



## Water 2017 Information Request Waste Management, Inc.

### Module: Introduction

#### Page: W0. Introduction

#### W0.1

#### Introduction

#### Please give a general description 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<sub>2e</sub> 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 2016, we managed 14 million tons of recyclables.
- iii) To invest in cleaner technologies: WM set a goal in 2007 to reduce CO<sub>2</sub> emissions and increase fleet efficiency by 15 percent. We exceeded that goal in 2011, reducing CO<sub>2</sub> 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.”

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## W0.2

### Reporting year

Please state the start and end date of the year for which you are reporting data

Period for which data is reported
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Fri 01 Jan 2016 - Sat 31 Dec 2016
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## W0.3

### Reporting boundary

Please indicate the category that describes the reporting boundary for companies, entities, or groups for which water-related impacts are reported

Companies, entities or groups over which operational control is exercised

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## W0.4

### Exclusions

Are there any geographies, facilities or types of water inputs/outputs within this boundary which are not included in your disclosure?

No

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## Further Information

**Module: Current State**

**Page: W1. Context**

**W1.1**

Please rate the importance (current and future) of water quality and water quantity to the success of your organization

Water quality and quantity	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 41,200 employees in North America. Our operations are supported by both office and field employees who work during regular business hours. Our field employees demand higher usage because they work outside and are often exposed to outdoor elements. In the future, good quality freshwater will continue to play an important role in our employees' health and productivity.
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 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.

**W1.2**

For your total operations, please detail which of the following water aspects are regularly measured and monitored and provide an explanation as to why or why not

Water aspect	% of sites/facilities/operations	Please explain
Water withdrawals- total volumes	51-75	For most of our operations, specifically in all WM offices across North America, we use municipal water for domestic purposes only. At the end of 2014, WM contracted with a leader in energy intelligence software to track energy and 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, and WM is using this data for the first time in this report.
Water withdrawals- volume by sources	Less than 1%	WM does not specifically monitor the source of water withdrawals. We consider most of our water to come from municipal water systems.
Water discharges- total volumes	51-75	WM does not specifically measure or monitor the volume of its facilities' water discharges. 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. Additionally, all 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).
Water discharges- volume by destination	Less than 1%	WM does not specifically monitor the destination of water discharges. We consider most of our water to be discharged to municipal water treatment systems. However, all 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).
Water discharges- volume by treatment method	Less than 1%	WM does not specifically monitor the treatment methods of water discharges. We consider most of our water to be discharged to municipal water treatment systems. However, all facilities comply with the

Water aspect	% of sites/facilities/operations	Please explain
		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).
Water discharge quality data-quality by standard effluent parameters	Less than 1%	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 consumption- total volume	76-100	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.
Facilities providing fully-functioning WASH services for all workers	76-100	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.

**W1.2a**

**Water withdrawals: for the reporting year, please provide total water withdrawal data by source, across your operations**

<b>Source</b>	<b>Quantity (megaliters/year)</b>	<b>How does total water withdrawals for this source compare to the last reporting year?</b>	<b>Comment</b>
Fresh surface water	0	Not applicable	No comment.
Brackish surface water/seawater	0	Not applicable	No comment.
Rainwater	0	Not applicable	No comment.
Groundwater - renewable	0	Not applicable	No comment.
Groundwater - non-renewable	0	Not applicable	No comment.
Produced/process water	0	Not applicable	No comment.
Municipal supply	2294.24	Much higher	At the end of 2014, WM contracted with a leader in energy intelligence software to track energy and 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, and WM is using this data for the first time in this report.
Wastewater from another organization	0	Not applicable	No comment.
Total	2294.24	Much higher	At the end of 2014, WM contracted with a leader in energy intelligence software to track energy and 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, and WM is using

Source	Quantity (megaliters/year)	How does total water withdrawals for this source compare to the last reporting year?	Comment
			this data for the first time in this report.

**W1.2b**

**Water discharges:** for the reporting year, please provide total water discharge data by destination, across your operations

Destination	Quantity (megaliters/year)	How does total water discharged to this destination compare to the last reporting year?	Comment
Fresh surface water	0	Not applicable	No comment.
Brackish surface water/seawater	0	Not applicable	No comment.
Groundwater	0	Not applicable	No comment.
Municipal/industrial wastewater treatment plant	1791.93	This is our first year of measurement	WM does not specifically measure or monitor the volume of its facilities' water discharges. 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.
Wastewater for another organization	0	Not applicable	No comment.
Total	1791.93	This is our first year of measurement	WM does not specifically measure or monitor the volume of its facilities' water discharges. We consider most of our water to be discharged to municipal water treatment systems, and equal to the

Destination	Quantity (megaliters/year)	How does total water discharged to this destination compare to the last reporting year?	Comment
			amount of water withdrawn, less the water consumed by employees and operations.

**W1.2c**

**Water consumption: for the reporting year, please provide total water consumption data, across your operations**

Consumption (megaliters/year)	How does this consumption figure compare to the last reporting year?	Comment
502.31	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 accurately measure its water consumption.

**W1.3**

**Do you request your suppliers to report on their water use, risks and/or management?**

No

**W1.3b**

**Please choose the option that best explains why you do not request your suppliers to report on their water use, risks and/or management**

Primary reason	Please explain
Assessed risk but no risk found	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



Primary reason	Please explain
	business operation, revenue or expenditure. WM continues to evaluate exposure to water-related risks from our supply chain on an annual basis.

**W1.4**

**Has your organization experienced any detrimental impacts related to water in the reporting year?**

Yes

**W1.4a**

**Please describe the detrimental impacts experienced by your organization related to water in the reporting year**

Country	River basin	Impact driver	Impact	Description of impact	Length of impact	Overall financial impact	Response strategy	Description of response strategy
United States of America	Not known	Phys-Climatic Change	Transport disruption	In recent years, WM has experienced service challenges because of more extreme weather events.	3-6 months	Less than \$1,000,000	Engagement with customers Infrastructure investment Greater due diligence	WM Market Areas, such as Southern California, have assessed operations located in areas experiencing adverse conditions in 2016, such as heavy rainfall, more extreme flooding,

Country	River basin	Impact driver	Impact	Description of impact	Length of impact	Overall financial impact	Response strategy	Description of response strategy
								and mudslides to take anticipatory action to secure adequate fuel supplies, flood-proof power supplies, and use technology to respond to logistical challenges.
United States of America	Colorado River (Pacific Ocean)	Phys-Drought	Water supply disruption	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	36-48 months	Less than \$1,000,000	Alignment of public policy positions with water stewardship goals Infrastructure investment Increased capital expenditure Establish site-specific targets	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

Country	River basin	Impact driver	Impact	Description of impact	Length of impact	Overall financial impact	Response strategy	Description of response strategy
				<p>' ability to use water in our Material Recovery Facilities (MRF) and Transfer Stations for odor mitigation and fleet maintenance and Landfill facilities for fugitive dust control. Although the cost may be minimal compared to overall operational cost, we project that the mitigation and compliance cost will start to affect our operational bottom line if the severe</p>				<p>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 as deemed necessary, measurement and monitoring of consumpti</p>

Country	River basin	Impact driver	Impact	Description of impact	Length of impact	Overall financial impact	Response strategy	Description of response strategy
				droughts continue.				on, and reporting.

**Further Information**

**Module: Risk Assessment**

**Page: W2. Procedures and Requirements**

**W2.1**

**Does your organization undertake a water-related risk assessment?**

Water risks are assessed

**W2.2**

**Please select the options that best describe your procedures with regard to assessing water risks**

Risk assessment procedure	Coverage	Scale	Please explain
Water risk assessment undertaken independently of other risk assessments	Direct operations	All facilities	Our current water risk assessment approach is based on geographic location and types of operation. Our facility list is cross-referenced with the WBCSD Water Tool and WRI Aqueduct Tool each year to classify the Overall Water Risk of each site. Additional local factors are taken into account, such as drought conditions and overall water availability and vulnerability. For example, our western Market Areas have started assessing viability of building LEED certified facilities to help mitigate water risk with target water use reductions to meet or exceed LEED design guidelines. In other areas, truck wash programs to reduce reliance on municipal water and instead use recycled water are being implemented. Our Environmental Protection and

Risk assessment procedure	Coverage	Scale	Please explain
			Engineering Groups continue to assess water quality and use viability in all of our landfill and leachate recovery operations.

### W2.3

Please state how frequently you undertake water risk assessments, at what geographical scale and how far into the future you consider risks for each assessment

Frequency	Geographic scale	How far into the future are risks considered?	Comment
Annually	Facility	>6 years	No Comment

### W2.4

Have you evaluated how water risks could affect the success (viability, constraints) of your organization's growth strategy?

Yes, evaluated over the next 10 years

### W2.4a

Please explain how your organization evaluated the effects of water risks on the success (viability, constraints) of your organization's growth strategy?

Since we started publishing our GRI based Sustainability Report in 2008 and, with additional focus, our reporting on our water use to CDP in 2012, we have undertaken efforts to assess water risks in our overall operations. Since our facilities are spread all over North America, water risk assessments are done regionally and then locally depending on level of risks and vulnerability.

Changes in precipitation patterns result in drought or flood conditions. MSW landfills, which are weather exposed, can be affected by events like flooding or drought conditions making landscaping and maintenance of vegetated cover challenging. The rate of decay of organic material in the landfill and the landfill gas generated from the decay are impacted by such conditions, which in turn impact gas generation rates and the revenue realized by gas converted to electricity or fuel. Virtually all of WM's landfills in the U.S. and Canada are vulnerable to intermittent drought conditions, flood conditions or both. The same is true with other operations where water is used in varying degree and function, for operations as simple as truck wash. As part of our business and environmental planning, we review opportunities to rely upon waste water where appropriate to mitigate the impacts of drought, and we review facility design and operation in areas potentially prone to flooding to avoid impacts on operations. We also have a program of best practices and protocols to minimize the potential for rain to come into contact with waste materials.

### W2.5

Please state the methods used to assess water risks

Method	Please explain how these methods are used in your risk assessment
WBCSD Global Water Tool WRI water stress definition WRI Aqueduct Other: California Department of Water Resources	WBCSD Global Water Tool and WRI water stress definition are primarily used in our water scarcity mapping - identifying vulnerable areas where our facilities and operations are located. This is done through our proprietary GIS service mapping called WAVE. The consumption of potable water is based on a "Gallons per Employee per Day" or GED calculation estimated by the California Department of Water Resources, and modified for WM's unique facility types.

**W2.6**

**Which of the following contextual issues are always factored into your organization's water risk assessments?**

Issues	Choose option	Please explain
Current water availability and quality parameters at a local level	Relevant, included	We have facilities across North America, and water availability and quality varies among local levels. Currently, about 21%- 30% of our facility portfolio are located in water stressed regions (medium and high risk) of the United States.
Current water regulatory frameworks and tariffs at a local level	Relevant, included	All of our operations have regulatory standards for stormwater and waste-water management. These are part of normal business planning.
Current stakeholder conflicts concerning water resources at a local level	Relevant, 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 are identifying local stakeholders and opening 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 a Wildlife Habitat Council (WHC).
Current implications of water on your key commodities/raw materials	Not relevant, explanation provided	WM is a service enterprise and does not produce consumer products. If we see more extreme weather conditions coupled with persistent drought associated with climate change, evaluation of the impacts of water on our Enterprise Key Suppliers will be part of our sustainability reviews.

Issues	Choose option	Please explain
Current status of ecosystems and habitats at a local level	Relevant, included	WM's Environmental Protection Group helps ensure that local ecosystems where our operations are located are not adversely impacted by our operations. We work with the Wildlife Habitat Council (WHC) to help preserve wildlife habitat. By the end of 2016, we had 110 WHC-certified programs at 95 facilities (mostly landfills, but also some other types of sites), with approximately 25,000 acres created, enhanced or protected for wildlife across North America.
Current river basin management plans	Relevant, included	River Basin Management Plans are currently used in specific landfill locations that are governed by Federal and State regulations under the Clean Water Act (CWA), the National Pollution Discharge Elimination System (NPDES), local ordinances and other regulatory agencies.
Current access to fully-functioning WASH services for all employees	Relevant, 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.
Estimates of future changes in water availability at a local level	Relevant, included	WM is mapping all its facilities across North America using a GIS based proprietary program to be used primarily for fleet management and service identification at the customer level. The same program will be used in the future to assess water scarcity and water availability at the local level - providing high level information that will help us mitigate future changes related to water availability that may disrupt our operations.
Estimates of future potential regulatory changes at a local level	Relevant, 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 imminent. Our government affairs staff monitor these changes as part of annual strategic and risk management planning processes.

Issues	Choose option	Please explain
Estimates of future potential stakeholder conflicts at a local level	Relevant, included	<p>A majority of potential stakeholders' conflicts at local level are directed towards our landfill expansion activities - which by and large, only affect a small number of our landfill sites.</p> <p>However, there is still a renewed focus on stakeholders engagement during the expansion's entitlement and permitting process. WM's Community and Government Affairs Group is taking responsibility in stakeholder dialogues and arbitration obtain consensual decisions before the expansion.</p>
Estimates of future implications of water on your key commodities/raw materials	Not relevant, explanation provided	<p>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.</p>
Estimates of future potential changes in the status of ecosystems and habitats at a local level	Relevant, included	<p>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.</p>
Scenario analysis of availability of sufficient quantity and quality of water relevant for your operations at a local level	Relevant, included	<p>The South and West regions of the continental United States, where 7 of our Market Areas are located, are particularly vulnerable to water stress. In the Southeast region where only portions are exposed to potential water stress, another 8 Market Areas will likely be affected in the future. All in all, these Market Areas represent approximately 856 facilities that could be subjected to water-related risks in the future. This includes all WM sites with employees present that are at high or medium to high risk.</p>
Scenario analysis of regulatory and/or tariff changes at a local level	Relevant, included	<p>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 imminent. Our government affairs staff monitor these changes as part of annual strategic and risk management planning processes.</p>



Issues	Choose option	Please explain
Scenario analysis of stakeholder conflicts concerning water resources at a local level	Relevant, included	A majority of potential stakeholders' conflicts at local level are directed towards our landfill expansion activities - which by and large, only affect a small number of our landfill sites. However, there is still a renewed focus on stakeholders engagement during the expansion's entitlement and permitting process. WM's Community and Government Affairs Group is taking responsibility in stakeholder dialogues and arbitration obtain consensual decisions before the expansion.
Scenario analysis of implications of water on your key commodities/raw materials	Not relevant, explanation provided	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.
Scenario analysis of potential changes in the status of ecosystems and habitats at a local level	Relevant, 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.
Other	Not evaluated	Not evaluated.

**W2.7**

**Which of the following stakeholders are always factored into your organization's water risk assessments?**

Stakeholder	Choose option	Please explain
Customers	Relevant, 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, 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

Stakeholder	Choose option	Please explain
		rely fully on our 41,200 employees, the impact of reduced water quality and quantity will potentially affect our employees' health and productivity.
Investors	Relevant, 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, 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, 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 <a href="http://www.michaeldbaker.com/MDB_WP_live_site/wp-content/uploads/2014/03/Guidance-on-Life-Cycle-Thinking-031014.pdf">http://www.michaeldbaker.com/MDB_WP_live_site/wp-content/uploads/2014/03/Guidance-on-Life-Cycle-Thinking-031014.pdf</a> .
Other water users at a local level	Relevant, 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, 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, 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, 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.

Stakeholder	Choose option	Please explain
Suppliers	Not relevant, explanation provided	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, 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	Not evaluated	No comment.

#### Further Information

[https://www.cdp.net/sites/2015/15/20515/Water 2015/Shared Documents/Attachments/Water2015/W2.ProceduresandRequirements/Guidance-on-Life-Cycle-Thinking-031014.pdf](https://www.cdp.net/sites/2015/15/20515/Water%202015/Shared%20Documents/Attachments/Water2015/W2.ProceduresandRequirements/Guidance-on-Life-Cycle-Thinking-031014.pdf)

### Module: Implications

#### Page: W3. Water Risks

##### W3.1

**Is your organization exposed to water risks, either current and/or future, that could generate a substantive change in your business, operations, revenue or expenditure?**

Yes, direct operations only

##### W3.2

**Please provide details as to how your organization defines substantive change in your business, operations, revenue or expenditure from water risk**

Changes in precipitation patterns result in drought or flood conditions that will impact landfill function, not only in terms of additional costs to maintain operations but also will impact potential revenues from the collection and use of landfill gas for energy. Virtually any of WM's landfills in the U.S. and Canada are vulnerable to intermittent drought conditions, flood conditions or both.

Both flooding and drought 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 gas collection system vacuum required to respond to the decrease in gas generation resulting from too little moisture. Also, additional labor and costs are incurred in compliance with regulatory obligations. Also, although WM is not a high volume water user, temporary disruptions in water supply could affect our operations.

### W3.2a

Please provide the number of facilities\* per river basin exposed to water risks that could generate a substantive change in your business, operations, revenue or expenditure; and the proportion of company-wide facilities this represents

Country	River basin	Number of facilities exposed to water risk	Proportion of company-wide facilities that this represents (%)	Comment
Canada	Other: Various River Basins in Alberta	2	Less than 1%	No comment.
United States of America	Other: Various River Basins in Arizona	9	Less than 1%	No comment.
United States of America	Other: Various River Basins in California	33	1-5	No comment.
United States of America	Other: Various River Basins in Illinois	3	Less than 1%	No comment.
United States of America	Other: Various River Basins in Indiana	3	Less than 1%	No comment.
United States of America	Other: Various River Basins in Michigan	2	Less than 1%	No comment.
United States of America	Other: Various River Basins in Oklahoma	1	Less than 1%	No comment.
United States of America	Other: Various River Basins in Texas	1	Less than 1%	No comment.
United States of America	Other: Various River Basins in Wisconsin	12	Less than 1%	No comment.

### W3.2b

For each river basin mentioned in W3.2a, please provide the proportion of the company's total financial value that could be affected by water risks

Country	River basin	Financial reporting metric	Proportion of chosen metric that could be affected	Comment
Canada	Other: Various River Basins in Alberta	% global revenue	Less than 1%	Overall impact on river basins are minuscule compared to our global revenue - less than 1%. This is due to the fact that current regulatory requirements on water quality and water discharge 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.
United States of America	Other: Various River Basins in Arizona	% global revenue	Less than 1%	Overall impact on river basins are minuscule compared to our global revenue - less than 1%. This is due to the fact that current regulatory requirements on water quality and water discharge 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.
United States of America	Other: Various River Basins in California	% global revenue	Less than 1%	Overall impact on river basins are minuscule compared to our global revenue - less than 1%. This is due to the fact that current regulatory requirements on water quality and water discharge 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	River basin	Financial reporting metric	Proportion of chosen metric that could be affected	Comment
United States of America	Other: Various River Basins in Illinois	% global revenue	Less than 1%	Overall impact on river basins are minuscule compared to our global revenue - less than 1%. This is due to the fact that current regulatory requirements on water quality and water discharge 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.
United States of America	Other: Various River Basins in Indiana	% global revenue	Less than 1%	Overall impact on river basins are minuscule compared to our global revenue - less than 1%. This is due to the fact that current regulatory requirements on water quality and water discharge 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.
United States of America	Other: Various River Basins in Michigan	% global revenue	Less than 1%	Overall impact on river basins are minuscule compared to our global revenue - less than 1%. This is due to the fact that current regulatory requirements on water quality and water discharge 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.
United States of America	Other: Various	% global revenue	Less than 1%	Overall impact on river basins are minuscule compared to our global revenue - less than 1%. This is due to

Country	River basin	Financial reporting metric	Proportion of chosen metric that could be affected	Comment
	River Basins in Oklahoma			the fact that current regulatory requirements on water quality and water discharge 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.
United States of America	Other: Various River Basins in Texas	% global revenue	Less than 1%	Overall impact on river basins are minuscule compared to our global revenue - less than 1%. This is due to the fact that current regulatory requirements on water quality and water discharge 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.
United States of America	Other: Various River Basins in Wisconsin	% global revenue	Less than 1%	Overall impact on river basins are minuscule compared to our global revenue - less than 1%. This is due to the fact that current regulatory requirements on water quality and water discharge 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.

**W3.2c**

**Please list the inherent water risks that could generate a substantive change in your business, operations, revenue or expenditure, the potential impact to your direct operations and the strategies to mitigate them**

Country	River basin	Risk driver	Potential impact	Description of potential impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
United States of America	Other: Multiple River Basins	Physical-Climate change Physical-Increased water scarcity	Other: Disruption in Operations	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.	>6 years	Probable	Low	Establish site-specific targets	Low	For our landfill sites, we protect waterways and watersheds, and apply structural best management practices (BMPs) to recharge groundwater supplies, e.g., stormwater capture using rain gardens and detention basins.



Country	River basin	Risk driver	Potential impact	Description of potential impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
										<p>We also implement greywater recycling. For all our facilities, especially those in water stressed regions, we implement water efficiency measures by instituting change outs to more efficient fixtures at</p>

Country	River basin	Risk driver	Potential impact	Description of potential impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
										<p>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 baselin</p>

Country	River basin	Risk driver	Potential impact	Description of potential impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
										e and set meaningful reduction goals. Cost: Less than 1% of our global revenue of \$13B.
United States of America	Other: Multiple River Basins	Physical-Climate change Physical-Drought Physical-Increased water scarcity Regulatory-Higher water prices	Other: Disruption in Operations	Higher water prices may impact some of our sites that depend on municipal water as only source to run landfill, fleet and support operations.	>6 years	Probable	Low	Establish site-specific targets	Low	For our landfill sites, we protect waterways and watersheds, if there are any, and apply structural best management practices.

Country	River basin	Risk driver	Potential impact	Description of potential impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
										<p>es (BMP) to recharge groundwater supplies, e.g., stormwater capture using rain gardens and detention basins. We implement greywater recycling. For all our facilities, especially those in water stressed</p>

Country	River basin	Risk driver	Potential impact	Description of potential impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
										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

Country	River basin	Risk driver	Potential impact	Description of potential impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
										using native plants that can thrive without use of water and tracking water consumption to identify baseline and set meaningful reduction goals. Cost: Less than 1% of our global revenue of \$13B.
United	Other:	Physical-Climate	Delays in	Landfill sites in	>6 years	Probable	Low	Engagement	Low	Beyond water

Country	River basin	Risk driver	Potential impact	Description of potential impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
States of America	Multiple River Basins	change Physical-Drought Physical-Increased water scarcity Regulatory-Increased difficulty in obtaining withdrawals /operations permit	permitting	water stressed regions may encounter difficulty in obtaining lease extensions and capacity expansions due to stricter land use policies and protection of undeveloped lands.				with public policy makers		resources efficiency strategies, we continually expand our recycling programs to divert materials from landfills, which use more water. Cost: Less than 1% of our global revenue of \$13B.
United States of	Other: Multiple	Physical-Climate change Physical-	Other: Constraint to	Uncertainties in water regulation	Unknown	Probable	Low	Other: Implement minim	Low	Anticipate and mitigate

Country	River basin	Risk driver	Potential impact	Description of potential impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
America	River Basins	Drought Physical- Increased water scarcity Regulatory- Regulatory uncertainty	future growth	ns may impact the company's landfill operations.				um performance standards		regulatory uncertainties by implementing best management practices now rather than later, when regulations become applicable. Cost: Less than 1% of our global revenue of \$13B.
United States of	Other: Multiple Riv	Physical- Climate change Physical- Declining	Other: Employee health and	Declining water quality may impact	>6 years	Unlikely	Low-medium	Establish site-specific	Low	For all our facilities, especially



Country	River basin	Risk driver	Potential impact	Description of potential impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
America	er Basins	water quality Physical-Drought Physical-Increased water scarcity	productivity	potable water use of field and office personnel where water is used for daily drinking requirements and sanitation.				c targets		lly 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, mitigat

Country	River basin	Risk driver	Potential impact	Description of potential impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
										<p>ing 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: Less than 1% of our</p>

Cou ntry	Riv er basi n	Risk driver	Poten tial impac t	Descript ion of potentia l impact	Timef rame	Likel ihood	Magn itude of poten tial finan cial impa ct	Respo nse strate gy	Cost s of resp onse strat egy	Details of strateg y and costs
										global revenu e of \$13B.

**W3.2f**

Please choose the option that best explains why you do not consider your organization to be exposed to water risks in your supply chain that could generate a substantive change in your business, operations, revenue or expenditure

Primary reason	Please explain
Risks exist, but no substantive impact anticipated	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. WM continues to evaluate exposure to water-related risks from our supply chain on an annual basis.

**Further Information**

We continue to assess our facilities' vulnerabilities to water risk, specifically, extreme droughts and precipitation. We rely on data provided by the WMCS D Water Tool to map our facility locations based on its extreme water scarcity categories throughout North America. Table W3.2a reflects the result of that mapping. 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

**Page: W4. Water Opportunities**

**W4.1**

Does water present strategic, operational or market opportunities that substantively benefit/have the potential to benefit your organization?

Yes

**W4.1a**

Please describe the opportunities water presents to your organization and your strategies to realize them

Country or region	Opportunity	Strategy to realize opportunity	Estimated timeframe	Comment
United States of America	Cost savings Increased brand value Improved water efficiency Innovation Other: Business Continuity	Our specific strategies are: 1. Stormwater capture and ground water recharge 2. Watershed and waterway protection 3. Implementing globally accepted environmental design guidelines such as LEED and Green Globes. 4. Water consumption monitoring and baseline establishment. 5. Marketing of Smart Sponge to help customers avoid adverse impacts of water from spills. 6. Constantly refining our emergency planning and response capabilities to be able to service communities impacted by water-related events.	1-3 years	Implementing best management practices now to mitigate water-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.

**Further Information****Module: Accounting****Page: W5. Facility Level Water Accounting (I)****W5.1**

Water withdrawals: for the reporting year, please complete the table below with water accounting data for all facilities included in your answer to W3.2a

Facility reference number	Country	River basin	Facility name	Total water withdrawals (megaliters/year) at this facility	How does the total water withdrawals at this facility compare to the last reporting year?	Please explain
Facility 1	Canada	Other: Various River Basins in Alberta	Alberta - 2 Facilities	.13	About the same	At the end of 2014, WM contracted with a leader in energy intelligence software to track energy and 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, and WM is using this data

Facility reference number	Country	River basin	Facility name	Total water withdrawals (megaliters/year) at this facility	How does the total water withdrawals at this facility compare to the last reporting year?	Please explain
						for the first time in this report.
Facility 2	United States of America	Other: Various River Basins in Arizona	Arizona - 9 Facilities	15.47	Much higher	At the end of 2014, WM contracted with a leader in energy intelligence software to track energy and 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

Facility reference number	Country	River basin	Facility name	Total water withdrawals (megaliters/year) at this facility	How does the total water withdrawals at this facility compare to the last reporting year?	Please explain
						, and WM is using this data for the first time in this report.
Facility 3	United States of America	Other: Various River Basins in California	California - 33 Facilities	202.29	Much higher	At the end of 2014, WM contracted with a leader in energy intelligence software to track energy and 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

Facility reference number	Country	River basin	Facility name	Total water withdrawals (megaliters/year) at this facility	How does the total water withdrawals at this facility compare to the last reporting year?	Please explain
						of this data is near completion , and WM is using this data for the first time in this report.
Facility 4	United States of America	Other: Various River Basins in Illinois	Illinois - 3 Facilities	.77	About the same	At the end of 2014, WM contracted with a leader in energy intelligence software to track energy and water data usage from invoices as part of an enterprise wide Utility Bill Management Program (UBM) spear-headed by WM's Supply Chain Procurement



Facility reference number	Country	River basin	Facility name	Total water withdrawals (megaliters/year) at this facility	How does the total water withdrawals at this facility compare to the last reporting year?	Please explain
						<p>nt Managers. Integration of this data is near completion, and WM is using this data for the first time in this report.</p>
Facility 5	United States of America	Other: Various River Basins in Indiana	Indiana - 3 Facilities	1.44	About the same	<p>At the end of 2014, WM contracted with a leader in energy intelligence software to track energy and water data usage from invoices as part of an enterprise wide Utility Bill Management Program (UBM) spear-headed by WM's</p>

Facility reference number	Country	River basin	Facility name	Total water withdrawals (megaliters/year) at this facility	How does the total water withdrawals at this facility compare to the last reporting year?	Please explain
						Supply Chain Procurement Managers. Integration of this data is near completion, and WM is using this data for the first time in this report.
Facility 6	United States of America	Other: Various River Basins in Michigan	Michigan - 2 Facilities	0.0	About the same	At the end of 2014, WM contracted with a leader in energy intelligence software to track energy and water data usage from invoices as part of an enterprise wide Utility Bill Management Program (UBM)

Facility reference number	Country	River basin	Facility name	Total water withdrawals (megaliters/year) at this facility	How does the total water withdrawals at this facility compare to the last reporting year?	Please explain
						<p>spear-headed by WM's Supply Chain Procurement Managers. Integration of this data is near completion, and WM is using this data for the first time in this report. Water withdrawals from these facilities may be considered de minimis.</p>
Facility 7	United States of America	Other: Various River Basins in Oklahoma	Oklahoma - 1 Facility	.07	About the same	<p>At the end of 2014, WM contracted with a leader in energy intelligence software to</p>

Facility reference number	Country	River basin	Facility name	Total water withdrawals (megaliters/year) at this facility	How does the total water withdrawals at this facility compare to the last reporting year?	Please explain
						<p>track energy and 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 , and WM is using this data for the first time in this report.</p>
Facility 8	United States of America	Other: Various River Basins in Texas	Texas - 1 Facility	0.0	About the same	This is a "Closed Site" so water withdrawals may be

Facility reference number	Country	River basin	Facility name	Total water withdrawals (megaliters/year) at this facility	How does the total water withdrawals at this facility compare to the last reporting year?	Please explain
						considered de minimis.
Facility 9	United States of America	Other: Various River Basins in Wisconsin	Wisconsin - 12 Facilities	4.47	About the same	At the end of 2014, WM contracted with a leader in energy intelligence software to track energy and 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

Facility reference number	Country	River basin	Facility name	Total water withdrawals (megaliters/year) at this facility	How does the total water withdrawals at this facility compare to the last reporting year?	Please explain
						, and WM is using this data for the first time in this report.

#### Further Information

In 2016, WM again used the World Resources Institute's Aqueduct Water Risk Atlas to update the water risk profile for each of our facilities. We used the default, overall risk distribution. None of our facilities were considered to have Extreme water risk, but we consider those facilities that have High water risk as water stressed for our analysis.

#### Page: W5. Facility Level Water Accounting (II)

##### W5.1a

Water withdrawals: for the reporting year, please provide withdrawal data, in megaliters per year, for the water sources used for all facilities reported in W5.1

Facility reference number	Fresh surface water	Brackish surface water/seawater	Rain water	Ground water (renewable)	Ground water (non-renewable)	Produced/process water	Municipal water	Waste water from another organization	Comment
Facility 1	0.00	0.00	0.00	0.00	0.00	0.00	.13	0.00	No Comment.
Facility 2	0.00	0.00	0.00	0.00	0.00	0.00	15.47	0.00	No Comment.
Facility 3	0.00	0.00	0.00	0.00	0.00	0.00	202.29	0.00	No Comment.

Facility reference number	Fresh surface water	Brackish surface water/seawater	Rain water	Ground water (renewable)	Ground water (non-renewable)	Produced/process water	Municipal water	Waste water from another organization	Comment
Facility 4	0.00	0.00	0.00	0.00	0.00	0.00	.77	0.00	No Comment.
Facility 5	0.00	0.00	0.00	0.00	0.00	0.00	1.44	0.00	No Comment.
Facility 6	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.00	Water withdrawals from these facilities may be considered de minimis.
Facility 7	0.00	0.00	0.00	0.00	0.00	0.00	.07	0.00	No Comment.
Facility 8	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.00	This is a "Closed Site" so water withdrawals may be considered de minimis.
Facility 9	0.00	0.00	0.00	0.00	0.00	0.00	4.47	0.00	No Comment.

**W5.2**

**Water discharge: for the reporting year, please complete the table below with water accounting data for all facilities included in your answer to W3.2a**

<b>Facility reference number</b>	<b>Total water discharged (megaliters/year) at this facility</b>	<b>How does the total water discharged at this facility compare to the last reporting year?</b>	<b>Please explain</b>
Facility 1	.1	This is our first year of measurement	WM does not specifically measure or monitor the volume of its facilities' water discharges. 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.
Facility 2	13.51	This is our first year of measurement	WM does not specifically measure or monitor the volume of its facilities' water discharges. 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.
Facility 3	183.03	This is our first year of measurement	WM does not specifically measure or monitor the volume of its facilities' water discharges. 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.
Facility 4	.77	This is our first year of measurement	WM does not specifically measure or monitor the volume of its facilities' water discharges. We consider most of our water to be discharged to municipal water treatment systems, and equal to the amount of water withdrawn, less the



Facility reference number	Total water discharged (megaliters/year) at this facility	How does the total water discharged at this facility compare to the last reporting year?	Please explain
			water consumed by employees and operations.
Facility 5	.73	This is our first year of measurement	WM does not specifically measure or monitor the volume of its facilities' water discharges. 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.
Facility 6	0.0	This is our first year of measurement	WM does not specifically measure or monitor the volume of its facilities' water discharges. 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.
Facility 7	.02	This is our first year of measurement	WM does not specifically measure or monitor the volume of its facilities' water discharges. 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.
Facility 8	0.0	This is our first year of measurement	WM does not specifically measure or monitor the volume of its facilities' water discharges. 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. This is a “Closed Site” with minimal activity, so water

Facility reference number	Total water discharged (megaliters/year) at this facility	How does the total water discharged at this facility compare to the last reporting year?	Please explain
			discharges may be considered de minimis.
Facility 9	2.73	This is our first year of measurement	WM does not specifically measure or monitor the volume of its facilities' water discharges. 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.

**W5.2a**

**Water discharge: for the reporting year, please provide water discharge data, in megaliters per year, by destination for all facilities reported in W5.2**

Facility reference number	Fresh surface water	Municipal/industrial wastewater treatment plant	Seawater	Groundwater	Wastewater for another organization	Comment
Facility 1	0.00	.1	0.00	0.00	0.00	No Comment
Facility 2	0.00	13.51	0.00	0.00	0.00	No Comment
Facility 3	0.00	183.03	0.00	0.00	0.00	No Comment
Facility 4	0.00	.77	0.00	0.00	0.00	No Comment
Facility 5	0.00	.73	0.00	0.00	0.00	No Comment
Facility 6	0.00	0.0	0.00	0.00	0.00	Water discharge

Facility reference number	Fresh surface water	Municipal/industrial wastewater treatment plant	Seawater	Groundwater	Wastewater for another organization	Comment
						s from these facilities may be considered de minimis.
Facility 7	0.00	.02	0.00	0.00	0.00	No Comment.
Facility 8	0.00	0.0	0.00	0.00	0.00	This is a "Closed Site" with minimal activity, so water discharges may be considered de minimis.
Facility 9	0.00	2.73	0.00	0.00	0.00	No Comment.

**W5.3**

**Water consumption: for the reporting year, please provide water consumption data for all facilities reported in W3.2a**

Facility reference number	Consumption (megaliters/year)	How does this compare to the last reporting year?	Please explain
Facility 1	.03	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.
Facility 2	1.96	About the same	Our consumption calculation is based on gallons per employee per day

Facility reference number	Consumption (megaliters/year)	How does this compare to the last reporting year?	Please explain
			(GED), and is representative of the number of employees we have working in these facilities in a reporting year.
Facility 3	19.26	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.
Facility 4	0.0	About the same	Water consumption may be considered de minimis.
Facility 5	.71	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.
Facility 6	0.0	About the same	Water consumption may be considered de minimis.
Facility 7	.05	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.
Facility 8	0.0	About the same	This is a “Closed Site” with minimal activity, so water consumption may be considered de minimis.
Facility 9	1.75	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.

**W5.4**

**For all facilities reported in W3.2a what proportion of their water accounting data has been externally verified?**

Water aspect	% verification	What standard and methodology was used?
Water withdrawals- total volumes	Not verified	No Comment
Water withdrawals- volume by sources	Not verified	No Comment

Water aspect	% verification	What standard and methodology was used?
Water discharges- total volumes	Not verified	No Comment
Water discharges- volume by destination	Not verified	No Comment
Water discharges- volume by treatment method	Not verified	No Comment
Water discharge quality data- quality by standard effluent parameters	Not verified	No Comment
Water consumption- total volume	Not verified	No Comment

#### Further Information

### Module: Response

#### Page: W6. Governance and Strategy

#### W6.1

Who has the highest level of direct responsibility for water within your organization and how frequently are they briefed?

Highest level of direct responsibility for water issues	Frequency of briefings on water issues	Comment
Senior Manager/Officer	Scheduled-annual	Since we started publishing our GRI-based Sustainability Report in 2008 and started reporting our water use to CDP in 2012, we have undertaken efforts to assess water risks in our overall operations as part of our corporate sustainability initiatives on an annual basis. Since our facilities are spread all over North America, water risk assessments are done regionally and then locally depending on level of risks and vulnerability. In 2016, the same method assessments were used.

#### W6.2

Is water management integrated into your business strategy?

Yes

#### W6.2a

Please choose the option(s) below that best explains how water has positively influenced your business strategy

Influence of water on business strategy	Please explain
Establishment of a clear water strategy	<p>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. These opportunities include:</p> <ul style="list-style-type: none"> <li>• Installing high-efficiency plumbing fixtures during building retrofits and fixture change-outs.</li> <li>• Reducing the amount of water needed for landscape irrigation at facilities.</li> <li>• Using rainwater and nonpotable water to wash trucks and control dust.</li> <li>• Installing biotreatment systems at some facilities to capture and reuse 100 percent of the water used to wash our trucks.</li> <li>• Reusing reclaimed wastewater in boilers for steam turbines at select renewable energy projects.</li> <li>• Using wastewater instead of potable water when constructing landfill units, where environmentally appropriate and allowed under state regulation.</li> </ul> <p>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).</p>
Alignment of public policy positions with water stewardship goals	<p>As a matter of policy for our active and non-active landfill sites, WM participates in the Wildlife Habitat Council and Corporate Lands for Learning Programs. These program help protect watershed areas through conservation, education and active community involvement. Our Next Generation landfills are being developed with EPA and DOE under a research agreement. A basic element of this project is the conversion of production wastewater, landfill leachate and other fluids into renewable energy. In 2016, we continued the same approach on our water stewardship goals.</p>

**W6.2b**

Please choose the option(s) below that best explains how water has negatively influenced your business strategy

<b>Influence of water on business strategy</b>	<b>Please explain</b>
Impacts on other sustainability KPIs	Water recycling and reuse quantification are not fully implemented across the company's facility portfolio because water use does not materially impact operations. We are still in the process of understanding how each of our facilities with WM employees use and process water. When we identify common practices by facility type, we will be able to provide more accurate data on means to implement enterprise-wide water conservation practices and thereby achieve cost savings and risk mitigation. In regions where extreme droughts are occurring like California, we see mid to long term negative influence on our sustainability KPIs, especially in the conventionally constructed facilities.

**W6.3**

**Does your organization have a water policy that sets out clear goals and guidelines for action?**

Yes

**W6.3a**

**Please select the content that best describes your water policy (tick all that apply)**

<b>Content</b>	<b>Please explain why this content is included</b>
Company-wide Performance standards for supplier, procurement and contracting best practice Commitment to customer education Incorporated within group environmental, sustainability or EHS policy Acknowledges the human right to water, sanitation and hygiene	Our Engineering Group, with the help and assistance of our field engineers, procurement and sustainability services are working in cross-functional teams to address sustainability performance standards across the organization. Water is an emerging concern that continues to be a topic of conversation in areas where water scarcity may be imminent within 5-10 years. The situation in California has served as a catalyst in shaping corporate water policy for the future. WM participates in the Wildlife Habitat Council and Corporate Lands for Learning Programs. These program help protect watershed areas through conservation, education and active community involvement.

**W6.4**

**How does your organization's water-related capital expenditure (CAPEX) and operating expenditure (OPEX) during the most recent reporting year compare to the previous reporting year?**

Water CAPEX (+/- % change)	Water OPEX (+/- % change)	Motivation for these changes
0	0	We consider water-related capital expenditure changes de minimis compared to our overall CAPEX and OPEX.

#### Further Information

### Page: W7. Compliance

#### W7.1

Was your organization subject to any penalties, fines and/or enforcement orders for breaches of abstraction licenses, discharge consents or other water and wastewater related regulations in the reporting year?

Yes, not significant

#### W7.1a

Please describe the penalties, fines and/or enforcement orders for breaches of abstraction licenses, discharge consents or other water and wastewater related regulations and your plans for resolving them

Facility name	Incident	Incident description	Frequency of occurrence in reporting year	Financial impact	Currency	Incident resolution
Atlantic Waste Disposal	Penalty	Order by Consent was issued to implement a schedule of compliance, addressing weekly leachate and storm water removal requirements, acceptance waste limits until capping project is completed, and other operational and reporting requirements.	1	99000	USD(\$)	Corrective actions taken, penalty paid.



Facility name	Incident	Incident description	Frequency of occurrence in reporting year	Financial impact	Currency	Incident resolution
BQE Transfer Station	Penalty	During an August 16, 2016 inspection, it is alleged that the site had a on-site wastewater holding tank that was overflowing onto the paved asphalt surface, and some wastewater had entered a nearby catch basin.	1	4000	USD(\$)	Immediate clean-up occurred as well as corrective and preventive actions taken, penalty paid.

**W7.1b**

What proportion of your total facilities/operations are associated with the incidents listed in W7.1a?

.5%

**W7.1c**

Please indicate the total financial impacts of all incidents reported in W7.1a as a proportion of total operating expenditure (OPEX) for the reporting year. Please also provide a comparison of this proportion compared to the previous reporting year

Impact as % of OPEX	Comparison to last year
.01	Higher

**Further Information**

**Page: W8. Targets and Initiatives**

**W8.1**

Do you have any company wide targets (quantitative) or goals (qualitative) related to water?

Yes, targets and goals

**W8.1a**

Please complete the following table with information on company wide quantitative targets (ongoing or reached completion during the reporting period) and an indication of progress made

Category of target	Motivation	Description of target	Quantitative unit of measurement	Base-line year	Target year	Proportion of target achieved, % value
Improvement in monitoring of water use	Cost savings	Our goal is to have 100% of our operationally controlled facilities monitoring water use through our UBM System.	% sites monitoring water use	2014	2018	68%

**W8.1b**

Please describe any company wide qualitative goals (ongoing or reached completion during the reporting period) and your progress in achieving these

Goal	Motivation	Description of goal	Progress
Watershed remediation and habitat restoration, ecosystem preservation	Water stewardship	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.	We achieved our goal of providing wildlife habitat at 100 of our landfills in 2010 – 10 years ahead of schedule.

**Further Information****Module: Linkages/Tradeoff**

**Page: W9. Managing trade-offs between water and other environmental issues**

**W9.1**

Has your organization identified any linkages or trade-offs between water and other environmental issues in its value chain?

Yes

W9.1a

Please describe the linkages or trade-offs and the related management policy or action

Environmental issues	Linkage or trade-off	Policy or action
Biodiversity	Linkage	<p>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 110 WHC-certified projects at 95 Waste Management sites. 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. As of 2015, more than 16,000 acres in the United States and Canada were used for this purpose.</p>

Further Information

Module: Sign Off

Page: Sign Off

W10.1

Please provide the following information for the person that has signed off (approved) your CDP water response

Name	Job title	Corresponding job category
Jim Fish	President and CEO	Chief Executive Officer (CEO)

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#### W10.2

Please indicate that your organization agrees for CDP to transfer your publicly disclosed data regarding your response strategies to the CEO Water Mandate Water Action Hub.

**Note:** Only your responses to W1.4a (response to impacts) and W3.2c&d (response to risks) will be shared and then reviewed as a potential collective action project for inclusion on the WAH website.

By selecting Yes, you agree that CDP may also share the email address of your registered CDP user with the CEO Water Mandate. This will allow the Hub administrator to alert your company if its response data includes a project of potential interest to other parties using water resources in the geographies in which you operate. The Hub will publish the project with the associated contact details. Your company will be provided with a secure log-in allowing it to amend the project profile and contact details.

No

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#### Further Information

CDP: [X][-,][P2]