Graphic Packaging International LLC - Water Security 2019

W0. Introduction

W0.1

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

Graphic Packaging Holding Company (together with its subsidiaries, “Graphic Packaging” or the “Company”) is committed to providing consumer packaging that makes a world of difference. The Company is a leading provider of paper-based packaging solutions for a wide variety of products to food, beverage, foodservice and other consumer products companies. The Company operates on a global basis, is one of the largest producers of folding cartons in the United States ("U.S.") and holds leading market positions in coated unbleached kraft paperboard (“CUK”), coated-recycled paperboard (“CRB”) and solid bleached sulfate paperboard ("SBS"). The Company’s customers include many of the world’s most widely recognized companies and brands with prominent market positions in beverage, food, foodservice and other consumer products. The Company strives to provide its customers with packaging solutions designed to deliver marketing and performance benefits at a competitive cost by capitalizing on its lowcost paperboard mills and carton manufacturing plants, its proprietary carton, container and packaging designs, and its commitment to quality and service.

The paperboard manufacturing industry is known to be water intensive, but we take pride in Graphic Packaging’s application of best practices in water use and management. Water use is primarily driven by our mills, both virgin fiber and recycled. As such, we have prioritized the quantification and disclosure of mill water withdrawals, discharge, and consumption and have excluded our carton manufacturing facilities and corporate and divisional offices from this disclosure. We plan to include these non-paper mill facilities in future quantitative water use analyses and disclosures.

Certain statements regarding the expectations of Graphic Packaging, including, but not limited to, the Company’s plans or estimates with respect to energy use reductions, water usage and climate related events in this report constitute “forward-looking statements” as defined in the Private Securities Litigation Reform Act of 1995. Such statements are based on currently available operating, financial and competitive information and are subject to various risks and uncertainties that could cause actual results to differ materially from the Company’s historical experience and its present expectations. These risks and uncertainties include, but are not limited to, the Company’s ability to obtain permits and other administrative approvals, changes in revenue due to climate related concerns, and supply chain disruptions. Undue reliance should not be placed on such forward-looking statements, as such statements speak only as of the date on which they are made and the Company undertakes no obligation to update such statements, except as may be required by law. Additional information regarding these and other risks is contained in Part I, “Item 1A., Risk Factors” of the Company’s 2018 Annual Report on Form 10-K, and in other filings with the Securities and Exchange Commission.

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 2018	December 31 2018

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?

Yes

W0.6a

(W0.6a) Please report the exclusions.

Exclusion	Please explain
Graphic Packaging Corporate and divisional offices and carton manufacturing operations have been excluded from this reporting.	Water use at Graphic Packaging is primarily driven by our virgin and recycled paperboard mills. Corporate and divisional offices and carton manufacturing facilities have been excluded as these facilities represent a small percentage of Graphic Packaging's water footprint. In addition, there is limited data available for these facilities.

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	Vital	Important	Direct Use: Good quality freshwater is vital for our operations because high-quality water is required for the processing of fiber into paperboard and cooling to produce high quality paperboard. Water supply is vital because future paperboard production and the related profitability of the organization could be affected if the water supply was insufficient. Further, good quality water is essential for employee use. Indirect Use: Good quality freshwater is important for our supply chain, such as our wood baskets and other upstream paperboard raw materials. This is important because water is a key component of quality upstream materials, primarily fiber. Poor quality or lower quantities of accessible fiber could negatively affect Graphic Packaging's production output. Future water dependency is not expected to change (vitally important for direct and important for indirect use) given Graphic Packaging's focus on paperboard production for the food, foodservice and beverage industry.
Sufficient amounts of recycled, brackish and/or produced water available for use	Important	Neutral	Direct Use: Recycled water is vital for our operations because high-quality water is required for the processing of fiber and cooling to produce high quality paperboard. Water supply is vital because future paperboard production and the related profitability of the organization could be affected if the water supply was insufficient. Indirect Use: Produced water is important for our supply chain, such as our wood baskets, and other upstream paperboard raw materials. This important because water is a key component of quality upstream materials, primarily wood chips and poor quality or lower quantities of accessible fiber could negatively affect Graphic Packaging's production output. Future water dependency is not expected to change (vitally important for direct and important for indirect use) given Graphic Packaging's focus on paperboard production for the food, foodservice, and beverage industry in which water as a coolant and agent for breaking down fiber.

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	Graphic Packaging monitors our water withdrawals and discharge at our paperboard mill operations. The paperboard mills represent a significant amount of water use by Graphic Packaging and thus we have prioritized these facilities for this disclosure. The quantitative analysis has been generated from our monitoring activities. Graphic Packaging has established KPIs and monitors our water discharge at all paperboard mills on a monthly basis. Key measures include discharge per saleable ton of paperboard YTD, against plan and against prior year. Water withdrawal monitoring for all facilities is conducted on an annual basis. We are assessing monthly monitoring. Monitoring discharge is a key metric to inform on our water performance. Water monitoring for our carton manufacturing facilities is in the assessment and development stages.
Water withdrawals – volumes from water stressed areas	76-99	Graphic Packaging monitors our water withdrawals and discharge at our paperboard mill operations. The paperboard mills represent a significant amount of water use by Graphic Packaging and thus we have prioritized these facilities for this disclosure. The quantitative analysis has been generated from our monitoring activities. Graphic Packaging has established KPIs and monitors our water discharge at all paperboard mills on a monthly basis. Key measures include discharge per saleable ton of paperboard YTD, against plan and against prior year. Water withdrawal monitoring for all facilities is conducted on an annual basis. We are assessing monthly monitoring. Monitoring discharge is a key metric to inform on our water performance. Water monitoring for our carton manufacturing facilities is in the assessment and development stages.
Water withdrawals – volumes by source	76-99	Graphic Packaging monitors our water withdrawals and discharge at our paperboard mill operations. The paperboard mills represent a significant amount of water use by Graphic Packaging and thus we have prioritized these facilities for this disclosure. The quantitative analysis has been generated from our monitoring activities. Graphic Packaging has established KPIs and monitors our water discharge at all paperboard mills on a monthly basis. Key measures include discharge per saleable ton of paperboard YTD, against plan and against prior year. Water withdrawal monitoring for all facilities is conducted on an annual basis. We are assessing monthly monitoring. Monitoring discharge is a key metric to inform on our water performance. Water monitoring for our carton manufacturing facilities is in the assessment and development stages.
Entrained water associated with your metals & mining sector activities - total volumes [only metals and mining sectors]	<Not Applicable>	<Not Applicable>
Produced water associated with your oil & gas sector activities - total volumes [only oil and gas sector]	<Not Applicable>	<Not Applicable>
Water withdrawals quality	76-99	Graphic Packaging monitors water quality at our paperboard mills. As an example, the Macon mill tests the pH conductivity and temperature from 1 of the 2 active wells. This groundwater source is monitored on an annual basis to comply with permit requirements. In addition, there is daily monitoring of the intake flow and turbidity, which is monitored for the boiler feed.
Water discharges – total volumes	76-99	Graphic Packaging monitors our water withdrawals and discharge at our paperboard mill operations. The paperboard mills represent a significant amount of water use by Graphic Packaging and thus we have prioritized these facilities for this disclosure. The quantitative analysis has been generated from our monitoring activities. Graphic Packaging has established KPIs and monitors our water discharge at all paperboard mills on a monthly basis. Key measures include discharge per saleable ton of paperboard YTD, against plan and against prior year. Water withdrawal monitoring for all facilities is conducted on an annual basis. We are assessing monthly monitoring. Monitoring discharge is a key metric to inform on our water performance. Water monitoring for our carton manufacturing facilities is in the assessment and development stages.
Water discharges – volumes by destination	76-99	Graphic Packaging monitors our water withdrawals and discharge at our paperboard mill operations. The paperboard mills represent a significant amount of water use by Graphic Packaging and thus we have prioritized these facilities for this disclosure. The quantitative analysis has been generated from our monitoring activities. Graphic Packaging treats water before discharge to the local water treatment facility. Water monitoring for the carton manufacturing facilities is in the assessment and development stages.
Water discharges – volumes by treatment method	76-99	Graphic Packaging monitors our water withdrawals and discharge at our paperboard mill operations. The paperboard mills represent a significant amount of water use by Graphic Packaging and thus we have prioritized these facilities for this disclosure. The quantitative analysis has been generated from our monitoring activities. Graphic Packaging treats water before discharge to the local water treatment facility. Water monitoring for the carton manufacturing facilities is in the assessment and development stages.
Water discharge quality – by standard effluent parameters	76-99	Graphic Packaging monitors our water withdrawals and discharge at our paperboard mill operations. The paperboard mills represent a significant amount of water use by Graphic Packaging and thus we have prioritized these facilities for this disclosure. The quantitative analysis has been generated from our monitoring activities. Graphic Packaging treats water before discharge to the local water treatment facility. Water monitoring for the carton manufacturing facilities is in the assessment and development stages.
Water discharge quality – temperature	76-99	Graphic Packaging monitors discharge quality at our paperboard mills. At the Kalamazoo mill we also monitor the temperature of the non-contact cooling water on a weekly basis.
Water consumption – total volume	76-99	Graphic Packaging monitors our water withdrawals and discharge at our paperboard mill operations. The paperboard mills represent a significant amount of water use by Graphic Packaging and thus we have prioritized these facilities for this disclosure. The quantitative analysis has been generated from our monitoring activities. Water monitoring for the carton manufacturing facilities is in the assessment and development stages.
Water recycled/reused	76-99	Graphic Packaging recycles a significant portion of process water through recirculation in short loops. This reuse is particularly prominent in the operating of the paper machine. Additionally, during the clarification process, where the water is clarified, and sediment is removed. There are slight variations of recycling water at each mill. As an example, effluent at the Kalamazoo mill is split into two streams; one goes to the POTW and the rest is recycled back into process reservoir. At the Macon mill clean condensate is reused for pulp washing and machine white water is reused for dilution makeup and machine showers.
The provision of fully-functioning, safely managed WASH services to all workers	76-99	All Paperboard mills and carton manufacturing facilities have wash services.

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	145074	About the same	The 971 megaliters slight increase year over year or .67% is driven by good year on year trending for all mills, especially for both Augusta and Texarkana mills. Of the mills within Graphic Packaging's portfolio, these mills represent the highest water flow. The Company anticipates that future changes will support our 2025 Sustainability Vision .
Total discharges	136048	Higher	The 9,731 megaliters increase year over year or 7.7% is primarily driven by an increase in discharge at the Texarkana mill. This mill, one of the mills within Graphic Packaging's portfolio that represents the highest water flow, contributed to the increase in water withdrawal compared to 2017. In particular Texarkana discharge is regulated by state agencies. The Company anticipates that future changes will support our 2025 Sustainability Vision .
Total consumption	9026	Much lower	Total consumption is calculated on a company-wide calculation taking the difference between the available data representing total withdrawals and discharge from Graphic Packaging's mill facilities. Overall consumption decreased year over year by approximately 7,857 megaliters or 12.37%. The Company anticipates that future changes will support our 2025 Sustainability Vision .

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	3.25	Lower	WRI Aqueduct	The WRI Aqueduct tool was used to assess the proportion of withdrawal associated with all sites, and particularly the 8 highest water consuming mills, which are located in areas (determined by the geographical longitude and latitude coordinates) that are considered to have high or extremely high baseline water stress. This subtotal corresponding to 2 mills (Battle Creek and Kalamazoo) identified with High baseline water stress was compared to the total of water volume withdrawn tracked in FY18 across Graphic Packaging's portfolio. The percent withdrawn from such stressed sites decreased as the overall amount of water withdrawn has increased significantly attributed to the 2 mills (Augusta and Texarkana) acquired in 2018.

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	Relevant	118112	About the same	Fresh surface water (river water) is monitored and tracked for use as process water and cooling. The Company anticipates that future changes will support our 2025 Sustainability Vision . Compared to PY, there was a slight decrease of approximately 284 ML or 0.24%. Water is critical to paper making and is an essential input to our processes. Of the water that is used for our non-contact cooling and process water, river water represents the most significant percent of Graphic Packaging's withdrawal source. Overall there is little to no expected change in withdrawal within the next year, however Graphic Packaging is assessing projects that could reduce intake of water for non-contact cooling water in which evaporated losses would increase and discharge would decrease by reusing more non-contact cooling water and by maintaining the water at a higher temperature reducing energy demands. The Company anticipates that future changes will support our 2025 Sustainability Vision.
Brackish surface water/Seawater	Not relevant	<Not Applicable>	<Not Applicable>	Graphic Packaging does not use or anticipate using brackish surface water in operational processes. As such, there is no withdrawal to disclose.
Groundwater – renewable	Relevant	3444	Much lower	Graphic Packaging tracks groundwater - renewable withdrawal from 4 mills, for which all renewable groundwater is sourced and directly measured from wells, for which year over year withdrawal has decreased by approximately 537 ML or 13.49%. Groundwater – renewable is withdrawn for the use as both process and non-contact cooling water in our mill operations. The Company anticipates that future changes will support our 2025 Sustainability Vision.
Groundwater – non-renewable	Relevant	12791	About the same	Graphic Packaging tracks groundwater - nonrenewable withdrawal from 1 mill, in which, per direct measurements, the year over year withdrawal has increased by approximately 245 ML or 1.95%. Groundwater – nonrenewable is withdrawn for the use as both process and non-contact cooling water in our operations at our largest mill. The Company anticipates that future changes will support our 2025 Sustainability Vision.
Produced/Entrained water	Relevant	1168	Much higher	Graphic Packaging estimates produced water through a calculation of estimated moisture content of wood chips as a percentage of estimated wood chips brought into the virgin mills, less the moisture content of paperboard leaving the mills. The Company anticipates that future changes will support our 2025 Sustainability Vision.
Third party sources	Relevant	9558	Much higher	Graphic Packaging withdraws and directly measures the volume of municipal grey water and municipal water used for operational processes in our mills to process fiber from wood chips to create paperboard. A significant increase of approximately 1,315 ML or 16% year over year. The Company anticipates that future changes will support our 2025 Sustainability Vision.

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	Relevant	75900	Much higher	Fresh surface water discharge represents all non-contact river water used for cooling that is returned to rivers in addition to all process water from the West Monroe mill, which is discharged to the river. Compared to the prior year, this discharge is slightly higher by approximately 8,340 ML or 12.3%. The Company anticipates that future changes will support our 2025 Sustainability Vision .
Brackish surface water/seawater	Not relevant	<Not Applicable>	<Not Applicable>	All water from Graphic Packaging's Paperboard mill operations is discharged through fresh surface water (i.e. rivers) or to municipal waste water treatment facilities. We do not anticipate discharge to brackish surface water destinations.
Groundwater	Not relevant	<Not Applicable>	<Not Applicable>	As all water from Graphic Packaging's operations is discharged through fresh surface water (i.e. rivers) or to municipal waste water treatment facilities, no discharge to groundwater is observed. There has been no change in practice compared to the prior year. No change in anticipated discharge is expected.
Third-party destinations	Relevant	60148	Higher	All remaining process water is discharged through third party (municipal waste water treatment facilities) less the process water from the West Monroe Mill noted above. This discharge volume has increased by approximately 1,391 ML or 2.4%. The Company anticipates that future changes will support our 2025 Sustainability Vision .

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	11-25	Much lower	Graphic Packaging does recycle and reuse process water in our operations. Water reuse and recycling is very process specific and the specific application varies from mill to mill. Typically, fully integrated mills recycle approximately 20% of water withdrawn into our operations. This is an estimate based on mill-specific knowledge of each of the water flows. The Kalamazoo mill recycles water primarily in the operation of our paper machine, where the Texarkana and Augusta mills reuse white water in their bleach plants. All of the mills, within our portfolio rely on reusing condensate and machine white water. The mills do not have monitoring equipment installed to measure the amount of water recycled or reused.

W1.4

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

Yes, our customers or other value chain partners

W1.4c

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

Graphic Packaging provides Paperboard mill water data to our customers to inform them when making packaging decisions. The information is important for our customers, who have water intensive products and supply chains. While process water is essential in paper making, we emphasize to our stakeholders that our withdrawal is reused and returned to local ecosystems. Many of our customers consider reputational water risk in their supply chain as many manufacture grain-based products, which require water for irrigation. Paper making has a different use profile and presents a very low supply chain reputational risk.

The Company engages with our communities on water sources and discharge. For example, the community of the West Monroe mill raised a concern to the Company, who was one of the larger water consumers and withdrew 10M gallons from the local aquifer daily. They approached the Company with a project and collaborated with them to replace water from the aquifer with treated water from the water treatment facility. The additional treatment ensured that the water met FDA drinking water quality standards. By obtaining approval from customers to use this as process water, the Company addressed concerns regarding the water quality expectations for input as a raw material for the papermaking process. As a result, water withdrawn from the aquifer was reduced by 50%.

The Company engaged with the community water treatment facility in Middletown, OH, to where our water is discharged, processed, and cleaned. The Company added a water tank that holds water until needed instead, which reduced the amount of water discharged. This reduction in mill water demand and discharge, also reduces the energy that the water treatment facility will use to process our water.

The Company also engages with the Texarkana Water Utility, operating under their permit, to supplement the local community with additional potable water, in order to meet local demand.

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
Savannah River

Type of impact driver
Physical

Primary impact driver
Increased water stress

Primary impact
Reduction or disruption in production capacity

Description of impact
Excessive rain in the South East, USA, is a cyclical event that impacts the supply of timber as a raw material approximately every 3 years. Over the course of the 3-year period, Graphic Packaging experiences wet and dry seasons. In the wet season, the hard wood becomes difficult to harvest. The cost of hard wood can increase as access to timber that could be extracted and utilized was further away from production sites as local supply is lower.

Primary response
Supplier diversification

Total financial impact
0

Description of response
Timber costs increased and the distance and cost for the timber to travel to production facilities increased. The cost impact was offset through cost containment programs and other countermeasures, including targeted sourcing programs.

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
1

Total value of fines
1600

% of total facilities/operations associated
0.51

Number of fines compared to previous reporting year
Higher

Comment
The event that occurred at our North Portland facility was isolated and recognized by Graphic Packaging. The company identified the error and self-reported. The fine was non-material and no negative environmental impacts resulted.

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 part of other company-wide risk assessment system

Frequency of assessment
Six-monthly or more frequently

How far into the future are risks considered?
>6 years

Type of tools and methods used
Tools on the market
Enterprise Risk Management

Tools and methods used
WRI Aqueduct

Comment
Graphic Packaging reviews and assesses risks, including exposure and potential liabilities when new assets are acquired. The Director of Risk engages with Executive Leadership, the Board and Audit Committee. Physical risks are reviewed twice per year to assess whether the Company's physical assets and sites are protected from probable weather and geological events. All insurance coverage, including flood insurance, is reviewed for any possible gaps with the Audit Committee biennially. The Company developed the Graphic Packaging International Risk Management System (RMS), which includes formal policies, procedures, and governance and defines and communicates the Company's policy regarding the management and oversight of risk. The RMS system assures the effective identification, analysis, prioritization and management of risks. Executive leadership and high-level management are both engaged in re-assessing risks and opportunities for the enterprise strategic risk report, which the Audit Commitee receives 3 times per year, and provide a detailed update on monitoring and mitigation activities related to the Company's top risk areas including disruptions to the business based on Water Security. The CEO and Board oversee the Sustainability office and the Audit Committee oversees the enterprise strategic risk management function, activities, and reporting. Key risks related to Water Security identified by the organization are included in the Annual Report on Form 10-K.

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	Water is critical to the process of paperboard manufacturing (without water the company could not manufacture paperboard) and all factors that could impact available withdrawn water are evaluated annually and as needed. Further, discharged water factors are evaluated from a regulatory and ecological framework. The analysis and decisions are completed at a local, division and corporate level. At the local level, assessments are completed in real time and adjustments to sources are determined. These changes can be implemented as necessary or elevated to the appropriate level for review. Assessments include current and emerging issues along with scope which may have an impact on capital investment. Additionally, Graphic Packaging utilizes the WRI Aqueduct Tool to assess a variety of water-related risk factors including quality, quantity, regulation and reputation, and threatened amphibians.
Water quality at a basin/catchment level	Relevant, always included	Water is critical to the process of paperboard manufacturing (without water the company could not manufacture paperboard) and all factors that could impact available withdrawn water are evaluated annually and as needed. Further, discharged water factors are evaluated from a regulatory and ecological framework. The analysis and decisions are completed at a local, division and corporate level. At the local level, assessments are completed in real time and adjustments to sources are determined. These changes can be implemented as necessary or elevated to the appropriate level for review. Assessments include current and emerging issues along with scope which may have an impact on capital investment. Additionally, Graphic Packaging utilizes the WRI Aqueduct Tool to assess a variety of water-related risk factors including quality, quantity, regulation and reputation, and threatened amphibians.
Stakeholder conflicts concerning water resources at a basin/catchment level	Relevant, always included	Water is critical to the process of paperboard manufacturing (without water the company could not manufacture paperboard) and all factors that could impact available withdrawn water are evaluated annually and as needed. Further, discharged water factors are evaluated from a regulatory and ecological framework. The analysis and decisions are completed at a local, division and corporate level. At the local level, assessments are completed in real time and adjustments to sources are determined. These changes can be implemented as necessary or elevated to the appropriate level for review. Assessments include current and emerging issues along with scope which may have an impact on capital investment. Additionally, Graphic Packaging utilizes the WRI Aqueduct Tool to assess a variety of water-related risk factors including quality, quantity, regulation and reputation, and threatened amphibians.
Implications of water on your key commodities/raw materials	Relevant, always included	Water is critical to the process of paperboard manufacturing (without water the company could not manufacture paperboard) and all factors that could impact available withdrawn water are evaluated annually and as needed. Further, discharged water factors are evaluated from a regulatory and ecological framework. The analysis and decisions are completed at a local, division and corporate level. At the local level, assessments are completed in real time and adjustments to sources are determined. These changes can be implemented as necessary or elevated to the appropriate level for review. Assessments include current and emerging issues along with scope which may have an impact on capital investment
Water-related regulatory frameworks	Relevant, always included	Water is critical to the process of paperboard manufacturing (without water the company could not manufacture paperboard) and all factors that could impact available withdrawn water are evaluated annually and as needed. Further, discharged water factors are evaluated from a regulatory and ecological framework. The analysis and decisions are completed at a local, division and corporate level. At the local level, assessments are completed in real time and adjustments to sources are determined. These changes can be implemented as necessary or elevated to the appropriate level for review. Assessments include current and emerging issues along with scope which may have an impact on capital investment. Additionally, Graphic Packaging utilizes the WRI Aqueduct Tool to assess a variety of water-related risk factors including quality, quantity, regulation and reputation, and threatened amphibians.
Status of ecosystems and habitats	Relevant, always included	Water is critical to the process of paperboard manufacturing (without water the company could not manufacture paperboard) and all factors that could impact available withdrawn water are evaluated annually and as needed. Further, discharged water factors are evaluated from a regulatory and ecological framework. The analysis and decisions are completed at a local, division and corporate level. At the local level, assessments are completed in real time and adjustments to sources are determined. These changes can be implemented as necessary or elevated to the appropriate level for review. Assessments include current and emerging issues along with scope which may have an impact on capital investment. Additionally, Graphic Packaging utilizes the WRI Aqueduct Tool to assess a variety of water-related risk factors including quality, quantity, regulation and reputation, and threatened amphibians.
Access to fully-functioning, safely managed WASH services for all employees	Relevant, always included	Water is critical to the process of paperboard manufacturing and all factors that could impact availability and quality of withdrawn water are evaluated annually and as needed. Further, discharged water factors are evaluated from a regulatory and ecological framework. The analysis and decisions are completed at a local, division and corporate level. Graphic Packaging has WASH services at all facilitates.
Other contextual issues, please specify	Please select	

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, always included	Water is critical for processing paperboard and the quality is assessed when withdrawn, in the process and specifically with the finished paperboard. The finished board analysis is completed to meet regulatory and customer expectations. These expectations include considerations for indirect and direct food contact. Customers are considered to be current and future stakeholders and as their products' performance and safety can be impacted by the paperboard packaging it is critical that specification are met.
Employees	Relevant, always included	Graphic Packaging ensures that our employees have access to good quality water, especially drinking water. Employees are essential to our operations and will continue to comprise our consideration of current and future stakeholders.
Investors	Relevant, always included	While Graphic Packaging has not experienced direct investor inquiry or pressure related to water issues, we have continued to assess and monitor water related issues as our investors expect Graphic Packaging to manage resources strategically and to deliver on financial commitments. Further reputational risk is a factor on investing decisions and Graphic Packaging management of our water resources is critical. Investors are current and future stakeholders.
Local communities	Relevant, always included	Water is assessed at each community and actions are taken when relevant. For example, we collaborated with the local community at our West Monroe mill to reduce our water consumption from the local aquifer. The project with the city of West Monroe, LA achieved our goal to reduce our draw of 10 million gallons per day from the Sparta Aquifer by 50% to 5 million gallons per day. The city waste treatment facility added an additional treatment process that ensures that waste treatment water meets FDA drinking water standards. That water is used as process water at Graphic Packaging for making paperboard. Local communities are considered current and future stakeholders.
NGOs	Relevant, always included	Water is critical to the process of paperboard manufacturing and all factors that could impact availability and quality of withdrawn water are evaluated annually and as needed. Further, discharged water factors are evaluated from a regulatory and ecological framework. The analysis and decisions are completed at a local, division and corporate level. Current and future water considerations are monitored and are assessed on an expectation basis. In that assessment the engagement of NGOs is determined.
Other water users at a basin/catchment level	Relevant, always included	Water is assessed at each community and actions are taken when relevant. For example, we collaborated with the local community at our West Monroe mill to reduce our water consumption from the local aquifer. The project with the city of West Monroe, LA achieved our goal to reduce our draw of 10 million gallons per day from the Sparta Aquifer by 50% to 5 million gallons per day. The city waste treatment facility added an additional treatment process that ensures that waste treatment water meets FDA drinking water standards. That water is used as process water at Graphic Packaging for making paperboard. Other water users are considered current and future stakeholders.
Regulators	Relevant, always included	Primary engagement with regulators regards permitting, regulations and compliance. Graphic Packaging has employees who sit on industry groups, such as the AF&PA (American Forest & Paper Association) and the GPFA (Georgia Paper and Forestry Association), in which regulatory changes are closely observed. Regulators are considered current and future stakeholders.
River basin management authorities	Relevant, always included	Water is critical to the process of our paperboard at our mills and all factures that could impact availability and quality of withdrawn water is evaluated annually and as needed. Further discharged water factors are evaluated from a regulatory and ecological framework. The analysis and decisions are completed at a local, division and corporate level. River authorities are considered current and future stakeholders.
Statutory special interest groups at a local level	Relevant, always included	Water is critical to the process of our paperboard at our mills and all factures that could impact availability and quality of withdrawn water is evaluated annually and as needed. Further discharged water factors are evaluated from a regulatory and ecological framework. The analysis and decisions are completed at a local, division and corporate level. Special interest groups are considered current and future stakeholders.
Suppliers	Relevant, not included	Graphic Packaging provides a "Suppliers Expectations" document for our suppliers. Further, effective in 2019 Graphic Packaging has issued a Global Supplier Code of Conduct that will be required for all new contracts with suppliers. Graphic Packaging fully expects that our suppliers have adequate policies in place to address their and our water needs.
Water utilities at a local level	Relevant, always included	Graphic Packaging paperboard mill discharge water is processed at some local community water treatment facilities. Water is assessed at each community and actions are taken when relevant. For example, we collaborated with the local community at our West Monroe mill to reduce our water consumption from the local aquifer. The project with the city of West Monroe, LA achieved our goal to reduce our draw of 10 million gallons per day from the Sparta Aquifer by 50% to 5 million gallons per day. The city waste treatment facility added an additional treatment process that ensures that waste treatment water meets FDA drinking water standards. That water is used as process water at Graphic Packaging for making paperboard. Water utilities are considered current and future stakeholders.
Other stakeholder, please specify	Please select	

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.

Graphic Packaging has a fairly mature risk management department and process. Risks are evaluated at a company and asset level for our direct operations. When new assets are acquired the risk management department assesses any additional exposure to risk, the magnitude, and any possible pollution liability, which is incorporated into every asset that is owned by the Company. The Director of Risk Management coordinates with Executive Officers as necessary and reports biannually to the CEO and staff to recommend how the Company can better protect the physical assets within the portfolio.

Each of the Company's global locations are reviewed for potentially damaging weather events to determine what type of insurance coverages should be obtained at each facility. The Director of Risk Management reports to the audit committee biennially and reviews all engaged insurance coverage and potential gaps. If a gap is identified, the magnitude of risk is evaluated for the likelihood of an estimated loss event, any potential reputational risks and financial impacts, which informs the risk response.

The Company developed the Graphic Packaging International Risk Management System, which includes formal policies and processes. The process for identifying and assessing climate-related risks employs the leadership team and specialists while seeking to holistically assess risks and opportunities across the business globally. A formal risk assessment, with established procedures, roles and responsibilities, processes, analyses, and reporting requirements are performed, while informal reviews occur in real time. Priorities and results are reviewed by the Executive Leadership Team in workshops, staff meetings, and communicated electronically to multiple levels of leadership.

The Audit Committee receives an annual enterprise strategic risk assessment based on an integrated risk management framework designed to identify, assess, prioritize, address, manage, monitor and communicate our top strategic risks and opportunities. This includes climate-related risks at operational levels, energy use, material supply, production, transportation, human resources, and weather/natural risks that are reviewed annually when the complete strategic risk assessment is performed and updated 3 times per year with the risk owners, senior leadership, and Audit Committee.

Opportunities and risks are evaluated based on formal defined risk ranking criteria for significance of impact and likelihood of occurrence. Impact represents the potential effect of an event and likelihood represents the possibility that a given event will occur. Both are measured on a scaled and weighted approach with clear definitions and ranking criteria such as market share, reputation, brand value, level of management and staff involved, regulatory concerns, legal perspective, and potential board and/or committee engagement. Risks are identified through a variety of people, process, methodologies and tools including but not limited to WRI Aqueduct Tool annual risk assessment, professional and trade related business associations and their publications, industry alerts, changes in market conditions, and government agency communications.

The Company is a contributor on the Board of Directors for the Paper & Packaging Board (P&PB). The USDA sponsored program develops and deploys mass media messaging to raise awareness of the sustainable attributes of products in the forest products industry. The P&PB conducts consumer and consumer brand products company' surveys to understand attitudes and perceptions of paper/paperboard products. The P&PB develops promotional programming to address gaps in understanding and promote positive perceptions. Annually, the Company uses the WRI Aqueduct Tool to assess water related risks such as water quality, quantity, regulation and reputation, etc. These resulting risks are assessed and prioritized, for which the outcomes are reported to the VP, Government Affairs and Sustainability.

Over 90% of the Company's revenues are attributable to packaging products that can be recycled depending on local recycling capabilities. Graphic Packaging's market leadership in the manufacturing of 100% Recycled Paperboard provides insight on recycling trends. Our Design for the Environment philosophy, where the end of life of innovative packages is reviewed extensively, is a strategic way to ensure that we are developing innovative solutions that will have a positive End of Life outcome.

Promoting paper/paperboard and aligning with recycling are critical steps that we can take to address water security. The material used to manufacture our paperboard products continue in a circular economy reducing the needs of virgin materials. We believe that a society that has access to paperboard products made from renewable resources and/or is recyclable is sustainable and makes positive contributions to reducing the impacts of water security.

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?

Graphic Packaging considers material financial impact to be at a level of 5% of assets, revenues or earnings. Strategic impacts include a loss of key alliances and customers, sustained serious loss in market share or company value. Considerations include long-term impact on reputation, litigation and/or regulatory/legislative, and whether the event requires engagement of the Executive Committee and Board.

These factors are weighed against: (a) The proportion of business units affected; (b) The size of the impact on those business units, and (c) The potential for shareholder or customer concern. A substantive financial impact of relatively high magnitude could occur because of a large change in one of these aspects, or small changes in all three combining to create a larger impact. Forward looking metrics to define thresholds for the top strategic organizational risks are under-development.

Graphic Packaging has identified specific Water Security related commitments that are included in our 2017 Sustainability and Social Responsibility Report and are focused on a reduction of the environmental impact of the organization. Our Vision 2025 goals include a 10% reduction in greenhouse gas emissions, nonrenewable energy use, water effluent at our mills, and collaborating with the AF&PA to achieve a 70% paper and paperboard recovery in the U.S. by 2020. Additional goals and implementation targets for waste diversion, safety, forest and wood-fiber certification, and social responsibility are also key programs for our Vision 2025.

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	8	1-25	Graphic Packaging's Paperboard mills are responsible for a significant portion of water use and thus represent the majority of water risk exposure. Specifically, any risk that would jeopardize the functioning of the paperboard mill, for an extended or undefined period are considered substantive. There have been and will continue to be weather events or geographical changes, which may impact the ability of Graphic Packaging to conduct operations. For example, Graphic Packaging engaged with our Congressional representatives and the Army Corps of Engineers to ensure dredging of the Ouachita river in Louisiana. Our West Monroe, LA mill relies upon this river as the key withdrawal and discharge source. The dredging was necessary to ensure that there was an adequate flow of river water that supports our mill production.

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
United States of America

River basin
St. Lawrence

Number of facilities exposed to water risk
2

% 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
1-25

Comment

Country/Region
United States of America

River basin
Mississippi River

Number of facilities exposed to water risk
3

% 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
26-50

Comment

Country/Region
United States of America

River basin
Altamaha River

Number of facilities exposed to water risk
1

% 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
1-25

Comment

Country/Region
Canada

River basin
St. Lawrence

Number of facilities exposed to water risk
1

% 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
1-25

Comment

Country/Region
United States of America

River basin
Savannah River

Number of facilities exposed to water risk
1

% 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
1-25

Comment

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
St. Lawrence

Type of risk
Physical

Primary risk driver
Increased water stress

Primary potential impact
Reduction or disruption in production capacity

Company-specific description
Stress on water resources, could limit or disrupt operational and production capacity at the mills, decreasing potential profitability of our papermaking processes. 3 mills: Texarkana, Kalamazoo and Battle Creek are dependent on this river basin. The baseline water stress is considered low at Texarkana and high at both Kalamazoo and Battle Creek. Battle Creek and Kalamazoo are both located on the Kalamazoo River on which the contributing factors to the high baseline water stress indicator include high water quality and quantity risk and extremely low upstream storage of water capacity. These conditions are expected to continue. Both plants have focused on pretreatment of incoming supply and water conservation measures that have resulted in successful operation throughout varying conditions. Texarkana, while currently assessed as having low baseline water stress is geographically located in a region where in 50 years it is expected, without change, that the river basin west of the mill may become overdrawn and water may need to be reallocated to the Dallas Fort Worth area in order to address increases in population growth.

Timeframe
More than 6 years

Magnitude of potential impact
Medium

Likelihood
Unlikely

Are you able to provide a potential financial impact figure?
No, we do not have this figure

Potential financial impact figure (currency)
<Not Applicable>

Potential financial impact figure - minimum (currency)
<Not Applicable>

Potential financial impact figure - maximum (currency)
<Not Applicable>

Explanation of financial impact
Depending on the nature of the water scarcity/stress, the financial impact would include lost revenue from decreased or ceased operations from product manufacturing.

Primary response to risk
Engage with local communities

Description of response
Graphic Packaging maintains strong and ongoing relationships in the communities with which we operate. In the event of a potential water issue, Graphic Packaging would first engage with the local community to collaborate and develop a plan of action.

Cost of response
0

Explanation of cost of response
Cost of response includes any costs necessary to ensure the water stress is mitigated. These costs could potentially include installing an additional storage tank, dredging, or implementing resource efficiency measures at the mill to improve water security for the mill and other water users of the shared water basin. No current projects are currently underway.

Country/Region
United States of America

River basin
Mississippi River

Type of risk
Physical

Primary risk driver
Increased water stress

Primary potential impact
Reduction or disruption in production capacity

Company-specific description

Graphic Packaging notes that one of our withdrawal sources, the Sparta Aquifer, is currently overdrawn. Prior to evaluation Graphic Packaging pulled ~10M gallons/day. The draw has since been reduced to ~5M gallons/day. Due to the stress on the aquifer from existing pressure from Graphic Packaging and other community members the lack of water availability could limit or disrupt operational and production capacity at the mill, decreasing potential profitability, thereby increasing the focus on resource efficiency initiatives and transfer of source load.

Timeframe
More than 6 years

Magnitude of potential impact
High

Likelihood
Unlikely

Are you able to provide a potential financial impact figure?
No, we do not have this figure

Potential financial impact figure (currency)
<Not Applicable>

Potential financial impact figure - minimum (currency)
<Not Applicable>

Potential financial impact figure - maximum (currency)
<Not Applicable>

Explanation of financial impact
Depending on the extent of the flooding and damage, the financial impact would include replacing and repairing any damaged equipment or infrastructure and lost revenue from decreased or ceased operations from product manufacturing.

Primary response to risk
Develop flood emergency plans

Description of response
In the event of potential or active flooding Graphic Packaging would fully evaluate required measures to mitigate the risk. Potential mitigation measures include adequate insurance coverage and appropriate and physical precautionary measures. For example, Graphic Packaging invested in an Aqua Dam to mitigate flooding risks at two of our facilities.

Cost of response
1000000

Explanation of cost of response
Cost of response may include additional insurance coverage as deemed necessary. The amount would be determined from a physical risk review that is performed twice per year, audit committee insurance coverage gap review that is performed every 2 years and investment in physical mitigation measures, such as the Aqua Dam. No current projects are currently underway, however an AquaDam was procured in the prior period to mitigate against potential flood risks.

Country/Region
United States of America

River basin
Altamaha River

Type of risk
Physical

Primary risk driver
Increased water stress

Primary potential impact
Reduction or disruption in production capacity

Company-specific description
Stress on water resources, could limit or disrupt operational and production capacity at the mills, decreasing potential profitability. The Macon, GA Mill is dependent on the Altamaha River basin. This mill has been assessed to have low to medium overall water risk experiences, medium to high baseline water stress, and both risk levels are expected to continue. Water quality and quantity issues are addressed through water conservation measures. High risk of flooding is ameliorated with the cooperation of the local municipality.

Timeframe
More than 6 years

Magnitude of potential impact
Medium

Likelihood
Unlikely

Are you able to provide a potential financial impact figure?
No, we do not have this figure

Potential financial impact figure (currency)
<Not Applicable>

Potential financial impact figure - minimum (currency)
<Not Applicable>

Potential financial impact figure - maximum (currency)
<Not Applicable>

Explanation of financial impact
Depending on the nature of the water scarcity/stress, the financial impact would include lost revenue from decreased or ceased operations from product manufacturing.

Primary response to risk
Engage with local communities

Description of response
Graphic Packaging maintains strong and ongoing relationships in the communities with which we operate. In the event of a potential water issue, Graphic Packaging would first engage with the local community to collaborate and develop a plan of action.

Cost of response
0

Explanation of cost of response
Cost of response may include any costs associated from partnerships with industry, non-profits and community stakeholders to ensure the water stress is mitigated. Potential costs could include installing additional water storage, dredging, or implementing resource efficiency measures at the mill. Any mitigation investment would improve water security for the mill and other water users of the shared water basin. No current projects are underway.

Country/Region
United States of America

River basin
Savannah River

Type of risk
Physical

Primary risk driver
Increased water stress

Primary potential impact
Reduction or disruption in production capacity

Company-specific description
The Augusta Mill is in the Savannah River basin outside of Atlanta. Currently the mill has access to a sufficient supply of water, because it is located upstream of a nuclear plant. The Corp of Engineers is required to maintain dredged canals to support the nuclear plant. Additionally, the Augusta Mill has located its intake pumps directly at the river eliminating the need to have a local canal from the river to the mill. The risk to the mill could change if the City of Atlanta diverts water back to the city to accommodate increasing demand as a function of population growth. If the mill's water intake were significantly curtailed, there is a risk of reducing or disrupting the mills production capacity.

Timeframe
More than 6 years

Magnitude of potential impact
Medium

Likelihood
Unlikely

Are you able to provide a potential financial impact figure?
No, we do not have this figure

Potential financial impact figure (currency)
<Not Applicable>

Potential financial impact figure - minimum (currency)
<Not Applicable>

Potential financial impact figure - maximum (currency)
<Not Applicable>

Explanation of financial impact
Depending on the extent of the effect on the drought and regional wild fires on Graphic Packaging's wood basket, the financial impact would include lost revenue from decreased or ceased operations from product manufacturing.

Primary response to risk
Engage with local communities

Description of response
Graphic Packaging maintains strong and ongoing relationships in the communities with which we operate. In the event of a potential water issue, Graphic Packaging would first engage with the local community to collaborate and develop a plan of action.

Cost of response
0

Explanation of cost of response
Cost of response may include any costs associated from partnerships with industry, non-profits and community stakeholders to ensure the water stress is mitigated. Potential costs could include installing additional water storage, dredging, or implementing resource efficiency measures at the mill. Any mitigation investment would improve water security for the mill and other water users of the shared water basin. No current projects are underway.

Country/Region
Canada

River basin
St. Lawrence

Type of risk
Physical

Primary risk driver
Increased water stress

Primary potential impact
Reduction or disruption in production capacity

Company-specific description
Stress on water resources, could limit or disrupt operational and production capacity at the mills, decreasing potential profitability. The East Angus, Quebec mill is dependent upon the St. Lawrence River basin, which experiences low to medium overall water risk and low baseline water stress, which is expected to continue.

Timeframe
More than 6 years

Magnitude of potential impact
Medium

Likelihood
Unlikely

Are you able to provide a potential financial impact figure?
No, we do not have this figure

Potential financial impact figure (currency)
<Not Applicable>

Potential financial impact figure - minimum (currency)
<Not Applicable>

Potential financial impact figure - maximum (currency)
<Not Applicable>

Explanation of financial impact
Depending on the nature of the water scarcity/stress, the financial impact would include lost revenue from decreased or ceased operations from product manufacturing.

Primary response to risk
Engage with local communities

Description of response
Graphic Packaging maintains strong and ongoing relationships in the communities with which we operate. In the event of a potential water issue, Graphic Packaging would first engage with the local community to collaborate and develop a plan of action.

Cost of response
0

Explanation of cost of response
Cost of response may include any costs associated from partnerships with industry, non-profits and community stakeholders to ensure the water stress is mitigated. Potential costs could include installing additional water storage, dredging, or implementing resource efficiency measures at the mill. Any mitigation investment would improve water security for the mill and other water users of the shared water basin. No current projects are underway.

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	At this time potential risks have been assessed and the company anticipates that there are no material financial impacts. In addition, there are adequate strategies in place to address any potential water impacts.

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?
No

W4.3b

(W4.3b) Why does your organization not consider itself to have water-related opportunities?

	Primary reason	Please explain
Row 1	Judged to be unimportant	Graphic Packaging has adequate water availability and so do competing paperboard manufacturers. At this time there is no perceived significant opportunity to leverage water availability for strategic advantage. Graphic Packaging has recently completed an enterprise risk management assessment in which water-related opportunities were not deemed to be considered substantive or material by leadership. Such related opportunities and risks will be evaluated in real-time as they may arise during the company-wide enterprise risk management assessment, which occurs every two years or less, reviewed by the Board. The threshold for pursuing a substantive opportunity will reflect the change in current status ultimately reducing operational costs associated with water-related processes at our mills or provide relief in terms of an improved or resilient supply chain in which raw materials are reliably secured.

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)
Augusta Mill

Country/Region
United States of America

River basin
Savannah River

Latitude
33.322971

Longitude
-81.956734

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)
51326

Comparison of withdrawals with previous reporting year
About the same

Total water discharges at this facility (megaliters/year)
46005

Comparison of discharges with previous reporting year
About the same

Total water consumption at this facility (megaliters/year)
5321

Comparison of consumption with previous reporting year
Lower

Please explain
Annual withdrawal and discharge represent metered data. Consumption data is estimated by the difference between annual withdrawal and discharge. The Company anticipates that future changes will support our 2025 Sustainability Vision .

Facility reference number
Facility 2

Facility name (optional)
Texarkana Mill

Country/Region
United States of America

River basin
Mississippi River

Latitude
33.250537

Longitude
-94.076775

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)
39385

Comparison of withdrawals with previous reporting year
About the same

Total water discharges at this facility (megaliters/year)
39385

Comparison of discharges with previous reporting year
Much higher

Total water consumption at this facility (megaliters/year)
0

Comparison of consumption with previous reporting year
Much lower

Please explain
Annual withdrawal represents metered data. The discharge water represents water that is held within a large reservoir until state agencies decide how much and when it is appropriate to discharge water based on the current conditions. At times discharged water data does not represent the same period when compared to withdrawn water. In the case of 2018, the water recorded as discharged exceeded water withdrawn, however due to timing of regulatory requests, some of the water discharged related to withdrawn water in 2017. In general, every three years, the average discharge approximates the water withdrawn. As such, the water discharged was estimated and set to equal the water withdrawn. Consumption data is estimated by the difference between annual withdrawal and discharge. The Company anticipates that future changes will support our 2025 Sustainability Vision .

Facility reference number
Facility 3

Facility name (optional)
West Monroe (Mills)

Country/Region
United States of America

River basin
Mississippi River

Latitude
32.48675

Longitude
-92.15005

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)
30453

Comparison of withdrawals with previous reporting year
About the same

Total water discharges at this facility (megaliters/year)
29910

Comparison of discharges with previous reporting year
About the same

Total water consumption at this facility (megaliters/year)
543

Comparison of consumption with previous reporting year
Much higher

Please explain
Annual withdrawal data is represented by 3 sources, for which well water withdrawn is estimated, river water is metered, and the municipal water is metered, however the latter is uncalibrated, while discharge represents metered data. Produced water is estimated using the average water composition of wood chips. Consumption data is estimated by the difference between annual withdrawal and discharge. The Company anticipates that future changes will support our 2025 Sustainability Vision .

Facility reference number
Facility 4

Facility name (optional)
Macon, GA (Mill)

Country/Region
United States of America

River basin
Altamaha River

Latitude
32.773784

Longitude
-83.631841

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)
16903

Comparison of withdrawals with previous reporting year
Higher

Total water discharges at this facility (megaliters/year)
15585

Comparison of discharges with previous reporting year
Higher

Total water consumption at this facility (megaliters/year)
1319

Comparison of consumption with previous reporting year
Higher

Please explain
Annual withdrawal and discharge represent metered data. Produced water is estimated using the average water composition of wood chips. Consumption data is estimated by the difference between annual withdrawal and discharge. The Company anticipates that future changes will support our 2025 Sustainability Vision .

Facility reference number
Facility 5

Facility name (optional)
Kalamazoo (Mill)

Country/Region
United States of America

River basin
St. Lawrence

Latitude
42.305634

Longitude
-85.578998

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)
2549

Comparison of withdrawals with previous reporting year
Much higher

Total water discharges at this facility (megaliters/year)
1972

Comparison of discharges with previous reporting year
Much higher

Total water consumption at this facility (megaliters/year)
577

Comparison of consumption with previous reporting year
Much lower

Please explain
Annual withdrawal and discharge represents metered data. Consumption data is estimated by the difference between annual withdrawal and discharge. The Company anticipates that future changes will support our 2025 Sustainability Vision .

Facility reference number
Facility 6

Facility name (optional)
Battle Creek

Country/Region
United States of America

River basin
St. Lawrence

Latitude
42.314983

Longitude
-85.186171

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)
2160

Comparison of withdrawals with previous reporting year
Much higher

Total water discharges at this facility (megaliters/year)
1289

Comparison of discharges with previous reporting year
Much lower

Total water consumption at this facility (megaliters/year)
871

Comparison of consumption with previous reporting year
Much higher

Please explain
Annual withdrawal and discharge represent metered data. This is the first year produced water is included in the withdrawal volumes for this facility, which was calculated by mill personnel. Consumption data is estimated by the difference between annual withdrawal and discharge. The Company anticipates that future changes will support our 2025 Sustainability Vision .

Facility reference number
Facility 7

Facility name (optional)
Middletown

Country/Region
United States of America

River basin
Mississippi River

Latitude
39.519179

Longitude
-84.390795

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)
1697

Comparison of withdrawals with previous reporting year
About the same

Total water discharges at this facility (megaliters/year)
1535

Comparison of discharges with previous reporting year
About the same

Total water consumption at this facility (megaliters/year)
162

Comparison of consumption with previous reporting year
Lower

Please explain
Annual withdrawal and discharge represent metered data. Consumption data is estimated by the difference between annual withdrawal and discharge. The Company anticipates that future changes will support our 2025 Sustainability Vision .

Facility reference number
Facility 8

Facility name (optional)
East Angus

Country/Region
Canada

River basin
St. Lawrence

Latitude
45.481688

Longitude
-71.664126

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)
601

Comparison of withdrawals with previous reporting year
Much higher

Total water discharges at this facility (megaliters/year)
367

Comparison of discharges with previous reporting year
Much higher

Total water consumption at this facility (megaliters/year)
234

Comparison of consumption with previous reporting year
Much higher

Please explain
Annual withdrawal and discharge represent metered data. Consumption data is estimated by the difference between annual withdrawal and discharge. The Company anticipates that future changes will support our 2025 Sustainability Vision .

W5.1a

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

Facility reference number
Facility 1

Facility name
Augusta Mill

Fresh surface water, including rainwater, water from wetlands, rivers and lakes
51000

Brackish surface water/seawater

Groundwater - renewable

Groundwater - non-renewable

Produced/Entrained water

Third party sources
326

Comment
All withdrawal data is sourced from direct measurements. For fresh surface water, river water is the primary source of withdrawal. Graphic Packaging relies on municipal supplied grey water for the remaining water withdrawal demand. The Company anticipates that future changes will support our 2025 Sustainability Vision .

Facility reference number
Facility 2

Facility name
Texarkana Mill

Fresh surface water, including rainwater, water from wetlands, rivers and lakes
39385

Brackish surface water/seawater

Groundwater - renewable

Groundwater - non-renewable

Produced/Entrained water

Third party sources

Comment
All withdrawal data is sourced from direct measurements. For fresh surface water, river water is the primary source of withdrawal. Graphic Packaging relies on municipal supplied grey water for the remaining water withdrawal demand. The Company anticipates that future changes will support our 2025 Sustainability Vision .

Facility reference number
Facility 3

Facility name
West Monroe (Mills)

Fresh surface water, including rainwater, water from wetlands, rivers and lakes
10151

Brackish surface water/seawater

Groundwater - renewable

Groundwater - non-renewable
12791

Produced/Entrained water
543

Third party sources
6967

Comment
All withdrawal data is sourced from direct measurements apart from produced water. Graphic Packaging estimates produced water by calculating the moisture content of wood chips as a percentage of wood chips brought into the virgin paperboard mills, less the moisture content of paperboard leaving the mills. For fresh surface water, river water is the primary source of withdrawal. Graphic Packaging relies on municipal supplied grey water for the remaining water withdrawal demand. The Company anticipates that future changes will support our 2025 Sustainability Vision .

Facility reference number
Facility 4

Facility name
Macon, GA (Mill)

Fresh surface water, including rainwater, water from wetlands, rivers and lakes
15582

Brackish surface water/seawater

Groundwater - renewable
418

Groundwater - non-renewable

Produced/Entrained water
430

Third party sources
473

Comment
All withdrawal data is sourced from direct measurements apart from produced water. Graphic Packaging estimates produced water by calculating the moisture content of wood chips as a percentage of wood chips brought into the virgin paperboard mills, less the moisture content of paperboard leaving the mills. For fresh surface water, river water is the primary source of withdrawal. Graphic Packaging relies on municipal supplied grey water for the remaining water withdrawal demand. The Company anticipates that future changes will support our 2025 Sustainability Vision .

Facility reference number
Facility 5

Facility name
Kalamazoo (Mill)

Fresh surface water, including rainwater, water from wetlands, rivers and lakes
906

Brackish surface water/seawater

Groundwater - renewable
224

Groundwater - non-renewable

Produced/Entrained water

Third party sources
1419

Comment
All withdrawal data is sourced from direct measurements. For fresh surface water, river water is the primary source of withdrawal. Graphic Packaging relies on municipal supplied grey water for the remaining water withdrawal demand. The Company anticipates that future changes will support our 2025 Sustainability Vision .

Facility reference number
Facility 6

Facility name
Battle Creek

Fresh surface water, including rainwater, water from wetlands, rivers and lakes
561

Brackish surface water/seawater

Groundwater - renewable
1151

Groundwater - non-renewable

Produced/Entrained water
195

Third party sources
253

Comment
All withdrawal data is sourced from direct measurements apart from produced water. For fresh surface water, river water is the primary source of withdrawal. Graphic Packaging relies on municipal supplied grey water for the remaining water withdrawal demand. The Company anticipates that future changes will support our 2025 Sustainability Vision .

Facility reference number
Facility 7

Facility name
Middletown

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

Brackish surface water/seawater

Groundwater - renewable
1651

Groundwater - non-renewable

Produced/Entrained water

Third party sources
46

Comment
All withdrawal data is sourced from direct measurements. For fresh surface water, river water is the primary source of withdrawal. Graphic Packaging relies on municipal supplied grey water for the remaining water withdrawal demand. The Company anticipates that future changes will support our 2025 Sustainability Vision .

Facility reference number
Facility 8

Facility name
East Angus

Fresh surface water, including rainwater, water from wetlands, rivers and lakes
527

Brackish surface water/seawater

Groundwater - renewable

Groundwater - non-renewable

Produced/Entrained water

Third party sources
74

Comment
All withdrawal data is sourced from direct. For fresh surface water, river water is the primary source of withdrawal. Graphic Packaging relies on municipal supplied grey water for the remaining water withdrawal demand. The Company anticipates that future changes will support our 2025 Sustainability Vision .

W5.1b

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

Facility reference number
Facility 1

Facility name
Augusta Mill

Fresh surface water

Brackish surface water/Seawater

Groundwater

Third party destinations
46005

Comment
Volumes for each destination are sourced from direct measurements. All wastewater is discharged to the municipality.

Facility reference number
Facility 2

Facility name
Texarkana Mill

Fresh surface water
39395

Brackish surface water/Seawater

Groundwater

Third party destinations

Comment
The discharge water represents that water which is held within a large reservoir until state agencies decide how much and when it is appropriate to discharge the water. Therefore, it is typical to have discharged water data that does not represent the same period when compared to withdrawn water. In general, every three years, the

average discharge approximates the water withdrawn. All wastewater is discharged to the river.

Facility reference number
Facility 3

Facility name
West Monroe (Mills)

Fresh surface water
29910

Brackish surface water/Seawater

Groundwater

Third party destinations

Comment
Volumes for each destination are sourced from direct measurements. All of West Monroe's process water is discharged to the river, as such no discharge is introduced to a brackish or groundwater environment or municipality.

Facility reference number
Facility 4

Facility name
Macon, GA (Mill)

Fresh surface water
4787

Brackish surface water/Seawater

Groundwater

Third party destinations
10798

Comment
Volumes for each destination are sourced from direct measurements. All of Macon's non-contact cooling water is discharged to the river, where all process water is discharged to the municipality.

Facility reference number
Facility 5

Facility name
Kalamazoo (Mill)

Fresh surface water
782

Brackish surface water/Seawater

Groundwater

Third party destinations
1190

Comment
Volumes for each destination are sourced from direct measurements. All of Kalamazoo's non-contact cooling water is discharged to the river, where all process water is discharged to the municipality.

Facility reference number
Facility 6

Facility name
Battle Creek

Fresh surface water
1036

Brackish surface water/Seawater

Groundwater

Third party destinations
253

Comment
Volumes for each destination are sourced from direct measurements. All of Battle Creek's non-contact cooling water is discharged to the river, where all process water is discharged to the municipality.

Facility reference number
Facility 7

Facility name
Middletown

Fresh surface water

Brackish surface water/Seawater

Groundwater

Third party destinations
1535

Comment
Volumes for each destination are sourced from direct measurements. All wastewater is discharged to the municipality.

Facility reference number
Facility 8

Facility name
East Angus

Fresh surface water

Brackish surface water/Seawater

Groundwater

Third party destinations
367

Comment
Volumes for each destination are sourced from direct measurements. All wastewater is discharged to the municipality.

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
Augusta Mill

% recycled or reused
Not monitored

Comparison with previous reporting year
<Not Applicable>

Please explain
Water is critical to papermaking, and the water we borrow from the environment is responsibly returned. We continue to invest in technologies, like water tanks, advanced strainers for water treatment, and clarifying units to allow us to reuse more of our process water, to reduce our draw on water resources. In addition, we have implemented a structured water monitoring system to help us isolate and find additional water conservation opportunities. The company does not anticipate additional changes to its water monitoring process.

Facility reference number
Facility 2

Facility name
Texarkana Mill

% recycled or reused
Not monitored

Comparison with previous reporting year
<Not Applicable>

Please explain
Water is critical to papermaking, and the water we borrow from the environment is responsibly returned. We continue to invest in technologies, like water tanks, advanced strainers for water treatment, and clarifying units to allow us to reuse more of our process water, to reduce our draw on water resources. In addition, we have implemented a structured water monitoring system to help us isolate and find additional water conservation opportunities. The company does not anticipate additional changes to its water monitoring process.

Facility reference number
Facility 3

Facility name
West Monroe (Mills)

% recycled or reused
76-99%

Comparison with previous reporting year
About the same

Please explain
Water is critical to papermaking; the water we borrow from the environment is responsibly returned. We invest in technologies, like water tanks, advanced strainers, and clarifying units to allow us to reuse more of our process water, to reduce our draw on water resources. We have implemented a structured water monitoring system to isolate additional water conservation opportunities. West Monroe estimated that 83% of water was recycled within the mill. We expect this to remain about the same.

Facility reference number
Facility 4

Facility name
Macon, GA (Mill)

% recycled or reused
Not monitored

Comparison with previous reporting year
<Not Applicable>

Please explain
Water is critical to papermaking and is responsibly returned to the environment. We invest in technologies, like water tanks, advanced strainers, and clarifying units. We have implemented a water monitoring system to isolate water conservation opportunities. Macon recycles water used in the paper machine process and uses wet scrubbers. Stripped condensate is reused for pulp washing and steam condensate is reclaimed for boiler feed water. The company does not anticipate additional changes to its water monitoring process.

Facility reference number
Facility 5

Facility name
Kalamazoo (Mill)

% recycled or reused
Not monitored

Comparison with previous reporting year
<Not Applicable>

Please explain
Water is critical to papermaking and is responsibly returned to the environment. We invest in technologies, like water tanks, advanced strainers, and clarifying units. We have implemented a water monitoring system to isolate conservation opportunities. Kalamazoo recirculates water in short loops for paper machine processing and reuses clarified water. We also split the final effluent stream between the POTW and recycled process water. The company does not anticipate additional changes to its water monitoring process.

Facility reference number
Facility 6

Facility name
Battle Creek

% recycled or reused
Not monitored

Comparison with previous reporting year
<Not Applicable>

Please explain
Water is critical to papermaking, and the water we borrow from the environment is responsibly returned. We continue to invest in technologies, like water tanks, advanced strainers for water treatment, and clarifying units to allow us to reuse more of our process water, to reduce our draw on water resources. In addition, we have implemented a structured water monitoring system to help us isolate and find additional water conservation opportunities. The company does not anticipate additional changes to its water monitoring process.

Facility reference number
Facility 7

Facility name
Middletown

% recycled or reused
Not monitored

Comparison with previous reporting year
<Not Applicable>

Please explain
Water is critical to papermaking, and the water we borrow from the environment is responsibly returned. We continue to invest in technologies, like water tanks, advanced strainers for water treatment, and clarifying units to allow us to reuse more of our process water, to reduce our draw on water resources. In addition, we have implemented a structured water monitoring system to help us isolate and find additional water conservation opportunities. The company does not anticipate additional changes to its water monitoring process.

Facility reference number
Facility 8

Facility name
East Angus

% recycled or reused
Not monitored

Comparison with previous reporting year
<Not Applicable>

Please explain
Water is critical to papermaking, and the water we borrow from the environment is responsibly returned. We continue to invest in technologies, like water tanks, advanced

strainers for water treatment, and clarifying units to allow us to reuse more of our process water, to reduce our draw on water resources. In addition, we have implemented a structured water monitoring system to help us isolate and find additional water conservation opportunities. The company does not anticipate additional changes to its water monitoring process.

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?
Water data was generated from invoices and on-site meters. Graphic Packaging is reviewing 3rd party partners to verify the data.

Water withdrawals – volume by source

% verified
Not verified

What standard and methodology was used?
Water data was generated from invoices and on-site meters. Graphic Packaging is reviewing 3rd party partners to verify the data.

Water withdrawals – quality

% verified
Not verified

What standard and methodology was used?
Water data was generated from invoices and on-site meters. Graphic Packaging is reviewing 3rd party partners to verify the data.

Water discharges – total volumes

% verified
Not verified

What standard and methodology was used?
Water data was generated from invoices and on-site meters. Graphic Packaging is reviewing 3rd party partners to verify the data.

Water discharges – volume by destination

% verified
Not verified

What standard and methodology was used?
Water data was generated from invoices and on-site meters. Graphic Packaging is reviewing 3rd party partners to verify the data.

Water discharges – volume by treatment method

% verified
Not verified

What standard and methodology was used?
Water data was generated from invoices and on-site meters. Graphic Packaging is reviewing 3rd party partners to verify the data.

Water discharge quality – quality by standard effluent parameters

% verified
Not verified

What standard and methodology was used?
Water data was generated from invoices and on-site meters. Graphic Packaging is reviewing 3rd party partners to verify the data.

Water discharge quality – temperature

% verified
Not verified

What standard and methodology was used?
Water data was generated from invoices and on-site meters. Graphic Packaging is reviewing 3rd party partners to verify the data.

Water consumption – total volume

% verified
Not verified

What standard and methodology was used?
Water data was generated from invoices and on-site meters. Graphic Packaging is reviewing 3rd party partners to verify the data.

Water recycled/reused

% verified
Not verified

What standard and methodology was used?
Water data was generated from invoices and on-site meters. Graphic Packaging is reviewing 3rd party partners to verify the data.

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	Select facilities, businesses, or geographies only	Description of water-related performance standards for direct operations Company water targets and goals Commitment to stakeholder awareness and education Commitment to water stewardship and/or collective action	Due to the high level of water use in our mills Graphic Packaging has prioritized our water strategy to these facilities. Our water policy reflects our commitments to water stewardship. The company has set water effluent and water monitoring goals. These goals are disclosed on our corporate website in our Sustainability Vision 2025 Goals.

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) (do not include any names) of the individual(s) on the board with responsibility for water-related issues.

Position of individual	Please explain
Other C-Suite Officer	The individual on the leadership team with responsibility to reporting to the Board of Directors for water-related issues is the Executive Vice President, General Counsel and Secretary. This position has the highest level of responsibility towards water-related activities, and participates on the Health, Safety, and Environmental (HS&E) Steering Committee. This committee meets every 60 days. This position regularly provides HS&E highlights to the Board and presents an annual compliance and corporate governance report addressing significant developments. Responsibility for water-related issues have been assigned to this position because it has indirect and direct oversight of the VP of HS&E as well as the VP of Sustainability, who maintain direct management of these areas.

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	Reviewing and guiding business plans Reviewing and guiding risk management policies Reviewing and guiding strategy	Approximately every 2 months the HS&E committee meetings are held. Safety, water-related risks, CapEx projects, and other related topics are discussed as appropriate. Key programs and KPIs are reviewed and a summary are presented for review by the Board of Directors. Long-term business objectives and goals are reviewed by the Board in conjunction with the presentation of changes to water reduction and crisis plans annually.

W6.3

(W6.3) Provide the highest management-level position(s) or committee(s) with responsibility for water-related issues (do not include the names of individuals).

Name of the position(s) and/or committee(s)
Other committee, please specify (HS&E Steering Committee)

Responsibility
Both assessing and managing water-related risks and opportunities

Frequency of reporting to the board on water-related issues
More frequently than quarterly

Please explain
The HS&E Steering Committee, which includes representatives from Sustainability/ Social Responsibility, HS&E, Operations, Legal, Human Resources and Risk Management, receives and reviews reports from the Vice President of Government Affairs and Sustainability and the Vice President of HS&E. This committee also reviews risk policies and insurance and meets approximately every 2 months. Overall responsibility for our sustainability and social responsibility strategy is with our executive leadership team. The Vice President of Government Affairs and Sustainability provides the strategic direction. This individual is a member of the extended executive leadership team and reports regularly on key programs to the President and CEO every 60 days.

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

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?

Along with communicating our sustainability and responsibility programs, we share the impacts of legislation and regulation on operations and our ability to execute these programs. Engagements with these groups include one-on-one meetings, facility tours and town hall meetings. For example, when there is legislation, which Graphic Packaging considers significant to our operations or community, we meet with legislators and review concerns for the bill or proposed regulation and highlight alternatives. Additionally, we participate in public comment periods representing Graphic Packaging or as a member of an industry association in order to provide relevant feedback as the opportunities for federal engagement arise.

W6.6

(W6.6) Did your organization include information about its response to water-related risks in its most recent mainstream financial report?
No, but we plan to do so in the next two years

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	5-10	The stewardship of our water resources along with our operational water efficiency are integrated into our long-term business objectives. Customers of food and beverage products have expressed concerns with plastic packaging due to pollution concerns and as such, are placing a greater interest on paperboard. Graphic Packaging communicates how our resource use and operational processes are making a positive impact on the environment, to our customers and to communities. Graphic Packaging is monitoring technologies associated with reducing water use on a continual basis and will implement those that have relevance to mill situations and are economically justifiable in the context of meeting our water use and monitoring commitments that have been incorporated into our Sustainability Vision 2025 goals. The time horizon selected aligns with the period for which each goal noted above is targeted for 2025 and are reviewed against a 2016 baseline. Graphic Packaging acknowledges that our near-term projects will have long-term impacts, however at this time, we have no formal long-term targets in excess of 10 years, as forecasting beyond 5 years can be highly speculative.
Strategy for achieving long-term objectives	Yes, water-related issues are integrated	5-10	Water use practices are embedded into Graphic Packaging's strategy for achieving long-term objectives, both in terms of the water-specific effluent and monitoring goals set as well as the energy and GHG reduction targets. By incorporating improved water reuse recovery and recycling efforts into our operations, our water withdrawals, discharges, energy use, emissions and energy costs all decline as we are able to maintain water at a higher temperature for optimal fiber processing. This is key to Graphic Packaging's strategy to maintain a low-cost operating structure. The time horizon selected aligns with the period for which each goal noted above is targeted for 2025 and are reviewed against a 2016 baseline.
Financial planning	Yes, water-related issues are integrated	5-10	Water related issues are indirectly integrated into Graphic Packaging's financial planning process in which Graphic Packaging anticipates positive revenue growth associated with a shift in customer preferences for paperboard based packaging. This is tied to the shift observed in customer concerns attributed to plastic packaging and industry trends switching to paperboard alternatives. This market shift along with Graphic Packaging's low cost structure that is supported by water and energy efficient practices will have direct financial impacts on both revenue and expenses. The operational efficiency goals are tied to a 5-10 year horizon and it is expected that financial effects will positively impact revenue and expenses.

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?

Row 1

Water-related CAPEX (+/- % change)

0

Anticipated forward trend for CAPEX (+/- % change)

0

Water-related OPEX (+/- % change)

0

Anticipated forward trend for OPEX (+/- % change)

0

Please explain

Graphic Packaging does not anticipate that CapEx will change from historical levels relative to the current revenue to CapEx ratio. With the combination of Graphic Packaging and the International Packaging's Consumer Packaging business, in 2018, increased reported revenue from $4.4 bil. to $6.0 bil. and capital spending increased from $260 million to $395 million. Thus CapEx increased due the growth of the company.

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	No, but we anticipate doing so within the next two years	Graphic Packaging has an effective process for assessing water availability. We continue to evaluate our assessment process to ensure that we are utilizing the most appropriate and informative tools available. At this time, climate-related scenario analysis is not deemed to be more informative.

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

Graphic Packaging does not anticipate integrating water valuation practices into our operations within the next two years.

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	Water is critical to papermaking, and the water we borrow from the environment is responsibly returned. We continue to invest in technologies, like water tanks, advanced strainers for water treatment, and clarifying units to allow us to reuse more of our process water and reduce our draw on water resources. In addition, we have implemented a structured water monitoring system to help us isolate and find additional water conservation opportunities. Graphic Packaging identifies targets and goals relevant to our specific water risks. Graphic Packaging monitors our effluent on a monthly basis consistent with prior reporting periods. Additionally, the mill division establishes goals each year and monitors progress of activity toward achieving those goals against the baseline period. Formally Graphic Packaging has set company-wide targets and goals in support of our organization's overall commitment to preserve the environment, which drives strategic development within our organization and traction toward our goals.

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
Water discharge

Level
Company-wide

Primary motivation
Water stewardship

Description of target
10% reduction in effluent by 2025 from a base year of 2016

Quantitative metric
% reduction per unit of production

Baseline year
2016

Start year
2016

Target year
2025

% achieved
0

Please explain
Graphic Packaging notes that water discharge increased approximately 5.2% since 2016 on an absolute basis and down 27.2% since 2016 per ton of paperboard produced on an intensity basis. The increase in water discharge aligns with the Company's water intensity goals.

Target reference number
Target 2

Category of target
Monitoring of water use

Level
Company-wide

Primary motivation
Recommended sector best practice

Description of target
100% of locations reporting water by 2025. Currently 100% of Mills report water which represents a significant percentage of water used by the company

Quantitative metric
% sites monitoring water discharge total volumes

Baseline year
2016

Start year
2016

Target year
2025

% achieved
9.88

Please explain
Graphic Packaging notes that the quantitative disclosure of our reporting water facilities remains at 9.88% or 8 mills of our 81 total sites. It is anticipated that the paperboard mills represent over 80% of Graphic Packaging's water usage. We plan to include water withdrawal, distribution, and consumption from the paperboard mills that were added to the Company's Paperboard mill footprint in 2018 which will reset our 2016 baseline. The 2025 target has not been revised.

W8.1b

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

Goal
Engagement with public policy makers to advance sustainable water management and policies

Level
Company-wide

Motivation
Shared value

Description of goal
Ensure that the Waters of the US legislation is achievable in its intent to improve water quality.

Baseline year
2016

Start year
2016

End year
2025

Progress
Waters of the US is under review at the EPA and Graphic Packaging has provided feedback to the EPA for consideration. We continue to monitor the rulemaking process. Progress indicators are represented by feedback from the EPA and through the rulemaking process.

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
Increased energy efficiency

Description of linkage/tradeoff
Due to Graphic Packaging's reliance on water as a critical resource, the reuse of water in our operations limits withdrawal and maintains an overall higher temperature for which less energy is required to heat the water to the process temperature to breakdown the paperboard. As such, water efficiency measures have a direct linkage toward increasing energy efficiency thereby also limiting any associated GHG emissions .

Policy or action
Water is critical to papermaking, and the water we borrow from the environment is responsibly returned. We continue to invest in technologies, like water tanks, advanced strainers for water treatment, and clarifying units to allow us to reuse more of our process water, to reduce our draw on water resources. In addition, we have implemented a structured water monitoring system to help us isolate and find additional water conservation opportunities.

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, we do not currently verify any other water information reported in our CDP disclosure

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.

N/A

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	EVP General Counsel and Secretary	Other C-Suite Officer

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	6023000000

SW0.2

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

Yes

SW0.2a

(SW0.2a) Please share your ISIN in the table below.

	ISIN country code	ISIN numeric identifier (including single check digit)
Row 1	US	3886891015

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?

Please select

SW1.2

(SW1.2) Are you able to provide geolocation data for your site facilities?

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.

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.

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