REPUBLIC SERVICES

Sustainability in Action™

Task Force on Climate-related Financial Disclosures

2023 TCFD Report

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About this Report

In this document, Republic Services has reported in accordance with the TCFD recommendations for the period January 1, 2023 through December 31, 2023. In many cases we provide disclosures and context that go beyond TCFD recommendations to share additional insights into our sustainability performance. We invite readers to be in touch with us at Sustainability@RepublicServices.com and to explore our full suite of sustainability and ESG reporting, aligned with CDP, SASB, GRI, and other standards, available at RepublicServices.com/Sustainability/Reporting.

Unless otherwise stated, all references in this 2023 TCFD Report to "Republic," "the Company," "we," "us" and "our" refer to Republic Services, Inc., and its consolidated subsidiaries. Where data is available, coverage of our publicly available economic, governance, environmental and social indicators is consolidated for all our business operations, unless otherwise noted.

Disclosure regarding forward-looking statements

This report 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. These statements include information about our sustainability targets, goals and programs in addition to our plans, strategies, expectations of future financial performance and prospects. Forward-looking statements are not guarantees of performance. You should not place undue reliance on any forward-looking statement. These statements are based upon the current beliefs and expectations of our management and are subject to significant 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, we cannot assure you that the expectations will prove to be correct. The inclusion of information in this report should not be construed as a characterization regarding the materiality or financial impact of that information. More information on factors that could cause actual results or events to differ materially from those anticipated is included from time to time in our reports filed with the Securities and Exchange Commission, including our Annual Report on Form 10-K ("2023 10-K" or "10-K") for the year ended December 31, 2023, particularly under Part I, Item 1A – Risk Factors, and in our Quarterly Reports on Form 10-Q. 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 sustainability programs and goals. We undertake no obligation to update publicly any forward-looking statements, whether as a result of new information, future events or otherwise, except as required by law.

Executive Summary

At Republic Services, our vision is to partner with customers to create a more sustainable world through industry-leading commitments to transform circularity and advance decarbonization solutions. As we operate in an ever-changing world, we seek to bring value to our diverse stakeholders through consistent and transparent reporting. We invite you to explore our third disclosure aligned with the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD).

We take seriously the climate-related risks and opportunities facing our company and society and we recognize the importance of sharing this with our investors, customers, employees and all parties invested in the future of our organization. Throughout this report, we follow the principles of double materiality in a continued effort to evaluate those risks and opportunities to our organization and the impacts of our operations on the environment. We demonstrate continued progress toward our Climate Leadership goals, annually reported in our Sustainability Report, which allows us to support our customers' goals by driving down our contribution to climate change. Progress is made possible through our investments in innovative solutions to landfill gas management, fleet electrification and material circularity.

Through our analysis of physical and transition risks, we have made our Enterprise Risk Management function more robust. By applying consensus carbon tax projections (see Exhibit S5), we can consider emissions reductions as a cost-avoidance measure. Our physical risk scenario analysis (see Analysis) found meaningful increases in both climate risks and opportunities that we can incorporate into our planning for employee safety, facility maintenance and other operational considerations. Our analysis supports our readiness for the disclosures we expect to be required by the U.S. Securities and Exchange Commission and the state of California in coming years.

Visit RepublicServices.com/Sustainability/Reporting to explore our suite of current and historical reporting.

CLIMATE LEADERSHIP

Science Based Target
35%

Reduce absolute Scope 1 and 2 greenhouse gas emissions 35% by 2030 (2017 baseline year)

Approved by SBTi

Interim target:
10% reduction by 2025

Circular Economy
40%

Increase recovery and circularity of key materials by 40% on a combined basis by 2030 (2017 baseline year)

Renewable Energy
50%

Increase beneficial reuse of biogas by 50% by 2030 (2017 baseline year)

Key Points

Governance: Disclose the organization's governance around climate-related risks and opportunities.

The Board receives quarterly updates from the Sustainability & Corporate Responsibility Committee of the Board. The Board, either through the Sustainability Committee or directly, oversees the enterprise risk management (ERM) program and sustainability programs with respect to business resiliency, strategy and long-term value creation. This includes overseeing the Company's management of climate-related risks and opportunities.

The ERM Council provides governance over the ERM program by overseeing program effectiveness and monitoring key enterprise risks and opportunities, including those related to climate change, and their associated mitigation plans. The Council includes select executives and was established to support the strategic plan and objectives of the Company.

Strategy: Disclose the actual and potential impacts of climate-related risks and opportunities on the organization's businesses, strategy and financial planning where such information is material.

We identify several climate-related risks and opportunities in this report, with a deeper assessment of the following risks and opportunities:

- Transition, Policy & Legal: Price on carbon
- Physical, Chronic: Temperature increase
- Physical, Chronic: Precipitation change
- Opportunity: Products & Services: Recycling and organics
- Opportunity: Products & Services: Low-carbon fleet
- Opportunity: Products & Services: Community cleanup

These risks and opportunities have the potential to impact business decisions like resource and capital allocation. They also shape the Company's strategy, influencing our market position, operating model, and people and talent agenda.

To assess the resiliency of our business to risks, Republic analyzed both physical and transition risks across multiple scenarios and time horizons. We modeled the risk of carbon pricing over short-term and medium- to long-term time horizons. The chronic physical risks were assessed across four future climate scenarios over a long-term time horizon.

Risk-Management: Disclose how the organization identifies, assesses and manages climate-related risks.

Climate-related risks are identified via business processes, such as interactions with our network of stakeholders, business unit operating reviews, and megatrend strategy sessions. These findings are then integrated into the ERM process for assessment and prioritization.

Our ERM team populates an ERM matrix with risks and opportunities from a variety of business impacts, including climate-related impacts. Climate-related risks and opportunities are assessed by the ERM team alongside other enterprise risks based on their impact on the strategy and organization. Once assessed, the ERM team determines the appropriate management approach, and a functional leader/owner is assigned. The functional leader is then responsible for reporting on progress for the established mitigation plan.

Metrics and Targets: Disclose the metrics and targets used to assess and manage relevant climate-related risks and opportunities where such information is material.

The transition risks highlighted in this report are assessed using our greenhouse gas emissions. Metrics used for assessing physical climate-related risks in this report include impact on employee safety, brand and reputation and labor effectiveness. Opportunities are generally assessed using a traditional internal rate of return model.

We report our 2023 Scope 1–3 greenhouse gas emissions in Exhibit M2 and more extensively in GRI 305. Each year we report progress toward our sustainability goals in our Sustainability Report and our full suite of related reporting may be found at RepublicServices.com/Sustainability/Reporting.

Governance

Disclose the organization's governance around climate-related risks and opportunities.

A) Board's oversight of climate-related risks and opportunities.

Our Board is directly involved in the oversight of Republic's sustainability program, including climate-related risks and opportunities, and conducts a comprehensive review of the Company's sustainability performance on an annual basis. We believe the Board's role is to ensure that:

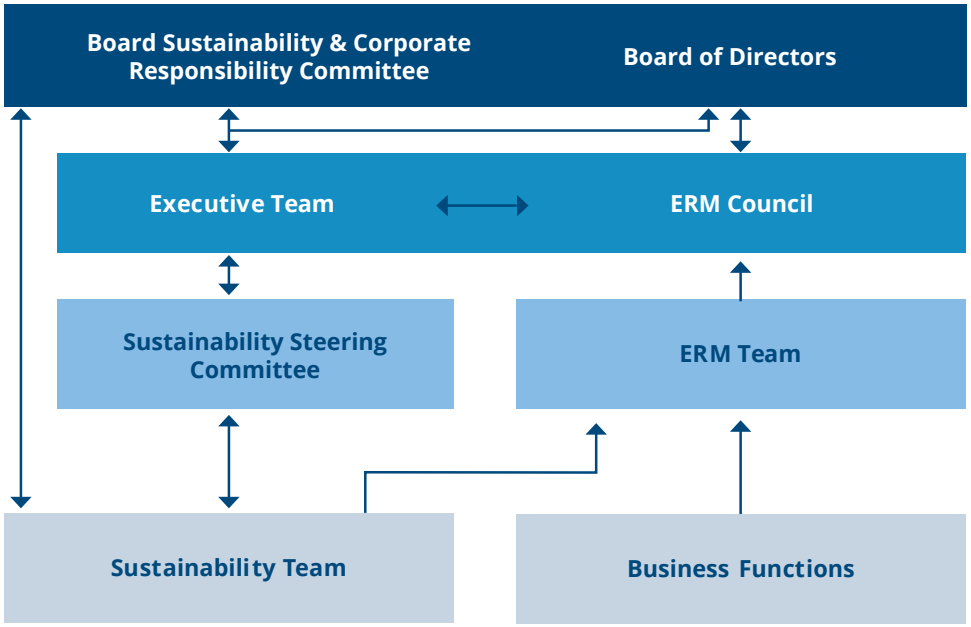
- The risk management processes designed and implemented by leadership are adapted to the overall corporate strategy, and those processes are functioning effectively.
- Management regularly communicates material risks to the Board or the appropriate Board committee.
- Actions are being taken to continue to foster a strong culture of compliance and risk-adjusted decision-making throughout the organization.
- The budget they approve reflects the strategy, for example, allocations to advancing the measurement and reduction of landfill greenhouse gas emissions, recycling infrastructure and electrification of our fleet.
- The executive compensation plans they approve incorporate the performance of our strategic initiatives and sustainability efforts, such as goals within our Climate Leadership element.

The Sustainability & Corporate Responsibility Committee of the Board was created in 2015 due to the depth of our initiatives, the unique nature of our climate-related risks and opportunities, the complexity in quantifying impact, and our strong commitment to corporate responsibility. The Committee meets quarterly to receive reports from management on topics such as:

- The role of sustainability in our enterprise strategy and progress toward our sustainability goals, including
  - Our Climate Leadership goals to reduce greenhouse gas emissions
  - Low-carbon services in the form of renewable energy
  - Circularity of key materials
- Management and progress on social topics, including those that impact the Company's ability to meet goals related to climate change
  - E.g. recycling education, which promotes the success of recycling

The Board oversees our ERM program and receives updates from management on the results of the program, which includes assessment, prioritization and management of risks and opportunities, including those related to climate issues.

Exhibit G1: Sustainability risk governance & management structure



- Oversee ERM and ESG Program and goals
- Assess risks with respect to business resiliency, strategy and long-term value creation
- Provide output to full board, as appropriate

- Manage risk mitigation plans by function
- Ensure ESG performance, which is incorporated into compensation goals

- Govern ERM Program
- Assess and monitor risks
- Identify, define and prioritize risks and opportunities
- Assign risk owners and oversee mitigation plans
- Disclose ESG risk mitigation plans

- Identify traditional and ESG risks and opportunities

Exhibit G2: Board Oversight

Group	Overview
Board of Directors	The Board is actively involved in risk oversight, receiving regular reports from the Sustainability & Corporate Responsibility Committee as well as other Board committees and management on matters pertaining to risk oversight. The Board approves the annual budget, which includes funding for the Company's sustainability agenda and climate-related activities.
Sustainability & Corporate Responsibility Committee	The Committee fulfills certain aspects of the Board's oversight responsibility and advises Company management with respect to significant issues, strategic goals, objectives, policies and practices regarding Republic's sustainability risks and opportunities, including those related to climate change.

B) Management's role in assessing and managing climate-related risks and opportunities.

The ERM Council provides governance over the ERM program, overseeing program effectiveness and monitoring key enterprise risks and the associated mitigation plans. The ERM Council is staffed by members of our executive leadership team, including the Chief Legal Officer, Chief Operating Officer, Chief Development Officer, Chief Financial Officer, Chief Marketing Officer and the Chief Human Resources Officer. The Council was established to support the strategic plan and objectives of the Company through the governance and oversight of enterprise risks and opportunities, including those related to climate.

The ERM Team consists of key business leaders representing multiple functions including Engineering, Environmental Compliance, Finance Support, Operations Support and so on. These functional representatives provide risks and opportunities that are then aggregated, assessed and prioritized based on their impact on the organization and its strategy. Outcomes of the ERM process, as described in the Risk Management section of this report and depicted in Exhibit G1, are provided to the Executive Team. This process informs strategy development and ensures the resilience of our strategy, contributing to long-term value creation aligned with business objectives.

Exhibit G3: Management Oversight

Group	Overview
Executive Team	Republic's executive leadership team integrates ERM results, including climate-related topics, into strategic planning; reports findings of the ERM process to the Board; and manages risks and mitigation plans within each function.
ERM Council	Made up of select executives, the ERM Council monitors ERM program effectiveness, key climate-related risks and associated mitigation plans.
ERM Team	A cross-functional team made up of managers and executives leads the ERM process. This team identifies and defines emerging risks, assigns risk owners, tracks risk-mitigation activities and reports to the ERM Council. Climate-related risks and opportunities are managed via the ERM process.
Sustainability Steering Committee	A cross-functional team made up of select executives and functional leaders that provides strategic oversight and guidance to the Sustainability Team.
Sustainability Team	A functional team that develops business-wide sustainability strategy, including risk/opportunity identification, and manages environmental, social and governance reporting.

Strategy

Disclose the actual and potential impacts of climate-related risks and opportunities on the organization's businesses, strategy and financial planning where such information is material.

A) Describe the climate-related risks and opportunities the organization has identified over the short-, medium- and long-term.

Below is a sample of risks and opportunities we've identified via the rigorous processes described in Risk Management. Republic examined these risks and opportunities across short (0 – 5 years), medium (5 – 10 years) and long-term (10 – 40 years) horizons. More information on our various risks and opportunities can be found in our 2023 10-K and our FY2023 CDP Response.

Risks

- **Physical, Acute: Storms, hurricanes, wildfires, floods** (short-term, see further discussion in Strategy and 10-K page 23)
- **Physical, Chronic: Temperature increase, precipitation change**, sea level rise, chronic heat waves (long-term, see further discussion in Strategy and 10-K page 23)
- Transition, Market: Reduced revenue from landfill diversion (long-term, see 10-K page 22)
- Transition, Policy & Legal: Permitting landfill expansion (short-term, see page 24 of 10-K)
- **Transition, Policy & Legal: Price on carbon** (medium to long-term, see further discussion in Strategy and 10-K pages 25 – 26)
- Transition, Reputation: Inability to achieve sustainability goals (medium-term, see 10-K page 24)
- Transition, Technology: Costs associated with emerging recycling technologies (medium-term, see 10-K page 29)

Opportunities

- Energy Source: Landfill gas to energy (short-term, see more below)
- Energy Source: On-site solar (short-term)
- Markets: Environmental solutions (short-term)
- Markets: Mechanical recycling (short- to medium-term)
- **Products & Services: Disaster cleanup** (short-term, see more throughout Strategy)
- **Products & Services: Low-carbon fleet** (short to medium-term, see more throughout Strategy)
- **Products & Services: Recycling and organics** (short-term, see more throughout Strategy)
- **Resilience: Fleet electrification** (medium-term)
- Resource Efficiency: On-site treatment of leachate through bioremediation (short- to medium-term)

To continue building transparency and accountability, we identified risks and opportunities of significant interest in bold, above, and have described our analysis and their impacts in more detail throughout this report.

Transition Risk: Policy and Legal: Price on Carbon

Policy and Legal risks stemming from pricing of GHG emissions (aka carbon tax) have the potential to be financially significant to our business and the potential to be enacted in more states within the U.S. Most of our emissions come from our customers' waste decomposing in our landfills and from the tailpipes of our fleet. Many of our customers, including municipalities, are concerned about greenhouse gas emissions, especially those from heavy-duty truck fleets, and some have responded with regulations and/or ordinances. Republic demonstrated our commitment to reducing GHG emissions and limiting future impacts of climate change by setting a science-based target. In addition, we have heavily invested in landfill gas-to-energy systems, with more than 126 projects active or expected in the coming years, and by pursuing a low carbon fleet by using renewable natural gas (RNG), using renewable diesel, and working toward our industry-leading ambition to electrify our fleet. Exhibit S1 describes the risk's impact and our associated goal.

Exhibit S1: Overview of Transition Risk: Price on Carbon

Risk Type	Risk	Potential Financial Impact	Impact			Mitigation Strategy
			Time Horizon			
			0 – 5 yrs	5 – 10 yrs	10 – 40+ yrs	
Transition: Policy and Legal	Fleet Fuel Emissions	Increased operating costs due to increased pricing of GHG emissions (carbon tax)	Medium	High	High	Science Based Target initiative (SBTi) approved goal to reduce fleet fuel emissions by 35% from 2017 to 2030 by using: • Electric vehicles • Renewable natural gas • Renewable diesel
	Landfill Emissions	Increased operating costs due to increased pricing of GHG emissions (carbon tax)	Low	Medium	Medium	SBTi-approved goal to reduce landfill emissions by 35% from 2017 to 2030 by: • Maximizing biogas collection, including use of innovative cover systems (Renewable Energy goal) • Improving landfill diversion via recycling (Circular Economy goal) • Enhanced management of landfill gas through emerging real-time measurement technologies and active monitoring

Physical Risks: Chronic

We have refreshed our prior analysis of chronic changes in temperature and precipitation patterns, applying the latest climate-related models as we continue developing our understanding of exposure to physical climate risks. This analysis allows the Company to identify locations needing additional investment in adaptation and mitigation strategies and resources to support climate change resiliency.

To evaluate the potential implications of future climate change on our business, we modeled changing temperature and precipitation under two Intergovernmental Panel on Climate Change (IPCC) scenarios, see Analysis. The impacts of these risks, and associated metrics, are described below, in Exhibit S2.

Exhibit S2: Overview of Physical Chronic Risk: Changes in Precipitation and Rising Temperatures

Risk Type	Risk	Potential Financial Impact	Impact	Associated Metric
			Time Horizon	
Physical: Chronic Events	Rising Temperatures	Business interruption (employees unable to work during extreme heat conditions), impact on productivity (cost per pickup), investment needed to provide additional training and safety measures	10+ years	Risks: • Number of heat-related incidents or injuries • Number of hours of training on "101 Days of Summer" safety program Opportunities: • Leverage existing trainings to build on employee safety education and trainings (enhancing resilience to heat stress and other health conditions)
	Changes in Precipitation	Increased environmental regulations/ taxes around leachate from landfills, business interruption (inability to access service routes), damage to open-air facilities, investments needed to build resilience	10+ years	Risks: • Leachate cost per inch of precipitation • Building repair cost per square foot Opportunities: • Additional revenue and service opportunities from disaster cleanup

Opportunities: Products and Services & Energy Source

To adapt to the transition to a low-carbon economy, our customers will need to embrace and develop innovative solutions to address emerging issues and rising challenges, in particular those related to recycling and waste. Due to the nature of Republic's business, there is a key opportunity for Republic to expand and develop products and services to support this transition through our low-carbon fleet, recycling and organics service, and community cleanup. See Exhibit S3 for more details about these opportunities.

Exhibit S3: Overview of Opportunities

Opportunity Type	Opportunity	Potential Financial Impact	Impact			Associated Metric
			Time Horizon			
			0 – 5 yrs	5 – 10 yrs	10 – 40+ yrs	
Products and Services & Energy Source	Low-carbon Fleet	Increased revenue serving customers that value a low-emissions offering. Reduced operating costs through lower total vehicle cost of ownership.	Low	Medium	High	• SBTi goal: impacted by GHG emissions from fleet • Percent of fleet using renewable fuels • Vehicle total cost of ownership • Revenue (not easily correlated)
Products and Services	Recycling & Organics Service	Increased revenue serving customers that value recycling and organics as a low-emissions offering.	High	High	High	• Circular Economy goal: tons of key materials recovered • Revenue from recycling and organics collection (not separately tracked at present) • Revenue from recycling and organics processing • Revenue from tons sold
Products and Services	Community Cleanup	Increased revenue serving customers and communities that need climate-related cleanup services.	Medium	High	High	• Temporary industrial collection revenue • Associated disposal revenue

B) Impact of climate-related risks and opportunities on the organization's businesses, strategy and financial planning.

Exhibit S4: Overview of Impact

Risk/Opportunity	Potential Impact On:		
	Businesses	Company Strategy	Financial Planning
RISKS Transition: Policy and Legal			
Price on Carbon: Fleet Fuel Emissions	With more than 17,000 collection vehicles, potential for increased operating costs due to increased pricing of GHG emissions (carbon tax). See Exhibit M2 for 2023 fleet emissions.	The potential for a price on fleet emissions has impacted our strategy by shifting our focus to electric fleet technology. This is a critical step toward reducing our environmental impact through lower fleet emissions, and we believe it will also improve our total cost of ownership while providing a competitive advantage in certain communities, see more on our Operating Model on page 5 of our 10-K. *Associated Sustainability Goal: Science Based Target (GHG Reduction)*	• Capital planning for replacement vehicles and fueling infrastructure • Partnering with manufacturers of electric vehicle technology • Use of renewable fuel credits • Partnering with utilities to develop infrastructure
Price on Carbon: Landfill Emissions	With 207 active landfills, potential for increased operating costs due to increased pricing of GHG emissions (carbon tax). See Exhibit M2 for 2023 landfill emissions.	The potential for a price on landfill emissions has impacted our strategy in several ways, namely, to reduce fugitive emissions by maximizing the amount of biogas captured and, in many cases, beneficially reused. We are rapidly expanding our landfill gas-to-energy projects through strategic partnerships, see more on page 13 of our 10-K. *Associated Sustainability Goal: Science Based Target (GHG Reduction) and Renewable Energy*	• Capital planning to ensure appropriate biogas collection and conversion systems (or partnerships) are in place • Operating expenses to fund daily, intermediate and final cover

Exhibit S4: Overview of Impact *(Continued)*

Risk/Opportunity	Potential Impact On:		
	Businesses	Company Strategy	Financial Planning
RISKS Physical: Chronic Events			
Rising Temperatures	The vast majority of Republic's workforce spends their days in and out of trucks, heavy-equipment or open-air facilities, providing essential services to our communities. Employees with outdoor exposure are among the most vulnerable to increased temperature. Extreme temperatures are potentially impactful to their health, safety and productivity.	Rising temperatures may impede our ability to service our customers and attract and retain talent. These impact our ability to grow, operate safely and keep our employees engaged, touching all three of our foundational elements; Market Position, Operating Model and People and Talent Agenda, see more on page 2 of our 10-K. Associated Sustainability Goal: *Engaged Workforce and all our Climate Leadership goals, which are designed to combat climate change.*	Capturing the potential financial impact of increased temperatures on operations includes: • Analyzing labor efficiency (cost of labor per service unit) against significant temperature increase • Analyzing safety metrics (TRIR, Safety Frequency) against significant temperature increase • Duration to complete service routes • Number of days requiring alternative working hours/additional breaks • Daily number heat-/cold-related health incidents reported
Changes in Precipitation	• Increased leachate at landfills • Infrastructure damage, inability to access customers • Damage to our facilities, especially those near coast or rivers • Damage to commodities to be sold, e.g., recycling material and compost	Damage to our facilities and delays in servicing customers impact our ability to grow and operate safely. Both are key aspects of our Market Position and Operating Model foundational elements, see more on page 2 of our 10-K. Associated Sustainability Goal: *All our Climate Leadership goals are designed to combat climate change.*	• Using current data on leachate generation per inch of precipitation to quantify – Capital required for leachate pre-treatment and/or additional third-party processing – Impacts from possible fines or violations • Estimating capital required to upgrade stormwater infrastructure • Estimating expense for additional sorting and separation of damaged recycling commodities, e.g., wet fibers • Business interruption assessment; as an essential service, interruptions are generally short-term delays, however assessment includes population migration due to climate change – Damage costs incurred by facilities from increased precipitation events – Duration of impact to service routes

Exhibit S4: Overview of Impact *(Continued)*

Risk/Opportunity	Potential Impact On:		
	Businesses	Company Strategy	Financial Planning
OPPORTUNITIES Products and Services & Energy Source			
Low-Carbon Fleet	With more than 17,000 collection vehicles, and customer/municipal interest in low-carbon solutions, especially related to fleet emissions, renewable fuel vehicles have impacted our business operationally, financially and reputationally.	See "Price on Carbon: Fleet Fuel Emissions" in this exhibit, above. Associated Sustainability Goal: *Science Based Target (GHG Reduction)*	• See "Price on Carbon: Fleet Fuel Emissions" in this exhibit, above • Consideration for mandates for low-carbon fleet in municipal contracts/RFPs
Recycling & Organics Service	With longstanding customer/municipal diversion goals and newer organics diversion laws (e.g., SB1383), recycling growth is core to our business strategy.	Expansion of recycling (and organics) capabilities is part of our Market Position, see page 2 of our 10-K. We expect that demand to grow over the long term and we continue to look for further opportunities to help our customers achieve their sustainability goals related to sound waste practices. Associated Sustainability Goal: *Circular Economy*	• Capital planning for investment in recycling and organics processing infrastructure • Developing the business case, including revenue projections, for entering new markets • Considerations for recycling-related policies, (e.g., phasing requirement, fines for non-compliance)
Community Cleanup	Given our national presence, capacity and ability to deploy resources quickly, our customers have increasingly come to us for post-disaster event cleanup services. Thus, we have created a deployment team called "SOS" to assemble quickly and deploy labor and assets to collect and cleanup debris after climate-related disasters.	This opportunity aligns with the volume growth and public-private partnership aspects of our Market Position fundamental elements, see page 2 of our 10-K. Associated Sustainability Goal: *Charitable Giving*	• Asset planning to assure assets (e.g., industrial boxes and trucks) are available when needed and processes to transport are in place • Labor capacity planning to assure employees are available and processes to transport are in place

Business Implications & Mitigation Plans

As Republic identifies and assesses climate-related risks and opportunities across future scenarios, the implications of any changes are important for the Company to fully understand, so that it can effectively manage them. If we can effectively adapt to changes and mitigate the impacts, there are key opportunities for our business.

Rising Temperatures

The occupational risks of heat stress may include restricted physical functions and capabilities, work capacity and productivity. Increasing temperatures are widely cited in literature as a primary driver of employee productivity loss. To understand potential future impacts of increasing heat, Republic examined the impacts of historical heat waves such as the 2020 Pacific Northwest heat wave and did not find a noticeable correlation between heat and productivity loss or employee turnover. However, Republic understands that the past exposure may not be indicative of future impacts. Compounding implications may arise from an overall increase in baseline temperatures. Therefore, to quantify the potential impacts of rising temperatures on our operations, Republic will use published studies to assume a percent decrease in productivity based on regional specificity and scenario analysis data. Based on those assumptions, Republic's internal teams can analyze a labor effectiveness value (cost of labor per unit of service) and the corresponding total potential enterprise-wide financial impact for specific productivity declines. In addition to labor effectiveness and productivity, Republic values and publicly reports our employee engagement score. Employee engagement is another indication of the health and satisfaction of our workforce and is a potential risk with rising temperatures. This best practice metric allows us to better understand our risk exposure and to adjust our programs should we see a corresponding decline in employee engagement scores.

To address and mitigate the potential implications of extreme temperatures on our employees, Republic implemented a Summer Safety Plan including our annual "101 Days of Summer" program, which aims to educate and set actions and expectations to ensure a safe and successful summer season. This includes protocols for ensuring truck A/Cs are properly functioning months prior to the season, employees are adequately hydrated while enroute and cooling PPE products are provided to our outdoor workforce. More about our program can be found in the Risk Management B) Mitigation Activities.

A secondary impact on our operations from rising mean temperatures is increased building cooling and energy costs. As temperatures rise, demand for cooling will increase, impacting the prices and reliability of power to facilities. Republic relies on the ability to cool our facilities as we often operate in conditions exposed to the elements. To quantify this implication, historical energy data is used to identify any correlations between peak pricing and extreme temperatures or heat waves. From this, we determine what percentage of energy per facility goes toward cooling. To forecast these implications on future years, we use energy cost and demand projections published by the International Energy Agency (IEA) and apply those to our assets.

Precipitation Change

We estimate that our largest business implication from increased precipitation comes from the potential for increased landfill leachate. Leachate can be costly to manage properly because of the level of treatment required before it can be discharged back into a water system. Some wastewater treatment plants require pretreatment or are increasing their rates for incoming leachate. In addition to leachate at landfills, a significant increase in precipitation could generate an increase in cost to stormwater management protocol. This could be in the form of upsizing existing infrastructure, increased costs related to permitting or liabilities from unmanaged stormwater due to large storm events. For these reasons, identifying facilities that may need additional resiliency measures to mitigate this exposure is a priority for Republic. Republic consistently tracks the correlation between precipitation and leachate, and the related implications on our operations. From this data, Republic can tie changes in precipitation and resulting leachate to the current cost to treat each gallon of leachate, enabling the Company to quantify the expected implications on our operations.

The secondary driver of business implications from precipitation increase is attributed to a delay in service either through damage to buildings or transportation infrastructure from flooding. Due to the nature of Republic's long-standing customer relationships and extended contracts, this is not likely to result in loss of business, but it may cause a delay in revenue as services would continue once operations resume.

Opportunities

If more precipitation brings additional storm damage through hurricanes, flooding and other extreme weather events, Republic is well positioned to manage the increased inflow of cleanup activities. A key part of our business strategy is to be a reliable cleanup resource. Our successes supporting various crises have proven that we are a dependable and trusted solution for the communities we serve, often being the first service providers to enter heavily damaged areas.

C) Resilience of the organization's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario.

Through scenario analysis, we gathered the quantitative information necessary to assess the adaptive capacity of our most impacted facilities and functions to climate risks and further invest in strategic initiatives to enhance resilience within our operations.

Modeling and Company Resiliency

Price on Carbon – Landfill Emissions

To assess the financial impact associated with a price on carbon, we focused on 2030 and 2050 using the following from the International Energy Agency's World Energy Outlook 2023, IEA (2023):

- Stated Policies Scenario (STEPS) – For the purpose of this report, this is our business as usual. We projected our Scope 1 (fleet and landfill) carbon emissions out to 2030 and 2050 using current policies, no price on carbon, and assumed achievement of our interim GHG emissions target, a reduction of 10% from 2017 to 2025, with no investment in reductions beyond 2025. In the analysis presented in Exhibit S5, this approach assumes that we will maintain our 2025 emissions in perpetuity.
- Announced Pledges Scenario (APS) – For the purpose of this report, this scenario assumes we achieve our SBTi-approved goal to reduce GHG emissions 35% from 2017 to 2030 and that we maintain the same level of annualized reductions through 2050.

To achieve our SBTi-approved goal, we must reduce emissions from our landfills, thereby reducing our risk in a scenario in which governments impose carbon-reduction regulations. Current carbon tax or cap-and-trade programs implemented in various jurisdictions typically do not directly levy a carbon tax at landfills. Policies are most often targeted on upstream waste generators. This approach is seen in several U.S. states today as a landfill diversion target that applies a fee to customers (businesses and/or municipalities) that do not meet diversion mandates. We anticipate this type of policy as opposed to a direct landfill carbon tax. Although the impact on operating costs due to this type of policy is difficult to model, we can discuss the actions we are taking to continue to build resiliency in the face of this type of policy. Examples of our mitigation and resiliency tactics include:

- Maximizing the amount of gas collected at each site. By safely collecting the maximum amount, we minimize gas escaping as fugitive emissions. The collected landfill gas is either converted into renewable energy or combusted in a flare. See Transition Risk: Policy and Legal: Price on Carbon.
- Advancing our recycling and organics service offerings. Consumer demand for recycling services continues to increase as they seek to divert emissions-generating materials away from the landfill, and we have responded by expanding our offering related to recycling. Our goal is to provide a complete waste stream management solution to our customers in a vertically integrated, environmentally sustainable way.
- Investing 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.

Price on Carbon – Fleet Fuel Emissions

Under STEPS, or business as usual, we would not expect a price to be set on carbon. However, carbon emissions pricing under APS is shown on the header row of Exhibit S5, below.

We assumed a carbon tax equal to the estimates IEA 2023 for 2030 and 2050 to assess the incremental costs to the business of a carbon tax under both the STEPS and APS scenarios mentioned above. We reviewed carbon pricing mechanisms from a variety of sources, including governments, corporations and NGOs, and we chose to incorporate costs based on the prices from IEA 2023, which align with widely accepted climate scenarios. We then modeled our risk-management strategy, reflecting GHG reductions aligned with our interim and SBTi-approved goals, and have reflected the potential range of resulting net income impacts shown in Exhibit S5.

The addition of a $135/ton carbon tax, corresponding to the 2030 APS scenario, would result in an increase in our fuel expenses as shown in Exhibit S5. However, we are deploying processes and investments to bolster our resiliency to a potential price on carbon from fleet vehicles:

- We would expect to offset most impacts of a carbon tax via a fuel recovery fee.
- Powering our fleet with alternative fuels, specifically electricity, renewable natural gas (RNG) and renewable diesel, allows us to lower our emissions. With one of the largest vocational fleets in the country, using innovative technology to reduce emissions is vital. Our strategy to expand the number of low- and zero-emission vehicles in our fleet provides us with a competitive advantage among the growing number of customers with sustainability goals of their own. Although upfront capital costs are higher, they often enable a lower total cost of ownership. See also Transition Risk: Policy and Legal: Price on Carbon.

We chose to model a carbon tax as an example of a regulatory device that could impact our business, readily allowing us to use scenarios to determine financial impacts and evaluate the resilience of our strategy. The estimated fleet fuel emissions cost shown in Exhibit S5 is presented for illustrative purposes only; it is based on numerous assumptions and estimates, is subject to numerous uncertainties, and does not necessarily reflect or predict the actual impact of carbon pricing on the Company's fleet fuel emissions costs in the years shown.

Exhibit S5: Price on Carbon Scenario Analysis

Scenario	Source	2030 Carbon Emissions Estimate ($MMTCO_2e$)[1]	2050 Carbon Emissions Estimate ($MMTCO_2e$)[1]	2030 $135/ton Carbon Tax[1]	2050 $200/ton Carbon Tax[1]
Stated Policies Scenario (STEPS) (I.e., business as usual)	Fleet	1.68	1.68	N/A	N/A
	Landfill	11.84	11.84	N/A	N/A
Announced Pledges Scenario (APS) (I.e., SBTi pathway)	Fleet	1.21	0.21	$163.89M	$41.66M
	Landfill	8.55	1.47	N/A	N/A

[1]Per IEA 2023 Table B.2 CO2 prices for Advanced Economies

Physical Risks

To assess the physical risks associated with a future changing climate, we examined physical climate risk using Shared Socioeconomic Pathways (SSPs) in the IPCC's Sixth Assessment Report. We considered two future climate models defined as SSP2–4, and SSP5–8.5, to evaluate the various climate impacts in long-term horizons (2041 – 2060). Each climate scenario is based on climate models to further account for the variability and uncertainty in climate projections. Understanding climactic changes against multiple future climate worlds equips Republic to begin to track the agility and resilience of our management methods and strategy at these locations.

By quantifying the range of temperature and precipitation changes at the location of each of Republic's facilities, we can build a meaningful and resilient strategy. The analysis found:

- Our facilities are likely to experience higher and longer-lived rising temperature. A similar storyline developed across both precipitation scenarios. Our employee Summer Safety Plan, including the "101 Days of Summer" program, are the foundational elements for which we consistently build upon our resilience to these expected rising temperature conditions; more information is found in Strategy B) under Business Implications & Mitigation Plans.
- Across both temperature scenarios, it was clear that facilities with workers exposed to the outdoors (e.g., landfills, recycling centers, transfer stations) would be key facility types to continue to support with adaptive management capacity, such as on-site leachate systems and stormwater retention basins.

For more information on our temperature and precipitation RCP analyses, see Analysis.

Risk Management

Disclose how the organization identifies, assesses and manages climate-related risks.

A) Describe the organization's processes for identifying and assessing climate-related risks.

Climate-related risks are identified via two separate methods, then integrated into the ERM process for assessment and prioritization. These methods are via a) traditional business processes and b) dedicated climate-risk tracking as part of the sustainability function; see Exhibit G1.

- Traditional business processes include presentations from field and corporate teams, such as quarterly business reviews and annual operating reviews. Local teams and area reviews tend to focus on short-term risks, within a 0- to 5-year time frame; however, long-term investments such as recycling facilities or landfills are also addressed.

- The sustainability team uses processes such as the Materiality Assessment to gather risks and opportunities from relevant stakeholders. This team focuses on risks across all time frames and topics across the organization, including but not limited to, climate-related topics. The process for identifying material topics includes review of key internal and external documentation, an analysis of sustainability standards and frameworks, stakeholder interviews, peer benchmarking and media analysis.

Risks and opportunities identified through these processes cover topics that are directly linked to climate change, such as fuel and electricity consumption, our recycling business, emissions from our landfills and fleet, and impacts of adverse weather.

Once identified and aggregated, risks are assessed for severity and prioritization within existing ERM processes using a ranking that includes financial, legal, operational and reputational impacts. Each risk is scored by impact, resulting in a negligible, minor, moderate, major or catastrophic risk categorization. The likelihood is then estimated, and the risks are plotted into a matrix that facilitates discussions about risk management. Climate-related risks with financial impacts at or above $1M are included in the risk matrix.

B) Describe the organization's processes for managing climate-related risks.

Process Overview

The process for managing business risks and opportunities, including those that are climate-related, is handled by the ERM team and the appropriate functional owners throughout the organization. The ERM team determines the management approach and assigns a functional leader. The functional leader creates a mitigation plan and is responsible for reporting on progress. This process is completed at least once a year, more often if new risks emerge or the nature or severity of a risk changes, all of which require adjusting the previously developed management approach.

Process Overview *(Continued)*

Any risks that fall into the high significance and/or high likelihood categories, and that are likely to impact the business in the short-term (1 – 5 years), are monitored and managed in the following ongoing forums. It is at these forums that these teams develop mitigation plans such as our Summer Safety Program and our Stormwater Management Plans.

- Monthly and as-needed Sustainability Steering Committee meetings
- Area operating reviews with the Executive Team
- Monthly CEO staff meetings
- Quarterly corporate operating reviews
- Quarterly Board meetings
- Annual reviews of risks identified in Form 10-K
- Periodic interviews with Senior Management
- Day-to-day oversight of risks by functional leaders throughout the organization

Mitigation Activities

Physical Risks: Rising Temperatures

Our Safety Department manages the mitigation plan for rising temperatures. They update the Company's Summer Safety Plan and develop training for our most safety-sensitive employees. Our plan also implements California OSHA's (Cal/OSHA) most recent Heat Illness Prevention requirements in every location to ensure we are applying the most rigorous protocols across all our sites.

- Extreme heat procedures
- Availability to shade
- Availability and replenishment of water
- Heat index monitoring and communication
- Weather acclimatization
- Pre-season A/C and cooling inspection and repairs
- Sun exposure
- PPE (hats, cooling towels, sunscreen, etc.)
- Working hours adjustment

Mitigation Activities *(Continued)*

Physical Risks: Increased Precipitation

We employ various strategies to mitigate impacts from increased precipitation. We believe that one of the largest impacts would be the increased leachate, but we also plan for excessive stormwater and facility damage. To mitigate negative impacts, we employ practices including:

- Leachate management (e.g., depth and type of cover, landfill density)
- On-site leachate treatment
- Mandatory, site-specific emergency response plans
  - Relocation of moveable assets (e.g., trucks, equipment) to higher ground
  - Securement of open facilities (e.g., roll-up doors at recycling centers) and exposed materials (e.g., relocated material at transfer stations)
- Stormwater management best practices (e.g., retention ponds, drywells, swales)
- Storm and flooding design
  - Overlaying analysis of at-risk facilities with flood plain zones and sea level rise impacts to understand potential damage

C) Describe how processes for identifying, assessing and managing climate-related risks are integrated into the organization's overall risk management.

Our ERM process is designed to identify, assess, prioritize, respond to and monitor risks and opportunities across the business. It is a formalized framework that is embedded into and fed by our current processes, which creates greater insight and durability. The steps of the process are shown in Exhibit R1.

As described earlier, the ERM matrix is populated with risks and opportunities from a variety of business functions and processes. These risks include those originating from climate-related issues. Aggregated risks and opportunities are then assessed and prioritized based on their impact on the strategy and organization by the ERM Team, which consists of multiple functional representatives. This group, which leads the ERM process, also identifies and defines emerging risks, assigns risk owners, tracks risk-mitigation activities and reports to the ERM Council. The ERM Team is led by the Deputy General Counsel.

Exhibit R1: Enterprise Risk Management process

Metrics & Targets

TCFD guidance: Disclose the metrics and targets used to assess and manage relevant climate-related risks and opportunities.

A) Disclose the metrics used by the organization to assess climate-related risks and opportunities in line with its strategy and risk-management process.

Climate-related risks and opportunities are evaluated against several criteria, including employee safety, cost or benefit, brand and reputation, business continuity impacts, or other factors specific to the risk. Free cash flow generation, internal rate of return and return on invested capital are key metrics that are used consistently across the business.

Transition risks to the organization due to policy and legal actions are also evaluated in this process. The Company accounts for its direct greenhouse gas emissions each year and projects those emissions into the future using a blended growth rate for the business. These projected emissions are used to calculate the potential operating cost impacts from a USD per ton carbon tax in 2030 and 2050.

Opportunities are evaluated using a traditional internal rate of return model for each initiative.

Exhibit M1: Sample of Metrics and Targets

Category	Metric	Public Targets
Safety	• Number of heat-related incidents • Number of inclement weather days • TRIR	• **Incident Reduction: TRIR ≤2.0 by 2030** • Safety Amplified: Zero Employee Fatalities
Financials[1]	• Revenue; by market vertical, Area, etc. • Operating expenses • Free cash flow • IRR • ROIC	• N/A
Climate[2]	• Scope 1, 2 and 3 GHG emissions • Biogas recovered (scf) • Recycling and organics (tons sold, processed, collected, etc.)	• Science-Based Target: 35% Scope 1 and 2 Reduction (SBTi Approved) • **Renewable Energy: 50% Increase in Beneficial Reuse of Biogas** • **Circular Economy: 40% Increase in Circularity of Key Materials**

[1]We evaluate climate-related risks and opportunities in conjunction with our broader financial metrics and targets.
[2] Climate goals are from 2017 to 2030.

Executive compensation is tied to performance toward the target in bold text. Read more on p.68 of our 2024 Proxy Statement. In addition, members of our Operations Team receive incentives for implementing actions that improve the effectiveness and efficiency of recycling, landfill operations and routing, which increase diversion, reduce landfill emissions and reduce vehicle emissions, respectively.

B) Disclose Scope 1, Scope 2 and, if appropriate, Scope 3 greenhouse gas (GHG) emissions, and the related risks.

Exhibit M2: 2022 Greenhouse Gas Emissions[1]

Scope	Metric Tons CO_2e	Related Risks & Opportunities
Gross global Scope 1 emissions	13,003,979	• Transition Risk: Policy & Legal: Price on carbon • Physical Risk: Acute: Storms, hurricanes, floods • Physical Risk: Chronic: Temperature change, increased precipitation
Scope 1: Landfills	11,426,636	
Scope 1: Fleet & Heavy Equipment	1,318,694	
Scope 1: Buildings	258,649	
Gross global Scope 2 market-based	172,968	
Gross global Scope 3	2,397,385	

[1]See GRI 305 for historical GHG emissions and methodology details, available on our Sustainability and ESG Reporting page, which also houses our assurance statement.

C) Describe the targets used by the organization to manage climate-related risks and opportunities and performance against targets.

Our 2030 Sustainability Goals were born from risk and opportunity assessments, including our Materiality Assessments and the ERM process. Our Climate Leadership targets, as shown in Exhibit M3 below, were specifically developed to manage climate-related risks and opportunities our Company faces and to hold us accountable for making progress.

- Transition Risks – by committing to:
  - Reduce Scope 1 and 2 greenhouse gas emissions 35% by 2030, our science-based target reduces our exposure to potential future carbon regulations. Investments to reduce our carbon emissions serve as a hedge against the cost of compliance with any future requirements.
- Transition Opportunities – by committing to:
  - Increase beneficial reuse of biogas from landfills by 50% from 2017 to 2030, we are growing our stake in the renewable energy market as a provider of low-carbon fuel. Demand for such energy sources is rising and we expect it to continue rising as the economy transitions away from fossil fuels.
  - Increase recovery and circularity of key materials by 40% from 2017 to 2030, we are presenting ourselves as a leader in providing the materials for a circular economy. Consumer packaged goods companies and other manufacturers already demand post-consumer recycled content at a rate higher than the market can deliver, and we are establishing ourselves as a reliable partner to help those manufacturers avoid use of higher-carbon virgin materials.
- Physical Risks – by committing to:
  - Protect our employees with Safety Amplified and Incident Reduction targets, we hold ourselves accountable to best-in-class safety practices. As the climate changes, we will already have systems in place to prevent heat-related illness and incidents, among others. Incident Reduction is tied to executive compensation; see Exhibit M3 for additional details.
- Physical Opportunities – through our strategy to:
  - Generate profitable growth by sustainably managing our customers' needs, we are positioned to respond quickly with post-disaster cleanup service to our customers and municipalities when they need us the most.

Exhibit M3: Climate-related Goals

SAFETY

Safety Amplified
0
Zero employee fatalities

Incident Reduction
<2.0
Reduce our OSHA Total Recordable Incident Rate (TRIR) to 2.0 or less by 2030

CLIMATE LEADERSHIP

Science Based Target
35%
Reduce absolute Scope 1 and 2 greenhouse gas emissions 35% by 2030 (2017 baseline year)
Approved by SBTi
Interim target: 10% reduction by 2025

Circular Economy
40%
Increase recovery and circularity of key materials by 40% on a combined basis by 2030 (2017 baseline year)

Renewable Energy
50%
Increase beneficial reuse of biogas by 50% by 2030 (2017 baseline year)

Analysis

Shared Socioeconomic Pathways (SSP) Methodology

The data for this SSP analysis used ArcGIS spatial layers for annual projected temperature and precipitation anomalies from a global climate model (CMIP6 multi-model). CMIP6 evaluates a group of climatic models to quantify the variability of simulation data and account for the inherent uncertainty presented by climate models. Quantifying the magnitude of changes in physical risk metrics allows Republic to understand the implications of the changing climate on the Company's operations. Overlaying this data with historical information from past events provides Republic with a more accurate representation of the likelihood of these scenarios. This analysis was also the basis used for identifying the key business implications driving rising temperature and precipitation change.

While a wide range of future scenarios were considered, we focused on two scenarios representing a broad range of impact, SSP2–4.5 and SSP5–8.5, to assess the implications on Republic's operations. The analysis was conducted by comparing temperature and precipitation changes between the 2041-2060 projections and the 1971-2000 baseline. As outlined in Exhibit A1, SSP2–4.5 projects a moderate increase in temperatures, which will require a moderate level of adaptation. SSP5–8.5 projects much greater temperature increases, is characterized as highly unlikely, and is the worst-case scenario for operations.

Exhibit A1: Description of Climate Scenarios

Shared Socioeconomic Pathways	Description	Likelihood
SSP2–4.5	Moderate emissions, "Middle of the Road" scenario	SSP2–4.5 is considered realistic if action is taken immediately to curb emissions.
SSP5–8.5	Very high emissions, "Extreme" scenario	SSP5–8.5 assumes high levels of population growth and continued lower incomes in developing countries. While it is the most extreme scenario, the probability of this scenario occurring is increasingly likely.

SSP Analysis (Physical Risk)

As one of the largest providers of environmental services in the United States, Republic provides critical recycling, waste and other environmental solutions to our residential, commercial and industrial customers. We included all our sites in our analysis, ranging greatly in function and exposure to physical risk. Exhibit A2 below provides a brief description of our sites' function and a breakdown of their proportions by count.

Exhibit A2: Republic's Facilities

Facility Type	Physical Description	Share of Portfolio
Hauling	Facilities dedicated to our fleet; customer drop-off sites	30%
Hazardous Waste Facilities	Facilities dedicated to the storage, processing, and/or permanent disposal of hazardous materials	5%
Landfill	Permanent disposal sites for municipal solid waste and/or construction and demolition waste	26%
Office	Office space	4%
Recycling Processing	Facilities that process recyclable and/or organic material diverted from landfill or incineration	6%
Transfer Station	Industrial buildings, including material drop-off sites	17%
Other	Miscellaneous facilities not included elsewhere	12%

Chronic Physical Risk: Rising Temperatures

Relevance of risk to Republic:

The vast majority of Republic's workforce spends most of their day providing essential services to our communities, while in and out of trucks and heavy equipment, or in an open-air facility (e.g., recycling centers, maintenance shops, transfer stations). Rising temperatures will increase these employees' exposure, with outdoor employees being among the most vulnerable, potentially impacting the health, safety and productivity of Republic's outdoor workforce. Additionally, higher outdoor temperatures may make it challenging to both retain and attract an outdoor workforce. Thus, we sought to understand how variation in temperature across the geographies where we operate might expose Republic locations, and therefore employees, to the greatest risks from climate change.

Description of risk level:

For the purposes of this analysis, to illustrate the magnitude of impact on our facilities, we separated temperature increases into three bands; see Exhibit A3. Republic set thresholds based on prevailing scientific consensus that the most extreme impacts of climate change will occur as temperatures rise more than 1.5°C. However, it is difficult to apply this categorization across the organization, as the impact to the business varies vastly depending on the location and the type of operation.

Our analysis showed substantial difference in facilities affected between SSP2–4.5 and SSP5–8.5, see final column in Exhibit A3. This observation is consistent with general trends in climate and temperature data based on varying emissions pathways. See also Exhibits A4 and A5, showing percent of sites by scenario with temperature increases above 1.5°C and 2°C, respectively.

Exhibit A3: Facilities by Temperature Increase under SSP2–4.5 and SSP5–8.5

Temperature Increase Range (°C)*	% of Facilities SSP2–4.5	% of Facilities SSP5–8.5	Difference in % from SSP2–4.5 to SSP5–8.5
<1.5	18.8%	0.3%	-18.6%
1.5-2	79.3%	23.1%	-56.2%
≥2	1.8%	76.6%	+74.8%

*The middle range represents temperatures ≥1.5 and <2

Exhibit A4: Share of Facilities with Temperature Increase ≥1.5°C

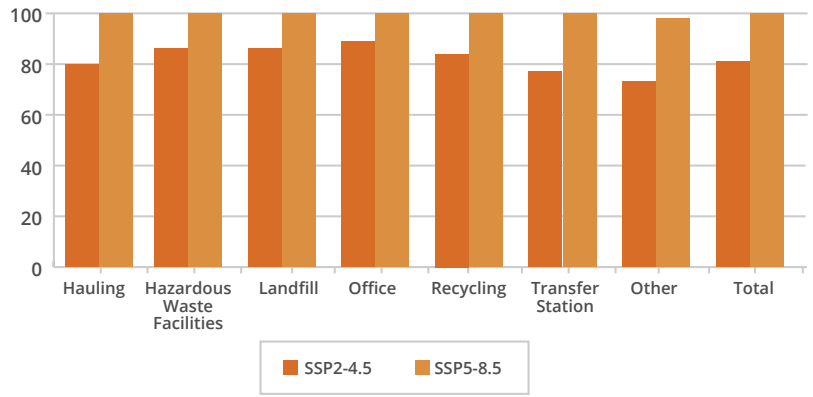
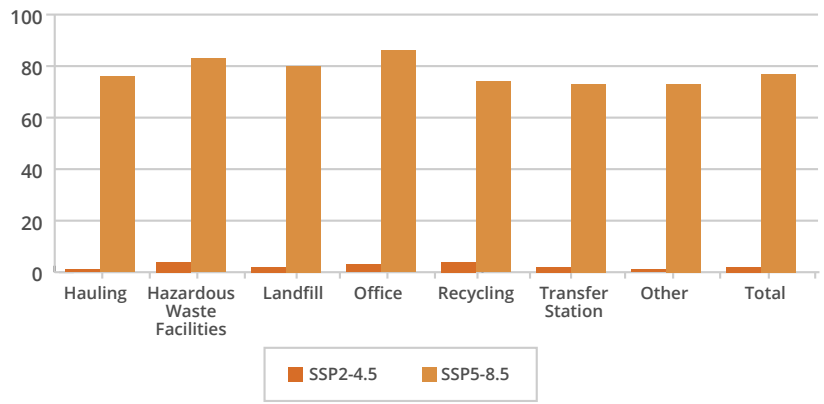


Exhibit A5: Share of Facilities with Temperature Increase ≥2°C



Chronic Physical Risk: Precipitation Change

Relevance of risk to Republic:

Changes in precipitation could result in changes in rainfall patterns, increased flooding, more frequent and severe droughts, decreased water quality and increased water stress in some locations. Increased disruption to supporting infrastructure from increased flooding from surface water could cause impacts to on-site operations, such as gas and leachate collection systems. For Republic, precipitation increase was deemed to cause more material implications than precipitation decrease. Additional leachate and stormwater runoff could have cost impacts for our operations. Additionally, in the event of a storm, Republic typically experiences an increase in service demand and urgency to help with cleanup, see more about this scenario as an opportunity in Exhibit S3. If there is transportation infrastructure damage from these types of events, this could impact our ability to conduct service. By analyzing changing precipitation conditions, Republic can identify locations that are most likely to experience future impacts and invest in efforts to bolster resilience to anticipated impacts.

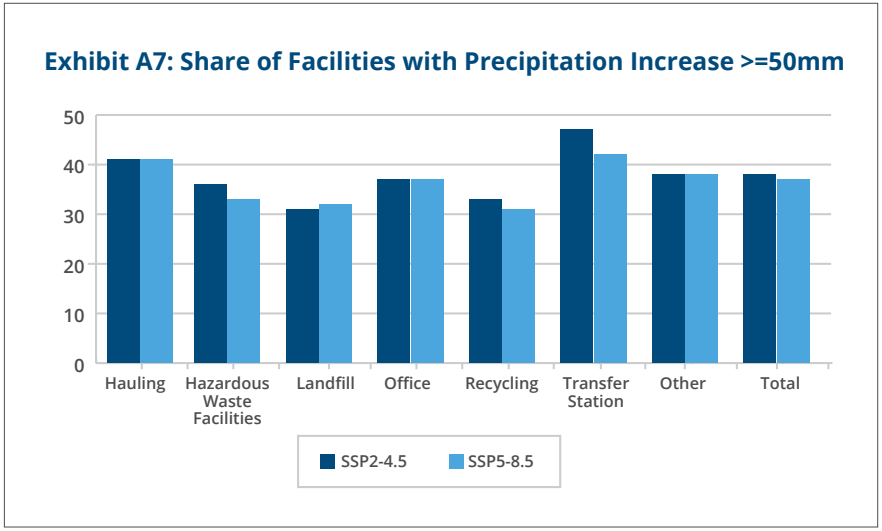
Description of risk level:

For the purposes of this analysis, to illustrate the magnitude of impact on our facilities, we calculated the percent of sites projected to experience different levels of precipitation change, as modeled by the listed scenario, see Exhibit A6. It is not meaningful to categorically translate this grouping into operational changes across the organization, as the impact on the business varies vastly depending on the location and the type of operation. See Exhibit A7, which shows the percentage of sites, by type, projected to experience an increase in precipitation of at least 50mm, under each scenario.

Exhibit A6: Percent of Facilities by Precipitation Change under SSP2–4.5 and SSP5–8.5

Precipitation Change Range (mm)*	% of Facilities (SSP2–4.5)	% of Facilities (SSP5–8.5)	Difference in % from SSP2–4.5 to SSP5–8.5
(-25) – 0	7%	18%	+11%
1 – 25	25%	18%	-8%
25 – 50	29%	27%	-2%
50 – 75	33%	27%	-5%
75 – 100	4%	9%	+5%
>100	1%	1%	+0%

*Ranges represent precipitation greater than or equal to the lower bound, and less than but not equal to the upper bound



For information on how Republic Services can help you achieve your sustainability goals, reach out to **Sustainability@RepublicServices.com**.

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