

W0. Introduction

W0.1

(W0.1) Give a general description of and introduction to your organization.

Waste Management (WM) is North America's leading provider of waste management environmental services and the largest recycler of post-consumer waste. We are capturing value from waste streams – by processing wastes to replace raw materials with recycled materials that have lower carbon footprints or by generating clean energy from landfill gas plants, or by investing in new technologies to convert post-recycled residuals into lower carbon fuel or chemicals. Our customers look to us to help them participate in the “circular economy” by helping them avoid creating waste, design for recycling, and convert discards into new products. Our customers are recognizing that they can reduce costs and improve their operations by meeting recycling goals. The WM Sustainability Services team helps customers reach their sustainability goals by evaluating every aspect of their operations, recommending overall strategies to improve sustainability – providing strategies to maximize recycling and reduce waste as well as avoiding the generation of waste. WM has four climate-change related sustainability goals that have been shaping our business and our investments since 2007:

i) To increase waste-based energy production: In 2016, WM created enough energy through our waste-to-energy operations to power nearly one-half million homes. In our drive to provide pragmatic sustainability options, we now focus on the technologies most likely to serve our customers' sustainability needs, including our new CORe® technology, which provides municipalities a cost-effective means to convert organic wastes into increased production of renewable energy, and landfill gas to fuel facilities that provide renewable natural gas to our natural gas collection fleet.

ii) To increase the volume of recyclable materials we process: WM continues to be North America's largest residential recycler. Our goal to manage more than 20 million tons of recyclables each year by 2020 represents 48.9 million MTCO_{2e} avoided emissions. To this end, we actively advocate for customers and regulators to evaluate and communicate their waste reduction and recycling progress in the form of GHG reductions achieved in order to shift from simply weight-based metrics to a more science-based delineation of climate change benefits. In 2017, we managed 15.33 million tons of recyclables.

iii) To invest in cleaner technologies: WM set a goal in 2007 to reduce CO₂ emissions and increase fleet efficiency by 15 percent. We exceeded that goal in 2011, reducing CO₂ emissions by 20 percent and continue to exceed our 2020 goal year-over-year despite acquisitions and changes in the US EPA methodology for calculating efficiency. We are implementing a range of technologies to make our trucks more efficient, including using on-board camera-assisted efficiency logistics; using alternative fuels; optimizing truck design; using hybrid “yellow iron” vehicles; having the largest natural gas heavy-duty fleet in the U.S.; actively supporting improvements in heavy-duty truck fuel efficiency standards; and investing in green technologies to convert waste to fuel and/or chemicals, convert landfill gas to liquefied natural gas or diesel, and convert organic waste to high-octane transportation fuel and high value compost products. We innovate in collection logistics to reduce emissions. Our At Your Door Special Collection provides a simple, one trip option for collecting special household waste items. We are using on-board computers to optimize routes, and compactor monitoring technologies to time pick-ups when the compactor is full.

iv) To protect more wildlife habitat across North America: We achieved our fourth goal of providing wildlife habitat at 100 of our landfills – 10 years ahead of schedule.

Please see Climate Change 2016 Information Request Introduction, CC0.1, for more details on these goals.

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 “Waste Management” or “WM.”

W0.2

(W0.2) State the start and end date of the year for which you are reporting data.

	Start date	End date
Reporting year	January 1 2017	December 31 2017

W0.3

(W0.3) Select the countries/regions for which you will be supplying data.

Canada

United States of America

W0.4

(W0.4) Select the currency used for all financial information disclosed throughout your response.

USD

W0.5

(W0.5) Select the option that best describes the reporting boundary for companies, entities, or groups for which water impacts on your business are being reported.

Companies, entities or groups over which operational control is exercised

W0.6

(W0.6) Within this boundary, are there any geographies, facilities, water aspects, or other exclusions from your disclosure?

No

W1. Current state

W1.1

(W1.1) Rate the importance (current and future) of water quality and water quantity to the success of your business.

	Direct use importance rating	Indirect use importance rating	Please explain
Sufficient amounts of good quality freshwater available for use	Important	Neutral	Potable water use is essential for daily use by our 42,300 employees in North America. Our operations are supported by both office and field employees who work during regular business hours. In the future, good quality freshwater will continue to play an important role in our employees' health and productivity. Unlike product manufacturing, Waste Management primarily offers waste hauling and environmental services for customers across North America. While we continue to monitor water-related risks, our supply chain is not directly exposed to risks from access to freshwater for indirect operations.
Sufficient amounts of recycled, brackish and/or produced water available for use	Important	Neutral	WM's hauling, recycling and landfill operations use recycled water in varying degrees, based on specific needs. For example, our hauling operation uses potable water for truck maintenance and periodic cleaning and washing. Our recycling operations and transfer stations use recycled water for misters to mitigate odors produced during tipping and sorting activities. Our landfill operations use recycled water for soil stabilization and fugitive dust emissions control. Recycled water is also used in boilers for steam turbines at select renewable energy projects. In the future, access to water for these processes will continue to be a priority. Unlike product manufacturing, Waste Management primarily offers waste hauling and environmental services for customers across North America. While we continue to monitor water-related risks, our supply chain is not directly exposed to risks from access to non-fresh water for indirect operations.

W1.2

(W1.2) Across all your operations, what proportion of the following water aspects are regularly measured and monitored?

	% of sites/facilities/operations	Please explain
Water withdrawals – total volumes	76-99	Since 2015, WM has tracked water data usage from invoices as part of an enterprise wide Utility Bill Management Program (UBM) spear-headed by WM's Supply Chain Procurement Managers. Integration of this data is near completion.
Water withdrawals – volumes from water stressed areas	76-99	Since 2015, WM has tracked water data usage from invoices as part of an enterprise wide Utility Bill Management Program (UBM) spear-headed by WM's Supply Chain Procurement Managers. Integration of this data is near completion. Each site's location and usage data is cross-referenced with the WRI Aqueduct Tool each year to quantify the volumes withdrawn from sites located within water stressed areas.
Water withdrawals – volumes by source	76-99	Based on invoice information provided by our Utility Bill Management (UBM) provider, we consider most of our water to come from municipal water systems. A small percentage of our landfill sites, mostly in rural areas, use water wells for dust mitigation control and leachate extraction processes.
Produced water associated with your metals & mining sector activities - total volumes	<Not Applicable>	<Not Applicable>
Produced water associated with your oil & gas sector activities - total volumes	<Not Applicable>	<Not Applicable>
Water withdrawals quality	76-99	Based on invoice information provided by our Utility Bill Management (UBM) provider, we consider most of our water to come from municipal water systems and be of good quality.
Water discharges – total volumes	76-99	We consider most of our water to be discharged to municipal water treatment systems, and equal to the amount of water withdrawn, less the water consumed by employees and operations. A small percentage of our landfill sites, mostly in rural areas, use water wells for dust mitigation control and leachate extraction processes and discharge this water to on-site septic systems.
Water discharges – volumes by destination	76-99	Based on invoice information provided by our Utility Bill Management (UBM) provider, we consider most of our water to be discharged to municipal water treatment systems or recycled/reused on site for various processes. A small percentage of our landfill sites, mostly in rural areas, use water wells for dust mitigation control and leachate extraction processes and discharge this water to on-site septic systems.
Water discharges – volumes by treatment method	76-99	Based on invoice information provided by our Utility Bill Management (UBM) provider, we consider most of our water to be discharged to municipal water treatment systems. A small percentage of our landfill sites, mostly in rural areas, use water wells for dust mitigation control and leachate extraction processes and discharge this water to on-site septic systems.
Water discharge quality – by standard effluent parameters	76-99	WM facilities comply with the provisions of the National Pollution Discharge Elimination System (NPDES) in mitigating point source pollution at the point of discharge using an array of best management practices (BMPs). This practice also includes region specific standard effluent parameters that are measured locally according to NPDES and the facility's Water Quality Management Plan.
Water discharge quality – temperature	76-99	WM facilities comply with the provisions of the National Pollution Discharge Elimination System (NPDES) in mitigating point source pollution at the point of discharge using an array of best management practices (BMPs). This practice also includes region specific parameters that are measured locally according to NPDES and the facility's Water Quality Management Plan.
Water consumption – total volume	76-99	Our consumption calculation is an estimate based on gallons per employee per day (GED) that is representative of the number of employees we have working in these facilities in a reporting year. WM continues to explore and develop ways to accurately measure its water consumption.
Water recycled/reused	1-25	Recycled water is used for a variety of purposes including, to wash trucks and control dust and landfills and transfer stations, and in boilers for steam turbines at select renewable energy projects, but we are unable to quantify it for a large portion of our facilities.
The provision of fully-functioning, safely managed WASH services to all workers	100%	All WM facilities across North America comply with local development code and municipal ordinances regarding mandatory provisions of fully functioning water supply, adequate sanitation and hygiene (WASH) in its facilities. All our workers, regardless of their status of employment, gender orientation, age, race and nationality have 100% access to WASH.

W1.2b

(W1.2b) What are the total volumes of water withdrawn, discharged, and consumed across all your operations, and how do these volumes compare to the previous reporting year?

	Volume (megaliters/year)	Comparison with previous reporting year	Please explain
Total withdrawals	2375.16	About the same	WM's hauling, recycling and landfill operations use municipal water and/or recycled water in varying degrees, based on specific needs. A small percentage of our landfill sites, mostly in rural areas, use water wells for dust mitigation control and leachate extraction processes. Beginning in 2017, we are estimating the water withdrawals and discharges from these sites using an estimate of 81 gallons/employee/day, the national average of the USGS estimate for self-supply groundwater withdrawals per capita for domestic purposes. We have not observed large fluctuations in our total withdrawals and we do not anticipate any large fluctuations moving forward.
Total discharges	1857.61	About the same	WM's hauling, recycling and landfill operations use municipal water and/or recycled water in varying degrees, based on specific needs. A small percentage of our landfill sites, mostly in rural areas, use water wells for dust mitigation control and leachate extraction processes and discharge this water to on-site septic systems. Beginning in 2017, we are estimating the water withdrawals and discharges from these sites using an estimate of 81 gallons/employee/day, the national average of the USGS estimate for self-supply groundwater withdrawals per capita for domestic purposes. For each source, withdrawn water (W) that is not consumed by our employees or through our operations (C) is returned (D) to the source (i.e. groundwater to groundwater, third party to third party), where $W = D + C$. We have not observed large fluctuations in our total water discharges and we do not anticipate any large fluctuations moving forward.
Total consumption	517.55	About the same	Our consumption calculation is based on gallons per employee per day (GED), and is representative of the number of employees we have working in these facilities in a reporting year. WM continues to explore and develop ways to more accurately measure its water consumption. As this calculation is dependent on our number of total employees, we have not observed large fluctuations in our total water consumption and we do not anticipate any large fluctuations moving forward.

W1.2d

(W1.2d) Provide the proportion of your total withdrawals sourced from water stressed areas.

	% withdrawn from stressed areas	Comparison with previous reporting year	Identification tool	Please explain
Row 1	18.61	Higher	WRI Aqueduct	Since 2015, WM has contracted with a Utility Bill Management Program (UBM) to track water data usage from invoices as part of an enterprise wide program. Each site's location and usage data is cross-referenced with the WRI Aqueduct Tool each year to quantify the volumes withdrawn from sites located within "Extremely High" or "High" water stressed areas. As integration of this data nears completion we are able to get a more complete picture of our water usage in these areas and thus our number is higher than previous years.

W1.2h

(W1.2h) Provide total water withdrawal data by source.

	Relevance	Volume (megaliters/year)	Comparison with previous reporting year	Please explain
Fresh surface water, including rainwater, water from wetlands, rivers, and lakes	Not relevant	<Not Applicable>	<Not Applicable>	Based on invoice information provided by our Utility Bill Management (UBM) provider, we consider most of our water to come from municipal water systems.
Brackish surface water/seawater	Not relevant	<Not Applicable>	<Not Applicable>	Based on invoice information provided by our Utility Bill Management (UBM) provider, we consider most of our water to come from municipal water systems.
Groundwater – renewable	Relevant	75.6	This is our first year of measurement	A small percentage of our landfill sites, mostly in rural areas, use water wells for dust mitigation control and leachate extraction processes. Beginning in 2017, we are estimating the water withdrawals and discharges from these sites using an estimate of 81 gallons/employee/day, the national average of the USGS estimate for self-supply groundwater withdrawals per capita for domestic purposes.
Groundwater – non-renewable	Not relevant	<Not Applicable>	<Not Applicable>	Based on invoice information provided by our Utility Bill Management (UBM) provider, we consider most of our water to come from municipal water systems.
Produced water	Not relevant	<Not Applicable>	<Not Applicable>	Based on invoice information provided by our Utility Bill Management (UBM) provider, we consider most of our water to come from municipal water systems.
Third party sources	Relevant	2299.56	About the same	For most of our operations, specifically in all WM offices across North America, we use municipal water for domestic purposes only. WM's hauling, recycling and landfill operations use municipal water and/or recycled water in varying degrees, based on specific needs.

W1.2i

(W1.2i) Provide total water discharge data by destination.

	Relevance	Volume (megaliters/year)	Comparison with previous reporting year	Please explain
Fresh surface water	Not relevant	<Not Applicable>	<Not Applicable>	We consider most of our water to be discharged to municipal water treatment systems, and equal to the amount of water withdrawn, less the water consumed by employees and operations.
Brackish surface water/seawater	Not relevant	<Not Applicable>	<Not Applicable>	We consider most of our water to be discharged to municipal water treatment systems, and equal to the amount of water withdrawn, less the water consumed by employees and operations.
Groundwater	Relevant	60.67	This is our first year of measurement	A small percentage of our landfill sites, mostly in rural areas, use water wells for dust mitigation control and leachate extraction processes and discharge this water to on-site septic systems. Beginning in 2017, we are estimating the water withdrawals and discharges from these sites using an estimate of 81 gallons/employee/day, the national average of the USGS estimate for self-supply groundwater withdrawals per capita for domestic purposes.
Third-party destinations	Relevant	1796.94	About the same	We consider most of our water to be discharged to municipal water treatment systems, and equal to the amount of water withdrawn, less the water consumed by employees and operations.

W1.2j

(W1.2j) What proportion of your total water use do you recycle or reuse?

	% recycled and reused	Comparison with previous reporting year	Please explain
Row 1	2-10	About the same	Recycled water is used for a variety of purposes including, to wash trucks and control dust and landfills and transfer stations, and in boilers for steam turbines at select renewable energy projects. We estimate that this represents between 2-10% of our total water use.

W1.4

(W1.4) Do you engage with your value chain on water-related issues?

Yes, our suppliers

Yes, our customers or other value chain partners

W1.4a

(W1.4a) What proportion of suppliers do you request to report on their water use, risks and/or management information and what proportion of your procurement spend does this represent?

Row 1

% of suppliers by number

None currently, but we plan to request this within the next two years

% of total procurement spend

<Not Applicable>

Rationale for this coverage

Every two years we identify the key stakeholders with whom we engage — from environmental and community groups to business and manufacturing leaders, from government associations to scientific academies. These stakeholders can be found across multiple sectors and within our communities. All are essential in helping us stay abreast of current trends, perspectives and policy matters that affect our industry, our customers and our communities. We have not requested water information in the past, but we intend to begin requesting this information in the next two years.

Impact of the engagement and measures of success

<Not Applicable>

Comment

W1.4b

(W1.4b) Provide details of any other water-related supplier engagement activity.

Type of engagement

Innovation & collaboration

Details of engagement

Encourage/incentivize innovation to reduce water impacts in products and services

% of suppliers by number

1-25

% of total procurement spend

1-25

Rationale for the coverage of your engagement

We discuss water quality issues with our suppliers and customers pursuant to our participation in the RCRA Corrective Action Project and the Sediment Management Working Group. Both groups fund research on water quality parameters, and discuss the interaction between water contamination and discharge standards and coverage.

Impact of the engagement and measures of success

Through our work with these groups, we have been successful at encouraging innovation to reduce water impacts by investigating new technologies and sampling techniques with the two groups.

Comment

Our participation in various working groups involves a large network of our suppliers and customers. We estimate this group to include between 1-25% of our suppliers, and between 1-25% of our total procurement spend.

Type of engagement

Innovation & collaboration

Details of engagement

Educate suppliers about water stewardship and collaboration

% of suppliers by number

1-25

% of total procurement spend

1-25

Rationale for the coverage of your engagement

In addition to our work with the Wildlife Habitat Council (WHC) in certifying wildlife habitat and environmental education at our sites, Waste Management works with WHC on collaborative efforts among nonprofits, government agencies and companies to create conservation strategies.

Impact of the engagement and measures of success

For example, the Corporate Pollinator Ecosystem Project (C-PEP) brings together companies with the United States Business Council for Sustainable Development to identify pollinator habitats on corporate land and ultimately help revive declining pollinator populations. Upon project culmination, the C-PEP Survey will be presented to the federal government as a response to President Obama's 2014 goal to restore or enhance 7 million acres of land for pollinators.

Comment

We estimate supplier and stakeholder involvement with our WHC work to involve 1-25% of our suppliers, and between 1-25% of our total procurement spend.

W1.4c

(W1.4c) What is your organization's rationale and strategy for prioritizing engagements with customers or other partners in its value chain?

At Waste Management, we take a systematic approach to stakeholder engagement, starting with public accountability. Every two years we identify the key stakeholders with whom we engage — from environmental and community groups to business and manufacturing leaders, from government associations to scientific academies. These stakeholders can be found across multiple sectors and within our communities. All are essential in helping us stay abreast of current trends, perspectives and policy matters that affect our industry, our customers and our communities.

Our engagement takes many forms. When working on facility upgrades and new construction, we map our community footprint and seek to engage groups and individuals in open dialogue through Community Advisory Councils or more informal routine interactions, open house events, public meetings, tours and more. With our larger customers, we host sustainability forums that focus on ways to reduce costs, lessen environmental footprints and increase the reuse of resources.

Participation in policy discussions supplements our dialogue at the local level and ensures that we are working with stakeholders from many perspectives. We give dozens of presentations each year on topics involving recycling, renewable energy and fuel, and civic engagement. Since 2011, we have sponsored the multi-stakeholder dialogues of the Sustainable Materials Management Coalition. We believe there is enormous value in bringing together diverse viewpoints in a sustained effort to find common ground and mutual understanding of difficult environmental challenges.

W2. Business impacts

W2.1

(W2.1) Has your organization experienced any detrimental water-related impacts?

Yes

W2.1a

(W2.1a) Describe the water-related detrimental impacts experienced by your organization, your response, and total financial impact.

Country/Region

United States of America

River basin

Not known

Type of impact driver

Physical

Primary impact driver

Severe weather events

Primary impact

Other, please specify (Disruption in Operations)

Description of impact

In recent years, WM Market Areas, such as Texoma, Gulf Coast, and Southern California, have experienced service challenges because of more extreme weather events, such as hurricanes, heavy rainfall, extreme flooding, mudslides and wildfires. For example, Hurricane Harvey caused a four-day disruption of operations in the South Texas area. Days later, during Hurricane Irma, Waste Management of the Florida Key's maintenance shop was destroyed. One WM-operated Transfer Station was also destroyed and two received significant damage. Additionally, on the Monday following the Sunday/Monday landfalls, all 67 business units within the Florida Area were closed due to the scope, path and severity of the storm.

Primary response

Develop flood emergency plans

Total financial impact

2500000

Description of response

The severe weather events have caused the Market Areas to take anticipatory action to relocate trucks, secure adequate fuel supplies, flood-proof power supplies, and use technology to respond to logistical challenges. In the aftermath of both Hurricanes Harvey and Irma, many of our post-collection teams were forced to operate on 24-hour a day/7-day a week shifts for many months to handle inbound storm debris. Monarch Hill Landfill alone averaged 845 trucks and 12,000 tons per day, more than twice its regular volume. In all, Monarch Hill received 660,000 tons of storm debris, utilizing one year of landfill space in four months. This acceleration of use can impact the lifespan of landfill facilities. Waste Management carries insurance for Property Damage/Business Interruption with a deductible of \$2,500,000 per storm event. While the current cost of contingency planning and securing disaster-related supplies and technology is minimal compared to overall operational expenditures, we project that the cost of operational disruptions will start to have a greater impact on our operational bottom line if the severe weather events continue.

Country/Region

United States of America

River basin

Colorado River (Pacific Ocean)

Type of impact driver

Physical

Primary impact driver

Drought

Primary impact

Other, please specify (Disruption in Operations)

Description of impact

In some parts of the Southwest Region of the United States, particularly in California, prolonged extreme drought conditions are potentially affecting some of our operations' ability to use water in our recycling facilities and transfer stations for odor mitigation and fleet maintenance and Landfill facilities for fugitive dust control.

Primary response

Develop drought emergency plans

Total financial impact

0

Description of response

\$0 WM market areas in these affected regions are getting advice from WM corporate on ways to prepare for State mandated water use reduction policies and regulations (California). Also, our internal sustainability consulting team, WMSS, has started to reach out to affected market areas to help facilities at local levels to implement conservation and reduction measures such as upgrades of current water fixtures to more efficient fixtures, outlining new internal water policies and procedures for measurement and monitoring of consumption and reporting. Currently, we estimate the financial impact of these conditions to be less than 1% of our revenue of \$14.5 Billion. While the current cost may be minimal compared to our overall operational expenditures, we project that the mitigation and compliance cost will start to affect our operational bottom line if the severe droughts continue.

W2.2

(W2.2) In the reporting year, was your organization subject to any fines, enforcement orders, and/or other penalties for water-related regulatory violations?

Yes, fines, enforcement orders or other penalties but none that are considered as significant

W2.2a

(W2.2a) Provide the total number and financial value of all water-related fines.

Row 1

Total number of fines

14

Total value of fines

70250

% of total facilities/operations associated

0.01

Number of fines compared to previous reporting year

Higher

Comment

The number of facilities affected represents .01% of our total facilities. Additionally, the total value of the fines represents less than .01% of our revenue.

W3. Procedures

W3.3

(W3.3) Does your organization undertake a water-related risk assessment?

Yes, water-related risks are assessed

W3.3a

(W3.3a) Select the options that best describe your procedures for identifying and assessing water-related risks.

Direct operations

Coverage

Full

Risk assessment procedure

Water risks are assessed as a standalone issue

Frequency of assessment

Annually

How far into the future are risks considered?

6 to 10 years

Type of tools and methods used

Tools on the market

Tools and methods used

WRI Aqueduct

Comment

We continue to assess our facilities' vulnerabilities to water risk, specifically, extreme droughts and precipitation. We rely on data provided by the World Resources Institute's Aqueduct Water Risk Atlas to map our facility locations based on its extreme water scarcity categories throughout North America. Our next step is to fully understand each facility as it relates to its geographic location and vulnerability to water scarcity and overall climate-related risk.

Supply chain

Coverage

None

Risk assessment procedure

<Not Applicable>

Frequency of assessment

<Not Applicable>

How far into the future are risks considered?

<Not Applicable>

Type of tools and methods used

<Not Applicable>

Tools and methods used

<Not Applicable>

Comment

Other stages of the value chain

Coverage

None

Risk assessment procedure

<Not Applicable>

Frequency of assessment

<Not Applicable>

How far into the future are risks considered?

<Not Applicable>

Type of tools and methods used

<Not Applicable>

Tools and methods used

<Not Applicable>

Comment

W3.3b

(W3.3b) Which of the following contextual issues are considered in your organization's water-related risk assessments?

	Relevance & inclusion	Please explain
Water availability at a basin/catchment level	Relevant, always included	We have facilities across North America, and water availability varies. Currently, about 20% of our facility portfolio is located in water stressed regions, designated as high or extremely high water risk by the WRI Aqueduct Water Risk Atlas.
Water quality at a basin/catchment level	Relevant, sometimes included	We maintain a comprehensive network of more than 6,000 groundwater-monitoring wells around our facilities, and every landfill uses monitoring strategies (many involving sophisticated statistical evaluations) to ensure that water quality in adjacent surface water and groundwater bodies is not impacted. While WM ensures that we are able to provide clean water for our employees at each of our facilities, many of our operations, such as truck washing, do not depend on the quality of the water at our facilities.
Stakeholder conflicts concerning water resources at a basin/catchment level	Relevant, always included	The basins in which facilities are located can impact water costs and availability. We need to provide leadership in water protection, conservation and stewardship for the sustainability of the water system. As part of our risk assessment, we identify local stakeholders and open consultation with them in community engagement initiatives at key projects and in particular with regard to our conservation programs with local and national NGOs such as Wildlife Habitat Council (WHC). WM's Community and Government Affairs Group is takes responsibility in stakeholder dialogues and arbitration to obtain consensual decisions before the expansion.
Implications of water on your key commodities/raw materials	Not relevant, included	While WM is a service provider and does not produce products that require commodities and raw materials, we continue to assess water impacts to our overall operations. Our landfill sites use water to enhance anaerobic digestions and mitigate fugitive dust emissions
Water-related regulatory frameworks	Relevant, always included	We recognize that regulatory changes due to continued water stress/scarcity of affected regions, specifically in the west and southwest of the United States, are always within sight. Our government affairs staff monitor these changes as part of annual strategic and risk management planning processes
Status of ecosystems and habitats	Relevant, always included	Our closed or capped landfill sites participate in local ecosystem and habitat regeneration programs through Wildlife Habitat Council (WHC) certification. To date, there are 110 programs that are certified under WHC. In some of our landfill locations, we have opened our WHC sites to the public, particularly to academic institutions, for educational purposes.
Access to fully-functioning, safely managed WASH services for all employees	Relevant, always included	All WM facilities across North America comply with local development code and municipal ordinances regarding mandatory provisions of fully functioning water supply, adequate sanitation and hygiene (WASH) in its facilities. All our workers, regardless of their status of employment, gender orientation, age, race and nationality have 100% access to WASH.
Other contextual issues, please specify	Not considered	

W3.3c

(W3.3c) Which of the following stakeholders are considered in your organization's water-related risk assessments?

	Relevance & inclusion	Please explain
Customers	Relevant, sometimes included	Our recent assessment shows that there is little or relatively no impact to our customers from our organization's current water risk. However, changes in operations in the future to mitigate potentially negative impacts in water stressed regions where our facilities are located may affect the future cost of disposal, recycling and landfilling operations. Our costs will rise, as will those of our customers.
Employees	Relevant, always included	Continued water stress currently identified in specific regions of the United States may potentially spread and impact water supply in other regions as well. Since our business operations rely fully on our 42,300 employees, the impact of reduced water quality and quantity will potentially affect our employees' health and productivity.
Investors	Relevant, always included	Through the years, we recognize that our investors have been increasingly aware of the impact of water resources on the business sector generally, although WM is generally less water dependent than most in the industry.
Local communities	Relevant, always included	Watershed areas where our facilities are located, particularly our landfills, are vulnerable to degradation in water resources. That is why we have regularly partnered with federal, state and local stakeholders to continually evaluate the sufficiency and effectiveness of regulations protecting the water supply.
NGOs	Relevant, always included	WM has partnered with many NGOs to evaluate the sufficiency of the regulatory system as it impacts water quality and quantity. In the reporting year, WM partnered with federal and state governments and NGOs to call for Life Cycle Thinking when evaluating products and services. See http://www.michaeldbaker.com/ MDB_WP_live_site/wp-content/uploads/2014/03/Guidance-on-Life-Cycle-Thinking-031014.pdf .
Other water users at a basin/catchment level	Relevant, always included	In the context of extreme weather events, whether drought or extreme precipitation associated with climate change, other water users at a local level where our facilities are located may be impacted indirectly. Some Market Areas are already experiencing shortages in some locations, and factor into local plans the mechanisms that will be available to allocate water in the event of scarcity.
Regulators	Relevant, always included	Watershed areas where our facilities are located, particularly our landfills, are vulnerable to degradation in water resources. That is why we have regularly partnered with federal, state and local stakeholders to continually evaluate the sufficiency and effectiveness of regulations protecting the water supply.
River basin management authorities	Relevant, always included	Watershed areas where our facilities are located, particularly our landfills, are vulnerable to degradation in water resources. That is why we have regularly partnered with federal, state and local stakeholders to continually evaluate the sufficiency and effectiveness of regulations protecting the water supply.
Statutory special interest groups at a local level	Relevant, always included	Watershed areas where our facilities are located, particularly our landfills, are vulnerable to degradation in water resources. That is why we have regularly partnered with federal, state and local stakeholders to continually evaluate the sufficiency and effectiveness of regulations protecting the water supply.
Suppliers	Relevant, sometimes included	Unlike product manufacturing, Waste Management primarily offers waste hauling and environmental services with multiple qualified suppliers across North America. Our supply chain therefore is not directly exposed to water related risks that have the potential to generate a substantial change in our business operation, revenue or expenditure.
Water utilities at a local level	Relevant, always included	While WM is a service provider and does not produce products that will impact commodities and raw materials, we continue to assess water impacts to our overall operations. Our landfill sites use water to enhance anaerobic digestions and mitigate fugitive dust emissions. Some Market Areas are already experiencing shortages in some locations, and factor into local plans the mechanisms that will be available to allocate water in the event of scarcity.
Other stakeholder, please specify	Not considered	

W3.3d

(W3.3d) Describe your organization's process for identifying, assessing, and responding to water-related risks within your direct operations and other stages of your value chain.

At a company level, WM initiated an enterprise risk management (ERM) committee several years ago and continues to expand and refresh the analytical tools for its risk assessment. While the ongoing responsibility for risk assessments rests with various field and corporate management, the Committee determines which risks are most significant to WM and should be reported to the Board. Water-related risks related to our supply chain and other aspects of our value chain are evaluated as part of this process.

At asset level, various internal groups benchmark risks, including assessment of likelihood and severity, known controls and metrics to monitor the risks. External stakeholders and independent organizations are consulted on an on-going basis (identity is disclosed in WM's biennial sustainability reporting) to provide the equivalent of open-source advice on risks and mitigation. The impacts of climate change as a physical, regulatory and legislative risk and the opportunities that may be presented by water-related response and mitigation are increasingly key elements of these consultations.

For our direct operations, our water risk assessment approach is based on geographic location and types of operation. Each year, our facility list is cross-referenced with the WRI Aqueduct Tool to classify the Overall Water Risk of each site. Sites with an Overall Water Risk of "High" or "Extremely High" Risk are deemed as water-stressed for our assessment. Additional local factors are taken into account, such as drought conditions and overall water availability and vulnerability. For example, some Market Areas have started assessing viability of building LEED certified facilities to help mitigate water risk. In other areas, truck wash programs to reduce reliance on municipal water and instead use recycled water are being implemented.

W4. Risks and opportunities

W4.1

(W4.1) Have you identified any inherent water-related risks with the potential to have a substantive financial or strategic impact on your business?

Yes, only within our direct operations

W4.1a

(W4.1a) How does your organization define substantive financial or strategic impact on your business?

Waste Management defines substantive strategic impact as events that directly impact the day-to-day operations of our facilities for an extended period of time, 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. WM has sites that operate in a variety of regions, therefore the magnitude of the individual financial impacts of these operational disruptions will vary from site to site.

For example, virtually any of WM's landfill sites in the U.S. and Canada are vulnerable to intermittent drought conditions, flood conditions or both. These significant weather pattern changes can impact the behaviors of materials decaying in a controlled MSW landfill environment. Flooding can impede the collection of landfill gas by filling collection wells with water; drought can reduce the rate of decay of organic material because water is essential to the decay process. Both extreme conditions result in additional labor being required to manage the landfill gas collection system, with additional liquids collection required to respond to excess moisture, and with adjustments to the gas collection system vacuum required to respond to the decrease in gas generation resulting from too little moisture. This can also create roadblocks for the productivity of the landfill gas-to-energy portion of our business.

For this analysis, we include those sites that are listed with a "High" or "Extremely High" Overall Water Risk, as indicated by the WRI Aqueduct Tool.

W4.1b

(W4.1b) What is the total number of facilities exposed to water risks with the potential to have a substantive financial or strategic impact on your business, and what proportion of your company-wide facilities does this represent?

	Total number of facilities exposed to water risk	% company-wide facilities this represents	Comment
Row 1	59	1-25	For this analysis, we include those sites that are listed with a "High" or "Extremely High" Overall Water Risk, as indicated by the WRI Aqueduct Tool.

W4.1c

(W4.1c) By river basin, what is the number and proportion of facilities exposed to water risks that could have a substantive impact on your business, and what is the potential business impact associated with those facilities?

Country/Region

Canada

River basin

Other, please specify (Various River Basins in Alberta)

Number of facilities exposed to water risk

2

% company-wide facilities this represents

Less than 1%

Production value for the metals & mining activities associated with these facilities

<Not Applicable>

% company's annual electricity generation that could be affected by these facilities

<Not Applicable>

% company's global oil & gas production volume that could be affected by these facilities

<Not Applicable>

% company's total global revenue that could be affected

Less than 1%

Comment

Overall impact is minuscule compared to our revenue - less than 1%. This is due to the fact that current risks related to regulatory changes, severe weather, and operational disruptions are already factored into the current operational cost. We will continue to review our water risks on an annual basis to determine if there are extra mitigation costs that are required to lessen our impact to river basins where our facilities operate.

Country/Region

United States of America

River basin

Other, please specify (Various River Basins in Arizona)

Number of facilities exposed to water risk

7

% company-wide facilities this represents

Less than 1%

Production value for the metals & mining activities associated with these facilities

<Not Applicable>

% company's annual electricity generation that could be affected by these facilities

<Not Applicable>

% company's global oil & gas production volume that could be affected by these facilities

<Not Applicable>

% company's total global revenue that could be affected

Less than 1%

Comment

Overall impact is minuscule compared to our revenue - less than 1%. This is due to the fact that current risks related to regulatory changes, severe weather, and operational disruptions are already factored into the current operational cost. We will continue to review our water risks on an annual basis to determine if there are extra mitigation costs that are required to lessen our impact to river basins where our facilities operate.

Country/Region

United States of America

River basin

Other, please specify (Various River Basins in California)

Number of facilities exposed to water risk

29

% company-wide facilities this represents

1-25

Production value for the metals & mining activities associated with these facilities

<Not Applicable>

% company's annual electricity generation that could be affected by these facilities

<Not Applicable>

% company's global oil & gas production volume that could be affected by these facilities

<Not Applicable>

% company's total global revenue that could be affected

Less than 1%

Comment

Overall impact is minuscule compared to our revenue - less than 1%. This is due to the fact that current risks related to regulatory changes, severe weather, and operational disruptions are already factored into the current operational cost. We will continue to review our water risks on an annual basis to determine if there are extra mitigation costs that are required to lessen our impact to river basins where our facilities operate.

Country/Region

United States of America

River basin

Other, please specify (Various River Basins in Illinois)

Number of facilities exposed to water risk

3

% company-wide facilities this represents

Less than 1%

Production value for the metals & mining activities associated with these facilities

<Not Applicable>

% company's annual electricity generation that could be affected by these facilities

<Not Applicable>

% company's global oil & gas production volume that could be affected by these facilities

<Not Applicable>

% company's total global revenue that could be affected

Less than 1%

Comment

Overall impact is minuscule compared to our revenue - less than 1%. This is due to the fact that current risks related to regulatory changes, severe weather, and operational disruptions are already factored into the current operational cost. We will continue to

review our water risks on an annual basis to determine if there are extra mitigation costs that are required to lessen our impact to river basins where our facilities operate.

Country/Region

United States of America

River basin

Other, please specify (Various River Basins in Indiana)

Number of facilities exposed to water risk

2

% company-wide facilities this represents

Less than 1%

Production value for the metals & mining activities associated with these facilities

<Not Applicable>

% company's annual electricity generation that could be affected by these facilities

<Not Applicable>

% company's global oil & gas production volume that could be affected by these facilities

<Not Applicable>

% company's total global revenue that could be affected

Less than 1%

Comment

Overall impact is minuscule compared to our revenue - less than 1%. This is due to the fact that current risks related to regulatory changes, severe weather, and operational disruptions are already factored into the current operational cost. We will continue to review our water risks on an annual basis to determine if there are extra mitigation costs that are required to lessen our impact to river basins where our facilities operate.

Country/Region

United States of America

River basin

Other, please specify (Various River Basins in Michigan)

Number of facilities exposed to water risk

2

% company-wide facilities this represents

Less than 1%

Production value for the metals & mining activities associated with these facilities

<Not Applicable>

% company's annual electricity generation that could be affected by these facilities

<Not Applicable>

% company's global oil & gas production volume that could be affected by these facilities

<Not Applicable>

% company's total global revenue that could be affected

Less than 1%

Comment

Overall impact is minuscule compared to our revenue - less than 1%. This is due to the fact that current risks related to regulatory changes, severe weather, and operational disruptions are already factored into the current operational cost. We will continue to review our water risks on an annual basis to determine if there are extra mitigation costs that are required to lessen our impact to river basins where our facilities operate.

Country/Region

United States of America

River basin

Other, please specify (Various River Basins in Texas)

Number of facilities exposed to water risk

1

% company-wide facilities this represents

Less than 1%

Production value for the metals & mining activities associated with these facilities

<Not Applicable>

% company's annual electricity generation that could be affected by these facilities

<Not Applicable>

% company's global oil & gas production volume that could be affected by these facilities

<Not Applicable>

% company's total global revenue that could be affected

Less than 1%

Comment

Overall impact is minuscule compared to our revenue - less than 1%. This is due to the fact that current risks related to regulatory changes, severe weather, and operational disruptions are already factored into the current operational cost. We will continue to review our water risks on an annual basis to determine if there are extra mitigation costs that are required to lessen our impact to river basins where our facilities operate.

Country/Region

United States of America

River basin

Other, please specify (Various River Basins in Wisconsin)

Number of facilities exposed to water risk

13

% company-wide facilities this represents

Less than 1%

Production value for the metals & mining activities associated with these facilities

<Not Applicable>

% company's annual electricity generation that could be affected by these facilities

<Not Applicable>

% company's global oil & gas production volume that could be affected by these facilities

<Not Applicable>

% company's total global revenue that could be affected

Less than 1%

Comment

Overall impact is minuscule compared to our revenue - less than 1%. This is due to the fact that current risks related to regulatory changes, severe weather, and operational disruptions are already factored into the current operational cost. We will continue to review our water risks on an annual basis to determine if there are extra mitigation costs that are required to lessen our impact to river basins where our facilities operate.

W4.2

(W4.2) Provide details of identified risks in your direct operations with the potential to have a substantive financial or strategic impact on your business, and your response to those risks.

Country/Region

United States of America

River basin

Other, please specify (Multiple River Basins)

Type of risk

Physical

Primary risk driver

Increased water scarcity

Primary potential impact

Other, please specify (Disruption in Operations)

Company-specific description

In our landfill sites, water is used for dust control and soil compaction. Water is also used to clean and maintain our fleets and to provide our facilities daily water resource needs to our workers on site and office personnel who support our daily operations. Disruptions in water service could impact our operations.

Timeframe

1 - 3 years

Magnitude of potential impact

Low

Likelihood

About as likely as not

Potential financial impact

0

Explanation of financial impact

WM has sites that operate in a variety of regions, therefore the financial impacts of operational disruptions will vary from site to site, but are not expected to individually have a large financial impact. Currently, we estimate the aggregate financial impact to be less than 1% of our revenue of \$14.5 Billion.

Primary response to risk

Adopt water efficiency, water re-use, recycling and conservation practices (Water reuse and recycling)

Description of response

For our landfill sites, we protect waterways and watersheds, and apply structural best management practices (BMPs) to recharge ground water supplies, e.g., stormwater capture using rain gardens and detention basins. We also implement greywater recycling.

Cost of response

0

Explanation of cost of response

WM has sites that operate in a variety of regions, therefore the water management responses will vary. Overall, the cost is expected to be de minimis as compared to our overall revenue of \$14.5 Billion.

Country/Region

United States of America

River basin

Other, please specify (Multiple River Basins)

Type of risk

Regulatory

Primary risk driver

Higher water prices

Primary potential impact

Increased operating costs

Company-specific description

Higher water prices may impact some of our sites that depend on municipal water as the only source of water to run landfill, fleet and support operations. As our water prices increase we must pass this cost onto our customers or decrease our revenues.

Timeframe

Current up to 1 year

Magnitude of potential impact

Medium

Likelihood

Likely

Potential financial impact

0

Explanation of financial impact

WM has sites that operate in a variety of regions, therefore the financial impacts of increased water costs will vary from site to site. Currently, we estimate the aggregate financial impact to be less than 1% of our revenue of \$14.5 Billion.

Primary response to risk

Establish site-specific targets

Description of response

For all our facilities, especially those in water stressed regions, we implement water efficiency measures by instituting change outs to more efficient fixtures at end-of-life, exploring opportunities for greywater recycling, mitigating water use in landscaping by using native plants that can thrive without use of water and tracking water consumption to identify baseline and set meaningful reduction goals.

Cost of response

0

Explanation of cost of response

While some water efficiency measures may require advanced technologies to aid in monitoring, limiting use, or recycling water, the establishment of water reduction goals will not require additional expenditures. Overall, the cost is expected to be de minimis as compared to our overall revenue of \$14.5 Billion.

Country/Region

United States of America

River basin

Other, please specify (Multiple River Basins)

Type of risk

Regulatory

Primary risk driver

Increased difficulty in supplier obtaining withdrawals/operations permit

Primary potential impact

Constraint to growth

Company-specific description

Landfill sites in water stressed regions may encounter difficulty in obtaining lease extensions and capacity expansions due to stricter land use policies and protection of undeveloped lands. This can impact our ability to add capacity at sites in the affected regions.

Timeframe

More than 6 years

Magnitude of potential impact

Medium-high

Likelihood

About as likely as not

Potential financial impact

0

Explanation of financial impact

WM has sites that operate in a variety of regions, therefore the financial impacts of regulatory changes will vary from site to site, but are not expected to individually have a large financial impact. Currently, we estimate the aggregate financial impact to be less than 1% of our revenue of \$14.5 Billion.

Primary response to risk

Engage with regulators/policymakers

Description of response

Our government affairs staff monitor regulatory changes as part of annual strategic and risk management planning processes. As part of this process we anticipate and mitigate regulatory changes and uncertainties by implementing best management practices

now rather than later, when regulations become applicable.

Cost of response

0

Explanation of cost of response

WM has sites that operate in a variety of regions, therefore the response to individual regulatory changes will vary. Overall, the cost is expected to be de minimis as compared to our overall revenue of \$14.5 Billion.

Country/Region

United States of America

River basin

Other, please specify (Multiple River Basins)

Type of risk

Physical

Primary risk driver

Declining water quality

Primary potential impact

Other, please specify (Employee Health and Productivity)

Company-specific description

Declining water quality may impact potable water use of field and office personnel where water is used for daily drinking requirements and sanitation.

Timeframe

More than 6 years

Magnitude of potential impact

Low

Likelihood

Unlikely

Potential financial impact

0

Explanation of financial impact

WM has sites that operate in a variety of regions, therefore the financial impacts of declining water quality will vary from site to site, but are not expected to individually have a large financial impact. Currently, we estimate the aggregate financial impact to be less than 1% of our revenue of \$14.5 Billion.

Primary response to risk

Establish site-specific targets

Description of response

In addition to conserving water, Waste Management works to maintain or improve the quality of local water supplies and to replenish subsurface water supplies. In some instances, we use methods such as reverse osmosis purification to treat and return water from industrial use into the environment at drinking-water quality and, at some facilities, we design "zero discharge" stormwater management infrastructure (e.g., infiltration galleries, percolation basins).

Cost of response

0

Explanation of cost of response

WM has sites that operate in a variety of regions, therefore the response will vary. Overall, the cost is expected to be de minimis as compared to our overall revenue of \$14.5 Billion.

Country/Region

United States of America

River basin

Other, please specify (Multiple River Basins)

Type of risk

Physical

Primary risk driver

Severe weather events

Primary potential impact

Other, please specify (Disruption in Operations)

Company-specific description

In addition to damage to structures or equipment, severe weather events can cause service disruptions. Often, after severe weather events, our post-collection teams may be forced to operate on 24-hour a day/7-day a week shifts for many months to handle inbound storm debris.

Timeframe

1 - 3 years

Magnitude of potential impact

Medium

Likelihood

Likely

Potential financial impact

2500000

Explanation of financial impact

WM has sites that operate in a variety of regions, therefore the financial impacts of operational disruptions due to sever weather events will vary from site to site, WM carries insurance for Property Damage/Business Interruption with a deductible of \$2,500,000 per storm event

Primary response to risk

Develop flood emergency plans

Description of response

The severe weather events have caused the Market Areas to take anticipatory action to relocate vehicles, secure adequate fuel supplies, flood-proof power supplies, and use technology to respond to logistical challenges.

Cost of response

0

Explanation of cost of response

While the current cost of contingency planning and securing disaster-related supplies and technology is minimal compared to overall operational expenditures, we project that the cost of operational disruptions will start to have a greater impact on our operational bottom line if the severe weather events continue.

W4.2c

(W4.2c) Why does your organization not consider itself exposed to water risks in its value chain (beyond direct operations) with the potential to have a substantive financial or strategic impact?

	Primary reason	Please explain
Row 1	Risks exist, but no substantive impact anticipated	As an integrated environmental service company, our primary supply chain involves the trucks, heavy equipment, and containers that we use to manage the waste that we collect, as well as safety gear, information technology, and office supplies that we utilize to operate our business. Additionally, WM is in many instances part of a closed loop materials management process. Our municipal and private sector customers contracting for recycling services are in fact the suppliers of the raw materials we collect to feed our Materials Recovery Facilities, which in turn serve as the suppliers of the feedstock for paper, metal and other manufacturing companies. These companies produce products that after being used are collected by WM for recycling to use again. As such, our supply chain is not directly exposed to water-related risks that have the potential to generate a substantial change in our business operation, revenue or expenditure. WM continues to evaluate exposure to water-related risks from our supply chain.

W4.3

(W4.3) Have you identified any water-related opportunities with the potential to have a substantive financial or strategic impact on your business?

Yes, we have identified opportunities, and some/all are being realized

W4.3a

(W4.3a) Provide details of opportunities currently being realized that could have a substantive financial or strategic impact on your business.

Type of opportunity

Efficiency

Primary water-related opportunity

Improved water efficiency in operations

Company-specific description & strategy to realize opportunity

Water consumption monitoring and baseline establishment, including as well as implementing globally accepted environmental design guidelines such as LEED and Green Globes

Estimated timeframe for realization

Current - up to 1 year

Magnitude of potential financial impact

Medium

Potential financial impact

0

Explanation of financial impact

Our water management practices have been enhanced recently through the use of a third-party vendor to provide a higher level of oversight into our utility data that helps sites better measure and manage consumption. The vendor notifies facilities when there is an unexpected consumption spike or higher-than-normal usage. For example, in 2016, a deviation report was sent to alert our Mill Seat Landfill in Bergen, New York. As a result, the landfill was able to identify the issue immediately, replace a malfunctioning valve, and monitor its effectiveness. WM sites throughout the country are implementing a variety of efficiency measures, therefore the financial impacts will vary from site to site. Currently, we estimate the aggregate financial impact to be less than 1% of our revenue of \$14.5 Billion.

Type of opportunity

Resilience

Primary water-related opportunity

Increased resilience to impacts of climate change

Company-specific description & strategy to realize opportunity

Constantly refining our emergency planning and response capabilities to be able to service communities impacted by weather-related events.

Estimated timeframe for realization

1 to 3 years

Magnitude of potential financial impact

Medium

Potential financial impact

0

Explanation of financial impact

To prepare for the possibility of extreme weather emergencies that have the potential to disrupt our business, we have instituted emergency contingency plans and staged emergency equipment and fuel to ensure continuity of service or a return to service in the shortest time period possible. These plans are based on an assessment of the types of disasters that could affect each business region and the ways in which each type of disaster would impact our employees, business operations and community needs. Implementing best management practices now to mitigate these weather-related risks in the future allows our businesses in these areas to operate more efficiently and demonstrate environmental leadership in our industry. Although business continuity is our primary opportunity, cost savings and increase in our brand value are positive impacts of these strategies. Currently, we estimate the aggregate financial impact of these planning and implementation processes to be less than 0.5% of our revenue of \$14.5 Billion.

W5. Facility-level water accounting

W5.1

(W5.1) For each facility referenced in W4.1c, provide coordinates, total water accounting data and comparisons with the previous reporting year.

Facility reference number

Facility 1

Facility name (optional)

Alberta - 2 Facilites

Country/Region

Canada

River basin

Other, please specify (Various River Basins in Alberta)

Latitude

52.82907

Longitude

-110.85319

Primary power generation source for your electricity generation at this facility

<Not Applicable>

Oil & gas sector business division

<Not Applicable>

Total water withdrawals at this facility (megaliters/year)

0.25

Comparison of withdrawals with previous reporting year

About the same

Total water discharges at this facility (megaliters/year)

0.22

Comparison of discharges with previous reporting year

About the same

Total water consumption at this facility (megaliters/year)

0.03

Comparison of consumption with previous reporting year

About the same

Please explain

For each source, withdrawn water (W) that is not consumed by our employees or through our operations (C) is returned (D) to the source, where $W = D + C$.

Facility reference number

Facility 2

Facility name (optional)

Arizona - 7 Facilities

Country/Region

United States of America

River basin

Other, please specify (Various River Basins in Arizona)

Latitude

32.337647

Longitude

-111.074996

Primary power generation source for your electricity generation at this facility

<Not Applicable>

Oil & gas sector business division

<Not Applicable>

Total water withdrawals at this facility (megaliters/year)

11.48

Comparison of withdrawals with previous reporting year

About the same

Total water discharges at this facility (megaliters/year)

9.68

Comparison of discharges with previous reporting year

About the same

Total water consumption at this facility (megaliters/year)

1.8

Comparison of consumption with previous reporting year

About the same

Please explain

For each source, withdrawn water (W) that is not consumed by our employees or through our operations (C) is returned (D) to the source, where $W = D + C$.

Facility reference number

Facility 3

Facility name (optional)

California – 29 Facilities

Country/Region

United States of America

River basin

Other, please specify (Various River Basins in California)

Latitude

33.781488

Longitude

-117.472736

Primary power generation source for your electricity generation at this facility

<Not Applicable>

Oil & gas sector business division

<Not Applicable>

Total water withdrawals at this facility (megaliters/year)

360.19

Comparison of withdrawals with previous reporting year

Much higher

Total water discharges at this facility (megaliters/year)

342.1

Comparison of discharges with previous reporting year

Much higher

Total water consumption at this facility (megaliters/year)

18.09

Comparison of consumption with previous reporting year

About the same

Please explain

As integration of our water withdrawal data nears completion we are able to get a more complete picture of our water usage and

thus our number is higher than previous years. For each source, withdrawn water (W) that is not consumed by our employees or through our operations (C) is returned (D) to the source, where $W = D + C$.

Facility reference number

Facility 4

Facility name (optional)

Illinois - 3 Facilities

Country/Region

United States of America

River basin

Other, please specify (Various River Basins in Illinois)

Latitude

41.92349

Longitude

-88.73717

Primary power generation source for your electricity generation at this facility

<Not Applicable>

Oil & gas sector business division

<Not Applicable>

Total water withdrawals at this facility (megaliters/year)

1.67

Comparison of withdrawals with previous reporting year

Higher

Total water discharges at this facility (megaliters/year)

0.78

Comparison of discharges with previous reporting year

About the same

Total water consumption at this facility (megaliters/year)

0.89

Comparison of consumption with previous reporting year

Higher

Please explain

As integration of our water withdrawal data nears completion we are able to get a more complete picture of our water usage and thus our number is higher than previous years. For each source, withdrawn water (W) that is not consumed by our employees or through our operations (C) is returned (D) to the source, where $W = D + C$.

Facility reference number

Facility 5

Facility name (optional)

Indiana - 2 Facilities

Country/Region

United States of America

River basin

Other, please specify (Various River Basins in Indiana)

Latitude

41.62324

Longitude

-85.974354

Primary power generation source for your electricity generation at this facility

<Not Applicable>

Oil & gas sector business division

<Not Applicable>

Total water withdrawals at this facility (megaliters/year)

64.82

Comparison of withdrawals with previous reporting year

Much higher

Total water discharges at this facility (megaliters/year)

64.13

Comparison of discharges with previous reporting year

Much higher

Total water consumption at this facility (megaliters/year)

0.69

Comparison of consumption with previous reporting year

About the same

Please explain

As integration of our water withdrawal data nears completion we are able to get a more complete picture of our water usage and thus our number is higher than previous years. For each source, withdrawn water (W) that is not consumed by our employees or through our operations (C) is returned (D) to the source, where $W = D + C$.

Facility reference number

Facility 6

Facility name (optional)

Michigan - 2 Facilities

Country/Region

United States of America

River basin

Other, please specify (Various River Basins in Michigan)

Latitude

41.918922

Longitude

-85.681304

Primary power generation source for your electricity generation at this facility

<Not Applicable>

Oil & gas sector business division

<Not Applicable>

Total water withdrawals at this facility (megaliters/year)

0

Comparison of withdrawals with previous reporting year

About the same

Total water discharges at this facility (megaliters/year)

0

Comparison of discharges with previous reporting year

About the same

Total water consumption at this facility (megaliters/year)

0

Comparison of consumption with previous reporting year

About the same

Please explain

For each source, withdrawn water (W) that is not consumed by our employees or through our operations (C) is returned (D) to the source, where $W = D + C$.

Facility reference number

Facility 7

Facility name (optional)

Texas - 1 Facility

Country/Region

United States of America

River basin

Other, please specify (Various River Basins in Texas)

Latitude

27.71243

Longitude

-97.46187

Primary power generation source for your electricity generation at this facility

<Not Applicable>

Oil & gas sector business division

<Not Applicable>

Total water withdrawals at this facility (megaliters/year)

0

Comparison of withdrawals with previous reporting year

About the same

Total water discharges at this facility (megaliters/year)

0

Comparison of discharges with previous reporting year

About the same

Total water consumption at this facility (megaliters/year)

0

Comparison of consumption with previous reporting year

About the same

Please explain

This is a "Closed Site" so water use may be considered de minimis.

Facility reference number

Facility 8

Facility name (optional)

Wisconsin - 13 Facilities

Country/Region

United States of America

River basin

Other, please specify (Various River Basins in Wisconsin)

Latitude

43.041794

Longitude

-89.406455

Primary power generation source for your electricity generation at this facility

<Not Applicable>

Oil & gas sector business division

<Not Applicable>

Total water withdrawals at this facility (megaliters/year)

3.64

Comparison of withdrawals with previous reporting year

About the same

Total water discharges at this facility (megaliters/year)

1.79

Comparison of discharges with previous reporting year

About the same

Total water consumption at this facility (megaliters/year)

1.85

Comparison of consumption with previous reporting year

About the same

Please explain

For each source, withdrawn water (W) that is not consumed by our employees or through our operations (C) is returned (D) to the source, where $W = D + C$.

W5.1a

(W5.1a) For each facility referenced in W5.1, provide withdrawal data by water source.

Facility reference number

Facility 1

Facility name

Alberta - 2 Facilities

Fresh surface water, including rainwater, water from wetlands, rivers and lakes

0

Brackish surface water/seawater

0

Groundwater - renewable

0

Groundwater - non-renewable

0

Produced water

0

Third party sources

0.25

Comment

Facility reference number

Facility 2

Facility name

Arizona - 7 Facilities

Fresh surface water, including rainwater, water from wetlands, rivers and lakes

0

Brackish surface water/seawater

0

Groundwater - renewable

0

Groundwater - non-renewable

0

Produced water

0

Third party sources

11.48

Comment

Facility reference number

Facility 3

Facility name

California - 29 Facilities

Fresh surface water, including rainwater, water from wetlands, rivers and lakes

0

Brackish surface water/seawater

0

Groundwater - renewable

0

Groundwater - non-renewable

0

Produced water

0

Third party sources

360.19

Comment

Facility reference number

Facility 4

Facility name

Illinois - 3 Facilities

Fresh surface water, including rainwater, water from wetlands, rivers and lakes

0

Brackish surface water/seawater

0

Groundwater - renewable

0.91

Groundwater - non-renewable

0

Produced water

0

Third party sources

0.76

Comment

Beginning in 2017, we are estimating the water withdrawals from sites with groundwater wells using an estimate of 81 gallons/employee/day, the national average of the USGS estimate for self-supply groundwater withdrawals per capita for domestic purposes.

Facility reference number

Facility 5

Facility name

Indiana - 2 Facilities

Fresh surface water, including rainwater, water from wetlands, rivers and lakes

0

Brackish surface water/seawater

0

Groundwater - renewable

0

Groundwater - non-renewable

0

Produced water

0

Third party sources

64.82

Comment

Facility reference number

Facility 6

Facility name

Michigan - 2 Facilities

Fresh surface water, including rainwater, water from wetlands, rivers and lakes

0

Brackish surface water/seawater

0

Groundwater - renewable

0

Groundwater - non-renewable

0

Produced water

0

Third party sources

0

Comment

Facility reference number

Facility 7

Facility name

Texas - 1 Facility

Fresh surface water, including rainwater, water from wetlands, rivers and lakes

0

Brackish surface water/seawater

0

Groundwater - renewable

0

Groundwater - non-renewable

0

Produced water

0

Third party sources

0

Comment

This is a "Closed Site" so water use may be considered de minimis.

Facility reference number

Facility 8

Facility name

Wisconsin - 13 Facilities

Fresh surface water, including rainwater, water from wetlands, rivers and lakes

0

Brackish surface water/seawater

0

Groundwater - renewable

0

Groundwater - non-renewable

0

Produced water

0

Third party sources

3.64

Comment

W5.1b

(W5.1b) For each facility referenced in W5.1, provide discharge data by destination.

Facility reference number

Facility 1

Facility name

Alberta - 2 Facilities

Fresh surface water

0

Brackish surface water/Seawater

0

Groundwater

0

Third party destinations

0.22

Comment

Facility reference number

Facility 2

Facility name

Arizona - 7 Facilities

Fresh surface water

0

Brackish surface water/Seawater

0

Groundwater

0

Third party destinations

9.68

Comment

Facility reference number

Facility 3

Facility name

California - 29 Facilities

Fresh surface water

0

Brackish surface water/Seawater

0

Groundwater

0

Third party destinations

342.1

Comment

Facility reference number

Facility 4

Facility name

Illinois - 3 Facilities

Fresh surface water

0

Brackish surface water/Seawater

0

Groundwater

0.73

Third party destinations

0.16

Comment

Beginning in 2017, we are estimating the water withdrawals and discharges from sites with groundwater wells using an estimate of 81 gallons/employee/day, the national average of the USGS estimate for self-supply groundwater withdrawals per capita for domestic purposes. For each source, withdrawn water (W) that is not consumed by our employees or through our operations (C) is returned (D) to the source, where $W = D + C$.

Facility reference number

Facility 5

Facility name

Indiana - 2 Facilities

Fresh surface water

0

Brackish surface water/Seawater

0

Groundwater

0

Third party destinations

64.13

Comment

Facility reference number

Facility 6

Facility name

Michigan - 2 Facilities

Fresh surface water

0

Brackish surface water/Seawater

0

Groundwater

0

Third party destinations

0

Comment

Facility reference number

Facility 7

Facility name

Texas - 1 Facility

Fresh surface water

0

Brackish surface water/Seawater

0

Groundwater

0

Third party destinations

0

Comment

This is a "Closed Site" so water use may be considered de minimis.

Facility reference number

Facility 8

Facility name

Wisconsin - 13 Facilities

Fresh surface water

0

Brackish surface water/Seawater

0

Groundwater

0

Third party destinations

1.79

Comment

W5.1c

(W5.1c) For each facility referenced in W5.1, provide the proportion of your total water use that is recycled or reused, and give the comparison with the previous reporting year.

Facility reference number

Facility 1

Facility name

Alberta - 2 Facilities

% recycled or reused

2-10%

Comparison with previous reporting year

About the same

Please explain

Recycled water is used for a variety of purposes including, to wash trucks and control dust and landfills and transfer stations, and in boilers for steam turbines at select renewable energy projects. We estimate that this represents between 2-10% of our total water use.

Facility reference number

Facility 2

Facility name

Arizona - 7 Facilities

% recycled or reused

2-10%

Comparison with previous reporting year

About the same

Please explain

Recycled water is used for a variety of purposes including, to wash trucks and control dust and landfills and transfer stations, and in boilers for steam turbines at select renewable energy projects. We estimate that this represents between 2-10% of our total water use.

Facility reference number

Facility 3

Facility name

California - 29 Facilities

% recycled or reused

2-10%

Comparison with previous reporting year

About the same

Please explain

Recycled water is used for a variety of purposes including, to wash trucks and control dust and landfills and transfer stations, and in boilers for steam turbines at select renewable energy projects. We estimate that this represents between 2-10% of our total water use.

Facility reference number

Facility 4

Facility name

Illinois - 3 Facilities

% recycled or reused

2-10%

Comparison with previous reporting year

About the same

Please explain

Recycled water is used for a variety of purposes including, to wash trucks and control dust and landfills and transfer stations, and in boilers for steam turbines at select renewable energy projects. We estimate that this represents between 2-10% of our total water use.

Facility reference number

Facility 5

Facility name

Indiana - 2 Facilities

% recycled or reused

2-10%

Comparison with previous reporting year

About the same

Please explain

Recycled water is used for a variety of purposes including, to wash trucks and control dust and landfills and transfer stations, and in boilers for steam turbines at select renewable energy projects. We estimate that this represents between 2-10% of our total water use.

Facility reference number

Facility 6

Facility name

Michigan - 2 Facilities

% recycled or reused

2-10%

Comparison with previous reporting year

About the same

Please explain

Recycled water is used for a variety of purposes including, to wash trucks and control dust and landfills and transfer stations, and in boilers for steam turbines at select renewable energy projects. We estimate that this represents between 2-10% of our total water use.

Facility reference number

Facility 7

Facility name

Texas - 1 Facility

% recycled or reused

2-10%

Comparison with previous reporting year

About the same

Please explain

Recycled water is used for a variety of purposes including, to wash trucks and control dust and landfills and transfer stations, and in boilers for steam turbines at select renewable energy projects. We estimate that this represents between 2-10% of our total water use.

Facility reference number

Facility 8

Facility name

Wisconsin - 13 Facilities

% recycled or reused

2-10%

Comparison with previous reporting year

About the same

Please explain

Recycled water is used for a variety of purposes including, to wash trucks and control dust and landfills and transfer stations, and in boilers for steam turbines at select renewable energy projects. We estimate that this represents between 2-10% of our total water use.

W5.1d

(W5.1d) For the facilities referenced in W5.1, what proportion of water accounting data has been externally verified?

Water withdrawals – total volumes

% verified

Not verified

What standard and methodology was used?

Our data is not currently verified, but we are actively considering verifying within the next two years.

Water withdrawals – volume by source

% verified

Not verified

What standard and methodology was used?

Our data is not currently verified, but we are actively considering verifying within the next two years.

Water withdrawals – quality

% verified

Not verified

What standard and methodology was used?

Our data is not currently verified, but we are actively considering verifying within the next two years.

Water discharges – total volumes

% verified

Not verified

What standard and methodology was used?

Our data is not currently verified, but we are actively considering verifying within the next two years.

Water discharges – volume by destination

% verified

Not verified

What standard and methodology was used?

Our data is not currently verified, but we are actively considering verifying within the next two years.

Water discharges – volume by treatment method

% verified

Not verified

What standard and methodology was used?

Our data is not currently verified, but we are actively considering verifying within the next two years.

Water discharge quality – quality by standard effluent parameters

% verified

Not verified

What standard and methodology was used?

Our data is not currently verified, but we are actively considering verifying within the next two years.

Water discharge quality – temperature

% verified

Not verified

What standard and methodology was used?

Our data is not currently verified, but we are actively considering verifying within the next two years.

Water consumption – total volume

% verified

Not verified

What standard and methodology was used?

Our data is not currently verified, but we are actively considering verifying within the next two years.

Water recycled/reused

% verified

Not verified

What standard and methodology was used?

Our data is not currently verified, but we are actively considering verifying within the next two years.

W6. Governance

W6.1

(W6.1) Does your organization have a water policy?

Yes, we have a documented water policy that is publicly available

W6.1a

(W6.1a) Select the options that best describe the scope and content of your water policy.

	Scope	Content	Please explain
Row 1	Company-wide	Description of business dependency on water Description of business impact on water Description of water-related performance standards for direct operations Description of water-related standards for procurement Company water targets and goals Commitments beyond regulatory compliance Commitment to water-related innovation Commitment to stakeholder awareness and education Commitment to water stewardship and/or collective action Acknowledgement of the human right to water and sanitation Recognition of environmental linkages, for example, due to climate change	We recognize that fresh water supplies are an increasingly scarce resource in our world. Though our operations are not relatively water intensive, we nevertheless work to use water sparingly and responsibly in our operations. Primary water uses include dust control and soil compaction at our landfills; cleaning and maintenance in our fleets; and drinking and sanitation in our facilities. Our approach to water conservation is guided by our company-wide conservation policy, which counsels facilities to consistently look for opportunities to reduce our water usage. In addition to conserving water, Waste Management works to maintain or improve the quality of local water supplies and to replenish subsurface water supplies. In some instances, we use methods such as reverse osmosis purification to treat and return water from industrial use into the environment at drinking-water quality and, at some facilities, we design "zero discharge" stormwater management infrastructure. 2016SustainabilityReport_WM - Water Conservation.pdf

W6.2

(W6.2) Is there board level oversight of water-related issues within your organization?

Yes

W6.2a

(W6.2a) Identify the position(s) of the individual(s) on the board with responsibility for water-related issues.

Position of individual	Please explain
Chief Executive Officer (CEO)	As a member of our Board, our CEO regularly receives environmental, health and safety compliance reports from management. Our Compliance Audit Services department supports these efforts and oversees compliance audits at all company-owned, -operated and -controlled facilities and operations.

W6.2b

(W6.2b) Provide further details on the board's oversight of water-related issues.

	Frequency that water-related issues are a scheduled agenda item	Governance mechanisms into which water-related issues are integrated	Please explain
Row 1	Scheduled - some meetings	Monitoring implementation and performance Overseeing major capital expenditures Reviewing and guiding business plans Reviewing and guiding major plans of action Reviewing and guiding risk management policies Reviewing and guiding strategy Reviewing and guiding corporate responsibility strategy Reviewing innovation/R&D priorities Setting performance objectives	Members of the Senior Leadership Team (listed in W6.3) report on issues relating to climate change (including recycling productivity, renewable energy generation, water-related issues, and pending regulatory matters) to the WM Board of Directors at least twice a year, which then gives strategic advice to the business in response.

W6.3

(W6.3) Below board level, provide the highest-level management position(s) or committee(s) with responsibility for water-related issues.

Name of the position(s) and/or committee(s)

Chief Operating Officer (COO)

Responsibility

Both assessing and managing water-related risks and opportunities

Frequency of reporting to the board on water-related issues

Half-yearly

Please explain

As part of the oversight of our collection and disposal operations, our Executive Vice President and Chief Operating Officer has responsibility for issues related to water and water risk as a component of our operations.

Name of the position(s) and/or committee(s)

Other C-Suite Officer, please specify (SVP and Chief Legal Officer)

Responsibility

Assessing water-related risks and opportunities

Frequency of reporting to the board on water-related issues

Half-yearly

Please explain

Along with our Senior Vice President, Operations, Safety, and Environmental Compliance, our Senior Vice President and Chief Legal Officer retains responsibility for confirming that we operate in an environmentally compliant and environmentally conscious manner.

Name of the position(s) and/or committee(s)

Other C-Suite Officer, please specify (SVP Operations, Safety, and Env. Comp.)

SVP Operations, Safety and Environmental Compliance

Responsibility

Both assessing and managing water-related risks and opportunities

Frequency of reporting to the board on water-related issues

Half-yearly

Please explain

As a member of our senior leadership team, the Senior Vice President Operations, Safety, and Environmental Compliance oversees the work of our Carbon Footprint Team, including responsibility for confirming that we operate in an environmentally compliant and environmentally conscious manner. At least twice a year our Board of Directors receives a report on various issues such as potential regulatory and market responses to climate change that may have near- or longer-term impact on our finances or the value of services we provide. The Board, in turn, provides them with strategic advice for the business.

Name of the position(s) and/or committee(s)

Other, please specify (VP, Environmental Management Group)

Responsibility

Both assessing and managing water-related risks and opportunities

Frequency of reporting to the board on water-related issues

As important matters arise

Please explain

Reporting to the Senior Vice President for Operations, Safety, and Environmental Compliance, our VP, Environmental Management Group manages the day to day operations of our environmental compliance teams. This includes coordination of climate change legislative and regulatory issues for the Company through a multi-disciplinary team comprising the Legal, Government Affairs, Communications, and Environmental Management departments. Additionally, the Waste Management Sustainability Services Voluntary GHG Reporting Team coordinates the corporate-wide reporting efforts such as data collection, calculation, updates and report composition.

W6.5

(W6.5) Do you engage in activities that could either directly or indirectly influence public policy on water through any of the following?

- Yes, direct engagement with policy makers
- Yes, trade associations
- Yes, funding research organizations

W6.5a

(W6.5a) What processes do you have in place to ensure that all of your direct and indirect activities seeking to influence policy are consistent with your water policy/water commitments?

WM has a multi-disciplinary team with members from the Legal, Government Affairs, Communications, Environmental Management and WM Sustainability Services (WMSS) departments which monitors emerging sustainability/water-related programs and other events and provides feedback internally to our SVP and Chief Legal Officer and SVP, Operations, Safety, and Environmental Compliance, our Board of Directors and our business units, as well as externally to legislators and regulators on elements that may impact the company and the environmental services industry at policy level. The same cross-functional team ensures that engagements and activities that may influence a policy, directly or indirectly are properly monitored and vetted for consistency with the company's overall climate change strategies. Our internal Public Policy Group oversees federal and state legislative and regulatory response to enhance the consistency of WM advocacy across multiple forums. This group reports to the SVP and Chief Legal Officer and coordinates closely with the SVP, Operations, Safety and Environmental Compliance. Individual responsibility for policy oversight for issues with climate change implications (e.g., clean air regulations, natural gas vehicle incentives, recycling policy) is identified on the WM intranet site to enhance consistency and coordination.

W7. Business strategy

W7.1

(W7.1) Are water-related issues integrated into any aspects of your long-term strategic business plan, and if so how?

	Are water-related issues integrated?	Long-term time horizon (years)	Please explain
Long-term business objectives	Yes, water-related issues are integrated	11-15	When establishing our strategic objectives, we take into account the perspectives of our customers, shareholders, employees, community members, regulators and other stakeholders, as well as our performance against key internal metrics and our reputation as measured with key audiences. We often employ "heat maps" that identify the geographic scope and intensity of risks and opportunities.
Strategy for achieving long-term objectives	Yes, water-related issues are integrated	11-15	We align our major financial, operational, environmental, community, people, safety, compliance and customer objectives with those specific company-wide programs and initiatives that have been approved and funded as critical to achieving our strategic objectives. Performance expectations are communicated throughout the organization, and senior leadership assigns quarterly and annual targets to which our field operations are held accountable. An ongoing initiative focuses all employees on knowing our customers better, optimizing assets, innovating in technologies, creating more efficient systems and extracting maximum value from the waste stream.
Financial planning	Yes, water-related issues are integrated	11-15	Opportunities presented to Waste Management from outside or inside the company that have the best potential to deliver high degrees of water-use reduction at low cost or to deliver water use reductions combined with a positive return are given priority for implementation. This approach to addressing the challenges of climate change is integrated into our evaluation of all activities and potential investments — from collection fleet and logistics to administrative functions and operating facilities.

W7.2

(W7.2) What is the trend in your organization’s water-related capital expenditure (CAPEX) and operating expenditure (OPEX) for the reporting year, and the anticipated trend for the next reporting year?

	Water-related CAPEX (+/- % change)	Anticipated forward trend for CAPEX (+/- % change)	Water-related OPEX (+/- % change)	Anticipated forward trend for OPEX (+/- % change)	Please explain
Row 1	0	0	0	0	We consider water-related capital expenditure changes de minimis compared to our overall CAPEX and OPEX.

W7.3

(W7.3) Does your organization use climate-related scenario analysis to inform its business strategy?

	Use of climate-related scenario analysis	Comment
Row 1	Yes	

W7.3a

(W7.3a) Has your organization identified any water-related outcomes from your climate-related scenario analysis?

Yes

W7.3b

(W7.3b) What water-related outcomes were identified from the use of climate-related scenario analysis, and what was your organization’s response?

	Climate-related scenario(s)	Description of possible water-related outcomes	Company response to possible water-related outcomes
Row 1	Other, please specify (WRI Acqueduct)	WM facilities located in areas with medium to high public awareness around water issues could carry higher reputational risks if water is not sustainably managed. For example, 47% of our Material Recovery Facilities (MRFs) are in high flood areas and 8% are in extremely high flood areas; 2 of these MRFs are also in areas with threatened amphibians. 10% of MRFs are in areas of medium to high drought severity. In a business as usual scenario, looking ahead at both 2030 and 2040, the majority of our MRFs are located in areas anticipated to experience near normal water demand and supply. Two MRFs may experience up to 1.4x increase in water supply, and to 1.2x decrease in current water supply, and 3 MRFs may experience up to 1.4x in water demand. One MRF is in an area of high flooding AND medium to high drought severity and is not anticipated to experience near normal supply and increased demand (1.2x) in 2030 and 2040.	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 potential future impacts. For example, over half of WM materials recycling facilities are currently in high or extremely high flood areas. Using the WRI Aqueduct tool, we consider other locations that might be similarly impacted in 2030 and begin to adapt existing Hurricane Preparedness Plans for these locations. We also 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 try to predict where we may need to be prepared in the future.

W7.4

(W7.4) Does your company use an internal price on water?

Row 1

Does your company use an internal price on water?

No, and we do not anticipate doing so within the next two years

Please explain

We do not anticipate establishing an internal price on water.

W8. Targets

W8.1

(W8.1) Describe your approach to setting and monitoring water-related targets and/or goals.

	Levels for targets and/or goals	Monitoring at corporate level	Approach to setting and monitoring targets and/or goals
Row 1	Company-wide targets and goals Business level specific targets and/or goals Site/facility specific targets and/or goals	Targets are monitored at the corporate level Goals are monitored at the corporate level	When establishing our strategic objectives, we take into account the perspectives of our customers, shareholders, employees, community members, regulators and other stakeholders, as well as our performance against key internal metrics and our reputation as measured with key audiences. We often employ "heat maps" that identify the geographic scope and intensity of risks and opportunities. We align our major objectives with those specific company-wide programs and initiatives that have been approved and funded as critical to achieving our strategic objectives. Performance expectations are communicated throughout the organization, and senior leadership assigns quarterly and annual targets to which our field operations are held accountable. We set targets as part of our annual budgeting process. The targets represent commitments we have made to our stakeholders and include improvements and metrics that are factored into employee evaluations. Our operations at all levels report progress in reaching the targets. At the corporate level, monthly and quarterly reports are prepared and presented to the Board of Directors at each of its meetings. There are Monthly Business Review and Quarterly Business Review meetings to continually engage layers of management on progress toward company goals. This format and target-setting process (using specific key performance indicators) was integrated into our annual performance planning process to ensure consistency among strategy, performance planning, and performance measurement and accountability

W8.1a

(W8.1a) Provide details of your water targets that are monitored at the corporate level, and the progress made.

Target reference number

Target 1

Category of target

Monitoring of water use

Level

Company-wide

Primary motivation

Cost savings

Description of target

Our goal is to have 100% of our non-groundwater facilities that use metered municipal water monitoring water use through our UBM System by 2020.

Quantitative metric

% sites monitoring water withdrawals total volumes

Baseline year

2014

Start year

2014

Target year

2020

% achieved

58

Please explain

We are continuing to work with our Accounting, Supply Chain, and Real Estate groups as well as EnerNOC, our Utility Bill Management (UBM) vendor to ensure that all metered-use sites are added into the database. Water use at other sites, such as those that primarily use groundwater, are estimated using USGS groundwater withdrawal data and other internal estimates. This enables us to better monitor the amount of water used at our facilities, and allows each Market Area and individual site to assess any water related issues such as leaks or usage deviations.

W8.1b

(W8.1b) Provide details of your water goal(s) that are monitored at the corporate level and the progress made.

Goal

Watershed remediation and habitat restoration, ecosystem preservation

Level

Company-wide

Motivation

Water stewardship

Description of goal

WM participates in the Wildlife Habitat Council and Corporate Lands for Learning Programs. These programs help protect watershed areas through conservation, education and active community involvement. We have established a goal of protecting more wildlife habitat across North America by providing wildlife habitat at 100 of our landfills.

Baseline year

2007

Start year

2007

End year

2020

Progress

While we achieved our goal of providing wildlife habitat at 100 of our landfills in 2010 – 10 years ahead of schedule, WM currently has 95 active Wildlife Habitat Programs, including “Lands for Learning” projects.

W9. Linkages and trade-offs

W9.1

(W9.1) Has your organization identified any linkages or tradeoffs between water and other environmental issues in its direct operations and/or other parts of its value chain?

Yes

W9.1a

(W9.1a) Describe the linkages or tradeoffs and the related management policy or action.

Linkage or tradeoff

Linkage

Type of linkage/tradeoff

Environmental restoration

Description of linkage/tradeoff

Waste Management owns a wide range of properties — large and small, urban and rural. At our larger properties, in the substantial areas that we set aside as buffer zones, we make a concerted effort to enhance the natural value of the land by providing habitat for wildlife and offering educational opportunities and natural beauty to the surrounding community. One of our key partners in protecting and enhancing wildlife habitat is the Wildlife Habitat Council (WHC), a nonprofit organization recognized as the authoritative conservation program for businesses. Our long-standing partnership with WHC has resulted in the creation of 95 WHC-certified projects at Waste Management sites.

Policy or action

Our projects are included in the WHC's Conservation Registry, an interactive database that maps conservation, restoration and wildlife habitat-enhancement projects worldwide, allowing us to better understand the impact of our conservation programs. We continue to expand certified sites to include small urban habitats at transfer stations, recycling facilities and other smaller Waste Management facilities. Beyond the wildlife habitats certified at our active and closed facilities, we lease our unused property for productive use by farmers and ranchers.

W10. Verification

W10.1

(W10.1) Do you verify any other water information reported in your CDP disclosure (not already covered by W5.1d)?

No, but we are actively considering verifying within the next two years

W11. Sign off

W-FI

(W-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.

W11.1

(W11.1) Provide details for the person that has signed off (approved) your CDP water response.

	Job title	Corresponding job category
Row 1	President and CEO	Chief Executive Officer (CEO)

W11.2

(W11.2) Please indicate whether your organization agrees for CDP to transfer your publicly disclosed data on your impact and risk response strategies to the CEO Water Mandate's Water Action Hub [applies only to W2.1a (response to impacts), W4.2 and W4.2a (response to risks)].

No

SW. Supply chain module

SW0.1

(SW0.1) What is your organization's annual revenue for the reporting period?

	Annual revenue
Row 1	1448500000

SW0.2

(SW0.2) Do you have an ISIN for your organization that you are willing to share with CDP?

No

SW1.1

(SW1.1) Have you identified if any of your facilities reported in W5.1 could have an impact on a requesting CDP supply chain member?

Yes, CDP supply chain members buy goods or services from facilities listed in W5.1

SW1.1a

(SW1.1a) Indicate which of the facilities referenced in W5.1 could affect a requesting CDP supply chain member.

Facility reference number

Facility 3

Facility name

California – 29 Facilities

Requesting member

California Department of General Services (DGS)

Description of potential impact on member

Changes in precipitation patterns can result in drought or flood conditions that may impact landfill operations. Flooding conditions can have an impact on collection operations if employees are unable to report to work and/or if collection vehicles are unable to service customers. WM facilities in California are subject to intermittent drought conditions, flood conditions or both.

Comment

SW1.2

(SW1.2) Are you able to provide geolocation data for your site facilities not already reported in W5.1?

No, this is confidential data

SW2.1

(SW2.1) Please propose any mutually beneficial water-related projects you could collaborate on with specific CDP supply chain members.

Requesting member

California Department of General Services (DGS)

Category of project

Promote river basin collective action

Type of project

Invite customer to collaborate with other users in their river basins to reduce impact

Motivation

Through our work with various stakeholder working groups, we have been successful at encouraging innovation to reduce water impacts by investigating new technologies and sampling techniques.

Estimated timeframe for achieving project

2 to 3 years

Details of project

We discuss water quality issues with many of our suppliers and customers pursuant to our participation in the RCRA Corrective Action Project and the Sediment Management Working Group. Both groups fund research on water quality parameters, and discuss the interaction between water contamination and discharge standards and coverage. We would encourage California Department of General Services to collaborate via these or other working groups.

Projected outcome

Reduce the impact on river basins throughout California and protect water quality and availability.

SW2.2

(SW2.2) Have any water projects been implemented due to CDP supply chain member engagement?

No

SW3.1

(SW3.1) Provide any available water intensity values for your organization's products or services across its operations.

Product name

Solid Waste Management (Landfilled or Recycled Materials)

Water intensity value

18.4

Numerator: Water aspect

Water withdrawn

Denominator: Unit of production

Tons Managed

Comment

In 2017, WM used 2,375,160 m³ (2,375.16 megaliters) of water in operations while handling 128,907 tons of Municipal Solid Waste and Recycled Material. Total tonnage is an aggregation of landfill and recycling tonnage from two distinct data sets.

Submit your response

In which language are you submitting your response?

English

Please confirm how your response should be handled by CDP

	Public or Non-Public Submission	I am submitting to	Are you ready to submit the additional Supply Chain Questions?
I am submitting my response	Public	Investors Customers	Yes, submit Supply Chain Questions now

Please confirm below

I have read and accept the applicable Terms