

C0. Introduction

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C0.1

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**(C0.1) Give a general description and introduction to your organization.**

WM ([WM.com](http://WM.com)) is North America's largest comprehensive waste management environmental solutions provider. Previously known as Waste Management and based in Houston, Texas, WM is driven by commitments to put people first and achieve success with integrity. The company, through its subsidiaries, provides collection, recycling and disposal services to millions of residential, commercial, industrial and municipal customers throughout the U.S. and Canada. With innovative infrastructure and capabilities in recycling, organics and renewable energy, WM provides environmental solutions to and collaborates with its customers in helping them achieve their sustainability goals. WM is the largest recycler of post-consumer materials and is the leader in beneficial reuse of landfill gas, with a growing network of renewable natural gas plants and the most gas-to-electricity plants in North America. WM's fleet includes nearly 11,000 natural gas trucks – the largest heavy-duty natural gas truck fleet of its kind in North America – where more than half are fueled by renewable natural gas. To learn more about WM and the company's sustainability progress and solutions, visit [Sustainability.WM.com](http://Sustainability.WM.com).

WM is committed to reducing absolute greenhouse gas emissions aligned with the Paris Agreement to limit global warming to 1.5°C and our plan to reduce Scope 1 and 2 absolute greenhouse gas emissions has been submitted to the Science-based Target Initiative (SBTi) and is awaiting review and validation.

To achieve this science-based target, our strategy is to reduce emissions from our landfills, fleet and electricity use, and continue to increase emissions-avoiding services that we provide to our customers.

We have established short-term 2025 goals in the following areas related to climate impact:

<u>Goal Description</u>	<u>2025</u>	<u>% achieved 2021</u>
Collection fleet to be alternative fuel vehicles	70%	57%
Alternative fuel vehicles to run on renewable natural gas	50%	53%
Renewable electricity at WM controlled sites	100%	27%

We continue to develop and implement solutions to reduce our own and our customers' carbon footprints.

Currently, the services we provide avoid three times more GHG emissions than we generate in our operations.

**CUSTOMER SOLUTIONS**

- Providing residential, commercial and industrial collection and recycling processing services to our customers across North America.
- Providing climate-related sustainability consulting services to customers who want to reduce their carbon footprints
- Helping create new markets for recycled products
- Educating customers on how and what to recycle

**RECYCLING SERVICES**

- Investing in technology to improve the quality of recycled material that we sell and increase material capture
- Focusing on recycling materials that provide the greatest GHG reduction benefits
- Turning food waste into energy or compost
- Purchasing products made with recycled content
- Expanding recycling facility infrastructure to new, under-resourced markets

**FLEET TRANSFORMATION**

- Transitioning our fleet to near zero emission natural gas vehicles
- Using renewable fuel in our fleet, including renewable natural gas generated from landfill gas and dairy digester gas
- Piloting electric vehicles
- Using smart logistics technologies to reduce fleet miles travelled
- Using hybrid dozers at our landfills
- Working with major domestic and international vehicle original equipment manufacturers to test and pilot electric vehicles

**ENERGY SERVICES**

- Creating renewable electricity and fuel from biogas at our landfills

- Using renewable electricity at our sites
- Hosting solar farms at our landfills for renewable electricity generation into the electric grid
- Creating renewable energy from food waste at our CORE® facilities

Details on these programs and all of WM's goals can be found in our Sustainability Report <<https://sustainability.wm.com/>> and ESG Resource Hub <[link to https://sustainability.wm.com/esg-hub/](https://sustainability.wm.com/esg-hub/)>

Please note that answers in this questionnaire are supplied on behalf of Waste Management, Inc., which is a holding company; all operations are conducted by its subsidiaries. Hereafter, Waste Management, Inc., its consolidated subsidiaries and consolidated variable interest entities are referred to as "WM", "the company", "we" or "us".

## C0.2

**(C0.2) State the start and end date of the year for which you are reporting data.**

	Start date	End date	Indicate if you are providing emissions data for past reporting years	Select the number of past reporting years you will be providing emissions data for
Reporting year	January 1 2021	December 31 2021	No	<Not Applicable>

## C0.3

**(C0.3) Select the countries/areas in which you operate.**

Canada  
United States of America

## C0.4

**(C0.4) Select the currency used for all financial information disclosed throughout your response.**

USD

## C0.5

**(C0.5) Select the option that describes the reporting boundary for which climate-related impacts on your business are being reported. Note that this option should align with your chosen approach for consolidating your GHG inventory.**

Operational control

## C0.8

**(C0.8) Does your organization have an ISIN code or another unique identifier (e.g., Ticker, CUSIP, etc.)?**

Indicate whether you are able to provide a unique identifier for your organization	Provide your unique identifier
Yes, a Ticker symbol	WM

## C1. Governance

### C1.1

**(C1.1) Is there board-level oversight of climate-related issues within your organization?**

Yes

#### C1.1a

**(C1.1a) Identify the position(s) (do not include any names) of the individual(s) on the board with responsibility for climate-related issues.**

Position of individual(s)	Please explain
Board Chair	The entire Board of Directors (Board) of Waste Management (WM) is responsible for oversight of climate-related issues. Our Board oversees, among other things, (1) systems, procedures, policies and controls related to assessing and managing material risks facing the Company, including matters of legal and regulatory compliance; (2) that corporate culture is aligned with the Company's values and strategy; (3) that operations are conducted in a legal, ethical and responsible manner and (4) the Company's environmental, social and governance risk (ESG) and performance. The Board fulfils these responsibilities with the support of its committees, as appropriate. As North America's leading provider of environmental services, consideration of sustainability and climate-related risks and opportunities is embedded in all that we do. As a result, consideration of various aspects of environmental sustainability and climate-related risks and opportunities is already organically a part of our Board and committees' oversight of our performance, risk management and strategic vision. As a result, the Chairman of our Board, and the Chairman of each of the Audit Committee, Nominating & Governance Committee and Management Development & Compensation Committee are responsible for oversight of these issues. Within the last two years, the Board has approved our three-year investment and capital spending authorization for renewable energy and recycling infrastructure projects, and a joint venture with Continuous Materials. Continuous Materials processes upcycle plastic and fiber materials, which will generate lower life-cycle greenhouse gas emissions than competing products made from traditional materials.

**C1.1b**

**(C1.1b) Provide further details on the board's oversight of climate-related issues.**

Frequency with which climate-related issues are a scheduled agenda item	Governance mechanisms into which climate-related issues are integrated	Scope of board-level oversight	Please explain
Scheduled – all meetings	<ul style="list-style-type: none"> <li>Reviewing and guiding strategy</li> <li>Reviewing and guiding major plans of action</li> <li>Reviewing and guiding risk management policies</li> <li>Reviewing and guiding annual budgets</li> <li>Reviewing and guiding business plans</li> <li>Monitoring implementation and performance of objectives</li> <li>Overseeing major capital expenditures, acquisitions and divestitures</li> <li>Monitoring and overseeing progress against goals and targets for addressing climate-related issues</li> </ul>	<Not Applicable>	As North America's leading provider of environmental services, consideration of sustainability and climate-related risks and opportunities is embedded in all that we do. As a result, consideration of various aspects of environmental sustainability and climate-related risks and opportunities is already organically a part of our Board and committees' oversight of our performance, risk management and strategic vision. Specifically, (1) our Board has a dedicated annual strategic planning session with our Senior Leadership Team (SLT) and receives focused strategic updates quarterly that encompass climate-related risks and opportunities applicable to our strategy (which is detailed in the Strategy section below); (2) the Audit Committee of our Board regularly receives Enterprise Risk Management updates and in-depth discussion on specific risk topics, which include aspects of climate-related risks and mitigation through climate-related opportunities; (3) our Board reviews and approves significant sustainability-related investments and transactions that further growth through sustainability offerings; and (4) our Board's annual financial planning session considers impacts from environmental and climate-related risks and opportunities. Additionally, following the appointment of the Company's first Senior Vice President and Chief Sustainability Officer (CSO) in 2021, our Board now receives a quarterly ESG dashboard to highlight critical focus areas and directly oversee progress toward ESG goals.

**C1.1d**

**(C1.1d) Does your organization have at least one board member with competence on climate-related issues?**

	Board member(s) have competence on climate-related issues	Criteria used to assess competence of board member(s) on climate-related issues	Primary reason for no board-level competence on climate-related issues	Explain why your organization does not have at least one board member with competence on climate-related issues and any plans to address board-level competence in the future
Row 1	Yes	The Nominating & Governance Committee ensures that our Board consists of highly experienced business leaders that have robust experience managing and overseeing complex business strategies and risk, including the climate-related issues applicable to WM's environmental services business. A few examples of this experience include: 1. CEO of The AES Corporation, a Fortune 500 company in the electricity sector, has led the transformation of the company to become a leader in renewable energy, energy storage and cloud-based energy efficiency services. In 2021, AES was the largest seller of renewable energy to corporate customers in the world, according to Bloomberg New Energy Finance. 2. Extensive experience leading the U.S. electrification business for ABB Group. Combined with her 19 years of executive leadership for divisions of GE, has developed expertise in delivering technology-enabled and energy-efficient sustainable solutions. Brings extensive knowledge regarding consumer marketing, supply chain strategy, and operational improvement. 3. Served on the Board of Directors of NRG Energy since 2003.	<Not Applicable>	<Not Applicable>

**C1.2**

**(C1.2) Provide the highest management-level position(s) or committee(s) with responsibility for climate-related issues.**

Name of the position(s) and/or committee(s)	Reporting line	Responsibility	Coverage of responsibility	Frequency of reporting to the board on climate-related issues
Chief Executive Officer (CEO)	<Not Applicable>	Both assessing and managing climate-related risks and opportunities	<Not Applicable>	More frequently than quarterly

**C1.2a**

**(C1.2a) Describe where in the organizational structure this/these position(s) and/or committees lie, what their associated responsibilities are, and how climate-related issues are monitored (do not include the names of individuals).**

Our executive officers have primary responsibility for risk management within our Company. A key component of this process is WM's enterprise risk management (ERM) framework. We believe that our leadership team's engagement and communication methods are supportive of comprehensive risk management practices, including climate-related risks and consideration of mitigation through climate-related opportunities. Consideration of such risks and opportunities has long been a part of WM's business, including evaluating strategy for investment and risk/opportunity forecasts of WM's climate-related services, in particular, recycling, renewable energy and fuel production, fleet emissions reduction, and sustainability advisory services. As North America's leading residential recycler and a major producer of renewable energy from waste, climate-related services are core to our operations.

Our ERM process is supported by regular inquiries of WM's SLT, and additional members of management and operations leadership across the enterprise, as to the risks, including emerging risks and climate-related risks, that may affect the execution of our strategic priorities or achievement of our long-term outlook. For the most significant risks, the ERM process is designed to generate actionable insights that are actively discussed and reviewed with the SLT and our Board. Risks and opportunities are assessed and then prioritized using internal evaluations of financial impact, likelihood of occurrence, outlook for changes in the nature or extent of risk exposure and a self-assessment of the Company's confidence in existing risk mitigation efforts.

The SLT reviews the outcomes of the risk assessments, focusing largely on the estimated scope of impacts, as well as the adequacy of current support by internal staff, the sufficiency of financial support for mitigation measures needed to manage and reduce risk, and the sufficiency of any third-party expertise that may be necessary to supplement internal resources. All significant risks have a standardized scorecard that includes forward-looking action plans with measurable indicators and progress updates on action plans from previous assessments. Examples of climate-related risks that are managed through this process are industry disruption, physical infrastructure risks, and environmental, health & safety risks. We continue to assess the physical risks to our Company's operations from the effects of severe weather events and use risk mitigation planning to increase our resiliency in the face of such events. We are investing in infrastructure to withstand more severe storm events, which may afford us a competitive advantage and reinforce our reputation as a reliable service provider through continued service in the aftermath of such events.

Comprehensive oversight of the ERM process is provided by the Executive Vice President and Chief Financial Officer and the Executive Vice President and Chief Legal Officer, both who report to the Chief Executive Officer. Additionally, our CSO leads the Company in the areas of climate-related risks and opportunities and also reports directly to the Chief Executive Officer. The CSO oversees the work of our climate impact, carbon footprint and climate risk analysis, as well as various issues related to our service offerings that address customer goals related to climate change, including benchmarking national accounts and municipal customers to determine the scope and nature of our customers' sustainability goals. The CSO also holds responsibility for managing information on climate-related issues, developing strategy, and adapting decisions based on climate-related information as necessary. WM has a robust cross-functional team of individuals reporting to the CSO who assist with identifying and developing climate-related opportunities and assessing, managing and mitigating climate-related risks.

We have identified strategic business opportunities to provide our customers with sustainable solutions to reduce their GHG emissions. We assess customer demand for and opportunities to develop waste services offering verifiable carbon reductions, such as waste reduction, increased recycling, composting, and conversion of landfill gas and discarded materials into electricity and fuel. We use carbon life cycle assessment tools in evaluating potential new services and in establishing the value proposition that makes us attractive as an environmental service provider. We are active in support of public policies that encourage development and use of lower carbon energy and waste services that lower users' carbon footprints.

**C1.3**

**(C1.3) Do you provide incentives for the management of climate-related issues, including the attainment of targets?**

	Provide incentives for the management of climate-related issues	Comment
Row 1	No, not currently but we plan to introduce them in the next two years	

**C2. Risks and opportunities**

**C2.1**

**(C2.1) Does your organization have a process for identifying, assessing, and responding to climate-related risks and opportunities?**

Yes

**C2.1a**

**(C2.1a) How does your organization define short-, medium- and long-term time horizons?**

	From (years)	To (years)	Comment
Short-term	0	3	Short-term climate-related risks and opportunities fall within a 0-3 year time horizon.
Medium-term	3	10	Medium-term climate-related risks and opportunities fall within a 3-10 year time horizon.
Long-term	10	30	Long-term climate-related risks and opportunities fall within a 10-30 year time horizon.

## C2.1b

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### (C2.1b) How does your organization define substantive financial or strategic impact on your business?

WM defines substantive strategic impact as events that materially impact the company's liquidity, solvency, profitability, market value or operating ability, not only in terms of additional costs to maintain operations but also in potential lost revenues from the inability to service our customers via collection, hauling, and disposal of materials. We typically rank risks in a matrix based on likelihood and earnings impact. When evaluating substantive financial or strategic impact, including climate-related impact, on our business, we use a scale from 1 to 10, with 1 being <\$10 million impact, extremely remote impact (1-2% or 1 event in 50+ years), and 10 being >\$500 million impact, almost certain likelihood (90-100% or 1 event in less than 1 year).

## C2.2

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### (C2.2) Describe your process(es) for identifying, assessing and responding to climate-related risks and opportunities.

#### Value chain stage(s) covered

Direct operations  
Upstream  
Downstream

#### Risk management process

Integrated into multi-disciplinary company-wide risk management process

#### Frequency of assessment

Annually

#### Time horizon(s) covered

Short-term  
Medium-term  
Long-term

#### Description of process

At the company level, WM uses an enterprise risk management (ERM) process involving senior leaders and subject matter experts from all major divisions to assess the materiality of all risks across the enterprise, including climate-related risks. Each year the Treasury & Risk Management team performs top-down and bottom-up reviews across all headline risk areas to assess changes, identify emerging risks and prioritize risks for in-depth analysis. Top-down reviews consist of one-on-one meetings with every member of the Senior Leadership Team (SLT) to get a regional and operations-focused viewpoint on risk. Bottom-up reviews are done in workshop format including all subject matter experts for a given headline risk as well as participants from regional operations. In both top-down and bottom-up reviews, the ERM team asks questions that are influenced by both what they are aware of internally as well as external viewpoints (e.g. thematic risks that companies are experiencing). An output from these meetings is a standardized scorecard which includes risk and opportunity ratings for (financial) impact, likelihood (of event), outlook (of risk exposure) and confidence (in risk management). Additionally, forward-looking action plans with measurable indicators and progress on action plans from previous assessments are also discussed. Based on findings from top-down and bottom-up reviews, certain risks are identified as "Priority Risks" and receive a more granular assessment, quantification of impact, and are elevated for further discussion with the SLT and the Board, regardless of time horizon (short-, medium-, or long-term). The executive team managing enterprise risk reviews all submissions for consistency in determining scope of impacts and comprehensiveness in determining the sufficiency of mitigation measures needed to manage and reduce risk. The environmental impacts, risks, and opportunities associated with our carbon reduction service lines are evaluated and incorporated into our broader business strategy each year. WM's Corporate Development & Innovation department briefs the Board at least annually on potentially disruptive technologies, including technologies related to customer carbon reduction services. Additionally, a cross functional team made up of team members from Legal, Sustainability, Recycling, Treasury & Risk Management, Corporate Development & Innovation and others, meet monthly to discuss business disruptors.

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## C2.2a

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**(C2.2a) Which risk types are considered in your organization's climate-related risk assessments?**

	Relevance & inclusion	Please explain
Current regulation	Relevant, always included	As an environmental services company, we are subject to regulatory requirements relating to climate change, such as the EPA's New Source Performance Standards and Emission Guidelines for Existing Municipal Solid Waste (MSW) Landfills, the National Emissions Standards for Hazardous Air Pollutants for MSW Landfills, and carbon tax schemes. Due to the significance of such regulations to our business, we closely monitor and assess risks associated with any changes through their inclusion in our enterprise risk management process.
Emerging regulation	Relevant, always included	We continually monitor, review, and assess proposed and incoming regulatory change as part of our enterprise risk management framework to mitigate and manage potential impacts on our business. Potential regulations involving emissions, carbon tax schemes, alternative fuels, and extended producer responsibility could significantly impact WM.
Technology	Relevant, always included	Technology advancements are driving changes in the solid waste management industry and have a material impact on WM's competitive position. WM is constantly evaluating and investing in technology to reduce our environmental impact, beneficially reuse material, operate more safely, reduce cost to serve customers, and assist our customers in achieving their environmental impact goals.
Legal	Relevant, always included	Failure to comply with our legal obligations in relation to climate change is a key risk to our business. For example, failure to deliver on landfill gas control and monitoring could lead to enforcement action, including fines.
Market	Relevant, always included	Consumer behavior is changing due to factors such as concern over the use of plastics, their impact on the environment and climate change. Industries are responding by increasing demand for recycled material. Like any commodity market, recycled material prices are driven by supply and demand. Changes in commodity prices are a risk to WM.
Reputation	Relevant, always included	Our reputation is core to our company's brand and value proposition. Damage to our reputation could reduce demand for our services and potentially have an adverse effect on our financial condition, liquidity and operations.
Acute physical	Relevant, always included	Acute climate risks, such as extreme weather events, pose numerous challenges to our operations and assets, due to the potential for disruption to critical processes and/or infrastructure, as well as the potential for increased customer demand for our services. For example, drought-related fires and storm events impact our front-line employees' ability to travel safely and may drive an increased demand for our emergency response services to placing pressure and safety risks on our workforce.
Chronic physical	Relevant, always included	Changes in precipitation patterns can have a material impact on the function of municipal solid waste (MSW) landfills. MSW landfills are weather-exposed entities that are affected by both drought and flood conditions. Both extreme conditions can result in increased operational costs.

**C2.3**

**(C2.3) Have you identified any inherent climate-related risks with the potential to have a substantive financial or strategic impact on your business?**

Yes

**C2.3a**

**(C2.3a) Provide details of risks identified with the potential to have a substantive financial or strategic impact on your business.**

**Identifier**

Risk 1

**Where in the value chain does the risk driver occur?**

Direct operations

**Risk type & Primary climate-related risk driver**

Emerging regulation	Carbon pricing mechanisms
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**Primary potential financial impact**

Increased direct costs

**Climate risk type mapped to traditional financial services industry risk classification**

<Not Applicable>

**Company-specific description**

As of 2021, WM operates approximately 255 landfills in the United States and Canada that could be impacted by current (and emerging) regulations. Landfills generate emissions that are currently calculated using mathematical models, moving towards direct measurement as technology advances. Landfills are subject to Federal and State regulations, and the greenhouse gas (GHG) emissions from landfills as well as our collection fleet are subject to potential and existing carbon pricing schemes. As regulations change, the potential for penalties and fines increases. If carbon pricing schemes grow, there is the potential for increased operational costs. In mitigating this risk WM is focused on reducing GHGs from our operations in line with our science-based target, which is currently in queue to be validated by the Science Based Target Initiative. Activities to reduce emissions at our landfills, which includes improvements in landfill gas system effectiveness, have co-benefits such as cost reduction and avoidance, and opportunities to increase use of renewable natural gas (RNG) at our landfills. Currently, WM is capturing landfill gas and turning it into renewable electricity and fuel at 144 of the landfills it owns or operates, with 16 plants across North America. To increase production of RNG, the company plans to expand its RNG network with 17 new RNG projects by 2026 in several areas across North America including: Arkansas, California, Florida, Illinois, Oklahoma and Pennsylvania, as well as Quebec and Ontario. The increase in RNG production WM expects from the new investments will lead to displacement of approximately 1.3 million metric tons of CO<sub>2</sub> GHG emissions by 2026, the equivalent to 3 billion miles driven by an average gasoline-powered passenger vehicle.

**Time horizon**

Medium-term

**Likelihood**

Likely

**Magnitude of impact**

High

**Are you able to provide a potential financial impact figure?**

Yes, an estimated range

**Potential financial impact figure (currency)**

<Not Applicable>

**Potential financial impact figure – minimum (currency)**

850000000

**Potential financial impact figure – maximum (currency)**

1700000000

**Explanation of financial impact figure**

The potential financial impact figure is based on the High Level Commission on Carbon Prices (drafted by the UN Framework Convention on Climate Change) estimate that achieving the Paris Agreement's goal of limiting warming to two degrees would require a universal carbon price of \$40-80 per ton by 2020 and \$50-100 by 2030 to achieve. (<https://www.carbonpricingleadership.org/report-of-the-highlevel-commission-on-carbon-prices>) WM's 2021 scope 1 emissions were 16,975,323 MTCO<sub>2</sub>e (16,975,323 (\$50) = \$850,000,000 (16,975,323)(\$100) = \$1,700,000,000

**Cost of response to risk**

1000000000

**Description of response and explanation of cost calculation**

In mitigating this risk WM is focused on reducing GHGs from our operations in line with our science-based target, which is currently in queue to be validated by the Science Based Target Initiative. The cost of response to mitigate risk is based on: (1) New capital expenditures to reduce GHG emissions from our landfills in line with our science-based target and the Paris Agreement: 42% by 2032 from a 2021 base year. We estimate that cost to be \$350 million over the next 10 years and for accurate comparison with the second input to cost of response to risk, we used \$175 million over the next 5 years. WM conducted an emissions analysis to determine priority landfills for focused landfill gas system effectiveness improvements. (2) WM's investment in renewable natural gas (RNG) plants, which is \$825 million by 2025. WM plans to expand its RNG network with 17 new RNG projects by 2026 in several areas across North America including: Arkansas, California, Florida, Illinois, Oklahoma and Pennsylvania in the U.S. as well as Quebec and Ontario in Canada.

**Comment**

**C2.4**

**(C2.4) Have you identified any climate-related opportunities with the potential to have a substantive financial or strategic impact on your business?**

Yes

**C2.4a**

**(C2.4a) Provide details of opportunities identified with the potential to have a substantive financial or strategic impact on your business.**



**Identifier**

Opp1

**Where in the value chain does the opportunity occur?**

Downstream

**Opportunity type**

Products and services

**Primary climate-related opportunity driver**

Development and/or expansion of low emission goods and services

**Primary potential financial impact**

Increased revenues resulting from increased production capacity

**Company-specific description**

WM is the leader in beneficial reuse of landfill gas, with a growing network of renewable natural gas (RNG) plants and the most landfill gas-to-electricity plants in North America. Landfill gas is captured and turned into renewable electricity and fuel at 144 of the landfills WM owns or operates. WM services – including landfill gas and recycling – avoid more than three times more greenhouse gas emissions than its operations generate. WM has 16 plants across North America through a mix of WM plants and third-party developers. By 2026, the company plans to expand its RNG network with 17 new RNG projects in several areas across North America including: Arkansas, California, Florida, Illinois, Oklahoma and Pennsylvania in the U.S. as well as Quebec and Ontario in Canada. The increase in RNG production WM expects from the new investments will lead to displacement of approximately 1.3 million metric tons of CO<sub>2</sub> greenhouse gas emissions by 2026, the equivalent to 3 billion miles driven by an average gasoline-powered passenger vehicle.

**Time horizon**

Medium-term

**Likelihood**

More likely than not

**Magnitude of impact**

Medium

**Are you able to provide a potential financial impact figure?**

Yes, an estimated range

**Potential financial impact figure (currency)**

&lt;Not Applicable&gt;

**Potential financial impact figure – minimum (currency)**

123700000

**Potential financial impact figure – maximum (currency)**

684400000

**Explanation of financial impact figure**

The minimum financial impact figure is based on 2021 earnings before interest, taxes, depreciation, and amortization (EBITDA) from WM's Renewable Energy group and the maximum financial impact is the potential EBITDA once RNG opportunities described in Company-specific description have been realized.

**Cost to realize opportunity**

825000000

**Strategy to realize opportunity and explanation of cost calculation**

WM's strategy to maximize landfill gas potential is to expand its RNG network with 17 new RNG projects in several areas across North America including. Cost to realize the opportunity is based on WM's plan to invest growth capital of approximately \$825 million from 2022-2025 to expand its network of RNG plants. By 2026, we expect all of these investments to be operational, bringing the owned asset network to 21 RNG facilities that will generate a total of 24 million MMBtu per year. With this new investment, we expect to increase projected production at WM-operated RNG facilities by approximately 600% in the next four years.

**Comment****Identifier**

Opp2

**Where in the value chain does the opportunity occur?**

Downstream

**Opportunity type**

Products and services

**Primary climate-related opportunity driver**

Development and/or expansion of low emission goods and services

**Primary potential financial impact**

Increased revenues through access to new and emerging markets

**Company-specific description**

Recent consumer response to climate change and the circular economy movement could result in more value being assigned to opportunities for reuse, recycling, use of renewable alternative fuels and sustainability consulting offerings. This would enhance the revenue generation of these products and services and could give us a market advantage because of the breadth of our offerings both in variety of technology and locations. Examples of new and emerging opportunities related to recycling include increased demand for post-consumer recycled content for use in textiles and building materials, growth for demand of polypropylene (PP) and increased demand for high-density polyethylene (HDPE) which reached a record high commodity price in 2021. According to the EPA, in 2018 recycling and composting of 68 million tons of materials provided an annual benefit of more than 193 million metric tons of life cycle carbon dioxide equivalent emissions avoided. WM is the largest recycler in North America, with 7-10% of our revenue coming from our recycling operations. In 2021, WM managed over 15 million tons of recyclable material which has the potential to avoid over 28 million metric tons of carbon dioxide equivalent.

**Time horizon**

Medium-term

**Likelihood**

Very likely

**Magnitude of impact**

Medium

**Are you able to provide a potential financial impact figure?**

Yes, an estimated range

**Potential financial impact figure (currency)**

<Not Applicable>

**Potential financial impact figure – minimum (currency)**

280000000

**Potential financial impact figure – maximum (currency)**

550400000

**Explanation of financial impact figure**

Financial impact figure is based on 2021 earnings before interest, taxes, depreciation, and amortization (EBITDA) from WM's Recycling group and potential EBITDA once recycling opportunities described in Company-specific description have been realized.

**Cost to realize opportunity**

800000000

**Strategy to realize opportunity and explanation of cost calculation**

The cost to realize these opportunities is based on investment in our circular economy business solutions. As consumer-packaged goods companies continue to set aggressive goals for recycled content, solutions need to scale, especially related to plastics, as plastic capture must grow five times to meet these targets. WM will have invested over \$800 million in new and upgraded recycling facilities by 2025. With the demand for recycled content products continuing to rise, the investment will enable WM to capture more recycled materials and increase access to recycling for its customers. WM's strategy to maximize recycled content has increased overall recycled plastic volume by 25% since 2019 and this will continue to expand. These enhancements will ensure recyclables are efficiently sorted and sold to high-quality end markets, meeting the strong demand for recycled content material in new products. By 2023, WM plans to outfit 95% of its residential recycling facilities with updated recycling technology, further enabling and enhancing the company's ability to provide high-quality recycled commodities to its customers. These recycling investments play an important role in WM's commitment to sustainability through contributing to WM's support of the circular economy, while helping WM customers achieve recycling and environmental goals.

**Comment**

**C3. Business Strategy**

**C3.1**

**(C3.1) Does your organization's strategy include a transition plan that aligns with a 1.5°C world?**

**Row 1**

**Transition plan**

Yes, we have a transition plan which aligns with a 1.5°C world

**Publicly available transition plan**

No

**Mechanism by which feedback is collected from shareholders on your transition plan**

We have a different feedback mechanism in place

**Description of feedback mechanism**

The Investor Relations team regularly receives feedback on WM's sustainability goals and progress. Written feedback is shared with the Corporate Secretary and ESG & Sustainability team, and as appropriate, the Senior Leadership Team and Board of Directors. Investor Relations files shareholder letters and logs meeting notes in a central location.

**Frequency of feedback collection**

More frequently than annually

**Attach any relevant documents which detail your transition plan (optional)**

**Explain why your organization does not have a transition plan that aligns with a 1.5°C world and any plans to develop one in the future**

<Not Applicable>

**Explain why climate-related risks and opportunities have not influenced your strategy**

<Not Applicable>

**C3.2**

**(C3.2) Does your organization use climate-related scenario analysis to inform its strategy?**

	Use of climate-related scenario analysis to inform strategy	Primary reason why your organization does not use climate-related scenario analysis to inform its strategy	Explain why your organization does not use climate-related scenario analysis to inform its strategy and any plans to use it in the future
Row 1	Yes, qualitative and quantitative	<Not Applicable>	<Not Applicable>

C3.2a

**(C3.2a) Provide details of your organization’s use of climate-related scenario analysis.**

Climate-related scenario		Scenario analysis coverage	Temperature alignment of scenario	Parameters, assumptions, analytical choices
Transition scenarios	IEA 2DS	Company-wide	<Not Applicable>	We used the International Energy Agency's (IEA) World Energy Outlook (WEO) 2DS scenario analysis, analyzing emissions reductions and energy flows mainly related to transport fuels, from 2025 to 2060. WM continued to use the time horizons embedded in the publicly available scenarios. The 2DS scenario uses time horizons of 2025, 2035, 2040 and 2060. We used the 2025, 2038 and 2040 time horizons because they are close to our current set of greenhouse gas reduction goals and fit within our short-, medium- and long-term climate strategies. Since the 2DS model sets the target of cutting greenhouse gas emissions by almost 60% by 2050, followed by continued decline after 2050 until carbon neutrality is reached, we included the 2060 time horizon in our analysis. Although it is a challenge to incorporate that planning so far into the future, the data obtained from the models is valuable. WM's largest Scope 1 emissions categories are landfills and transportation, therefore these areas were the primary focus of the scenario analysis. This includes landfill gas capture systems and programs, as well as capital investments in fleet vehicles and subsequently fuel types. This analysis was conducted in 2020 and will be updated on a 2-3 year timeframe to inform long-term climate strategy. WM conducted this analysis in 2020 and will update this assessment every 3 years to assess physical risks to direct operations.
Physical climate scenarios	RCP 2.6	Company-wide	<Not Applicable>	Selected scenarios were chosen because they are publicly available, peer-reviewed, issued by an independent body, supported by publicly available data sets, updated, and link to mapping tools or visualizers. We used National Oceanic and Atmospheric Administration's (NOAA) "Representative Concentration Pathways" (RCP) 2.6 scenario analysis, to assess emissions reductions necessary to align with global mean temperature increase well below 2°C, from 2020 to 2050. The RCP scenarios outline the possible radiative forcing levels caused by greenhouse gases and impacting the global mean temperature increase between 2000 and 2100. RCP 2.6 is considered a "very stringent" pathway which limits radiative forcing and keeps global mean temperature increase well below 2°C. WM committed to an absolute emissions reduction target in line with Science Based Target Initiative's (SBTI) guidance in January 2021, and the target has been submitted for approval. WM conducted this analysis in 2020 and will update this assessment every 3 years to assess physical risks to direct operations.
Physical climate scenarios	Customized publicly available physical scenario	Company-wide	Unknown	The World Resource Institute (WRI) Aqueduct Water Risk Atlas looks at baseline, 2030 and 2040 time horizons. We used the baseline, 2030 and 2040 scenarios because they are close to our current set of greenhouse gas reduction goals and fit within our medium- and long-term climate strategies. We specifically looked at flood, drought, groundwater stress, regulatory and reputational risks, media coverage, and projected change in water stress at our facilities. What we concluded from this analysis is that the majority of WM Facilities face low to medium risk from flood, groundwater stress, and regulatory and reputational risks, and a minority of Facilities (between 1% and 10%) have a high or extremely high risk. 100% of WM Facilities are in areas of low, low to medium or medium drought severity. In a business as usual scenario, 80% of WM Facilities are located in areas projected to experience near normal water stress in 2030, decreasing to 59% in 2040. Of these facilities, 18% may experience up to 1.4 times increase in water stress in 2030, increasing to 38% in 2040. By 2030, seven landfills, nine transfer stations, one MRF and nine hauling facilities may experience twice the water stress. By 2040 these increase to, fifteen landfills, six transfer stations, two MRFs and eleven hauling facilities may experience twice the water stress, with 2 landfills and one hauling facility possibly experiencing 2.8 or greater increase in water stress. WM conducted this analysis in 2020 and will update this assessment every 3 years to assess physical risks to direct operations.

C3.2b

**(C3.2b) Provide details of the focal questions your organization seeks to address by using climate-related scenario analysis, and summarize the results with respect to these questions.**

**Row 1**

**Focal questions**

What are the physical and transitional risks of climate-change on our current business operations?

**Results of the climate-related scenario analysis with respect to the focal questions**

Climate-related scenario analysis has highlighted that transitioning to a low-carbon business model presents the greatest and most near-term risks to WM. While physical risks from extreme weather do exist, they are not material. Our operations located in the path of extreme weather events such as hurricanes and wildfires are intimately aware of the risks, with Contingency Response Plans (CRPs) in place. Scenario analyses of the physical impact of climate change on all locations where WM has a facility of any kind has resulted in taking a closer look at potential future impacts. For example, we consider multiple scenarios where WM operations are impacted to varying degrees and put plans in place to utilize the closest operations that would be out of the severe weather path. Another example is plotting WM locations into scenario analysis that shows areas of high drought severity and high likelihood of wildfires to see where we may need to be prepared in the future. We are confident these existing mitigation strategies are sufficient, but WM will continue to monitor and perform scenario analyses every 3 years. WM discovered through use of the IEA's 2DS scenario that one of the primary levers identified in reducing heavy duty vehicle emissions in the short- and medium-term is the use of biomethane, also referred to as renewable natural gas (RNG). As owners and operators of municipal solid waste landfills in North America, WM has a particular advantage in accessing and developing landfill gas capture systems for the purposes of processing the gas to generate electricity or for fuel use within our own fleet as well as public sale. Utilizing the climate-related scenario analysis and aligned renewable energy incentives adds to the business case to expand landfill capture and continue to invest capital expense in compressed natural gas (CNG) trucks. At the end of 2021, WM's collection fleet consisted of 18,927 vehicles and 10,832 of these vehicles have CNG engines, with 53% running on RNG. For every diesel truck we replace with natural gas, we reduce our use of diesel fuel by an average of 8,000 gallons per year, resulting in a reduction of 14 metric tons of GHG emissions annually. Utilizing RNG fuel reduces GHG and particulate emissions. Further, the analysis of RCP 2.6 has not only informed our science-based target but is already a driving factor in developing our internal carbon reduction strategies. WM's largest emissions category is landfills and therefore it is a primary area of focus. WM is investing capital funds in landfill gas capture systems and improve emissions measurement systems.

C3.3

**(C3.3) Describe where and how climate-related risks and opportunities have influenced your strategy.**

	Have climate-related risks and opportunities influenced your strategy in this area?	Description of influence
Products and services	Yes	Risks and opportunities related to landfill gas and its beneficial use and the demand to pull more recyclable material back into the circular economy have influenced our product and services-related strategy (as reported in C2.3a Risk1 and C2.4a Opportunity 1 and 2). This has a medium-term time horizon. Landfill gas is captured and turned into renewable electricity and fuel at 144 of the landfills WM owns or operates. By 2026, the company plans to expand its RNG network with 17 new RNG projects in several areas across North America. The increase in RNG production WM expects from the new investments will lead to displacement of approximately 1.3 million metric tons of CO <sub>2</sub> greenhouse gas emissions by 2026, the equivalent to 3 billion miles driven by an average gasoline-powered passenger vehicle. Recent consumer response to climate change and the circular economy movement could create new and emerging opportunities that reduce lifecycle greenhouse gas emissions associated with manufacturers replacing virgin material with recycled content. According to EPA, in 2018 recycling and composting of 68 million tons of materials provided an annual benefit of more than 193 million metric tons of life cycle carbon dioxide equivalent emissions avoided. In 2021, WM managed over 15 million tons of recyclable material which has the potential to avoid over 28 million metric tons of carbon dioxide equivalent.
Supply chain and/or value chain	Yes	The opportunities related to the impact of using of lower-emission sources of energy to reduce direct costs and GHG emissions have influenced aspects of our supply chain strategy, which has a medium-term time horizon. WM worked with its primary engine manufacturers in the development of a new "Near Zero" carbon emissions engine that is now the only natural gas truck engine that WM is purchasing. We are also transitioning from diesel fuel to compressed natural gas and renewable natural gas. WM has a collection fleet of 18,927 trucks, and in 2019 we set a goal for 70% of our collection fleet to use compressed natural gas engines by 2025, with 50% running on renewable natural gas.
Investment in R&D	Yes	WM is finding increased demand for renewable fuels (as reported in C2.4a Opportunity 1), which reduce GHG and particulate emissions and impacts investment in landfill gas projects at WM landfills. The Federal Renewable Fuel Standard and state incentive programs encourage investment in our facilities that produce renewable fuel from landfill gas. WM has invested in its commitment to a lower carbon collection fleet and renewable fuel. Risks and opportunities related to regulation of existing products and services impacts this investment in R&D and have a medium-term time horizon. WM's senior leadership team developed a business strategy to invest in a low carbon fleet, fueling infrastructure, and infrastructure at our landfills to develop low carbon fuel from landfill gas. WM allocates significant capital and invests in infrastructure to process biogas from our landfills into renewable natural gas RNG. In addition, WM has partnered with and/or managed investments in firms evaluating innovative treatment technologies across North America and Europe. We have prioritized our investments to focus on continued funding of those projects most likely to succeed at commercial scale. WM's Corporate Development & Innovation group manages a portfolio of investments in innovative waste reduction and treatment technologies.
Operations	Yes	Global concern over the use of fossil fuel-derived plastics, their impact on the environment, and using recycled content in the manufacturing of new products is leading several states to consider extended producer responsibility (EPR) legislation to transfer cost and responsibility for recycling packaging materials to the manufacturing industry. China's ban of recycling imports resulted in a global downturn for recycling, negatively impacting community recycling programs everywhere. COVID-19 has exacerbated municipal budget constraints. Municipalities across the U.S. have been impacted by China's policy and the recent pandemic, leading many communities to cancel their curbside recycling programs, thus increasing the risk of EPR. As the largest recycler in North America, with 7-10% of our revenue coming from our recycling operations, the risk to our industry is significant since the need for our existing infrastructure investments would be uncertain. This is medium-term time horizon.

**C3.4**

**(C3.4) Describe where and how climate-related risks and opportunities have influenced your financial planning.**

	Financial planning elements that have been influenced	Description of influence
Row 1	Indirect costs Capital expenditures Assets	In 2018 WM announced an overarching goal to reduce or avoid four times the emissions we generate by 2038 and has submitted a science-based target to the Science-Based Target Initiative. WM plans to achieve greenhouse gas reduction goals by investment in recycling infrastructure and education/behavior change, increasing renewable energy generation at out landfills, procuring renewable electricity, and reducing emissions from our fleet. Budgeting for capital expenditures such as renewable energy and "Near Zero" carbon emissions engines has a medium-term horizon. WM is investing growth capital of approximately \$825 million by 2025 to expand its network of renewable natural gas plants. WM is also investing \$800 million to build out recycling capabilities by investing in recycling infrastructure and upgrades.

**C3.5**

**(C3.5) In your organization's financial accounting, do you identify spending/revenue that is aligned with your organization's transition to a 1.5°C world?**

Yes

**C3.5a**

**(C3.5a) Quantify the percentage share of your spending/revenue that is aligned with your organization's transition to a 1.5°C world.**

**Financial Metric**

CAPEX

**Percentage share of selected financial metric aligned with a 1.5°C world in the reporting year (%)**

29

**Percentage share of selected financial metric planned to align with a 1.5°C world in 2025 (%)**

**Percentage share of selected financial metric planned to align with a 1.5°C world in 2030 (%)**

**Describe the methodology used to identify spending/revenue that is aligned with a 1.5°C world**

We currently generate renewable energy from landfill gas and support the circular economy through our recycling services. We have accounted only the CAPEX associated with our renewable energy and recycling assets as 'aligned with a 1.5°C world' and we intend to invest \$825 million in low-carbon energy generation by 2025; and \$800 million in recycling infrastructure by 2025.

## C4. Targets and performance

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### C4.1

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(C4.1) Did you have an emissions target that was active in the reporting year?

Absolute target

#### C4.1a

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(C4.1a) Provide details of your absolute emissions target(s) and progress made against those targets.

**Target reference number**

Abs 1

**Year target was set**

2021

**Target coverage**

Company-wide

**Scope(s)**

Scope 1

Scope 2

**Scope 2 accounting method**

Market-based

**Scope 3 category(ies)**

<Not Applicable>

**Base year**

2021

**Base year Scope 1 emissions covered by target (metric tons CO2e)**

16975323

**Base year Scope 2 emissions covered by target (metric tons CO2e)**

182885

**Base year Scope 3 emissions covered by target (metric tons CO2e)**

<Not Applicable>

**Total base year emissions covered by target in all selected Scopes (metric tons CO2e)**

17158208

**Base year Scope 1 emissions covered by target as % of total base year emissions in Scope 1**

100

**Base year Scope 2 emissions covered by target as % of total base year emissions in Scope 2**

100

**Base year Scope 3 emissions covered by target as % of total base year emissions in Scope 3 (in all Scope 3 categories)**

<Not Applicable>

**Base year emissions covered by target in all selected Scopes as % of total base year emissions in all selected Scopes**

100

**Target year**

2032

**Targeted reduction from base year (%)**

42

**Total emissions in target year covered by target in all selected Scopes (metric tons CO2e) [auto-calculated]**

9951760.64

**Scope 1 emissions in reporting year covered by target (metric tons CO2e)**

16975323

**Scope 2 emissions in reporting year covered by target (metric tons CO2e)**

182885

**Scope 3 emissions in reporting year covered by target (metric tons CO2e)**

<Not Applicable>

**Total emissions in reporting year covered by target in all selected scopes (metric tons CO2e)**

17158208

**% of target achieved relative to base year [auto-calculated]**

0

**Target status in reporting year**

New

**Is this a science-based target?**

Yes, we consider this a science-based target, and the target is currently being reviewed by the Science Based Targets initiative

**Target ambition**

1.5°C aligned

**Please explain target coverage and identify any exclusions**

In 2022, WM submitted its carbon reduction goals to SBTi for validation. In line with SBTi guidance, WM committed to an absolute Scope 1 plus Scope 2 reduction of 42% by 2032. WM is excluded from including Scope 3 in our SBT per guidance since Scope 3 emissions (reported in C6.5) are less than 40% of our total emissions.

**Plan for achieving target, and progress made to the end of the reporting year**

The primary methods for GHG reduction include the following: Transition of our owned vehicle fleet from diesel fuel to renewable natural gas, transition to 100% renewable electricity by 2025, landfill decarbonization via reducing landfill gas generation and increasing landfill gas collection, and the continued investment in recycling technologies for landfill diversion at end of life (trash collection). WM will implement the Scope 1 and 2 emission reduction target via decarbonization activities at our landfills, including gas collection system installation, daily cover considerations, and organics diversion; continuing to transition our fleet to near zero emission natural gas vehicles, using renewable fuel, including landfill gas, in our fleet; and working across vendors and manufacturers to evaluate the viability of and pilot the use of electric vehicles for industry use; purchasing 100% renewable electricity through PPA/VPPA.

**List the emissions reduction initiatives which contributed most to achieving this target**

<Not Applicable>

**C4.2**

**(C4.2) Did you have any other climate-related targets that were active in the reporting year?**

Other climate-related target(s)

**C4.2b**

**(C4.2b) Provide details of any other climate-related targets, including methane reduction targets.**

**Target reference number**

Oth 3

**Year target was set**

2018

**Target coverage**

Company-wide

**Target type: absolute or intensity**

Absolute

**Target type: category & Metric (target numerator if reporting an intensity target)**

Other, please specify	Other, please specify (100% Renewable Electricity Commitment; figures reported in MTCO2e)
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**Target denominator (intensity targets only)**

<Not Applicable>

**Base year**

2018

**Figure or percentage in base year**

246091

**Target year**

2025

**Figure or percentage in target year**

0

**Figure or percentage in reporting year**

182885

**% of target achieved relative to base year [auto-calculated]**

25.6839949449594

**Target status in reporting year**

Underway

**Is this target part of an emissions target?**

Yes

**Is this target part of an overarching initiative?**

Science Based targets initiative - other

**Please explain target coverage and identify any exclusions**

Our commitment to 100% renewable electricity goes beyond the aggressive 4.2% year-over-year emissions reduction between the base year and the target year by purchasing 100% renewable energy by 2025. WM plans to submit its carbon reduction commitments to SBTi for validation in summer of 2022; as such, this target takes the place of previous target Abs 4 (note Abs 4 is also replaced by an absolute S1+S2 reduction goal).

**Plan for achieving target, and progress made to the end of the reporting year**

Work with providers to secure 100% renewable energy by 2025. To date, WM has generated our own RECs which were retired in 2021 and applied to our market-based Scope 2 allocation.

**List the actions which contributed most to achieving this target**

<Not Applicable>

---

**Target reference number**

Oth 1

**Year target was set**

2018

**Target coverage**

Company-wide

**Target type: absolute or intensity**

Absolute

**Target type: category & Metric (target numerator if reporting an intensity target)**

Low-carbon vehicles	Percentage of low-carbon vehicles in company fleet
---------------------	--

**Target denominator (intensity targets only)**

<Not Applicable>

**Base year**

**Figure or percentage in base year**

**Target year**

2025

**Figure or percentage in target year**

70

**Figure or percentage in reporting year**

57

**% of target achieved relative to base year [auto-calculated]**

<Calculated field>

**Target status in reporting year**

Replaced

**Is this target part of an emissions target?**

Oth1 has been incorporated as part of the strategy to achieve Abs1 to reduce emissions from our collection fleet which impacts our Scope 1 total. We will continue to track this target as part of our internal sustainability reporting efforts, including on our ESG Data Center (<https://sustainability.wm.com/esg-data-center/>).

**Is this target part of an overarching initiative?**

Science Based targets initiative - other

**Please explain target coverage and identify any exclusions**

In 2019, we set a goal for 70% of our collection fleet to use alternative, low-carbon fuel by 2025, including compressed natural gas (CNG) engines.

**Plan for achieving target, and progress made to the end of the reporting year**

<Not Applicable>

**List the actions which contributed most to achieving this target**

<Not Applicable>

---

**Target reference number**

Oth 2

**Year target was set**

2019

**Target coverage**

Company-wide

**Target type: absolute or intensity**

Absolute

**Target type: category & Metric (target numerator if reporting an intensity target)**

Engagement with suppliers	Other, please specify (Increase spend associated with sustainability projects by at least 10% each year)
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**Target denominator (intensity targets only)**

<Not Applicable>

**Base year**

2019

**Figure or percentage in base year**

263893881

**Target year**

2038

**Figure or percentage in target year**

1613950973

**Figure or percentage in reporting year****% of target achieved relative to base year [auto-calculated]**

&lt;Calculated field&gt;

**Target status in reporting year**

Retired

**Is this target part of an emissions target?**

No, not at this time

**Is this target part of an overarching initiative?**

No, it's not part of an overarching initiative

**Please explain target coverage and identify any exclusions**

In 2019, the Supply Chain (SC) contribution to the WM sustainability effort was in the early stages with sustainability spend being a metric we could capture and report confidently. As our SC sustainability focus matured, we recognized that a financial target does not accurately capture the true impact of our project-based efforts. Sometimes, making the sustainable choice results in financial savings which are not able to be captured in such a metric. Therefore, we are actively researching the best metrics that fully capture the internal and external collaborative measures we have taken to capture and monitor the impacts of our implemented sustainability programs. Please review our supply chain program online: <https://sustainability.wm.com/esghub/company/supply-chain>  
[https://sustainability.wm.com/downloads/WM\\_Purchasing\\_Program.pdf](https://sustainability.wm.com/downloads/WM_Purchasing_Program.pdf) [https://sustainability.wm.com/downloads/WM\\_Sustainable\\_Supplier\\_Partnership\\_Playbook.pdf](https://sustainability.wm.com/downloads/WM_Sustainable_Supplier_Partnership_Playbook.pdf)

**Plan for achieving target, and progress made to the end of the reporting year**

&lt;Not Applicable&gt;

**List the actions which contributed most to achieving this target**

&lt;Not Applicable&gt;

**C4.3**

**(C4.3) Did you have emissions reduction initiatives that were active within the reporting year? Note that this can include those in the planning and/or implementation phases.**

Yes

**C4.3a**

**(C4.3a) Identify the total number of initiatives at each stage of development, and for those in the implementation stages, the estimated CO2e savings.**

	Number of initiatives	Total estimated annual CO2e savings in metric tonnes CO2e (only for rows marked *)
Under investigation	0	0
To be implemented*	0	0
Implementation commenced*	0	0
Implemented*	2	30252840
Not to be implemented	0	0

**C4.3b**

**(C4.3b) Provide details on the initiatives implemented in the reporting year in the table below.**

**Initiative category & Initiative type**

Waste reduction and material circularity	Product/component/material recycling
--	--------------------------------------

**Estimated annual CO2e savings (metric tonnes CO2e)**

28062546

**Scope(s) or Scope 3 category(ies) where emissions savings occur**

Scope 3: Other (upstream)

**Voluntary/Mandatory**

Voluntary

**Annual monetary savings (unit currency – as specified in C0.4)**

180000000

**Investment required (unit currency – as specified in C0.4)**

800000000

**Payback period**

4-10 years

**Estimated lifetime of the initiative**

16-20 years



**Comment**

The potential benefits of significantly increased recycling are enormous. According to EPA, 94 million tons of recycled or composted waste provided an annual benefit of more than 193 million metric tons of carbon dioxide equivalent emissions reduced, comparable to the annual greenhouse gas emissions from more than 42 million passenger vehicles. WM's recycling activities result in a wide variety of greenhouse gas reductions that otherwise very likely would not occur. WM plans to invest \$800 million in recycling capabilities by 2025. This investment in recycling infrastructure includes the construction of five new MRFs and upgrading equipment at 26 facilities. These facilities will be highly automated based on the typical material composition in that market, expected volumes and the types of recycled materials we plan to sell there. The result will be more materials processed to higher levels of quality.

**Initiative category & Initiative type**

Low-carbon energy generation	Biogas
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**Estimated annual CO2e savings (metric tonnes CO2e)**

2160000

**Scope(s) or Scope 3 category(ies) where emissions savings occur**

Scope 2 (market-based)  
Scope 3 category 11: Use of sold products

**Voluntary/Mandatory**

Voluntary

**Annual monetary savings (unit currency – as specified in C0.4)**

0

**Investment required (unit currency – as specified in C0.4)**

825000000

**Payback period**

1-3 years

**Estimated lifetime of the initiative**

>30 years

**Comment**

At our landfill gas-to-energy (LFGTE) facilities, we capture methane from waste decomposition and use it beneficially as an alternative to fossil fuel to power homes and provide fuel for industrial uses and commercial vehicles, decreasing WM and our customers' greenhouse gas emissions. WM is investing growth capital of approximately \$825 million by 2025 to expand its network of renewable natural gas plants.

**Initiative category & Initiative type**

Transportation	Company fleet vehicle replacement
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**Estimated annual CO2e savings (metric tonnes CO2e)**

30294

**Scope(s) or Scope 3 category(ies) where emissions savings occur**

Scope 1

**Voluntary/Mandatory**

Voluntary

**Annual monetary savings (unit currency – as specified in C0.4)**

134225000

**Investment required (unit currency – as specified in C0.4)**

28320000

**Payback period**

<1 year

**Estimated lifetime of the initiative**

6-10 years

**Comment**

In 2019, we set a goal for 70% of our collection fleet to use alternative, low-carbon fuel by 2025. We are implementing this by transitioning our fleet to natural gas vehicles instead of diesel, and primarily using Renewable Natural Gas (RNG) from landfills and dairy farms.

**C4.3c**

**(C4.3c) What methods do you use to drive investment in emissions reduction activities?**

Method	Comment
Dedicated budget for other emissions reduction activities	WM's goal to purchase 100% renewable energy by 2025 requires a dedicated budget to evaluate, contract and implement power purchase agreement(s). Until the PPA is in place, the budget funds renewable energy credits.

**C4.5**

**(C4.5) Do you classify any of your existing goods and/or services as low-carbon products?**

Yes

**C4.5a**

**(C4.5a) Provide details of your products and/or services that you classify as low-carbon products.**

**Level of aggregation**

Product or service

**Taxonomy used to classify product(s) or service(s) as low-carbon**

The IEA Energy Technology Perspectives Clean Energy Technology Guide

**Type of product(s) or service(s)**

Biofuels	Other, please specify (Landfill Gas Generated Renewable Electricity)
----------	--

**Description of product(s) or service(s)**

WM utilizes landfill gas as fuel for power generation, which reduces greenhouse gases that would otherwise be released to the atmosphere. In 2021, WM operated 144 landfill gas to energy facilities.

**Have you estimated the avoided emissions of this low-carbon product(s) or service(s)**

Yes

**Methodology used to calculate avoided emissions**

Estimating and Reporting the Comparative Emissions Impacts of Products (WRI)

**Life cycle stage(s) covered for the low-carbon product(s) or services(s)**

Use stage

**Functional unit used**

MTCO<sub>2e</sub> per calendar year (calculated based on total Megawatt-hours of produced renewable electricity)

**Reference product/service or baseline scenario used**

Reporting-period specific "avoided" emissions were calculated using CY 2021 data.

**Life cycle stage(s) covered for the reference product/service or baseline scenario**

Use stage

**Estimated avoided emissions (metric tons CO<sub>2e</sub> per functional unit) compared to reference product/service or baseline scenario**

2160000

**Explain your calculation of avoided emissions, including any assumptions**

For each location where renewable electricity was generated, the total Megawatt hours (MWh) generated was compiled. To determine displaced emissions, a region-specific emission factor from EPA's Emissions & Generation Resource Integrated Database (eGRID) was multiplied by the generated MWh. The displaced emissions by region were, then, summed to estimate the total "savings" in greenhouse gases during 2021. This evaluation only included the combustion use phase, additional avoided emissions from upstream impacts from fuel production and transport are not included.

**Revenue generated from low-carbon product(s) or service(s) as % of total revenue in the reporting year**

1.5

**Level of aggregation**

Group of products or services

**Taxonomy used to classify product(s) or service(s) as low-carbon**

Other, please specify (United States Environmental Protection Agency's (EPA) Waste Reduction Model (WARM))

**Type of product(s) or service(s)**

Other	Other, please specify (Recycling /Compost/Anaerobic Digestion)
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**Description of product(s) or service(s)**

In 2021, WM operated 44 organics facilities and 96 recycling facilities. Recycled materials include: paper, cardboard, mixed organics, glass, wood, metal, plastics, electronic waste, batteries, used oil, tires, textiles, and fly ash. In 2021, our avoided emissions for the recycling of 15.33 million tons of materials (versus sending to a landfill with energy recovery) were a savings of 28,062,546 MTCO<sub>2e</sub>.

**Have you estimated the avoided emissions of this low-carbon product(s) or service(s)**

Yes

**Methodology used to calculate avoided emissions**

Estimating and Reporting the Comparative Emissions Impacts of Products (WRI)

**Life cycle stage(s) covered for the low-carbon product(s) or services(s)**

Cradle-to-gate + end-of-life stage

**Functional unit used**

MTCO<sub>2e</sub> per tons of generated material in year (annualized for 2021)

**Reference product/service or baseline scenario used**

Using 2021 data, a comparative analysis was run in EPA's WARM Model to estimate avoided emissions for scenario 1 - WM's actual operations which include recycling, composting, and anaerobic digestion activities and scenario 2 - all generated waste directed to landfill. The emissions difference is used as the avoided emissions basis. Detailed methodology is provided by EPA, found here: <https://www.epa.gov/warm/documentation-chapters-greenhouse-gas-emission-energy-and-economic-factors-used>

waste.

**Life cycle stage(s) covered for the reference product/service or baseline scenario**

Cradle-to-gate + end-of-life stage

**Estimated avoided emissions (metric tons CO2e per functional unit) compared to reference product/service or baseline scenario**

28062546

**Explain your calculation of avoided emissions, including any assumptions**

The Waste Reduction Model (WARM) was created by the U.S. Environmental Protection Agency (EPA) to help solid waste planners and organizations estimate greenhouse gas (GHG) emission reductions and economic impacts from several different WM practices. WARM calculates GHG emissions, energy, and economic impacts for baseline and alternative WM practices, including source reduction, recycling, combustion, composting, and landfilling. The GHG emission factors used in WARM are based on a life cycle perspective and developed using guidance as prescribed by WRI including its GHG Protocol.

**Revenue generated from low-carbon product(s) or service(s) as % of total revenue in the reporting year**

9

**C5. Emissions methodology**

**C5.1**

**(C5.1) Is this your first year of reporting emissions data to CDP?**

No

**C5.1a**

**(C5.1a) Has your organization undergone any structural changes in the reporting year, or are any previous structural changes being accounted for in this disclosure of emissions data?**

**Row 1**

**Has there been a structural change?**

Yes, an acquisition

**Name of organization(s) acquired, divested from, or merged with**

Acquired Advanced Disposal Services (ADS)

**Details of structural change(s), including completion dates**

WM completed the acquisition of ADS on October 30, 2020. Emissions from ADS assets were included in the 2020 emissions inventory for the portion of 2020 that WM owned ADS. 2021 was the first full year that WM owned ADS assets and therefore the full impact is reflected in the 2021 emissions inventory.

**C5.1b**

**(C5.1b) Has your emissions accounting methodology, boundary, and/or reporting year definition changed in the reporting year?**

	Change(s) in methodology, boundary, and/or reporting year definition?	Details of methodology, boundary, and/or reporting year definition change(s)
Row 1	Yes, a change in methodology Yes, a change in boundary	In 2021, WM evaluated the operational control of each landfill to refine ownership and operational status. The resulting impact was relatively minor as compared to the acquisition of Advanced Disposal Services (ADS). Additionally, WM changed its base year to 2021 instead of 2019 as part of its application for a Science Based Target.

**C5.1c**

**(C5.1c) Have your organization's base year emissions been recalculated as result of the changes or errors reported in C5.1a and C5.1b?**

	Base year recalculation	Base year emissions recalculation policy, including significance threshold
Row 1	Yes	In 2021, WM made a public commitment to set a science-based target (SBT) aligned with the SBTi's target-setting criteria. The baseline year for the SBT is 2021 with a target to reduce Scope 1 and 2 emissions 42% by 2032 (equates to 4.2% annualized reduction, starting in 2021). As such, changing the year of the base year triggers the significance threshold.

**C5.2**

**(C5.2) Provide your base year and base year emissions.**

**Scope 1**

**Base year start**

January 1 2021

**Base year end**

December 31 2021

**Base year emissions (metric tons CO2e)**

16975323

**Comment**

**Scope 2 (location-based)**

**Base year start**

January 1 2021

**Base year end**

December 31 2021

**Base year emissions (metric tons CO2e)**

257188

**Comment**

**Scope 2 (market-based)**

**Base year start**

January 1 2021

**Base year end**

December 31 2021

**Base year emissions (metric tons CO2e)**

182885

**Comment**

**Scope 3 category 1: Purchased goods and services**

**Base year start**

January 1 2021

**Base year end**

December 31 2021

**Base year emissions (metric tons CO2e)**

1136734

**Comment**

**Scope 3 category 2: Capital goods**

**Base year start**

January 1 2021

**Base year end**

December 31 2021

**Base year emissions (metric tons CO2e)**

1613209

**Comment**

**Scope 3 category 3: Fuel-and-energy-related activities (not included in Scope 1 or 2)**

**Base year start**

January 1 2021

**Base year end**

December 31 2021

**Base year emissions (metric tons CO2e)**

325520

**Comment**

**Scope 3 category 4: Upstream transportation and distribution**

**Base year start**

January 1 2021

**Base year end**

December 31 2021

**Base year emissions (metric tons CO2e)**

0

**Comment**

Not relevant. The only product we sell is Bagster bags and the transportation and distribution associated are already included in our Scope 3 Purchased Goods & Services.

**Scope 3 category 5: Waste generated in operations**

**Base year start**

January 1 2021

**Base year end**

December 31 2021

**Base year emissions (metric tons CO2e)**

0

**Comment**

Not relevant. Since we are an environmental solutions provider, waste generated through our operations are managed by WM and therefore are included in Scope 1 and not relevant to our Scope 3 inventory.

**Scope 3 category 6: Business travel**

**Base year start**

January 1 2021

**Base year end**

December 31 2021

**Base year emissions (metric tons CO2e)**

9266

**Comment**

**Scope 3 category 7: Employee commuting**

**Base year start**

January 1 2021

**Base year end**

December 31 2021

**Base year emissions (metric tons CO2e)**

199333

**Comment**

**Scope 3 category 8: Upstream leased assets**

**Base year start**

January 1 2021

**Base year end**

December 31 2021

**Base year emissions (metric tons CO2e)**

7918

**Comment**

**Scope 3 category 9: Downstream transportation and distribution**

**Base year start**

January 1 2021

**Base year end**

December 31 2021

**Base year emissions (metric tons CO2e)**

62668

**Comment**

**Scope 3 category 10: Processing of sold products**

**Base year start**

January 1 2021

**Base year end**

December 31 2021

**Base year emissions (metric tons CO2e)**

0

**Comment**

The products we sell result in negative lifecycle emissions and are therefore excluded from our inventory, as per Greenhouse Gas Protocol's Corporate Value Chain (Scope 3) Accounting and Reporting Standard.

**Scope 3 category 11: Use of sold products**

**Base year start**

January 1 2021

**Base year end**

December 31 2021

**Base year emissions (metric tons CO2e)**

823

**Comment**

**Scope 3 category 12: End of life treatment of sold products**

**Base year start**

January 1 2021

**Base year end**

December 31 2021

**Base year emissions (metric tons CO2e)**

0

**Comment**

Not relevant. Per Greenhouse Gas Protocol's Corporate Value Chain (Scope 3) Accounting and Reporting Standard, this category boundary is scope 1 and 2 emissions of waste management companies that occur during disposal or treatment of sold products. As the waste management company offering this service, these emissions are accounted for in WM's Scope 1 and 2 emissions accounting.

**Scope 3 category 13: Downstream leased assets**

**Base year start**

January 1 2021

**Base year end**

December 31 2021

**Base year emissions (metric tons CO2e)**

1163

**Comment**

**Scope 3 category 14: Franchises**

**Base year start**

January 1 2021

**Base year end**

December 31 2021

**Base year emissions (metric tons CO2e)**

0

**Comment**

Not relevant. No franchises.

**Scope 3 category 15: Investments**

**Base year start**

January 1 2021

**Base year end**

December 31 2021

**Base year emissions (metric tons CO2e)**

1108

**Comment**

**Scope 3: Other (upstream)**

**Base year start**

**Base year end**

**Base year emissions (metric tons CO2e)**

**Comment**

**Scope 3: Other (downstream)**

**Base year start**

**Base year end**

**Base year emissions (metric tons CO2e)**

**Comment**

**C5.3**

**(C5.3) Select the name of the standard, protocol, or methodology you have used to collect activity data and calculate emissions.**

IPCC Guidelines for National Greenhouse Gas Inventories, 2006

The Climate Registry: General Reporting Protocol

The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)

The Greenhouse Gas Protocol: Scope 2 Guidance

US EPA Center for Corporate Climate Leadership: Indirect Emissions From Purchased Electricity

US EPA Center for Corporate Climate Leadership: Direct Emissions from Stationary Combustion Sources

US EPA Center for Corporate Climate Leadership: Direct Emissions from Mobile Combustion Sources

US EPA Mandatory Greenhouse Gas Reporting Rule

US EPA Emissions & Generation Resource Integrated Database (eGRID)

Other, please specify (Solid Waste Industry for Climate Solutions (SWICS) Protocol by SCS Engineers, version 2.2)

## C6. Emissions data

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### C6.1

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**(C6.1) What were your organization's gross global Scope 1 emissions in metric tons CO2e?**

**Reporting year**

**Gross global Scope 1 emissions (metric tons CO2e)**

16975323

**Start date**

<Not Applicable>

**End date**

<Not Applicable>

**Comment**

Per The GHG Protocol's Corporate Accounting and Reporting Standard and best practice environmental reporting, direct emissions of biogenic carbon are not included in this number but reported separately in 6.5

### C6.2

---

**(C6.2) Describe your organization's approach to reporting Scope 2 emissions.**

**Row 1**

**Scope 2, location-based**

We are reporting a Scope 2, location-based figure

**Scope 2, market-based**

We are reporting a Scope 2, market-based figure

**Comment**

In 2021, WM retired renewable energy credits (RECs). To calculate Market Based emissions, the value of the RECs in MWh are subtracted from the total MWh consumption, then converted to MTCO2e.

### C6.3

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**(C6.3) What were your organization's gross global Scope 2 emissions in metric tons CO2e?**

**Reporting year**

**Scope 2, location-based**

257188

**Scope 2, market-based (if applicable)**

182885

**Start date**

<Not Applicable>

**End date**

<Not Applicable>

**Comment**

### C6.4

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**(C6.4) Are there any sources (e.g. facilities, specific GHGs, activities, geographies, etc.) of Scope 1 and Scope 2 emissions that are within your selected reporting boundary which are not included in your disclosure?**

No

### C6.5

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**(C6.5) Account for your organization's gross global Scope 3 emissions, disclosing and explaining any exclusions.**

## Purchased goods and services

### Evaluation status

Relevant, calculated

### Emissions in reporting year (metric tons CO2e)

1136734

### Emissions calculation methodology

Spend-based method

### Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

### Please explain

This includes emissions from purchases of production-related products (e.g., materials used in operations, components for fleet and equipment, and other parts) and non-production-related products (e.g., office building furniture, office supplies, and IT support). These emissions are from all WM operations related to both goods (tangible products) and services (intangible products), and were not otherwise included in the other categories of upstream Scope 3 emissions.

## Capital goods

### Evaluation status

Relevant, calculated

### Emissions in reporting year (metric tons CO2e)

1613209

### Emissions calculation methodology

Spend-based method

### Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

### Please explain

This includes emissions from purchases of capital goods, used for WM operations. These emissions are from purchases of land, vehicles, large machinery and equipment, and buildings. These emissions are from all WM operations, and were not otherwise included in the other categories of upstream Scope 3 emissions.

## Fuel-and-energy-related activities (not included in Scope 1 or 2)

### Evaluation status

Relevant, calculated

### Emissions in reporting year (metric tons CO2e)

325520

### Emissions calculation methodology

Other, please specify (The GREET model's Well to Pump factors were used to calculate the emissions associated with transportation fuel. The GHG Protocol Scope 3 Evaluator tool was utilized to calculate emissions associated with electricity and stationary natural gas.)

### Percentage of emissions calculated using data obtained from suppliers or value chain partners

84

### Please explain

This includes emissions associated with the production and distribution of fuels used for transportation, electricity generation and natural gas heating. This excludes the combustion of these fuel sources as those emissions are captured in Scope 1 and 2.

## Upstream transportation and distribution

### Evaluation status

Not relevant, explanation provided

### Emissions in reporting year (metric tons CO2e)

<Not Applicable>

### Emissions calculation methodology

<Not Applicable>

### Percentage of emissions calculated using data obtained from suppliers or value chain partners

<Not Applicable>

### Please explain

The only product we sell is Bagster bags and the transportation and distribution associated are already included in our Scope 3 Purchased Goods & Services.

## Waste generated in operations

### Evaluation status

Not relevant, explanation provided

### Emissions in reporting year (metric tons CO2e)

<Not Applicable>

### Emissions calculation methodology

<Not Applicable>

### Percentage of emissions calculated using data obtained from suppliers or value chain partners

<Not Applicable>

### Please explain

Since we are an environmental solutions provider, waste generated through our operations are managed by WM and therefore are included in Scope 1 and not relevant to our Scope 3 inventory.



## Business travel

### Evaluation status

Relevant, calculated

### Emissions in reporting year (metric tons CO2e)

9266

### Emissions calculation methodology

Other, please specify (World Resources Institute (2015). GHG protocol tool for mobile combustions. Version 2.6.)

### Percentage of emissions calculated using data obtained from suppliers or value chain partners

100

### Please explain

Data provided by business partners for air and vehicle miles.

## Employee commuting

### Evaluation status

Relevant, calculated

### Emissions in reporting year (metric tons CO2e)

199333

### Emissions calculation methodology

Average data method

Other, please specify (World Resources Institute (2015). GHG protocol tool for mobile combustions. Version 2.6. Watershed. The climate impact of hybrid workplaces calculator.)

### Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

### Please explain

In 2021, due to the on-going COVID-19 pandemic, approximately 18,000 desk/office based employees of WM's 48,500 total employees worked from home for approximately 6 months. The Watershed climate impact of hybrid workplaces calculator was utilized to estimate emissions associated with employee telework. For the remaining 30,500 essential employees continuing to report to WM facilities, WM utilized the WRI Transport tool to calculate the emissions associated with this commuting. WM employee commuting and teleworking resulted in 199,333 MTCO2e. This is an expected increase from 2020 when employee commuting resulted in 177,563 MTCO2e, based on the total employee count of 48,500 and the return to office initiatives.

## Upstream leased assets

### Evaluation status

Relevant, calculated

### Emissions in reporting year (metric tons CO2e)

7918

### Emissions calculation methodology

Average data method

Other, please specify (CARBON FOOTPRINT Country Specific Electricity Grid GHG Emissions Factors)

### Percentage of emissions calculated using data obtained from suppliers or value chain partners

100

### Please explain

Electricity usage gathered from Real Estate Dept. for leased sites in India.

## Downstream transportation and distribution

### Evaluation status

Relevant, calculated

### Emissions in reporting year (metric tons CO2e)

62668

### Emissions calculation methodology

Distance-based method

### Percentage of emissions calculated using data obtained from suppliers or value chain partners

100

### Please explain

Third-party transportation data is collected and cross-referenced with the supply chain to determine tonnage transported and mileage travelled. WM assumes a typical transport vehicle to be a Kenworth T800 which we conservatively estimate at 5.5 miles per gallon and the average vehicle age to be approximately 2015 – 2017.

## Processing of sold products

### Evaluation status

Not relevant, explanation provided

### Emissions in reporting year (metric tons CO<sub>2</sub>e)

<Not Applicable>

### Emissions calculation methodology

<Not Applicable>

### Percentage of emissions calculated using data obtained from suppliers or value chain partners

<Not Applicable>

### Please explain

The products we sell result in negative lifecycle emissions and are therefore excluded from our inventory, as per Greenhouse Gas Protocol's Corporate Value Chain (Scope 3) Accounting and Reporting Standard.

## Use of sold products

### Evaluation status

Relevant, calculated

### Emissions in reporting year (metric tons CO<sub>2</sub>e)

823

### Emissions calculation methodology

Fuel-based method

### Percentage of emissions calculated using data obtained from suppliers or value chain partners

100

### Please explain

At more than half of our landfills, WM creates economic and environmental value by turning landfill gas into energy. As organic material decomposes in an anaerobic environment, it naturally produces landfill gas, which is roughly half carbon dioxide and half methane. At our landfill gas-to-energy (LFGTE) facilities, we capture this methane and use it beneficially as an alternative to fossil fuel. Emissions associated with LFGTE sold to third-parties are calculated and reported as biogenic emissions and can be found in C6.7a.

## End of life treatment of sold products

### Evaluation status

Not relevant, explanation provided

### Emissions in reporting year (metric tons CO<sub>2</sub>e)

<Not Applicable>

### Emissions calculation methodology

<Not Applicable>

### Percentage of emissions calculated using data obtained from suppliers or value chain partners

<Not Applicable>

### Please explain

Per Greenhouse Gas Protocol's Corporate Value Chain (Scope 3) Accounting and Reporting Standard, this category boundary is scope 1 and 2 emissions of waste management companies that occur during disposal or treatment of sold products. As the waste management company offering this service, these emissions are accounted for in WM's Scope 1 and 2 emissions accounting.

## Downstream leased assets

### Evaluation status

Relevant, calculated

### Emissions in reporting year (metric tons CO<sub>2</sub>e)

1163

### Emissions calculation methodology

Average data method

### Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

### Please explain

Based on the GHG Protocol, Technical Guidance for Calculating Scope 3 Emissions, average consumption per square foot is calculated using the EIA's average consumption per square foot in kilowatt hours and eGRID's state-level EF for purchased electricity, currently eGRID 2019 (February 2021) for US sites, and the province-level Emissions Factors listed in the National Inventory Report (NIR2018) released in 2020 for Canadian sites.

## Franchises

### Evaluation status

Not relevant, explanation provided

### Emissions in reporting year (metric tons CO<sub>2</sub>e)

<Not Applicable>

### Emissions calculation methodology

<Not Applicable>

### Percentage of emissions calculated using data obtained from suppliers or value chain partners

<Not Applicable>

### Please explain

WM does not have franchised operations.

**Investments**

**Evaluation status**

Relevant, calculated

**Emissions in reporting year (metric tons CO2e)**

1108

**Emissions calculation methodology**

Average data method

**Percentage of emissions calculated using data obtained from suppliers or value chain partners**

0

**Please explain**

WM investments is calculated using the average-data method for calculating emissions from equity investments.

**Other (upstream)**

**Evaluation status**

**Emissions in reporting year (metric tons CO2e)**

<Not Applicable>

**Emissions calculation methodology**

<Not Applicable>

**Percentage of emissions calculated using data obtained from suppliers or value chain partners**

<Not Applicable>

**Please explain**

**Other (downstream)**

**Evaluation status**

**Emissions in reporting year (metric tons CO2e)**

<Not Applicable>

**Emissions calculation methodology**

<Not Applicable>

**Percentage of emissions calculated using data obtained from suppliers or value chain partners**

<Not Applicable>

**Please explain**

C6.7

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**(C6.7) Are carbon dioxide emissions from biogenic carbon relevant to your organization?**

Yes

C6.7a

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**(C6.7a) Provide the emissions from biogenic carbon relevant to your organization in metric tons CO2.**

	CO2 emissions from biogenic carbon (metric tons CO2)	Comment
Row 1	14115791	Scope 1 biogenic emissions from landfills (12,969,522) . Scope 3 biogenic emissions from third-party LFGTE (1,146,269).

C6.10

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**(C6.10) Describe your gross global combined Scope 1 and 2 emissions for the reporting year in metric tons CO2e per unit currency total revenue and provide any additional intensity metrics that are appropriate to your business operations.**

**Intensity figure**

0.00096

**Metric numerator (Gross global combined Scope 1 and 2 emissions, metric tons CO2e)**

17158208

**Metric denominator**

unit total revenue

**Metric denominator: Unit total**

17931000000

**Scope 2 figure used**

Market-based

**% change from previous year**

10.8

**Direction of change**

Decreased

**Reason for change**

In 2021, WM collected 10% more total waste and saw an increase in revenue of 17.8%, as compared to 2020. Despite the processing of additional wastes, the carbon intensity of WM (Additive of Scope 1 + Scope 2) decreased from 0.127 to 0.122 MTCO2e/MT waste collected (on a revenue basis – decreases from 0.00107 to 0.00096 MTCO2e/USD). Noting that 76.4% of WM's 2021 carbon emissions are biogenic, the primary drivers for the reduction in carbon intensity from 2020 to 2021 include the following: 1. Significant investment in recycling collected waste which displaces carbon that would otherwise be generated via landfill decomposition; 2. Increased the total material recycled by an additional 2% from 2020 to 2021; 3. Investment in landfill gas-to-energy (LFGTE) facilities, where methane from waste decomposition is captured and used as a fossil-fuel alternative power source; and, 4. Continued conversion of our conventional fleet to alternative fuel vehicles to lower emissions, primarily using Renewable Natural Gas (RNG) from landfills and dairy farms instead of diesel fuel.

**C7. Emissions breakdowns**

**C7.1**

**(C7.1) Does your organization break down its Scope 1 emissions by greenhouse gas type?**

Yes

**C7.1a**

**(C7.1a) Break down your total gross global Scope 1 emissions by greenhouse gas type and provide the source of each used greenhouse warming potential (GWP).**

Greenhouse gas	Scope 1 emissions (metric tons of CO2e)	GWP Reference
CO2	1588864.9	IPCC Fourth Assessment Report (AR4 - 100 year)
CH4	15328019.5	IPCC Fourth Assessment Report (AR4 - 100 year)
N2O	10394.4	IPCC Fourth Assessment Report (AR4 - 100 year)
HFCs	48044.3	IPCC Fourth Assessment Report (AR4 - 100 year)

**C7.2**

**(C7.2) Break down your total gross global Scope 1 emissions by country/region.**

Country/Region	Scope 1 emissions (metric tons CO2e)
United States of America	15866115
Canada	1109208

**C7.3**

**(C7.3) Indicate which gross global Scope 1 emissions breakdowns you are able to provide.**

By business division

**C7.3a**

**(C7.3a) Break down your total gross global Scope 1 emissions by business division.**

Business division	Scope 1 emissions (metric ton CO2e)
Corporate Office	3182
Inactive or Closed Sites	853676.5
WM of Mid South	959544.2
WM of Florida	705192.6
WM of Four Corners	1098863.9
WM of Greater Mid Atlantic	376258.4
WM of Gulf Coast	717835.9
WM of Heartland	1488898.4
WM of Great Lakes	1806685.6
WM of New England	729384.4
WM of Northern California and Nevada	517024.5
WM of Pacific Northwest British Columbia	402228.9
WM of South Atlantic	1100050.9
WM of Southern California	569785.9
WM of Texas Oklahoma	2256074.4
WM of Upper Midwest	762570.5
WM of Capitol Area	1448502.6
WM SBS	888
WM of Canada	1109208.1
Venturing and New Products (Investments and Other Business)	1634
Energy and Environmental Services	847.7
WM Renewable Energy	66984.2

**C7.5**

**(C7.5) Break down your total gross global Scope 2 emissions by country/region.**

Country/Region	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)
United States of America	253950	182885
Canada	3238	0

**C7.6**

**(C7.6) Indicate which gross global Scope 2 emissions breakdowns you are able to provide.**

By business division

**C7.6a**

**(C7.6a) Break down your total gross global Scope 2 emissions by business division.**

Business division	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)
Corporate Office	2455.4	2455.4
Inactive or Closed Sites	4908.5	4908.5
WM of Mid South	8846.7	0
WM of Florida	16346.9	16346.9
WM of Four Corners	13850.7	13850.7
WM of Greater Mid Atlantic	20503.4	20503.4
WM of Gulf Coast	11521.5	11521.5
WM of Heartland	25246	15615
WM of Great Lakes	22006.3	20938.8
WM of New England	6920.9	6920.9
WM of Northern California and Nevada	3966.3	3966.3
WM of Pacific Northwest British Columbia	9937.2	9937.2
WM of South Atlantic	8879.8	0
WM of Southern California	7732.8	7732.8
WM of Texas Oklahoma	12376.7	12376.7
WM of Upper Midwest	19232.2	0
WM of Capital Area	21245.9	21245.9
WM SBS	59.8	59.8
WM of Canada	2713.6	2713.6
Venturing and New Products (Investments and Other Business)	398.3	398.3
Energy and Environmental Services	127.3	127.3
WM Renewable Energy	37911.3	11265.6

**C7.9**

**(C7.9) How do your gross global emissions (Scope 1 and 2 combined) for the reporting year compare to those of the previous reporting year?**

Increased

**C7.9a**

**(C7.9a) Identify the reasons for any change in your gross global emissions (Scope 1 and 2 combined), and for each of them specify how your emissions compare to the previous year.**

	Change in emissions (metric tons CO2e)	Direction of change	Emissions value (percentage)	Please explain calculation
Change in renewable energy consumption	7668.5	Decreased	13	For the last decade, WM has invested in converting our conventional fleet to alternative fuel vehicles to lower emissions, primarily using Renewable Natural Gas (RNG) from landfills and dairy farms instead of diesel fuel. These are included in C6.7a as emissions from biogenic carbon relevant to the organization. WM's gross RNG consumption decreased from 59,023,879 gallons in 2020 to 51,770,730 gallons in 2021, resulting in 291,350.7 MTCO2e and 255,952.0 MTCO2e respectively. The decrease in emissions is realized due to a decrease in fuel consumption. However, for every diesel truck we replace with natural gas, we reduce our use of diesel fuel and resulting greenhouse gas emissions. This is equivalent to a 17% emissions reduction per truck, using an emission factor of 10.2 kg CO2/ gallon diesel. If this volume of fuel was diesel instead of RNG, the equivalent emissions would be 350,467.4 MTCO2e in 2020 and 307,400.2 MTCO2e in 2021. The result of our conversion from diesel vehicles to RNG reduced our emissions 59,116.7 MTCO2e in 2020 and 51,448.2 MTCO2e in 2021. $(59,116.7 \text{ MTCO2e} - 51,448.2 \text{ MTCO2e}) / 59,116.7 \text{ MTCO2e} = -13.0\%$
Other emissions reduction activities	347366	Decreased	1.1	One of WM's largest vehicles for GHG reduction potential is realized through recycling and composting. In 2021, WM's recycling activities resulted in 28.1 million metric tonnes of displaced CO2e which would have otherwise been routed to landfill; this is approximately on par with 2020 where 28.5 million metric tonnes of CO2e were displaced. Additionally, in 2021, WM continued to invest in landfill gas-to-energy (LFGTE) facilities, where methane from waste decomposition is captured and used as a fossil-fuel alternative power source. The implementation of this technology, displaces WM's footprint - an estimated 2.16 million metric tonnes CO2e displaced in 2021 (compared to 2.01 million metric tonnes CO2e displaced in 2020). The sum of these two activities equals the total CO2e displaced (or reduced) from 2021 and 2020 $(2021: 28.06 + 2.16 = 30.2 \text{ million MTCO2e compared to } 2020: 28.5 + 2.01 = 30.6 \text{ million MTCO2e } (-1\% \text{ change from } 2020 \text{ to } 2021).$
Divestment	60060	Decreased	100	Emissions resulting from divested interests account for a reduction of 60,060 MTCO2e in 2021. This equates to a 100% change due to divestment as activities divested no longer occur.
Acquisitions	699902	Increased	194.9	WM completed the acquisition of Advanced Disposal Services (ADS) on October 30, 2020. Emissions associated with the acquired landfills equated to 359,037 MTCO2e for the 62 days of WM ownership in 2020. In 2021, the acquired landfills equated to 1,058,939 MTCO2e for the full 2021 calendar year. $(1,058,939 \text{ MTCO2e} - 359,037 \text{ MTCO2e}) / 359,037 \text{ MTCO2e} = 194.9\%$
Mergers		<Not Applicable >		Not applicable during 2021
Change in output	838837	Increased	5.1	Overall in 2021, WM collected 10% more total waste as compared to 2020. In 2021, WM acquired 24 landfills and divested 2 (netting 18 landfills) as a result of the Advanced Disposal Services (ADS) Acquisition which is detailed in the Acquisitions section of this table (699,902 MTCO2e of difference). Despite the processing of additional wastes, the carbon intensity of WM (Additive of Scope 1 + Scope 2) decreased from 0.127 to 0.122 MTCO2e/MT waste collected. Our total Scope 1 plus Scope 2 emissions includes biogenic emissions. The difference between 16,319,371 MTCO2e (S1+S2 for 2020) and 17,158,208 MTCO2e (S1+S2 for 2021) equates to a 5.1% increase.
Change in methodology	129673	Decreased	10	1. In 2021, WM updated our Scope 2 accounting methodology to break out location-based and market-based electricity consumption. This change equates to a reduction of 53,266 MTCO2e. $236,151 \text{ MTCO2e (2020)} - 182,885 \text{ MTCO2e (2021)} = 53,266 \text{ MTCO2e (equals } 22.6\% \text{ decrease)}$ . 2. In 2021, WM refined input data to an emissions model which equated to a change in emissions of -76,407 MTCO2e. $1,064,404 \text{ MTCO2e (2020)} - 987,997 \text{ MTCO2e (2021)} = 76,407 \text{ MTCO2e (equals } 7.2\% \text{ decrease)}$ . Overall, change is determined as follows: $[236,151 + 1,064,404 \text{ MTCO2e (equals } 1,300,555 \text{ MTCO2e for } 2020)] - [182,885 + 987,997 \text{ MTCO2e (equals } 1,170,882 \text{ MTCO2e for } 2021)] = -129,673 \text{ MTCO2e which equals a change in emissions of } -10\%$ .
Change in boundary	15202.6	Decreased	19	In 2021, WM corrected the accounting for a landfill that was included in the 2020 inventory, but correctly reclassified the site as out of scope/out of boundary for 2021. This change equates to a reduction of 15,203 MTCO2e. $79,955 \text{ MTCO2e (2020)} - 64,752 \text{ MTCO2e (2021)} = 15,203 \text{ MTCO2e (equals } 19\% \text{ decrease)}$ .
Change in physical operating conditions	33991	Decreased	9.7	WM's total stationary energy use resulted in 316,509 MTCO2e in 2021. This was approximately a 9.7% decrease from 2020 emissions of 350,500 MTCO2e. Total energy usage includes purchase electricity and heating fuels, including propane, natural gas, used oil, kerosene, acetylene and distillate fuel oil No. 2. $(316,509 - 350,500 \text{ MTCO2e}) / 350,500 = -9.7\%$
Unidentified		<Not Applicable >		Not applicable for 2021
Other		<Not Applicable >		Not applicable for 2021

**C7.9b**

**(C7.9b) Are your emissions performance calculations in C7.9 and C7.9a based on a location-based Scope 2 emissions figure or a market-based Scope 2 emissions figure?**

Market-based

**C8. Energy**

**C8.1**

**(C8.1) What percentage of your total operational spend in the reporting year was on energy?**

More than 5% but less than or equal to 10%

**C8.2**

**(C8.2) Select which energy-related activities your organization has undertaken.**

	Indicate whether your organization undertook this energy-related activity in the reporting year
Consumption of fuel (excluding feedstocks)	Yes
Consumption of purchased or acquired electricity	Yes
Consumption of purchased or acquired heat	No
Consumption of purchased or acquired steam	No
Consumption of purchased or acquired cooling	No
Generation of electricity, heat, steam, or cooling	Yes

**C8.2a**

**(C8.2a) Report your organization's energy consumption totals (excluding feedstocks) in MWh.**

	Heating value	MWh from renewable sources	MWh from non-renewable sources	Total (renewable and non-renewable) MWh
Consumption of fuel (excluding feedstock)	Unable to confirm heating value	1763896	7389804	9153700
Consumption of purchased or acquired electricity	<Not Applicable>	188542	502594	691136
Consumption of purchased or acquired heat	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Consumption of purchased or acquired steam	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Consumption of purchased or acquired cooling	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Consumption of self-generated non-fuel renewable energy	<Not Applicable>	0	<Not Applicable>	0
Total energy consumption	<Not Applicable>	1952438	7892398	9844836

**C8.2b**

**(C8.2b) Select the applications of your organization's consumption of fuel.**

	Indicate whether your organization undertakes this fuel application
Consumption of fuel for the generation of electricity	No
Consumption of fuel for the generation of heat	Yes
Consumption of fuel for the generation of steam	No
Consumption of fuel for the generation of cooling	No
Consumption of fuel for co-generation or tri-generation	No

**C8.2c**

**(C8.2c) State how much fuel in MWh your organization has consumed (excluding feedstocks) by fuel type.**

**Sustainable biomass**

**Heating value**

**Total fuel MWh consumed by the organization**

**MWh fuel consumed for self-generation of electricity**

<Not Applicable>

**MWh fuel consumed for self-generation of heat**

<Not Applicable>

**MWh fuel consumed for self-generation of steam**

<Not Applicable>

**MWh fuel consumed for self-generation of cooling**

<Not Applicable>

**MWh fuel consumed for self- cogeneration or self-trigeneration**

<Not Applicable>

**Comment**



**Other biomass**

**Heating value**

Please select

**Total fuel MWh consumed by the organization**

**MWh fuel consumed for self-generation of electricity**

<Not Applicable>

**MWh fuel consumed for self-generation of heat**

<Not Applicable>

**MWh fuel consumed for self-generation of steam**

<Not Applicable>

**MWh fuel consumed for self-generation of cooling**

<Not Applicable>

**MWh fuel consumed for self- cogeneration or self-trigeneration**

<Not Applicable>

**Comment**

**Other renewable fuels (e.g. renewable hydrogen)**

**Heating value**

Unable to confirm heating value

**Total fuel MWh consumed by the organization**

1763896

**MWh fuel consumed for self-generation of electricity**

<Not Applicable>

**MWh fuel consumed for self-generation of heat**

<Not Applicable>

**MWh fuel consumed for self-generation of steam**

<Not Applicable>

**MWh fuel consumed for self-generation of cooling**

<Not Applicable>

**MWh fuel consumed for self- cogeneration or self-trigeneration**

<Not Applicable>

**Comment**

Renewable CNG from landfill gas, Renewable LNG from landfill gas, and biodiesel. Landfill gas is recognized by the US EPA as a renewable energy resource.

**Coal**

**Heating value**

**Total fuel MWh consumed by the organization**

**MWh fuel consumed for self-generation of electricity**

<Not Applicable>

**MWh fuel consumed for self-generation of heat**

<Not Applicable>

**MWh fuel consumed for self-generation of steam**

<Not Applicable>

**MWh fuel consumed for self-generation of cooling**

<Not Applicable>

**MWh fuel consumed for self- cogeneration or self-trigeneration**

<Not Applicable>

**Comment**

## Oil

### Heating value

Unable to confirm heating value

### Total fuel MWh consumed by the organization

4150430

### MWh fuel consumed for self-generation of electricity

<Not Applicable>

### MWh fuel consumed for self-generation of heat

<Not Applicable>

### MWh fuel consumed for self-generation of steam

<Not Applicable>

### MWh fuel consumed for self-generation of cooling

<Not Applicable>

### MWh fuel consumed for self- cogeneration or self-trigeneration

<Not Applicable>

### Comment

Diesel, Gasoline, Jet Fuel, Kerosene, Used Oil

## Gas

### Heating value

Unable to confirm heating value

### Total fuel MWh consumed by the organization

2669415

### MWh fuel consumed for self-generation of electricity

<Not Applicable>

### MWh fuel consumed for self-generation of heat

<Not Applicable>

### MWh fuel consumed for self-generation of steam

<Not Applicable>

### MWh fuel consumed for self-generation of cooling

<Not Applicable>

### MWh fuel consumed for self- cogeneration or self-trigeneration

<Not Applicable>

### Comment

Natural Gas, CNG, LNG, Acetylene, and Propane

## Other non-renewable fuels (e.g. non-renewable hydrogen)

### Heating value

Unable to confirm heating value

### Total fuel MWh consumed by the organization

569958

### MWh fuel consumed for self-generation of electricity

<Not Applicable>

### MWh fuel consumed for self-generation of heat

<Not Applicable>

### MWh fuel consumed for self-generation of steam

<Not Applicable>

### MWh fuel consumed for self-generation of cooling

<Not Applicable>

### MWh fuel consumed for self- cogeneration or self-trigeneration

<Not Applicable>

### Comment

Methanol and Non-renewable biodiesel

**Total fuel**

**Heating value**

**Total fuel MWh consumed by the organization**  
9153700

**MWh fuel consumed for self-generation of electricity**  
<Not Applicable>

**MWh fuel consumed for self-generation of heat**  
<Not Applicable>

**MWh fuel consumed for self-generation of steam**  
<Not Applicable>

**MWh fuel consumed for self-generation of cooling**  
<Not Applicable>

**MWh fuel consumed for self- cogeneration or self-trigeneration**  
<Not Applicable>

**Comment**

**C8.2d**

**(C8.2d) Provide details on the electricity, heat, steam, and cooling your organization has generated and consumed in the reporting year.**

	Total Gross generation (MWh)	Generation that is consumed by the organization (MWh)	Gross generation from renewable sources (MWh)	Generation from renewable sources that is consumed by the organization (MWh)
Electricity	3490041	188542	3490041	188542
Heat	0	0	0	0
Steam	0	0	0	0
Cooling	0	0	0	0

**C8.2e**

**(C8.2e) Provide details on the electricity, heat, steam, and/or cooling amounts that were accounted for at a zero or near-zero emission factor in the market-based Scope 2 figure reported in C6.3.**

**Sourcing method**

Unbundled energy attribute certificates (EACs) purchase

**Energy carrier**

Electricity

**Low-carbon technology type**

Renewable energy mix, please specify (Landfill Gas)

**Country/area of low-carbon energy consumption**

United States of America

**Tracking instrument used**

US-REC

**Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)**

2509

**Country/area of origin (generation) of the low-carbon energy or energy attribute**

United States of America

**Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)**

1992

**Comment**

Landfill gas is recognized by the US EPA as a renewable energy resource.

**Sourcing method**

Unbundled energy attribute certificates (EACs) purchase

**Energy carrier**

Electricity

**Low-carbon technology type**

Renewable energy mix, please specify (Landfill gas)

**Country/area of low-carbon energy consumption**

United States of America

**Tracking instrument used**

US-REC

**Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)**

26146

**Country/area of origin (generation) of the low-carbon energy or energy attribute**

United States of America

**Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)**

2006

**Comment**

Landfill gas is recognized by the US EPA as a renewable energy resource.

---

**Sourcing method**

Unbundled energy attribute certificates (EACs) purchase

**Energy carrier**

Electricity

**Low-carbon technology type**

Renewable energy mix, please specify (Landfill gas)

**Country/area of low-carbon energy consumption**

United States of America

**Tracking instrument used**

US-REC

**Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)**

15654

**Country/area of origin (generation) of the low-carbon energy or energy attribute**

United States of America

**Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)**

1989

**Comment**

Landfill gas is recognized by the US EPA as a renewable energy resource.

---

**Sourcing method**

Unbundled energy attribute certificates (EACs) purchase

**Energy carrier**

Electricity

**Low-carbon technology type**

Renewable energy mix, please specify (Landfill gas)

**Country/area of low-carbon energy consumption**

United States of America

**Tracking instrument used**

US-REC

**Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)**

47430

**Country/area of origin (generation) of the low-carbon energy or energy attribute**

United States of America

**Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)**

2009

**Comment**

Landfill gas is recognized by the US EPA as a renewable energy resource.

---

**Sourcing method**

Unbundled energy attribute certificates (EACs) purchase

**Energy carrier**

Electricity

**Low-carbon technology type**

Renewable energy mix, please specify (Landfill gas)

**Country/area of low-carbon energy consumption**

United States of America

**Tracking instrument used**

US-REC

**Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)**

22269

**Country/area of origin (generation) of the low-carbon energy or energy attribute**

United States Virgin Islands

**Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)**

2002

**Comment**

Landfill gas is recognized by the US EPA as a renewable energy resource.

---

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**Sourcing method**

Unbundled energy attribute certificates (EACs) purchase

**Energy carrier**

Electricity

**Low-carbon technology type**

Renewable energy mix, please specify (Landfill gas)

**Country/area of low-carbon energy consumption**

United States of America

**Tracking instrument used**

US-REC

**Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)**

22507

**Country/area of origin (generation) of the low-carbon energy or energy attribute**

United States of America

**Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)**

2008

**Comment**

Landfill gas is recognized by the US EPA as a renewable energy resource.

---

**Sourcing method**

Unbundled energy attribute certificates (EACs) purchase

**Energy carrier**

Electricity

**Low-carbon technology type**

Renewable energy mix, please specify (Landfill gas)

**Country/area of low-carbon energy consumption**

United States of America

**Tracking instrument used**

US-REC

**Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)**

31264

**Country/area of origin (generation) of the low-carbon energy or energy attribute**

United States of America

**Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)**

2010

**Comment**

Landfill gas is recognized by the US EPA as a renewable energy resource. Additionally, the originating facility of these RECs is recognized in Argonne National Laboratory's Renewable Natural Gas Database <https://www.anl.gov/es/reference/renewable-natural-gas-database>.

---

**Sourcing method**

Unbundled energy attribute certificates (EACs) purchase

**Energy carrier**

Electricity

**Low-carbon technology type**

Renewable energy mix, please specify (Landfill gas)

**Country/area of low-carbon energy consumption**

United States of America

**Tracking instrument used**

US-REC

**Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)**

20763

**Country/area of origin (generation) of the low-carbon energy or energy attribute**

United States of America

**Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)**

2006

**Comment**

Landfill gas is recognized by the US EPA as a renewable energy resource.

---

C8.2g

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**(C8.2g) Provide a breakdown of your non-fuel energy consumption by country.**

**Country/area**

United States of America

**Consumption of electricity (MWh)**

658425

**Consumption of heat, steam, and cooling (MWh)**

0

**Total non-fuel energy consumption (MWh) [Auto-calculated]**

658425

**Is this consumption excluded from your RE100 commitment?**

<Not Applicable>

---

**Country/area**

Canada

**Consumption of electricity (MWh)**

32711

**Consumption of heat, steam, and cooling (MWh)**

0

**Total non-fuel energy consumption (MWh) [Auto-calculated]**

32711

**Is this consumption excluded from your RE100 commitment?**

<Not Applicable>

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**C9. Additional metrics**

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**C9.1**

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**(C9.1) Provide any additional climate-related metrics relevant to your business.**

**C10. Verification**

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**C10.1**

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**(C10.1) Indicate the verification/assurance status that applies to your reported emissions.**

	Verification/assurance status
Scope 1	Third-party verification or assurance process in place
Scope 2 (location-based or market-based)	Third-party verification or assurance process in place
Scope 3	Third-party verification or assurance process in place

**C10.1a**

---

(C10.1a) Provide further details of the verification/assurance undertaken for your Scope 1 emissions, and attach the relevant statements.

**Verification or assurance cycle in place**

Annual process

**Status in the current reporting year**

Complete

**Type of verification or assurance**

Limited assurance

**Attach the statement**

RY2021WM Assurance Statement 23June 2022 Final.pdf

**Page/ section reference**

1-3

**Relevant standard**

ISO14064-3

**Proportion of reported emissions verified (%)**

100

---

### C10.1b

---

(C10.1b) Provide further details of the verification/assurance undertaken for your Scope 2 emissions and attach the relevant statements.

**Scope 2 approach**

Scope 2 location-based

**Verification or assurance cycle in place**

Annual process

**Status in the current reporting year**

Complete

**Type of verification or assurance**

Limited assurance

**Attach the statement**

RY2021WM Assurance Statement 23June 2022 Final.pdf

**Page/ section reference**

1-3

**Relevant standard**

ISO14064-3

**Proportion of reported emissions verified (%)**

100

---

**Scope 2 approach**

Scope 2 market-based

**Verification or assurance cycle in place**

Annual process

**Status in the current reporting year**

Complete

**Type of verification or assurance**

Limited assurance

**Attach the statement**

RY2021WM Assurance Statement 23June 2022 Final.pdf

**Page/ section reference**

1-3

**Relevant standard**

ISO14064-3

**Proportion of reported emissions verified (%)**

100

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### C10.1c

---

(C10.1c) Provide further details of the verification/assurance undertaken for your Scope 3 emissions and attach the relevant statements.

**Scope 3 category**

Scope 3: Purchased goods and services

**Verification or assurance cycle in place**

Annual process

---

**Status in the current reporting year**

Complete

**Type of verification or assurance**

Limited assurance

**Attach the statement**

RY2021WM Assurance Statement 23June 2022 Final.pdf

**Page/section reference**

1-3

**Relevant standard**

ISO14064-3

**Proportion of reported emissions verified (%)**

100

---

**Scope 3 category**

Scope 3: Capital goods

**Verification or assurance cycle in place**

Annual process

**Status in the current reporting year**

Complete

**Type of verification or assurance**

Limited assurance

**Attach the statement**

RY2021WM Assurance Statement 23June 2022 Final.pdf

**Page/section reference**

1-3

**Relevant standard**

ISO14064-3

**Proportion of reported emissions verified (%)**

100

---

**Scope 3 category**

Scope 3: Fuel and energy-related activities (not included in Scopes 1 or 2)

**Verification or assurance cycle in place**

Annual process

**Status in the current reporting year**

Complete

**Type of verification or assurance**

Limited assurance

**Attach the statement**

RY2021WM Assurance Statement 23June 2022 Final.pdf

**Page/section reference**

1-3

**Relevant standard**

ISO14064-3

**Proportion of reported emissions verified (%)**

100

---

**Scope 3 category**

Scope 3: Business travel

**Verification or assurance cycle in place**

Annual process

**Status in the current reporting year**

Complete

**Type of verification or assurance**

Limited assurance

**Attach the statement**

RY2021WM Assurance Statement 23June 2022 Final.pdf

**Page/section reference**

1-3

**Relevant standard**

ISO14064-3

**Proportion of reported emissions verified (%)**

100

---



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**Scope 3 category**

Scope 3: Employee commuting

**Verification or assurance cycle in place**

Annual process

**Status in the current reporting year**

Complete

**Type of verification or assurance**

Limited assurance

**Attach the statement**

RY2021WM Assurance Statement 23June 2022 Final.pdf

**Page/section reference**

1-3

**Relevant standard**

ISO14064-3

**Proportion of reported emissions verified (%)**

100

---

**Scope 3 category**

Scope 3: Upstream leased assets

**Verification or assurance cycle in place**

Annual process

**Status in the current reporting year**

Complete

**Type of verification or assurance**

Limited assurance

**Attach the statement**

RY2021WM Assurance Statement 23June 2022 Final.pdf

**Page/section reference**

1-3

**Relevant standard**

ISO14064-3

**Proportion of reported emissions verified (%)**

100

---

**Scope 3 category**

Scope 3: Investments

**Verification or assurance cycle in place**

Annual process

**Status in the current reporting year**

Complete

**Type of verification or assurance**

Limited assurance

**Attach the statement**

RY2021WM Assurance Statement 23June 2022 Final.pdf

**Page/section reference**

1-3

**Relevant standard**

ISO14064-3

**Proportion of reported emissions verified (%)**

100

---

**Scope 3 category**

Scope 3: Use of sold products

**Verification or assurance cycle in place**

Annual process

**Status in the current reporting year**

Complete

**Type of verification or assurance**

Limited assurance

**Attach the statement**

RY2021WM Assurance Statement 23June 2022 Final.pdf

**Page/section reference**

1-3

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**Relevant standard**

ISO14064-3

**Proportion of reported emissions verified (%)**

100

**Scope 3 category**

Scope 3: Downstream leased assets

**Verification or assurance cycle in place**

Annual process

**Status in the current reporting year**

Complete

**Type of verification or assurance**

Limited assurance

**Attach the statement**

RY2021WM Assurance Statement 23June 2022 Final.pdf

**Page/section reference**

1-3

**Relevant standard**

ISO14064-3

**Proportion of reported emissions verified (%)**

100

**C10.2****(C10.2) Do you verify any climate-related information reported in your CDP disclosure other than the emissions figures reported in C6.1, C6.3, and C6.5?**

Yes

**C10.2a****(C10.2a) Which data points within your CDP disclosure have been verified, and which verification standards were used?**

Disclosure module verification relates to	Data verified	Verification standard	Please explain
C11. Carbon pricing	Other, please specify	Verification of the West Edmonton Landfill in accordance with the requirements of the Carbon Competitiveness Incentive Regulation, conducted to a reasonable level of assurance, in accordance with ISO 14064-3 and with AEP's Technical Guidance for Greenhouse Gas Verification at Reasonable Level Assurance, Version 1.0 (AEP, 2013) and the Facility Verification Report Template.	The Alberta Carbon Competitiveness Incentive Regulation (CCIR) Program is a mandatory, carbon intensity based GHG reduction program in which WM's West Edmonton Landfill is currently engaged. WM elected to approach compliance aggressively, with the overall strategy of reducing emissions as much as possible. Instead of paying an emissions fee or buying offsets annually, WM installed a landfill gas collection and control system to reduce GHG emissions from the site. This approach has and continues to generate the benefit of excess, saleable allowances (EPCs) because the operation of the landfill gas collection system exceeds the requirements of the associated rule, and EPCs generated are verified and serialized under the Alberta CCIR Program during the reporting period. Verified emissions are scope 1 and verification is completed annually. More on our reporting to CCIR can be found in CDP sections 11.1b, 11.1d, and 11.2a. West Edmonton 2021 TIER Verification Report Final.pdf
C12. Engagement	Emissions reduction activities	Golf Environmental Organization - "GEO Certified" Sustainable Golf Tournament Certification	The 2021 WM Phoenix Open was "GEO Certified®" for the fifth year – the highest international award for sustainability in golf, awarded by Scotland-based Golf Environment Organization (GEO) Foundation. To become "GEO Certified" the WM Phoenix Open must complete a custom-built program for golf tournaments, including: document and evidence submission, a third-party verification carried out by the Council for Responsible Sport (the official verification body for GEO Certified Tournaments in North America), a thorough review by GEO, and agree to a range of Continual Improvement Points. The 2021 WMPO sustainability program details are available in the annual sustainability report. WM Phoenix Open 2021.pdf Certified Tournament Certificate - WM Phoenix Open 2021.pdf
C12. Engagement	Emissions reduction activities	UL Environment - Environmental Claims Validation - Zero Waste to Landfill Operations	For the ninth straight year, UL provided a third-party verification of the WM Phoenix Open's waste diversion. UL evaluated the procurement, on-course operations and the material diversion chain to verify the tournament's efforts, awarding the 2021 WMPO "100% landfill diversion rate with 11% incineration with energy recovery." The WM Phoenix Open maintained its status as the largest verified zero waste event in the world. WMPO-4789942830- ECV_Letter_Report.pdf WMPO- 4789942830- ECV_Letter_Report.pdf

**C11. Carbon pricing****C11.1****(C11.1) Are any of your operations or activities regulated by a carbon pricing system (i.e. ETS, Cap & Trade or Carbon Tax)?**

Yes

**C11.1a**

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**(C11.1a) Select the carbon pricing regulation(s) which impacts your operations.**

Alberta TIER - ETS

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**C11.1b**

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**(C11.1b) Complete the following table for each of the emissions trading schemes you are regulated by.**

**Alberta TIER - ETS**

**% of Scope 1 emissions covered by the ETS**

0.05

**% of Scope 2 emissions covered by the ETS**

0

**Period start date**

January 1 2021

**Period end date**

December 31 2021

**Allowances allocated**

27966

**Allowances purchased**

0

**Verified Scope 1 emissions in metric tons CO2e**

8217

**Verified Scope 2 emissions in metric tons CO2e**

0

**Details of ownership**

Facilities we own and operate

**Comment**

2021 allowances serialized and allocated by the regulatory agency. Calculated and third party verified 27,966. The facility is 100% WM of Canada Corporation. CY2021 credits have been serialized and issued by the agency but not yet certified due to processing delays related to COVID-19. We anticipate the agency will certify the 27,966 credits as they have in previous years. Purpose is Compliance, with additional voluntary reductions.

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**C11.1d**

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**(C11.1d) What is your strategy for complying with the systems you are regulated by or anticipate being regulated by?**

The 2020 Alberta TIER Program that replaced the 2019 CCIR Program is a mandatory, carbon intensity based GHG reduction program in which WM's West Edmonton Landfill is currently engaged. WM elected to approach compliance aggressively, with the overall strategy of reducing emissions as much as possible. Instead of paying an emissions fee or buying offsets annually, WM installed a landfill gas collection and control system to reduce GHG emissions from the site. This approach has and continues to generate the benefit of excess, saleable allowances (EPCs) because the operation of the landfill gas collection system exceeds the requirements of the associated rule. As for the carbon tax, the natural gas and propane fuel are used for comfort heating and flare start-up; we continue to evaluate opportunities to employ energy efficiency practices to reduce usage.

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**C11.2**

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**(C11.2) Has your organization originated or purchased any project-based carbon credits within the reporting period?**

No

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**C11.3**

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**(C11.3) Does your organization use an internal price on carbon?**

No, but we anticipate doing so in the next two years

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**C12. Engagement**

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**C12.1**

**(C12.1) Do you engage with your value chain on climate-related issues?**

- Yes, our suppliers
- Yes, our customers/clients
- Yes, other partners in the value chain

**C12.1a**

**(C12.1a) Provide details of your climate-related supplier engagement strategy.**

**Type of engagement**

Engagement & incentivization (changing supplier behavior)

**Details of engagement**

Climate change performance is featured in supplier awards scheme

**% of suppliers by number**

100

**% total procurement spend (direct and indirect)**

100

**% of supplier-related Scope 3 emissions as reported in C6.5**

100

**Rationale for the coverage of your engagement**

All ESG factors articulated in our Procurement Policy are considered essential balancing criteria and must be considered in supplier contract awards. There is no formal weighting template. All evaluations of potential suppliers for contract awards include a threshold for consideration that includes a sustainability component, which must be fully satisfied for eligibility for further consideration of other factors (e.g., cost, safety, on-time delivery, diversity status, payment terms). These are all part of our scorecard process and vary by project. Our supply chain management strategy identifies the top priorities as the best combination of: (1) Quality–Supply Chain ensures the service or equipment provided meet our criteria and standards. The evaluation of the deliverable is a team effort between Supply Chain and Operations. We ensure that any new sustainable products and services meet our current quality levels. (2) Sustainability–We work with suppliers who can help us deliver sustainable products and services and engage with suppliers on their sustainability programs and their environmental impact. We have included sustainability language in all contracts to stress its importance to WM. (3) Delivery–Completing the supply chain loop and ensuring the service and/or material is delivered on time at the agreed to price. (4) Cost–Supply Chain’s fundamental responsibility is to provide value to WM by working with over 44k suppliers to deliver high quality services/equipment. We work closely on the costing of sustainable products/services to maintain our current price point. (5) Service technology–Verify suppliers can efficiently and effectively satisfy our needs. (6) Risk Reduction–We have established a process to identify key risk factors and mitigation. In addition to those key corporate factors, we also focus on (7) Safety – We have a safety first culture and work closely with the operations team to verify and monitor that our suppliers are performing to the levels of our agreements. (8) Environmental Assessments – As we work with suppliers who can help us deliver sustainable projects, we also engage with suppliers on their sustainable programs and their impact on the environment. We have begun including sustainability language in all contracts to stress its importance to WM.

**Impact of engagement, including measures of success**

Compliance with the regulatory ESG standards is a mandatory threshold, with carbon footprint reduction initiatives considered along with sustainability, cost, risk and other factors. The WM Supply Chain team receives training on the Procurement Policy and Procedures when the procedures are updated and when new members join the team. In addition to evaluating sustainability in our supplier contract awards scheme, we are updating all of our contracts to include the following sustainability language by 2025: “WM has positioned itself as the leader in environmental services, developing strategies and implementing actions to reduce our overall impact on the environment. We encourage our suppliers to develop and participate in sustainability programs and engage their supply chain networks to be aware of our joint impact on the environment. We will support supplier’s efforts to cut waste, use recycled materials and maximize the use of their resources to help us meet our sustainability goals.” As a result of these initiatives, WM has a program to track sustainability projects in our project management portfolio which are documented in our Supply Chain Sustainability Dashboard. To be considered a sustainability project, the initiative must have a proven Environmental or Social benefit, such as material reduction, use of recycled content materials, reduce GHG emissions, etc. The first sustainability project was launched in 2020, with a goal of completing 500 by the end of 2025. We are well on our way to achieving that goal having worked on 248 sustainability projects.

**Comment**

**C12.1b**

**(C12.1b) Give details of your climate-related engagement strategy with your customers.**

**Type of engagement & Details of engagement**

Education/information sharing	Run an engagement campaign to educate customers about the climate change impacts of (using) your products, goods, and/or services
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**% of customers by number**

75

**% of customer - related Scope 3 emissions as reported in C6.5**

0

**Please explain the rationale for selecting this group of customers and scope of engagement**

75% of WM’s residential customers have recycling services. Along with these services, WM provides access to educational materials including a nationwide campaign, “Recycle Right”, which was developed to educate customers and the general public on proper recycling practices to maximize diversion and value. Recycle Right is a national research-based education and outreach program built on community-based social marketing strategies aimed at changing consumer behavior. See <https://www.wm.com/us/en/recycle-right>.

**Impact of engagement, including measures of success**

Foundational education and communication efforts focus on helping consumers recycle right and improve the quality of their recycling materials. In the last 4 years, we have seen reduced recycling contamination rates, which we consider to be a measure of success. This campaign has allowed WM to more efficiently capture and process recyclable materials. This results in increased volumes of recycling and avoided lifecycle emissions.

## C12.1d

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### **(C12.1d) Give details of your climate-related engagement strategy with other partners in the value chain.**

WM has been the title sponsor of Phoenix Open (WMPO) since 2010 which is owned and operated by The Thunderbirds. From the very beginning of the sponsorship, WM made a conscious decision to embed sustainability into the tournament despite having limited operational control. The key to success has been engaging the value chain partners, including The Thunderbirds, the PGA Tour, tournament vendors and the local community, to support the program. The WMPO is not only aligned with environmental sustainability, but has a large focus on community, through public awareness and education, charitable giving, safety, economics, through the tournament's impact on the local economy and overall experience.

In 2010, at the very first WMPO, the goal was simply to make the event zero waste, despite the more than 600,000 attendees over the course of the week. Since achieving that goal in 2012, the program evolved to include goals of carbon neutrality and water restoration. The success of these engagements is measured through year over year tracking against our goals and share these achievements in our sustainability report which highlights the tournaments impact on resources such as energy, water and waste we generate.

Achieving our ambitious goals requires engaging every level of the tournament value chain, from pre-event construction teams to on course food and beverage vendors. WM engages with every WMPO vendor and stakeholder months before they come on course via virtual meetings and e-mail correspondence. Once on course in the weeks or months leading up to the event, a WM representative checks in with every partner, from the beverage distributors to the broadcast team televising the event and every food service vendor. WM's Sustainability Service team also provides in-person sustainability training to thousands of staff and volunteers in the days leading up to and through the event.

In 2021, we tracked all event emissions, not only from WM operations and travel, but from all tournament stakeholders including golf carts, shuttle buses, lights, cooking, refrigeration, and travel (employees, players, volunteers, vendor staff and deliveries). WM offsets include Scope 1 GHG emissions as well as all Scope 3 emissions except for fan travel, including building materials, purchased goods, hospitality, and transportation for WM employees, event management, professional and amateur players, vendors, and volunteers. Additionally, we continue working to reduce operational emissions by purchasing 100% renewable electricity and generators that are not plugged into the grid and utilize biodiesel. For the last 10 years WM trucks used to haul tournament waste have run on compressed natural gas (CNG), which emits less GHG and particulate emissions than diesel. These results are leveraged to encourage stakeholders to further innovate and push sustainability at the WMPO, thereby cementing the nickname – The Greenest Show on Grass.

For more information on WMPO material, water, energy and greenhouse gas impacts, please see the 2021 WMPO Sustainability Report at <https://www.wm.com/us/en/inside-wm/phoenix-open/sustainability-report>.

## C12.2

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### **(C12.2) Do your suppliers have to meet climate-related requirements as part of your organization's purchasing process?**

Yes, climate-related requirements are included in our supplier contracts

## C12.2a

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### **(C12.2a) Provide details of the climate-related requirements that suppliers have to meet as part of your organization's purchasing process and the compliance mechanisms in place.**

#### **Climate-related requirement**

Complying with regulatory requirements

#### **Description of this climate related requirement**

We require suppliers to meet government mandated emission requirements. There are four categories that are impacted by these requirements: Landfill Flare, Fleet Trucks, Service Vehicles and Heavy Equipment. These four categories represent 20% of our overall spend and 100% compliance of the government mandated emission requirements.

#### **% suppliers by procurement spend that have to comply with this climate-related requirement**

20

#### **% suppliers by procurement spend in compliance with this climate-related requirement**

100

#### **Mechanisms for monitoring compliance with this climate-related requirement**

Certification

Supplier self-assessment

#### **Response to supplier non-compliance with this climate-related requirement**

Retain and engage

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**(C12.3) Does your organization engage in activities that could either directly or indirectly influence policy, law, or regulation that may impact the climate?****Row 1****Direct or indirect engagement that could influence policy, law, or regulation that may impact the climate**

Yes, we engage directly with policy makers

Yes, we engage indirectly through trade associations

Yes, we engage indirectly by funding other organizations whose activities may influence policy, law, or regulation that may significantly impact the climate

**Does your organization have a public commitment or position statement to conduct your engagement activities in line with the goals of the Paris Agreement?**

Yes

**Attach commitment or position statement(s)**

SBT Commitment Letter

SBT-Commitment-Letter.pdf

**Describe the process(es) your organization has in place to ensure that your engagement activities are consistent with your overall climate change strategy**

WM is committed to reducing absolute greenhouse gas emissions aligned with the Paris Agreement to limit global warming to 1.5°C and our plan to reduce Scope 1 and 2 absolute greenhouse gas emissions has been submitted to Science-based Target Initiative (SBTi) and is waiting for review and validation.

**Primary reason for not engaging in activities that could directly or indirectly influence policy, law, or regulation that may impact the climate**

<Not Applicable>

**Explain why your organization does not engage in activities that could directly or indirectly influence policy, law, or regulation that may impact the climate**

<Not Applicable>

## C12.3a

**(C12.3a) On what policy, law, or regulation that may impact the climate has your organization been engaging directly with policy makers in the reporting year?****Focus of policy, law, or regulation that may impact the climate**

Mandatory climate-related reporting

**Specify the policy, law, or regulation on which your organization is engaging with policy makers**

Provided expert review and advice on the Environmental Protection Agency's (EPA) draft Inventory of U.S. Greenhouse Gas Emissions and Sinks in 2021, as requested by the Agency.

**Policy, law, or regulation geographic coverage**

National

**Country/region the policy, law, or regulation applies to**

United States of America

**Your organization's position on the policy, law, or regulation**

Support with no exceptions

**Description of engagement with policy makers**

Support EPA in using best available data and protocols to establish accurate GHG inventories for industry sectors. We actively coordinate with the public and private landfill sector, landfill gas-to-energy project and equipment owners, academic and industry researchers, and EPA. WM has been working with EPA since 2012 on improving landfill methane emissions measurements processes, including emission reductions from landfill cover and landfill gas collection. EPA's latest reporting methodology, finalized in 2016, reflects enhancements for precise, site-specific methods that WM suggested as part of its advocacy with the agency. WM assisted EPA in enhancing the accuracy of its waste sector emissions in the most recent nationwide US GHG Inventory. With academic and industry researchers, WM continues to assist EPA in accurately characterizing waste disposed in landfills and the associated levels of methane generation.

**Details of exceptions (if applicable) and your organization's proposed alternative approach to the policy, law or regulation**

<Not Applicable>

**Have you evaluated whether your organization's engagement is aligned with the goals of the Paris Agreement?**

Yes, we have evaluated, and it is aligned

**Focus of policy, law, or regulation that may impact the climate**

Other, please specify (Clean transportation fuel)

**Specify the policy, law, or regulation on which your organization is engaging with policy makers**

The EPA Renewable Fuel Standard program

**Policy, law, or regulation geographic coverage**

National

**Country/region the policy, law, or regulation applies to**

United States of America

**Your organization's position on the policy, law, or regulation**

Support with no exceptions

**Description of engagement with policy makers**

WM has directly lobbied the U.S. Congress, and has worked closely with senior Administration officials, in support of incentivizing the production of renewable natural gas as cellulosic biofuel under EPA's Renewable Fuel Standard program. WM has developed four renewable fuels projects that produce cellulosic biofuel from landfill gas and is used in our collection fleet. We contract with other landfill owners and dairy farms to purchase additional renewable fuel to use in our vehicles. Use of renewable natural gas results in reduction of GHG and particulate emissions as compared to use of diesel fuel it replaces.

**Details of exceptions (if applicable) and your organization's proposed alternative approach to the policy, law or regulation**

<Not Applicable>

**Have you evaluated whether your organization's engagement is aligned with the goals of the Paris Agreement?**

Yes, we have evaluated, and it is aligned

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**Focus of policy, law, or regulation that may impact the climate**

Other, please specify (Phase 2 heavy-duty truck GHG Rule)

**Specify the policy, law, or regulation on which your organization is engaging with policy makers**

If finalized, the rule would reduce vehicle emissions standards. WM supports implementation of the heavy-duty truck standards as compatible with our transition to a natural gas fleet operating on Renewable Natural Gas.

**Policy, law, or regulation geographic coverage**

National

**Country/region the policy, law, or regulation applies to**

United States of America

**Your organization's position on the policy, law, or regulation**

Support with no exceptions

**Description of engagement with policy makers**

Other: Phase 2 heavy-Duty Truck GHG Rule -- WM engaged with EPA and Department of Transportation (DOT) providing technical information on our fleet and its operations and providing recommendations on ways to promote continued conversion of vehicles to renewable natural gas.

**Details of exceptions (if applicable) and your organization's proposed alternative approach to the policy, law or regulation**

<Not Applicable>

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**Have you evaluated whether your organization's engagement is aligned with the goals of the Paris Agreement?**

Yes, we have evaluated, and it is aligned

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**Focus of policy, law, or regulation that may impact the climate**

Low-carbon, non-renewable energy generation

**Specify the policy, law, or regulation on which your organization is engaging with policy makers**

Include in tax and/or energy legislation incentives for renewable energy and low-carbon fuel options.

**Policy, law, or regulation geographic coverage**

National

**Country/region the policy, law, or regulation applies to**

United States of America

**Your organization's position on the policy, law, or regulation**

Support with no exceptions

**Description of engagement with policy makers**

We continue to seek Congressional and regulatory support for tax incentives for renewable energy production based upon energy value and GHG reductions coordinating with other companies and trade associations to advocate before Congress and federal agencies on incentivizing the production of renewable energy, fuels and fueling infrastructure.

**Details of exceptions (if applicable) and your organization's proposed alternative approach to the policy, law or regulation**

<Not Applicable>

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**Have you evaluated whether your organization's engagement is aligned with the goals of the Paris Agreement?**

Yes, we have evaluated, and it is aligned

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**Focus of policy, law, or regulation that may impact the climate**

Renewable energy generation

**Specify the policy, law, or regulation on which your organization is engaging with policy makers**

State renewable energy incentives are essential means to address climate change by encouraging renewable, low carbon substitutes. Active coordination with other companies and trade associations to lobby state legislatures on incentivizing the production of renewable energy is vital to the transition to renewable fuel vehicles.

**Policy, law, or regulation geographic coverage**

National

**Country/region the policy, law, or regulation applies to**

United States of America

**Your organization's position on the policy, law, or regulation**

Support with no exceptions

**Description of engagement with policy makers**

State renewable energy incentives are essential means to address climate change by encouraging renewable, low carbon substitutes. We coordinate with other companies and trade associations focused on incentivizing the production of renewable energy and engage in direct lobbying of US Congress and advocacy before federal agencies.

**Details of exceptions (if applicable) and your organization's proposed alternative approach to the policy, law or regulation**

<Not Applicable>

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**Have you evaluated whether your organization's engagement is aligned with the goals of the Paris Agreement?**

Yes, we have evaluated, and it is aligned

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C12.3b

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(C12.3b) Provide details of the trade associations your organization engages with which are likely to take a position on any policy, law or regulation that may impact the climate.

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**Trade association**

National Association of Manufacturers

**Is your organization's position on climate change consistent with theirs?**

Mixed

**Has your organization influenced, or is your organization attempting to influence their position?**

We have already influenced them to change their position

**State the trade association's position on climate change, explain where your organization's position differs, and how you are attempting to influence their position (if applicable)**

We press to assure NAM advocacy includes support for renewable energy tax incentives, including those for our landfill gas to energy facilities, and for increased participation among landfills in carbon capture tax incentive programs. We have seen progress in their support for renewable energy in an "all of the above" strategy.

**Funding figure your organization provided to this trade association in the reporting year, if applicable (currency as selected in C0.4) (optional)****Describe the aim of your organization's funding**

<Not Applicable>

**Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?**

Yes, we have evaluated, and it is aligned

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**Trade association**

Other, please specify (Renewable Natural Gas (RNG) Coalition)

**Is your organization's position on climate change consistent with theirs?**

Consistent

**Has your organization influenced, or is your organization attempting to influence their position?**

We publicly promote their current position

**State the trade association's position on climate change, explain where your organization's position differs, and how you are attempting to influence their position (if applicable)**

Yes, as part of our Board membership we advocate in support of EPA's Renewable Fuel Standard Program and for federal and state incentives to produce and use renewable transportation fuel and renewable electricity. For example, we have worked closely with the RNG Coalition throughout 2021 to engage in dialogue with EPA to help ensure the stability of the market for renewable natural gas under the RFS.

**Funding figure your organization provided to this trade association in the reporting year, if applicable (currency as selected in C0.4) (optional)****Describe the aim of your organization's funding**

<Not Applicable>

**Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?**

Yes, we have evaluated, and it is aligned

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**Trade association**

Other, please specify (National Waste & Recycling Association (NWRA))

**Is your organization's position on climate change consistent with theirs?**

Consistent

**Has your organization influenced, or is your organization attempting to influence their position?**

We publicly promote their current position

**State the trade association's position on climate change, explain where your organization's position differs, and how you are attempting to influence their position (if applicable)**

WM has worked closely with NWRA on advocacy efforts involving the federal Renewable Fuel Standard, which incentivizes the production of renewable natural gas from landfills as a cellulosic biofuel for use in our fleet and other vehicles, and outreach to EPA to improve the accuracy of GHG emissions accounting from our sector. For example, WM worked closely with NWRA in December 2021 to submit comments on EPA's annual Inventory of U.S. Greenhouse Gas Emissions and Sinks, encouraging the agency to revisit certain outdated assumptions used in modelling landfill GHG emissions. In 2022, WM also worked with NWRA in submitting comments on the SEC's Climate Disclosure proposed rule. WM partners with NWRA to address key issues facing the waste and recycling industries, including on landfill emissions standards, EPA's methodology underlying its annual GHG inventory, recycling policy, tax incentives for carbon capture and sequestration, renewable electricity and fuel policies, regulatory efforts around emerging contaminants, health and safety standards, climate disclosure requirements, Congressional engagement on sustainability matters, and environmental justice.

**Funding figure your organization provided to this trade association in the reporting year, if applicable (currency as selected in C0.4) (optional)****Describe the aim of your organization's funding**

<Not Applicable>

**Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?**

Yes, we have evaluated, and it is aligned

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**Trade association**

Other, please specify (Environmental Technology Council (ETC))

**Is your organization's position on climate change consistent with theirs?**

Mixed

**Has your organization influenced, or is your organization attempting to influence their position?**

We are attempting to influence them to change their position

**State the trade association's position on climate change, explain where your organization's position differs, and how you are attempting to influence their position (if applicable)**

WM partners with ETC to address specific issues facing our hazardous business units, including advocacy and agency outreach on improvements to the tracking of hazardous waste shipments, destruction and disposal of materials containing per- and polyfluoroalkyl substances, and the long-term storage and management of elemental mercury. WM partners with ETC to address key issues facing the hazardous waste sector, including on EPA's e-manifest system for tracking shipments of hazardous waste, programs for the long-term storage and management of elemental mercury, and regulation of emerging contaminants.

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**Funding figure your organization provided to this trade association in the reporting year, if applicable (currency as selected in C0.4) (optional)**

**Describe the aim of your organization's funding**

<Not Applicable>

**Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?**

Yes, we have evaluated, and it is aligned

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**Trade association**

Other, please specify (Institute for Scrap Recycling Industries (ISRI))

**Is your organization's position on climate change consistent with theirs?**

Consistent

**Has your organization influenced, or is your organization attempting to influence their position?**

We publicly promote their current position

**State the trade association's position on climate change, explain where your organization's position differs, and how you are attempting to influence their position (if applicable)**

ISRI represents the interests of the scrap recycling industry and its members at the federal and state level as well as regulatory agencies and international bodies around the world. WM participates in several committees including the Paper Stock Industries (PSI), the Plastics Division, and the MRF Committee. WM partners with ISRI to address key issues facing the recycling industry, including international trade issues, bale specifications, state and federal recycling definitions, recycled content standards, and extended producer responsibility legislation.

**Funding figure your organization provided to this trade association in the reporting year, if applicable (currency as selected in C0.4) (optional)**

**Describe the aim of your organization's funding**

<Not Applicable>

**Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?**

Yes, we have evaluated, and it is aligned

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## C12.3c

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**(C12.3c) Provide details of the funding you provided to other organizations in the reporting year whose activities could influence policy, law, or regulation that may impact the climate.**

**Type of organization**

Other, please specify (WM has invested in infrastructure to collect landfill gas for a variety of applications to create renewable energy. )

**State the organization to which you provided funding**

The Coalition for Renewable Natural Gas ETC

**Funding figure your organization provided to this organization in the reporting year (currency as selected in C0.4)**

24979

**Describe the aim of this funding and how it could influence policy, law or regulation that may impact the climate**

WM supports federal and state energy policies that facilitate the widespread development and use of renewable energy sources, including electricity and transportation fuel derived from landfill gas. With a third of our trucks running on renewable natural gas (RNG) produced from landfill biogas, federal and state policies play an important role in our efforts to make significant investments to reduce GHG emissions associated with fossil fuel consumption. WM thus supports policies—including the Federal Renewable Fuel Standard, the California Low Carbon Fuel Standard, the Oregon Clean Fuels Program, and state renewable portfolio standards—that encourage production of electricity and fuel from renewable sources such as municipal solid waste and provide attractive and stable returns to generators of renewable electricity and producers of RNG.

**Have you evaluated whether this funding is aligned with the goals of the Paris Agreement?**

Yes, we have evaluated, and it is aligned

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**Type of organization**

Other, please specify (Recycling: Governments continue to seek ways to divert waste from landfills, while product manufacturers have established lofty recycling goals in order to find circular solutions for their packaging through increased recycling and recovery. )

**State the organization to which you provided funding**

NAM NWRA ISRI

**Funding figure your organization provided to this organization in the reporting year (currency as selected in C0.4)**

82459

**Describe the aim of this funding and how it could influence policy, law or regulation that may impact the climate**

WM has taken a national leadership role in support of policies to improve recycling education to ensure that a clean feedstock is delivered to our recycling facilities (MRFs), and to support the development of domestic markets for recyclables. Material processed through our MRFs is only recycled after it has been manufactured into a new product, reducing the use of virgin materials. In 2019, WM made a commitment to purchase curbside carts with 10% post consumer curbside plastic. We also continue to support education efforts through our Recycle Right program. WM advocates for support of the focus on both education and market development for post consumer content legislation.

**Have you evaluated whether this funding is aligned with the goals of the Paris Agreement?**

Yes, we have evaluated, and it is aligned

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## C12.4

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**(C12.4) Have you published information about your organization's response to climate change and GHG emissions performance for this reporting year in places other than in your CDP response? If so, please attach the publication(s).**

**Publication**

In mainstream reports

**Status**

Complete

**Attach the document**

10k\_2021.pdf

**Page/Section reference**

In particular, Item 1A Risk Factors pg. 17

**Content elements**

Governance

Strategy

Risks & opportunities

Other metrics

Other, please specify

**Comment**

WM's 2021 10k is available online: <https://investors.wm.com/sec-filings/sec-filing/10-k/0001558370-21-001348>

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**Publication**

In voluntary sustainability report

**Status**

Underway – previous year attached

**Attach the document**

WM\_2021\_SR.pdf

**Page/Section reference**

WM 2021 Sustainability Report pp 5-9, Mitigating Climate Change pp 36-47, Community Engagement pp 49-60

**Content elements**

Governance

Strategy

Risks & opportunities

Emissions figures

Emission targets

Other metrics

**Comment**

WM has launched an online sustainability website which hosts the most up-to-date information available: <https://sustainability.wm.com/> The following pages specifically present WM's response to climate change and GHG emissions performance for the reporting year: Corporate Governance: <https://sustainability.wm.com/esg-hub/governance/corporate-governance>; Environmental Policy: [https://sustainability.wm.com/downloads/WM\\_Environmental\\_Policy.pdf](https://sustainability.wm.com/downloads/WM_Environmental_Policy.pdf); Environmental Management: <https://sustainability.wm.com/esg-hub/environmental/environmental-management>; Carbon Methodology: <https://sustainability.wm.com/esghub/environmental/carbonmethodology>; Greenhouse Gas Inventory Verification Assurance Letter: [https://sustainability.wm.com/downloads/WM\\_2020\\_Verification\\_Assurance\\_Letter.pdf](https://sustainability.wm.com/downloads/WM_2020_Verification_Assurance_Letter.pdf); WM's 2022 Sustainability Report will be available online in September 2022: <https://sustainability.wm.com/downloads/report.php>

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**Publication**

In voluntary communications

**Status**

Complete

**Attach the document**

**Page/Section reference**

WM SASB index is available online <https://sustainability.wm.com/sasb/>

**Content elements**

Please select

**Comment**

**Publication**

In voluntary sustainability report

**Status**

Complete

**Attach the document**

**Page/Section reference**

WM TCFD Report is available online <https://sustainability.wm.com/tcf/>

**Content elements**

Please select

**Comment**

## C15. Biodiversity

### C15.1

(C15.1) Is there board-level oversight and/or executive management-level responsibility for biodiversity-related issues within your organization?

	Board-level oversight and/or executive management-level responsibility for biodiversity-related issues	Description of oversight and objectives relating to biodiversity	Scope of board-level oversight
Row 1	No, and we do not plan to have both within the next two years	<Not Applicable>	<Not Applicable>

### C15.2

(C15.2) Has your organization made a public commitment and/or endorsed any initiatives related to biodiversity?

	Indicate whether your organization made a public commitment or endorsed any initiatives related to biodiversity	Biodiversity-related public commitments	Initiatives endorsed
Row 1	Yes, we have made public commitments and publicly endorsed initiatives related to biodiversity	Other, please specify (Our 73 WHC-certified programs vary in scope from individual species management to large-scale habitat restoration. All projects are included in WHC's Conservation Index, an interactive database that maps conservation projects worldwide.)	Please select

### C15.3

(C15.3) Does your organization assess the impact of its value chain on biodiversity?

	Does your organization assess the impact of its value chain on biodiversity?	Portfolio
Row 1	No, and we do not plan to assess biodiversity-related impacts within the next two years	<Not Applicable>

### C15.4

(C15.4) What actions has your organization taken in the reporting year to progress your biodiversity-related commitments?

	Have you taken any actions in the reporting period to progress your biodiversity-related commitments?	Type of action taken to progress biodiversity-related commitments
Row 1	Yes, we are taking actions to progress our biodiversity-related commitments	Land/water protection Education & awareness

### C15.5

(C15.5) Does your organization use biodiversity indicators to monitor performance across its activities?

	Does your organization use indicators to monitor biodiversity performance?	Indicators used to monitor biodiversity performance
Row 1	No	Please select

### C15.6

(C15.6) Have you published information about your organization's response to biodiversity-related issues for this reporting year in places other than in your CDP response? If so, please attach the publication(s).

Report type	Content elements	Attach the document and indicate where in the document the relevant biodiversity information is located
In voluntary sustainability report or other voluntary communications	Impacts on biodiversity Other, please specify (WM has 73 WHC-certified programs or nearly 14,000 acres across North America.)	<a href="https://sustainability.wm.com/esg-hub/social/wildlife-habitat-council-programs">https://sustainability.wm.com/esg-hub/social/wildlife-habitat-council-programs</a> There may be fluctuations based on certification timelines and where we are in the process of setting up replacement sites.

## C16. Signoff

C-FI

(C-FI) Use this field to provide any additional information or context that you feel is relevant to your organization's response. Please note that this field is optional and is not scored.

C16.1

(C16.1) Provide details for the person that has signed off (approved) your CDP climate change response.

	Job title	Corresponding job category
Row 1	Senior Vice President & CSO	Chief Sustainability Officer (CSO)