUs, respectively, to executives and employees that vest in four equal annual installments beginning on the anniversary date of the original grant or cliff vest after three or four years.

During the years ended December 31, 2023, 2022 and 2021, we granted an additional 12,751, 13,969 and 19,049 RSUs, respectively, as dividend equivalents.

The RSUs do not carry any voting or dividend rights, except the right to receive additional RSUs in lieu of dividends.

Compensation Expense

The fair value of RSUs is based on the closing market price on the date of the grant. The compensation expense related to RSUs is amortized ratably over the vesting period, or to the employee's retirement eligible date, if earlier.

During the years ended December 31, 2023, 2022 and 2021, compensation expense related to RSUs totaled \$24.1 million, \$22.8 million and \$32.5 million, respectively. In 2021, we recognized approximately \$6 million of compensation expense related to the accelerated vesting of RSUs previously granted to Donald W. Slager that were previously scheduled to vest in 2022 and beyond as a result of his retirement as Chief Executive Officer (CEO) of Republic Services, Inc. in June 2021. As of December 31, 2023, total unrecognized compensation expense related to outstanding RSUs was \$37.1 million, which will be recognized over a weighted average period of 2.6 years.

REPUBLIC SERVICES, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)
Performance Shares

The following table summarizes performance stock unit (PSU) activity for the years ended December 31, 2023, 2022 and 2021:

	Number of PSUs (in thousands)		Weighted Average Grant Date Fair Value per Share
Outstanding as of December 31, 2020	853.6	\$	76.14
Granted	313.1	\$	91.01
Vested and issued	(287.0)	\$	65.35
Forfeited	(22.4)	\$	91.20
Outstanding as of December 31, 2021	857.3	\$	84.79
Granted	156.6	\$	124.29
Vested and issued	(233.4)	\$	76.24
Forfeited	(24.3)	\$	109.62
Outstanding as of December 31, 2022	756.2	\$	95.19
Granted	199.5	\$	138.03
Vested and issued	(227.1)	\$	100.06
Forfeited	(40.9)	\$	123.30
Outstanding and Exercisable as of December 31, 2023	687.7	\$	101.48

During the years ended December 31, 2023, 2022 and 2021, we awarded 80,452, 79,043 and 181,322 PSUs to our executive officers, respectively. These awards are performance-based as the number of shares ultimately earned depends on performance against pre-determined targets for return on invested capital (ROIC), cash flow value creation (CFVC) and total shareholder return relative to the S&P 500 index (RTSR). The PSUs are payable 50% in shares of common stock and 50% in cash after the end of a three-year performance period, when our financial performance for the entire performance period is reported, typically in February of the succeeding year. At the end of the performance period, the number of PSUs awarded can range from 0% to 150% of the targeted amount, depending on the performance against the pre-determined targets.

During the years ended December 31, 2023, 2022 and 2021, we awarded 108,560, 66,296 and 118,168 PSUs to our employees other than our executive officers, respectively. The PSUs are payable 100% in shares of common stock after the end of a three-year performance period, when our financial performance for the entire performance period is reported, typically in February of the succeeding year. At the end of the performance period, the number of PSUs awarded can range from 0% to 150% of the targeted amount, depending on the performance against the pre-determined targets.

During the years ended December 31, 2023, 2022 and 2021, we granted an additional 10,511, 11,304 and 13,586 PSUs to our executive officers, respectively, as dividend equivalents.

The PSUs do not carry any voting or dividend rights, except the right to accumulate additional PSUs in lieu of dividends.

Compensation Expense

For the stock-settled portion of the award that vests based on future ROIC and CFVC performance, compensation expense is measured using the fair value of our common stock at the grant date. For the cash-settled portion of the award that vests based on future ROIC and CFVC performance, compensation expense is recorded based on the fair value of our common stock at the end of each reporting period. Compensation expense is recognized ratably over the performance period based on our estimated achievement of the established performance criteria. Compensation expense is only recognized for the portion of the award that we expect to vest, which we estimate based on an assessment of the probability that the performance criteria will be achieved.

For the stock-settled portion of the award that vests based on RTSR, the grant date fair value is based on a Monte Carlo valuation and compensation expense is recognized on a straight-line basis over the vesting period. For the cash-settled portion of the award that vests based on RTSR, compensation expense also incorporates the fair value of our PSUs at the end of each reporting period. Compensation expense is recognized for the RTSR portion of the award whether or not the market conditions are achieved.

During the years ended December 31, 2023, 2022 and 2021, compensation expense related to PSUs totaled \$29.2 million, \$22.1 million and \$47.1 million, respectively. In 2021, we recognized approximately \$16 million of compensation expense related to the accelerated vesting of PSUs previously granted to Mr. Slager that were previously scheduled to vest in 2022 and beyond as a result of his retirement in June 2021. As of December 31, 2023, total unrecognized compensation expense related to outstanding PSUs was \$21.9 million, which will be recognized over a weighted average period of approximately one year.

REPUBLIC SERVICES, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)

Defined Benefit Pension Plan

We currently have one qualified defined benefit pension plan, the BFI Retirement Plan (the Plan). The Plan covers certain employees in the United States, including some employees subject to collective bargaining agreements.

The Plan benefits are frozen. Interest credits continue to be earned by participants in the Plan, and participants whose collective bargaining agreements provide for additional benefit accruals under the Plan continue to receive those credits in accordance with the terms of their bargaining agreements. The Plan was converted from a traditional defined benefit plan to a cash balance plan in 1993.

Prior to the conversion to the cash balance design, benefits payable as a single life annuity under the Plan were based on the participant's highest five years of earnings out of the last ten years of service. Upon conversion to the cash balance plan, the existing accrued benefits were converted to a lump-sum value using the actuarial assumptions in effect at the time. Participants' cash balance accounts are increased until retirement by certain benefit and interest credits under the terms of their bargaining agreements. Participants may elect early retirement with the attainment of age 55 and completion of ten years of credited service at reduced benefits. Participants with 35 years of service may retire at age 62 without any reduction in benefits.

Our pension contributions are made in accordance with funding standards established by the Employee Retirement Income Security Act of 1974 and the Internal Revenue Code, as amended by the Pension Protection Act enacted in 2006 (the PPA). No contributions were made in 2023 or 2022.

We must separately recognize the overfunded or underfunded status of the Plan as an asset or liability. The funded status represents the difference between the projected benefit obligation (PBO) and the fair value of the Plan assets. The PBO is equal to the accumulated benefit obligation (ABO) as the Plan is frozen and the present value of liabilities is not affected by future salary increases. We use a measurement date that coincides with our year end of December 31.

The following table presents the ABO and reconciliations of the changes in the PBO, the Plan assets and the accounting funded status of our defined benefit pension plan for the years ended December 31:

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The amounts included in accumulated other comprehensive income on the consolidated balance sheets that have not yet been recognized as components of net periodic benefit cost as of December 31, 2023 and 2022 were \$11.4 million and \$11.8 million, respectively.

REPUBLIC SERVICES, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)

The components of the net periodic benefit income for the years ended December 31 are summarized below:

	2023		2022		2021	
Components of net periodic benefit income:						
Interest cost	\$	8.5	\$	5.7	\$	4.7
Expected return on plan assets		(7.5)		(7.0)		(6.0)
Net periodic benefit loss (income)	\$	1.0	\$	(1.3)	\$	(1.3)
Weighted average assumptions used to determine net periodic benefit income:						
Discount rate		4.94 %		5.13 %		2.77 %
Expected return on plan assets		5.40 %		5.40 %		4.10 %
Rate of compensation increase		N/A		N/A		N/A

We determine the discount rate used in the measurement of our obligations based on a model that matches the timing and amount of expected benefit payments to maturities of high quality bonds priced as of the Plan measurement date. When that timing does not correspond to a published high-quality bond rate, our model uses an expected yield curve to determine an appropriate current discount rate. The yields on the bonds are used to derive a discount rate for the liability. The term of our obligation, based on the expected retirement dates of our workforce, is approximately six years.

In developing our expected rate of return assumption, we have evaluated the actual historical performance and long-term return projections of the Plan assets, which give consideration to the asset mix and the anticipated timing of the Plan outflows. We primarily utilize fixed income investments to minimize the volatility of the difference between the market value of the Plan assets and the present value of the obligation. Risk tolerance is established through careful consideration of Plan liabilities, Plan funded status and our financial condition. Derivatives may be used to gain market exposure in an efficient and timely manner; however, derivatives may not be used to leverage the portfolio beyond the market value of the underlying investments. Investment risk is measured and monitored on an ongoing basis through annual liability measurements, periodic asset and liability studies and quarterly investment portfolio reviews.

The following table summarizes our target asset allocation as of December 31, 2023 and the actual asset allocation as of December 31, 2023 and 2022 for our Plan:

	December 31, 2023		December 31, 2023		December 31, 2022	
	Target Asset Allocation		Actual Asset Allocation		Actual Asset Allocation	
Debt securities	100	%	100	%	100	%
Total	100	%	100	%	100	%

Asset allocations are reviewed and rebalanced periodically based on funded status. For 2024, the investment strategy for Plan assets is to maintain a portfolio designed to achieve our target of an average long-term rate of return of 5.40%. While we believe we can achieve a long-term average return of 5.40%, we cannot be certain that the portfolio will perform to our expectations. Assets are strategically allocated among fixed income and cash portfolios to achieve a diversification level that reduces fluctuations in investment returns. Asset allocation target ranges and strategies are reviewed periodically with the assistance of an independent external consulting firm.

The Plan assets are measured at fair value. The following table summarizes, by level, within the fair value hierarchy, the investments of the Plan at fair value as of December 31, 2023 and 2022:

[illegible]

2024	\$	15.7
2025	\$	15.4
2026	\$	15.6
2027	\$	15.5
2028	\$	14.6
2029 through 2033	\$	61.7

As of December 31, 2023, approximately 23% of our workforce was covered by collective bargaining agreements (CBAs), and approximately 3% of our workforce was covered by CBAs that will expire during 2024.

We participate in multiemployer pension plans that generally provide retirement benefits to participants of contributing employers. We do not administer these plans. In general, these plans are managed by a board of trustees with the unions appointing certain trustees and other contributing employers of the plan appointing certain members. We generally are not represented on the board of trustees.

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funding improvement plans or rehabilitation plans as required by the PPA, we cannot determine the amount of any additional contribution or other financial obligations that we may be subject to, if any. Accordingly, we cannot presently determine the effect that the PPA may have on our consolidated financial position, results of operations or cash flows.

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

REPUBLIC SERVICES, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)

Republic's participation in individually significant multiemployer pension plans for the year ended December 31, 2023 is outlined in the table below. Only with respect to multiemployer pension plans, we considered contributions in excess of \$3.5 million in any period disclosed to be individually significant. The most recent PPA zone status available in 2023 and 2022 is for the plans' year ended September 30, or December 31, 2022 and 2021, respectively. The status is based on information that Republic received from the plans and is certified by the plans' actuary. Among other factors, plans in the critical red zone are generally less than 65% funded, plans in the endangered yellow zone are less than 80% funded and plans in the safe green zone are at least 80% funded. Plans in the critical and declining zone are classified as critical and projected to be insolvent in the current year or any of the 14 following plan years. The last column lists the expiration dates of the CBAs to which the plans are subject.

Legal Plan Name	EIN	Pension Protection Act Zone Status		Funding Improvement or Rehabilitation Plan Status Pending / Implemented	Republic Contributions to Plan			
		2023	2022		2023		2022	
Western Conference of Teamsters Pension Plan	91-6145047	Safe	Safe	No	\$ 69.5		\$ 61.2	
Local No. 731 I.B. of T., Pension Fund	36-6513567	Safe	Safe	No	8.5		8.1	
New England Teamsters & Trucking Industry Pension	04-6372430	Critical & Declining	Critical & Declining	No	5.1		3.3	
Individually significant plans					83.1		72.6	
All other plans	N/A	N/A	N/A	N/A	16.0		13.5	
Total					\$ 99.1		\$ 86.1	

We are listed in the Form 5500 for Local No. 731, I.B. of T. Pension Fund as providing more than 5% of the total contributions. At the date these financial statements were issued, Forms 5500 were not available for the plan years ended in 2023.

Defined Contribution Plan

We maintain the Republic Services 401(k) Plan (the 401(k) Plan), which is a defined contribution plan covering all eligible employees. Under the 401(k) Plan, participants may direct us to defer a portion of their compensation to the 401(k) Plan, subject to Internal Revenue Code limitations. We provide for an employer matching contribution equal to 100% of the first 3.0% of eligible compensation and 50.0% of the next 2.0% of eligible compensation contributed by each employee, which is funded in cash. All contributions vest immediately.

Total expense recorded for matching 401(k) contributions in 2023, 2022 and 2021 was \$82.3 million, \$73.7 million and \$62.4 million, respectively.

Deferred Compensation Plan

We provide eligible Republic employees, officers and directors with the opportunity to voluntarily defer base salary, bonus payments, long-term incentive awards and other compensation, as applicable, on a pre-tax basis through the Republic Services, Inc. Deferred Compensation Plan (the DCP). The DCP is a nonqualified deferred compensation plan that conforms to Section 409A of the Internal Revenue Code. Eligible participants can defer up to 80% of base salary and up to 100% of bonus, long-term compensation and directors' fees. Under the DCP, some participants also are eligible for matching contributions. The matching

contribution under the DCP is equal to the lesser of 2% of the participant's compensation over established 401(k) limits or 50% of the amount the participant has deferred. The DCP participants have no ownership or security interest in any of the amounts deferred or the measurement funds under the DCP. The right of each participant in the DCP is solely that of a general, unsecured creditor of Republic with respect to his or her own interest under the DCP. Deferred amounts may be subject to forfeiture and are deemed invested among investment funds offered under the DCP, as directed by each participant. Payments of deferred amounts are payable following separation from service or at a date or dates elected by the participant when the deferral is elected. Payments of deferred amounts are made in either a lump sum or in annual installments over a period not exceeding 15 years.

Republic invested in corporate-owned life insurance policies to satisfy future obligations under the DCP. These corporate-owned life insurance policies are held in a Rabbi Trust and are recorded at the amount that can be realized under insurance contracts at the balance sheet date, which is the cash surrender value adjusted for other charges or other amounts due that are probable at settlement. The aggregate cash surrender value of these life insurance policies was \$112.7 million and

REPUBLIC SERVICES, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)

\$100.6 million as of December 31, 2023 and 2022, respectively, and is classified in other assets in our consolidated balance sheets. The DCP liability was \$114.7 million and \$98.6 million as of December 31, 2023 and 2022, respectively, and is classified in other long-term liabilities in our consolidated balance sheets.

Employee Stock Purchase Plan

Republic employees are eligible to participate in an employee stock purchase plan. The plan allows participants to purchase our common stock for 95% of its quoted market price on the last day of each calendar quarter. For the years ended December 31, 2023, 2022 and 2021, issuances under this plan totaled 103,706 shares, 99,680 shares and 104,217 shares, respectively. As of December 31, 2023, shares reserved for issuance to employees under this plan totaled 2.4 million and Republic held employee contributions of \$3.2 million for the purchase of common stock.

13. SHARE REPURCHASES AND DIVIDENDS

Available Shares

We currently have approximately 11.7 million shares of common stock reserved for future grants under the Republic Services, Inc. 2021 Stock Incentive Plan.

Share Repurchases

In October 2020, our Board of Directors approved a \$2.0 billion share repurchase authorization effective starting January 1, 2021 and extending through December 31, 2023. In October 2023, our Board of Directors approved a \$3.0 billion share repurchase authorization effective starting January 1, 2024 and extending through December 31, 2026. Share repurchases under the program may be made through open market purchases or privately negotiated transactions in accordance with applicable federal securities laws. While the Board of Directors has approved the program, the timing of any purchases, the prices and the number of shares of common stock to be purchased will be determined by our management, at its discretion, and will depend upon market conditions and other factors. The share repurchase program may be extended, suspended or discontinued at any time. On a quarterly basis, our Board of Directors reviews the intrinsic value of our stock and the parameters around which we repurchase our shares.

Share repurchase activity during the years ended December 31, 2023, 2022 and 2021 follows (in millions except per share amounts):

	2023			2022			2021		
Number of shares repurchased	1.8			1.6			2.2		
Amount paid	\$	261.8		\$	203.5		\$	252.2	
Weighted average cost per share	\$	145.72		\$	124.02		\$	116.09	

The average price paid per share, total repurchase costs and approximate maximum dollar value of the shares that may yet be purchased under the plans or programs exclude a 1% excise tax.

As of December 31, 2023, 2022 and 2021 there were no repurchased shares pending settlement. As of December 31, 2023, the remaining authorized purchase capacity under our October 2023 repurchase program was \$3.0 billion.

Dividends

In October 2023, our Board of Directors approved a quarterly dividend of \$0.535 per share. Aggregate cash dividends declared were \$650.0 million, \$603.4 million and \$563.0 million for the years ended December 31, 2023, 2022 and 2021, respectively. As of December 31, 2023, we recorded a quarterly dividend payable of \$168.3 million to shareholders of record at the close of business on January 2, 2024.

REPUBLIC SERVICES, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)

14. EARNINGS PER SHARE

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

Earnings per share for the years ended December 31, 2023, 2022 and 2021 are calculated as follows (in thousands, except per share amounts):

	2023	2022	2021
Basic earnings per share:			
Net income attributable to Republic Services, Inc.	\$ 1,730,985	\$ 1,487,586	\$ 1,290,405
Weighted average common shares outstanding	316,182	316,530	318,811
Basic earnings per share	\$ 5.47	\$ 4.70	\$ 4.05
Diluted earnings per share:			
Net income attributable to Republic Services, Inc.	\$ 1,730,985	\$ 1,487,586	\$ 1,290,405
Weighted average common shares outstanding	316,182	316,530	318,811
Effect of dilutive securities:			
Unvested RSU awards	104	152	266
Unvested PSU awards	379	398	348
Weighted average common and common equivalent shares outstanding	316,665	317,080	319,425
Diluted earnings per share	\$ 5.47	\$ 4.69	\$ 4.04

During each of the years ended December 31, 2023, 2022 and 2021 there were less than 0.1 million antidilutive securities outstanding.

15. SEGMENT REPORTING

Our senior management evaluates, oversees and manages the financial performance of our operations through three field groups, referred to as Group 1, Group 2 and Group 3. Group 1 is our recycling and waste business operating primarily in geographic areas located in the western United States. Group 2 is our recycling and waste business operating primarily in geographic areas located in the southeastern and mid-western United States, the eastern seaboard of the United States, and Canada. Group 3 is our environmental solutions business operating in geographic areas located across the United States and Canada. These groups are presented below as our reportable segments, which each provide integrated environmental services, including but not limited to collection, transfer, recycling and disposal. Prior to the third quarter of 2022, our environmental services operating segment, now referred to as our Group 3 reportable segment, was aggregated with Corporate entities and other.

We generated \$169.9 million and \$90.2 million of revenue in Canada for the years ended December 31, 2023 and 2022, respectively. There was no revenue generated in Canada during 2021. As of December 31, 2023 and 2022, we had \$136.8 million and \$47.7 million, respectively, of long-lived assets in Canada. The remainder of our revenue and assets were related to our United States operations.

REPUBLIC SERVICES, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)

Adjusted EBITDA is the single financial measure our chief operating decision maker (CODM) uses to evaluate operating segment profitability and determine resource allocations. Summarized financial information concerning our reportable segments for the years ended December 31, 2023, 2022 and 2021 follows:

|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|

(1) The Recycling & Waste Subtotal represents the combined results of our Group 1 and Group 2 reportable segments.

Corporate functions include legal, tax, treasury, information technology, risk management, human resources, closed landfills, and other administrative functions. National Accounts revenue included in Corporate entities and other represents the portion of

revenue generated from nationwide and regional contracts in markets outside our operating areas where the associated material handling is subcontracted to local operators. Revenue and overhead costs of Corporate entities and other are either specifically assigned or allocated on a rational and consistent basis among our reportable segments to calculate Adjusted EBITDA.

As presented in the tables below, Adjusted EBITDA reflects certain adjustments for US Ecology, Inc., acquisition, integration and deal costs, (income) losses from unconsolidated equity method investments, losses on extinguishment of debt, adjustments to withdrawal liabilities for a multiemployer pension fund and restructuring expenses. This presentation is consistent with how our CODM reviews results of operations to make resource allocation decisions.

Intercompany revenue reflects transactions within and between segments that generally are made on a basis intended to reflect the market value of such services. Capital expenditures for Corporate entities and other primarily include vehicle inventory acquired but not yet assigned to operating locations and facilities.

REPUBLIC SERVICES, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)

A reconciliation of the Company's single measure of segment profitability (segment Adjusted EBITDA) to Income before income tax provision in the Consolidated Statements of Net Income is as follows for the years ended December 31, 2023, 2022 and 2021 (in millions of dollars and as a percentage of revenue):

	2023			2022			2021		
Group 1 Adjusted EBITDA	\$	2,134.7		\$	1,967.4		\$	1,812.8	
Group 2 Adjusted EBITDA		1,964.0			1,750.8			1,526.1	
Group 3 Adjusted EBITDA		348.4			211.1			44.6	
Total Adjusted EBITDA		4,447.1			3,929.3			3,383.5	
Other expense (income), net		(7.5)			2.3			0.5	
Interest income		(6.5)			(3.3)			(2.5)	
Interest expense		508.2			395.6			314.6	
Depreciation, amortization and depletion		1,501.4			1,351.6			1,185.5	
Accretion		97.9			89.6			82.7	
Loss from unconsolidated equity method investments		94.3			165.6			188.5	
Adjustment to withdrawal liability for multiemployer pension funds		4.5			(1.6)			—	
Restructuring charges		33.2			27.0			16.6	
(Gain) loss on business divestitures and impairments, net		(3.6)			(6.3)			0.5	
US Ecology, Inc. acquisition integration and deal costs		33.5			77.3			—	
Accelerated vesting of compensation expense for CEO transition		—			—			22.0	
Loss on extinguishment of debt and other related costs		0.2			—			—	
Income before income taxes	\$	2,191.5		\$	1,831.5		\$	1,575.1	

REPUBLIC SERVICES, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)
16. REVENUE

Our operations primarily consist of providing environmental services. The following table disaggregates our revenue by service line for the years ended December 31 (in millions of dollars and as a percentage of revenue):

	2023				2022				2021			
Collection:												
Residential	\$	2,822.7		18.9 %	\$	2,642.6		19.5 %	\$	2,452.8		21.7 %
Small-container		4,438.4		29.7		3,945.7		29.2		3,417.7		30.3
Large-container		2,922.4		19.5		2,701.1		20.0		2,355.6		20.8
Other		69.4		0.4		53.9		0.4		52.1		0.5
Total collection		10,252.9		68.5		9,343.3		69.1		8,278.2		73.3
Transfer		1,699.1				1,574.5				1,490.0		
Less: intercompany		(933.7)				(849.8)				(814.4)		
Transfer, net		765.4		5.1		724.7		5.4		675.6		6.0
Landfill		2,885.4				2,681.7				2,516.6		
Less: intercompany		(1,206.0)				(1,131.9)				(1,092.8)		
Landfill, net		1,679.4		11.2		1,549.8		11.5		1,423.8		12.6
Environmental solutions		1,701.4				1,262.1				242.4		
Less: intercompany		(76.5)				(53.9)				(19.5)		
Environmental solutions, net		1,624.9		10.9		1,208.2		8.9		222.9		2.0
Other:												
Recycling processing and commodity sales		312.3		2.1		359.1		2.7		420.5		3.7
Other non-core		329.6		2.2		326.2		2.4		274.0		2.4
Total other		641.9		4.3		685.3		5.1		694.5		6.1
Total revenue	\$	14,964.5		100.0 %	\$	13,511.3		100.0 %	\$	11,295.0		100.0 %

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

Environmental solutions revenue includes revenue generated by US Ecology following our acquisition of the business on May 2, 2022.

The factors that impact the timing and amount of revenue recognized for each service line may vary based on the nature of the service performed. Generally, we recognize revenue at the time we perform a service. In the event that we bill for services in advance of performance, we recognize deferred revenue for the amount billed and subsequently recognize revenue at the time the service is provided. Depending on the nature of the contract, we may also generate revenue through the collection of fuel recovery fees and environmental fees which are designed to recover our internal costs of providing services to our customers.

See Note 15, *Segment Reporting*, for additional information regarding revenue by reportable segment.

Revenue by Service Line

Collection Services

Our collection business involves the collection of material for transport to transfer stations, or directly to landfills or recycling centers. Our collection services business includes both recurring and temporary customer relationships. Our standard contract duration is three years, although some of our exclusive franchises are for significantly longer periods. The fees received for collection services are based primarily on the market, collection frequency, type of service, type and volume or weight of the material collected, the distance to the disposal facility and the cost of disposal.

In general, small-container and residential collection fees are billed monthly or quarterly in advance. Substantially all of the deferred revenue recognized as of December 31, 2022 was recognized as revenue during 2023 when the service was performed. Our large-container customers are typically billed on a monthly basis based on the nature of the services provided during the period.

REPUBLIC SERVICES, INC.**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)**

Revenue recognized under these agreements is variable in nature based on the number of residential homes or businesses serviced during the period, the frequency of collection and the volume of material collected. In addition, certain of our contracts have annual price escalation clauses that are tied to changes in an underlying base index such as a consumer price index which are unknown at contract inception.

Transfer Services

Revenue at our transfer stations is primarily generated by charging tipping or disposal fees. The fees received for transfer services are based primarily on the market, type and volume or weight of the material accepted, the distance to the disposal facility and the cost of disposal. In general, fees are billed and revenue is recognized at the time the service is performed. Revenue recognized under these agreements is variable in nature based on the volume and nature of the material accepted at the transfer station.

Landfill Services

Revenue at our landfills is primarily generated by charging tipping fees to third parties based on the volume disposed and the nature of the waste. In general, fees are variable in nature and revenue is recognized at the time the waste is disposed at the facility.

Environmental Solutions

Environmental solutions revenue is primarily generated from the fees we charge for the collection, treatment, consolidation, disposal and recycling of hazardous and non-hazardous waste, field and industrial services, equipment rental, emergency response and standby services and in-plant services, such as transportation and logistics, including at our transfer, storage and disposal facilities (TSDF). Activity for this service line varies across markets and reflects the regulatory environment, pricing and disposal alternatives available in any given market. Revenue recognized under these agreements is variable in nature and primarily based on the volume and type of waste accepted or processed during the period. For certain field and industrial services contracts, we have a right to consideration from our customers in an amount that corresponds directly with the value to the customer of the Company's performance completed to date. Therefore, we have applied the practical expedient to recognize revenue in the amount to which we have the right to invoice.

Recycling Processing and Commodity Sales

Our recycling centers generate revenue through the processing and sale of old corrugated cardboard (OCC), old newsprint (ONP), aluminum, glass and other materials at market prices. In certain instances, we issue recycling rebates to our municipal or large-container customers, which can be based on the price we receive upon the final 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. The fees received are based primarily on the market, type and volume or weight of the materials sold. In general, fees are billed and revenue is recognized at the time title is transferred. Revenue recognized under these agreements is variable in nature based on the volume and type of materials sold. In addition, the amount of revenue recognized is based on commodity prices at the time of sale, which are unknown at contract inception.

Revenue Recognition

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

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

REPUBLIC SERVICES, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)

Deferred Contract Costs

We incur certain upfront payments to acquire customer contracts which are recognized as other assets in our consolidated balance sheet, and we amortize the asset over the respective contract life. In addition, we recognize sales commissions that represent an incremental cost of the contract as other assets in our consolidated balance sheet, and we amortize the asset over the average life of the customer relationship. As of December 31, 2023 and 2022, we recognized \$82.5 million and \$80.2 million, respectively, of deferred contract costs and capitalized sales commissions. During the years ended December 31, 2023, 2022 and 2021, we amortized \$14.5 million, \$13.4 million and \$12.5 million, respectively, of capitalized sales commissions to selling, general and administrative expenses, and \$5.1 million, \$5.7 million and \$6.4 million, respectively, of other deferred contract costs as a reduction of revenue.

17. CHANGES IN ACCUMULATED OTHER COMPREHENSIVE LOSS BY COMPONENT

A summary of changes in accumulated other comprehensive loss, net of tax, by component, for the years ended December 31, 2023, 2022 and 2021 follows:

	Cash Flow Hedges	Defined Benefit Pension Plan	Foreign Currency Translation	Total
Balance as of December 31, 2020	\$ (30.4)	\$ 18.0	\$ —	\$ (12.4)
Other comprehensive loss before reclassifications	—	(5.8)	—	(5.8)
Amounts reclassified from accumulated other comprehensive loss	4.6	(1.0)	—	3.6
Net current-period other comprehensive income (loss)	4.6	(6.8)	—	(2.2)
Balance as of December 31, 2021	(25.8)	11.2	—	(14.6)
Other comprehensive income (loss) before reclassifications	8.4	(1.6)	(5.0)	1.8
Amounts reclassified from accumulated other comprehensive loss	1.1	(0.4)	—	0.7
Net current-period other comprehensive income (loss)	9.5	(2.0)	(5.0)	2.5
Balance as of December 31, 2022	(16.3)	9.2	(5.0)	(12.1)
Other comprehensive income (loss) before reclassifications	14.0	0.1	(4.4)	9.7
Amounts reclassified from accumulated other comprehensive loss	(9.3)	(0.4)	—	(9.7)
Net current-period other comprehensive income (loss)	4.7	(0.3)	(4.4)	—
Balance as of December 31, 2023	\$ (11.6)	\$ 8.9	\$ (9.4)	\$ (12.1)

A summary of reclassifications out of accumulated other comprehensive loss for the years ended December 31, 2023, 2022 and 2021 follows:

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REPUBLIC SERVICES, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)
18. FINANCIAL INSTRUMENTS

The effect of our derivative instruments in fair value and cash flow hedging relationships on the consolidated statements of income for the years ended December 31, 2023, 2022 and 2021 follows (in millions):

	Classification and Amount of (Loss) Gain Recognized in Income on Fair Value and Cash Flow Hedging Relationships											
	2023				2022				2021			
	Interest Expense				Interest Expense				Interest Expense			
Total amounts of expense line items presented in the consolidated statements of income in which the effects of fair value or cash flow hedges are recorded	\$		(508.2)		\$		(395.6)		\$		(314.6)	
The effects of fair value and cash flow hedging relationships in Subtopic 815-20:												
(Loss) gain on fair value hedging relationships:												
Interest rate swaps:												
Net swap settlements	\$		(2.2)		\$		2.9		\$		7.9	
Net periodic loss	\$		(1.1)		\$		(3.3)		\$		(0.1)	
(Loss) gain on cash flow hedging relationships:												
Amount of (loss) gain reclassified from accumulated other comprehensive loss into earnings, net of tax												
Interest rate swap locks	\$		(3.8)		\$		(4.4)		\$		(4.6)	
2022 Interest Rate Swap	\$		13.1		\$		3.3		\$		—	
The effects of derivative instruments not in Subtopic 815-20:												
Gain (loss) on free-standing derivative instruments:												
Interest rate swaps:												
Gain (loss) on change in fair value of free-standing derivative instruments	\$		1.0		\$		(5.0)		\$		(4.4)	
Interest rate contract:												
Net (loss) gain on change in fair value of free-standing derivative instruments	\$		(1.9)		\$		2.1		\$		0.3	

Fair Value Measurements

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

The carrying value for certain of our financial instruments, including cash, accounts receivable, accounts payable and certain other accrued liabilities, approximates fair value because of their short-term nature.

REPUBLIC SERVICES, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)

As of December 31, 2023 and 2022, our assets and liabilities that are measured at fair value on a recurring basis include the following:

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December 31, 2022											
	Fair Value										
	Carrying Amount		Total		Quoted Prices in Active Markets (Level 1)		Significant Other Observable Inputs (Level 2)		Significant Unobservable Inputs (Level 3)		
Assets:											
Money market mutual funds	\$ 38.3		\$ 38.3		\$ 38.3		\$ —		\$ —		
Bonds - restricted cash and marketable securities and other assets	56.9		56.9		—		56.9		—		
Derivative and hedging assets - other assets	105.8		105.8		—		105.8		—		
Total assets	\$ 201.0		\$ 201.0		\$ 38.3		\$ 162.7		\$ —		
Liabilities:											
Derivative and hedging liabilities - other accrued liabilities and other long-term liabilities	\$ 102.0		\$ 102.0		\$ —		\$ 102.0		\$ —		
Contingent consideration - other accrued liabilities and other long-term liabilities	65.1		65.1		—		—		65.1		
Total liabilities	\$ 167.1		\$ 167.1		\$ —		\$ 102.0		\$ 65.1		

Total Debt

As of December 31, 2023 and 2022, the carrying value of our total debt was \$12.8 billion and \$11.8 billion, respectively, and the fair value of our total debt was \$12.5 billion and \$11.1 billion, respectively. The estimated fair value of our fixed rate senior notes and debentures is based on quoted market prices. The fair value of our remaining notes payable, tax-exempt financings and borrowings under our credit facilities approximates the carrying value because the interest rates are variable. The fair value estimates -are based on Level 2 inputs of the fair value hierarchy as of December 31, 2023 and 2022. See Note 9, *Debt*, for further information related to our debt.

Contingent Consideration

In 2015, we entered into a waste management contract with the County of Sonoma, California to operate the county's waste management facilities. As of December 31, 2023, the Sonoma contingent consideration represents the fair value of \$58.8 million payable to the County of Sonoma based on the achievement of future annual tonnage targets through the expected

REPUBLIC SERVICES, INC.**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)**

remaining capacity of the landfill. The potential undiscounted amount of all future contingent payments that we could be required to make under the waste management contract is estimated to be between approximately \$81 million and \$114 million. During 2023, the activity in the contingent consideration liability included accretion, which was offset by concession payments made in the ordinary course of business. There were no changes to the estimate of fair value.

19. COMMITMENTS AND CONTINGENCIES**Legal Proceedings**

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

As used herein, the term *legal proceedings* refers to litigation and similar claims against us and our subsidiaries, excluding: (1) ordinary course accidents, general commercial liability and workers' compensation claims, which are covered by insurance programs, subject to customary deductibles, and which, together with insured employee health care costs, are discussed in Note 7, *Other Liabilities*; and (2) environmental remediation liabilities, which are discussed in Note 8, *Landfill and Environmental Costs*.

We accrue for legal proceedings when losses become probable and reasonably estimable. We have recorded an aggregate accrual of approximately \$18 million relating to our outstanding legal proceedings as of December 31, 2023. As of the end of each applicable reporting period, we review each of our legal proceedings and, where it is probable that a liability has been incurred, we accrue for all probable and reasonably estimable losses. Where we can reasonably estimate a range of losses we may incur regarding such a matter, we record an accrual for the amount within the range that constitutes our best estimate. If we can reasonably estimate a range but no amount within the range appears to be a better estimate than any other, we use the amount that is the low end of such range. If we had used the high ends of such ranges, our aggregate potential liability would be approximately \$11 million higher than the amount recorded as of December 31, 2023.

Multiemployer Pension Plans

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

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

Unconditional Purchase Commitments***Royalties***

We have entered into agreements to pay royalties to prior landowners or host communities, based on, among other things, revenue received and waste tonnage disposed at specified landfills. These royalties are generally payable quarterly and amounts incurred, but not paid, are accrued in our consolidated balance sheets. Royalties are accrued as revenue is received or tonnage is disposed of, as applicable, in the landfills.

Disposal Agreements

We have several agreements that require us to dispose of a minimum number of tons at third-party disposal facilities. Under these put-or-pay agreements, we must pay for agreed-upon minimum volumes regardless of the actual number of tons placed at the facilities.

REPUBLIC SERVICES, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)

Our unconditional purchase commitments have varying expiration dates, with some extending through the remaining life of the respective landfill. Future minimum payments under unconditional purchase commitments, consisting primarily of (1) disposal related agreements, which include fixed or minimum royalty payments, host agreements and take-or-pay and put-or-pay agreements, and (2) other obligations including committed capital expenditures and consulting service agreements, as of December 31, 2023 are as follows:

2024	\$	205.2
2025		159.4
2026		109.7
2027		76.6
2028		49.7
Thereafter		373.7
	\$	<u>974.3</u>

Cash and Cash Equivalents and Restricted Cash and Marketable Securities

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

	December 31, 2023	December 31, 2022	December 31, 2021
Cash and cash equivalents	\$ 140.0	\$ 143.4	\$ 29.0
Restricted cash and marketable securities	163.6	127.6	139.0
Less: restricted marketable securities	(76.1)	(56.7)	(62.4)
Cash, cash equivalents, restricted cash and restricted cash equivalents	<u>\$ 227.5</u>	<u>\$ 214.3</u>	<u>\$ 105.6</u>

Our restricted cash and marketable securities includes amounts pledged to regulatory agencies and governmental entities as financial guarantees of our performance under certain collection, landfill and transfer station contracts and permits and relating to our final capping, closure and post-closure obligations at our landfills and restricted cash and marketable securities related to our insurance obligations.

The following table summarizes our restricted cash and marketable securities as of December 31:

	2023	2022
Capping, closure and post-closure obligations	\$ 43.2	\$ 39.1
Insurance	120.4	88.5
Total restricted cash and marketable securities	<u>\$ 163.6</u>	<u>\$ 127.6</u>

We must provide financial assurance to governmental agencies and a variety of other entities under applicable environmental regulations relating to our landfill operations for capping, closure and post-closure costs and our performance under certain collection, landfill and transfer station contracts. We satisfy our financial assurance requirements by providing surety bonds, letters of credit, insurance policies or trust deposits. The amount of the financial assurance requirements for capping, closure and post-closure costs is determined by applicable state environmental regulations, which vary by state. The financial assurance requirements for capping, closure and post-closure costs can either be for costs associated with a portion of the landfill or the entire landfill. Generally, states will require a third-party engineering specialist to determine the estimated capping, closure and post-

closure costs that are used to determine the required amount of financial assurance for a landfill. The amount of financial assurance required can, and generally will, differ from the obligation determined and recorded under U.S. GAAP. The amount of the financial assurance requirements related to contract performance varies by contract. Additionally, we are required to provide financial assurance for our insurance program and collateral for certain performance obligations.

REPUBLIC SERVICES, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)

We had the following financial instruments and collateral in place to secure our financial assurances as of December 31:

	2023		2022	
Letters of credit	\$	466.9	\$	475.0
Surety bonds	\$	4,677.1	\$	4,322.3

We had \$336.5 million and \$347.6 million of letters of credit outstanding under our Credit Facility as of December 31, 2023 and 2022, respectively. Surety bonds subject to expiration will expire on various dates through 2029.

These financial instruments are issued in the normal course of business and are not classified as debt. Because we currently have no liability for this financial assurance, it is not reflected in our consolidated balance sheets. However, we have recorded capping, closure and post-closure obligations and insurance reserves as they are incurred.

We own a 19.9% interest in a company that, among other activities, issues financial surety bonds to secure capping, closure and post-closure obligations for companies operating in the environmental services industry. We account for this investment using an alternative measurement approach. There have been no identified events or changes in circumstances that may have a significant adverse effect on the recoverability of this investment. This investee company and the parent company of the investee had written surety bonds for us relating primarily to our landfill operations for capping, closure and post-closure, of which \$1,737.6 million were outstanding as of December 31, 2023. Our reimbursement obligations under these bonds are secured by an indemnity agreement with the investee and a surety bond.

Off-Balance Sheet Arrangements

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

Guarantees

We enter into contracts in the normal course of business that include indemnification clauses. Indemnifications relating to known liabilities are recorded in the consolidated financial statements based on our best estimate of required future payments. Certain of these indemnifications relate to contingent events or occurrences, such as the imposition of additional taxes due to a change in the tax law or adverse interpretation of the tax law and indemnifications made in divestiture agreements where we indemnify the buyer for liabilities that relate to our activities prior to the divestiture and that may become known in the future. We do not believe that these contingent obligations will have a material effect on our consolidated financial position, results of operations or cash flows.

We have entered into agreements with property owners to guarantee the value of property that is adjacent to certain of our landfills. These agreements have varying terms. We do not believe that these contingent obligations will have a material effect on our consolidated financial position, results of operations or cash flows.

Other Matters

Our business activities are conducted in the context of a developing and changing statutory and regulatory framework. Governmental regulation of the environmental services industry requires us to obtain and retain numerous governmental permits to conduct various aspects of our operations. These permits are subject to revocation, modification or denial. The costs and other capital expenditures that may be required to obtain or retain the applicable permits or comply with applicable regulations could be significant. Any revocation, modification or denial of permits could have a material adverse effect on us.

ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

None.

ITEM 9A. CONTROLS AND PROCEDURES

REPORT OF MANAGEMENT ON REPUBLIC SERVICES, INC.'S INTERNAL CONTROL OVER FINANCIAL REPORTING

We, as members of management of Republic Services, Inc., are responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Exchange Act Rule 13a-15(f). Internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. Internal

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

Because of its inherent limitations, our internal control systems and procedures may not prevent or detect misstatements. An internal control system, no matter how well conceived and operated, can provide only reasonable, not absolute, assurance that the objectives of the control system are met. Because of the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that all control issues and instances of fraud, if any, have been detected. Also, projections of any evaluation of effectiveness to future periods are subject to the risks that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies and procedures may deteriorate.

We, under the supervision of and with the participation of our management, including the Chief Executive Officer, Chief Financial Officer and Chief Accounting Officer, assessed the effectiveness of our internal control over financial reporting as of December 31, 2023, based on criteria for effective internal control over financial reporting described in Internal Control — Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on this assessment, we concluded that we maintained effective internal control over financial reporting as of December 31, 2023, based on the specified criteria.

Our internal control over financial reporting has been audited by Ernst & Young LLP, an independent registered public accounting firm, as stated in their attestation report which is included herein.

Disclosure Controls and Procedures

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

Changes in Internal Control Over Financial Reporting

Based on an evaluation, under the supervision and with the participation of our management, including our Chief Executive Officer and Chief Financial Officer, there has been no change in our internal control over financial reporting during the quarter ended December 31, 2023 identified in connection with that evaluation, that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

In March 2023, we acquired all of the issued and outstanding shares and other equity interests of Wasteco Holdings Inc. and related subsidiaries. In June 2023, we acquired a vertically-integrated set of operations located primarily in Colorado from GFL Environmental Inc. In November 2023, we acquired all of the issued and outstanding capital stock or other ownership interests of Advanced Chemical Transport LLC. In December 2023, we acquired all of the issued and outstanding membership and other equity interests of Central Texas Refuse, LLC and an affiliate thereof. As permitted by the SEC Staff interpretive guidance for newly acquired businesses, management's assessment of our internal control over financial reporting as of December 31, 2023 did not include an assessment of internal control over financial reporting as it relates to these acquired businesses. We will continue the process of implementing internal controls over financial reporting for these acquired businesses. These businesses collectively contributed approximately 1% of our total consolidated revenue for the year ended December 31, 2023.

ITEM 9B. OTHER INFORMATION

During the quarter ended December 31, 2023, no director or officer adopted or terminated any contract, instrument or written plan for the purchase or sale of Republic securities intended to satisfy the affirmative defense conditions of Rule 10b5-1(c) under the Exchange Act or any non-Rule 10b5-1 trading arrangement as defined in Item 408(c) of Regulation S-K.

ITEM 9C. DISCLOSURE REGARDING FOREIGN JURISDICTIONS THAT PREVENT INSPECTIONS

Not applicable.

PART III

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

Information required by this item is incorporated by reference to the material appearing under the headings Proposal 1 - Election of Directors, Biographical Information Regarding Director Nominees, Board of Directors and Corporate Governance Matters, Delinquent Section 16(a) Reports and Executive Officers in the Proxy Statement for the 2024 Annual Meeting of Shareholders.

ITEM 11. EXECUTIVE COMPENSATION

Information required by this item is incorporated by reference to the material appearing under the headings Executive Compensation and Director Compensation in the Proxy Statement for the 2024 Annual Meeting of Shareholders.

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS

Information required by this item is incorporated by reference to the material appearing under the headings Security Ownership of Five Percent Shareholders and Security Ownership of the Board of Directors and Management in the Proxy Statement for the 2024 Annual Meeting of Shareholders.

The following table sets forth certain information regarding equity compensation plans as of December 31, 2023 (number of securities in millions):

Plan Category	Number of Securities to be Issued Upon Exercise of Outstanding Options and Rights ^(b)	Weighted Average Exercise Price of Outstanding Options and Rights ^(c)	Number of Securities Remaining Available for Future Issuance Under Equity Compensation Plans (excluding securities reflected in the first column) ^(d)
Equity compensation plans approved by security holders ^(a)	1.3	\$ 156.67	29.6
Equity compensation plans not approved by security holders	—	—	—
Total	1.3	\$ 156.67	29.6

(a) Includes our 2006 Plan, Amended and Restated 2007 Stock Incentive Plan, our 2018 Employee Stock Purchase Plan (ESPP) and our 2021 Stock Incentive Plan.

(b) Includes no stock options as all were exercised in 2020, 0.9 million shares underlying restricted stock units, 0.4 million shares underlying performance shares and less than 0.1 million shares underlying purchase rights that accrue under the ESPP.

(c) Excludes restricted stock units and performance shares as these awards do not have exercise prices.

(d) The shares remaining available for future issuances include 11.7 million shares under our 2021 Stock Incentive Plan and 2.4 million shares under our ESPP. No further awards will be granted under the Amended and Restated 2007 Stock Incentive Plan after December 31, 2020.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE

Information required by this item is incorporated by reference to the material appearing under the headings Board of Directors and Corporate Governance Matters and Certain Relationships and Related Party Transactions in the Proxy Statement for the 2024 Annual Meeting of Shareholders.

ITEM 14. PRINCIPAL ACCOUNTANT FEES AND SERVICES

Information required by this item is incorporated by reference to the material appearing under the heading Audit and Related Fees in the Proxy Statement for the 2024 Annual Meeting of Shareholders.

PART IV

ITEM 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

(a) The following documents are filed as part of this report:

1. Financial Statements

Our consolidated financial statements are set forth under Part II, Item 8 of this Annual Report on Form 10-K.

2. Financial Statement Schedules

All schedules are omitted as the required information is not applicable or the information is presented in the consolidated financial statements and notes thereto in Part II, Item 8 of this Annual Report on Form 10-K.

3. Exhibits

The following exhibits are filed herewith or are incorporated by reference to exhibits previously filed with the SEC, as indicated in the description of each, File No. 1-14267 in the case of Republic and File No. 1-14705 and No. 0-19285 in the case of Allied, and

<u>Exhibit Number</u>	<u>Description</u>
<u>3.1</u>	Amended and Restated Certificate of Incorporation (incorporated by reference to Exhibit 3.1 of the Company's Quarterly Report on Form 10-Q for the period ended June 30, 1998).
<u>3.2</u>	Certificate of Amendment of Amended and Restated Certificate of Incorporation of Republic Services, Inc. (incorporated by reference to Exhibit 4.2 of the Company's Registration Statement on Form S-8, Registration No. 333-81801, filed with the Commission on June 29, 1999).
<u>3.3</u>	Amended and Restated Bylaws of Republic Services, Inc. (incorporated by reference to Exhibit 3.1 of the Company's Quarterly Report on Form 10-Q for the period ended September 30, 2022).
<u>4.1</u>	Republic Services, Inc. Common Stock Certificate (incorporated by reference to Exhibit 4.4 of the Company's Registration Statement on Form S-8, Registration No. 333-81801, filed with the Commission on June 29, 1999).
<u>4.2</u>	Indenture, dated as of August 15, 2001 between Republic Services, Inc. and The Bank of New York, as trustee, including the form of notes (incorporated by reference to Exhibit 4.1 of the Company's Current Report on Form 8-K filed August 16, 2001).
<u>4.3</u>	Second Supplemental Indenture, dated as of March 21, 2005, to the Indenture dated as of August 15, 2001, by and between Republic Services, Inc. and The Bank of New York, as trustee, including the form of 6.086% Note due March 15, 2035 (incorporated by reference to Exhibit 4.1 of the Company's Quarterly Report on Form 10-Q for the quarter ended March 31, 2005).
<u>4.4</u>	Indenture, dated as of September 8, 2009, by and between Republic Services, Inc. and The Bank of New York Mellon Trust Company, N.A., as trustee (incorporated by reference to Exhibit 4.1 of the Company's Current Report on Form 8-K dated September 9, 2009).
<u>4.5</u>	Third Supplemental Indenture, dated as of May 9, 2011, to the Indenture dated as of September 8, 2009, by and among Republic Services, Inc., the guarantors named therein and The Bank of New York Mellon Trust Company, N.A., as trustee, including the form of 4.750% Notes due 2023 (incorporated by reference to Exhibit 4.2 of the Company's Current Report on Form 8-K dated May 9, 2011).
<u>4.6</u>	Fourth Supplemental Indenture, dated as of May 9, 2011, to the Indenture dated as of September 8, 2009, by and among Republic Services, Inc., the guarantors named therein and The Bank of New York Mellon Trust Company, N.A., as trustee, including the form of 5.700% Notes due 2041 (incorporated by reference to Exhibit 4.3 of the Company's Current Report on Form 8-K dated May 9, 2011).
<u>4.7</u>	Indenture, dated as of November 25, 2009, by and between Republic Services, Inc. and U.S. Bank National Association, as trustee (incorporated by reference to Exhibit 4.1 of the Company's Current Report on Form 8-K dated November 25, 2009).
<u>4.8</u>	Third Supplemental Indenture, dated as of March 4, 2010, to the Indenture dated as of November 25, 2009, by and among Republic Services, Inc., the guarantors named therein and U.S. Bank National Association, as trustee, including the form of 6.20% Notes due 2040 (incorporated by reference to Exhibit 4.2 of the Company's Current Report on Form 8-K dated March 4, 2010).
<u>4.9</u>	Restated Indenture, dated as of September 1, 1991, by and between Browning-Ferris Industries, Inc. and First City, Texas-Houston, National Association, as trustee (incorporated by reference to Exhibit 4.22 of Allied's Registration Statement on Form S-4/A (No. 333-61744)).

Exhibit Number	Description
4.10	First Supplemental Indenture, dated as of July 30, 1999, to the Restated Indenture dated as of September 1, 1991, by and among Allied Waste Industries, Inc., Allied Waste North America, Inc., Browning-Ferris Industries, Inc. and Chase Bank of Texas, National Association, as trustee (incorporated by reference to Exhibit 4.23 of Allied's Registration Statement on Form S-4/A (No. 333-61744)).
4.11	First [sic] Supplemental Indenture, dated as of December 31, 2004, to the Restated Indenture dated as of September 1, 1991, by and among Browning-Ferris Industries, Inc., BBCO, Inc. and JP Morgan Chase Bank, National Association as trustee (incorporated by reference to Exhibit 4.33 of Allied's Annual Report on Form 10-K for the year ended December 31, 2004).
4.12	Third Supplemental Indenture, dated as of December 5, 2008, to the Restated Indenture dated as of September 1, 1991, by and among Allied Waste Industries, Inc., Allied Waste North America, Inc., Browning-Ferris Industries, LLC (successor to Browning-Ferris Industries, Inc.), BBCO, Inc., Republic Services, Inc., the guarantors party thereto and The Bank of New York Mellon Trust Company, N.A., as trustee (incorporated by reference to Exhibit 4.1 of the Company's Current Report on Form 8-K dated December 10, 2008).
4.13	Fourth Supplemental Indenture, dated as of March 11, 2015, to the Indenture, dated as of November 25, 2009, between Republic Services, Inc. and U.S. Bank National Association, as trustee, including the form of 3.20% Notes due 2025 (incorporated by reference to Exhibit 4.1 of the Company's Current Report on Form 8-K dated March 11, 2015).
4.14	Fifth Supplemental Indenture, dated as of July 5, 2016, to the Indenture, dated as of November 25, 2009, between Republic Services, Inc. and U.S. Bank National Association, as trustee, including the form of 2.900% Notes due 2026 (incorporated by reference to Exhibit 4.1 of the Company's Current Report on Form 8-K dated July 5, 2016).
4.15	Sixth Supplemental Indenture, dated as of November 16, 2017, between Republic Services, Inc. and U.S. Bank National Association, as trustee, including the form of 3.375% Notes due 2027 (incorporated by reference to Exhibit 4.1 of the Company's Current Report on Form 8-K dated November 15, 2017).
4.16	Form of Browning-Ferris Industries, Inc. 7.4% Debentures due 2035 (incorporated by reference to Exhibit 4 of Browning-Ferris Industries, Inc.'s Current Report on Form 8-K dated September 15, 1995).
4.17	Seventh Supplemental Indenture, dated as of May 14, 2018, between Republic Services, Inc. and U.S. Bank National Association, as trustee, including the form of 3.950% Notes due 2028 (incorporated by reference to Exhibit 4.1 of the Company's Current Report on Form 8-K dated May 3, 2018).
4.18	Limited consent (2018 Credit Agreement), dated as of August 21, 2019, by and among Republic Services, Inc., as Borrower, Bank of America, N.A., as Administrative Agent, Swing Line Lender and an L/C Issuer, and the lenders party thereto (incorporated by reference to Exhibit 4.1 of the Company's Quarterly Report on Form 10-Q for the quarter ended September 30, 2019).
4.19	Description of Securities Registered Under Section 12 of the Securities Exchange Act of 1934 (incorporated by reference to Exhibit 4.23 of the Company's Annual Report on Form 10-K for the year ended December 31, 2019).
4.20	Eighth Supplemental Indenture, dated as of August 7, 2019, between Republic Services, Inc. and U.S. Bank National Association, as trustee, including the form of 2.500% Notes due 2024 (incorporated by reference to Exhibit 4.1 of the Company's Current Report on Form 8-K dated August 1, 2019).
4.21	Ninth Supplemental Indenture, dated as of February 27, 2020, between Republic Services, Inc. and U.S. Bank National Association, as trustee, including the form of 2.300% Notes due 2030 and the form of 3.050% Notes due 2050 (incorporated by reference to Exhibit 4.1 of the Company's Current Report on Form 8-K dated February 21, 2020).
4.22	Tenth Supplemental Indenture, dated as of August 20, 2020, between Republic Services, Inc. and U.S. Bank National Association, as trustee, including the form of 1.450% Notes due 2031 (incorporated by reference to Exhibit 4.1 of the Company's Current Report on Form 8-K dated August 13, 2020).
4.23	Eleventh Supplemental Indenture, dated as of November 24, 2020, between Republic Services, Inc. and U.S. Bank National Association, as trustee, including the form of 0.875% Notes due

Exhibit Number	Description
4.26	Form of Commercial Paper Dealer Agreement--4(a)(2) Program, dated as of May 25, 2022, between Republic Services, Inc. and the applicable dealer party thereto (incorporated by reference to Exhibit 10.1 of the Company's Current Report on Form 8-K filed September 1, 2022).
4.27	Thirteenth Supplemental Indenture, dated as of March 28, 2023, between Republic Services, Inc. and U.S. Bank Trust Company, National Association (as successor in interest to U.S. Bank National Association), as trustee, including the form of 4.875% Notes due 2029 and form of 5.000% Notes due 2034 (incorporated by reference to Exhibit 4.1 of the Company's Current Report on Form 8-K dated March 23, 2023).
4.28	Fourteenth Supplemental Indenture, dated as of December 12, 2023, between Republic Services, Inc. and U.S. Bank Trust Company, National Association (as successor in interest to U.S. Bank National Association), as trustee, including the form of 5.000% Notes due 2033 (incorporated by reference to Exhibit 4.1 of the Company's Current Report on Form 8-K dated December 11, 2023).
4.29	Amendment No. 1, dated as of February 23, 2023, to Amended and Restated Credit Agreement, dated as of August 17, 2021, by and among Republic Services, Inc., USE Canada Holdings, Inc., Bank of America, N.A., as Administrative Agent, Swing Line Lender and L/C Issuer, and the other lenders party thereto (incorporated by reference to Exhibit 4.1 of the Company's Current Report on Form 8-K dated February 27, 2023).
4.30	Term Loan Credit Agreement, dated as of April 29, 2022, by and among Republic Services, Inc., as Borrower, Bank of America, N.A., as Administrative Agent, and the other lenders party thereto (incorporated by reference to Exhibit 4.1 of the Company's Current Report on Form 8-K dated May 4, 2022).
4.31	Amendment No. 1, dated as of February 23, 2023, to Term Loan Credit Agreement, dated as of April 29, 2022, by and among Republic Services, Inc., Bank of America, N.A., as Administrative Agent, and the other lenders party thereto (incorporated by reference to Exhibit 4.2 of the Company's Current Report on Form 8-K dated February 27, 2023).
4.32	Amendment No. 2, dated as of October 30, 2023, to Amended and Restated Credit Agreement, dated as of August 17, 2021, by and among Republic Services, Inc., USE Canada Holdings, Inc., Bank of America, N.A., as Administrative Agent, Swing Line Lender and L/C Issuer, and the other lenders party thereto (incorporated by reference to Exhibit 4.1 of the Company's Current Report on Form 8-K dated November 3, 2023).
10.1+	Republic Services, Inc. Amended and Restated 2007 Stock Incentive Plan effective May 12, 2011 (incorporated by reference to Appendix A of the Company's Proxy Statement on Schedule 14A filed on April 1, 2011).
10.2+	Republic Services, Inc. Executive Incentive Plan, as amended and restated effective October 26, 2020 (incorporated by reference to Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q for the quarter ended September 30, 2020).
10.3+	Form of Employee Restricted Stock Unit Agreement under the Republic Services, Inc. Amended and Restated 2007 Stock Incentive Plan (for awards on or after December 27, 2011) (incorporated by reference to Exhibit 10.1 of the Company's Current Report on Form 8-K dated December 27, 2011).
10.4+	Form of Non-Employee Director Restricted Stock Unit Agreement (annual vesting) under the Republic Services, Inc. Amended and Restated 2007 Stock Incentive Plan (for awards on or after December 27, 2011) (incorporated by reference to Exhibit 10.2 of the Company's Current Report on Form 8-K dated December 27, 2011).
10.5+	Form of Non-Employee Director Restricted Stock Unit Agreement (3 year vesting) under the Republic Services, Inc. Amended and Restated 2007 Stock Incentive Plan (for awards on or after December 27, 2011) (incorporated by reference to Exhibit 10.3 of the Company's Current Report on Form 8-K dated December 27, 2011).
10.6+	Republic Services, Inc. Deferred Compensation Plan, as amended and restated effective January 1, 2010 (incorporated by reference to Exhibit 4.4 of the Company's Registration Statement on Form S-8, Registration No. 333-170174, filed with the SEC on October 27, 2010).
10.7+	Amendment No. 1 to Republic Services, Inc. Deferred Compensation Plan, effective January 6, 2011 (incorporated by reference to Exhibit 10.17 of the Company's Annual Report on Form 10-K for the year ended December 31, 2010).

<u>Exhibit Number</u>	<u>Description</u>
<u>10.10+</u>	Amendment No. 2 to Republic Services, Inc. Deferred Compensation Plan, effective February 7, 2012 (incorporated by reference to Exhibit 10.3 of the Company's Quarterly Report on Form 10-Q for the quarter ended March 31, 2012).
<u>10.11+</u>	Republic Services, Inc. Amended and Restated 2007 Stock Incentive Plan effective May 9, 2013 (incorporated by reference to Exhibit 10.1 of the Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 2013).
<u>10.12+</u>	Amendment No. 3 to Republic Services, Inc. Deferred Compensation Plan, effective October 29, 2013 (incorporated by reference to Exhibit 10.3 of the Company's Quarterly Report on Form 10-Q for the quarter ended September 30, 2013).
<u>10.13+</u>	Amendment No. 4 to Republic Services, Inc. Deferred Compensation Plan, effective January 1, 2015 (incorporated by reference to Exhibit 10.53 of the Company's Annual Report on Form 10-K for the year ended December 31, 2014).
<u>10.14+</u>	Offer Letter, dated July 25, 2016, by and between Catharine D. Ellingsen and Republic Services, Inc. (incorporated by reference to Exhibit 10.37 of the Company's Annual Report on Form 10-K dated February 16, 2017).
<u>10.15+*</u>	Non-Competition, Non-Solicitation, Confidentiality and Arbitration Agreement, effective February 13, 2024, by and between Catharine D. Ellingsen and Republic Services, Inc.
<u>10.16+</u>	Republic Services, Inc. 2018 Employee Stock Purchase Plan (incorporated by reference to Annex A of the Company's Proxy Statement on Schedule 14A filed on March 29, 2018).
<u>10.17+</u>	Offer Letter, dated April 29, 2019, by and between Timothy Stuart and Republic Services, Inc. (incorporated by reference to Exhibit 10.3 of the Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 2019).
<u>10.18+*</u>	Non-Competition, Non-Solicitation and Confidentiality Agreement, effective August 20, 2021, by and between Timothy Stuart and Republic Services, Inc.
<u>10.19+</u>	Offer letter, dated May 29, 2020, by and between Brian DelGhiaccio and Republic Services, Inc. (incorporated by reference to Exhibit 10.1 of the Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 2020).
<u>10.20+*</u>	Non-Competition, Non-Solicitation, Confidentiality and Arbitration Agreement, effective February 13, 2024, by and between Brian DelGhiaccio and Republic Services, Inc.
<u>10.21+</u>	Offer letter, dated March 26, 2021, by and between Jon Vander Ark and Republic Services, Inc. (incorporated by reference to Exhibit 10.1 of the Company's Quarterly Report on Form 10-Q for the quarter ended March 31, 2021).
<u>10.22+*</u>	Non-Competition, Non-Solicitation, Confidentiality, and Arbitration Agreement, effective February 13, 2024, by and between Jon Vander Ark and Republic Services, Inc.
<u>10.23+</u>	Republic Services, Inc. 2021 Stock Incentive Plan (incorporated by reference to Exhibit 10.30 of the Company's Annual Report on Form 10-K for the year ended December 31, 2020).
<u>10.24+*</u>	Form of Performance Share Agreement (Executive Officer) under the Republic Services, Inc. 2021 Stock Incentive Plan.
<u>10.25+*</u>	Form of Performance Share Agreement (Other Executive) under the Republic Services, Inc. 2021 Stock Incentive Plan.
<u>10.26+*</u>	Form of Performance Share Agreement (Non-Executive Officer EVP) under the Republic Services, Inc. 2021 Stock Incentive Plan.
<u>10.27+*</u>	Form of Employee Restricted Stock Unit Agreement (Senior Executive) under the Republic Services, Inc. 2021 Stock Incentive Plan.
<u>10.28+*</u>	Form of Employee Restricted Stock Unit Agreement (Senior Executive, Cliff Vesting) under the Republic Services, Inc. 2021 Stock Incentive Plan.
<u>10.29+*</u>	Form of Employee Restricted Stock Unit Agreement (Other Employees) under the Republic Services, Inc. 2021 Stock Incentive Plan.
<u>10.30+*</u>	Non-Competition, Non-Solicitation, Confidentiality, and Arbitration Agreement, effective February 13, 2024, by and between Brian A. Bales and Republic Services, Inc.
<u>21.1*</u>	Subsidiaries of the Company.
<u>23.1*</u>	Consent of Ernst & Young LLP.

<u>Exhibit Number</u>	<u>Description</u>
32.1**	Section 1350 Certification of Chief Executive Officer.
32.2**	Section 1350 Certification of Chief Financial Officer.
97+	Amended and Restated Clawback Policy, dated July 19, 2023 (incorporated by reference to Exhibit 10.1 of the Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 2023).
101.INS*	XBRL Instance Document. - the instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document.
101.SCH*	XBRL Taxonomy Extension Schema Document.
101.CAL*	XBRL Taxonomy Extension Calculation Linkbase Document.
101.LAB*	XBRL Taxonomy Extension Labels Linkbase Document.
101.PRE*	XBRL Taxonomy Extension Presentation Linkbase Document.
101.DEF*	XBRL Taxonomy Extension Definition Linkbase Document.
104*	Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101).

* Filed herewith.

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

+ Indicates a management or compensatory plan or arrangement.

Pursuant to Item 601(b)(4)(iii)(A) of Regulation S-K, the Company has not filed as exhibits to this Form 10-K certain long-term debt instruments under which the total amount of securities authorized does not exceed 10% of the total assets of the Company and its subsidiaries on a consolidated basis. The Company hereby agrees to furnish a copy of any such instrument to the SEC upon request.

ITEM 16. FORM 10-K SUMMARY

None.

Signatures

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

[illegible]

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the Registrant and in the capacities and on the dates indicated.

[illegible]

[illegible]