

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 fiber-based consumer 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 ("CUK") paperboard, coated-recycled board ("CRB") and solid bleached sulfate ("SBS") paperboard. The Company's customers include many of the world's most widely recognized companies and brands with prominent market positions in beverage, food, food service, and other consumer products. The Company strives to provide its customers with sustainable packaging solutions designed to deliver marketing and performance benefits at a competitive cost by capitalizing on its low-cost paperboard mills and carton manufacturing plants, its proprietary carton, container and packaging designs, and its commitment to quality and service.

Sustainability is one of the strongest trends in the packaging industry today. Given the significant sustainability characteristics of paperboard, we are uniquely positioned to capture new opportunities with our global fiber-based packaging platform. We have a long history of environmental and social responsibility practices at the Company and we continue to improve our manufacturing processes.

At Graphic Packaging, our packaging solutions are made primarily from renewable wood fiber, and most of our paperboard packaging and food service products can be recycled today. We intend to leverage our industry-leading sustainability profile and continue to reduce our impact on the environment through our own operations and through innovative paperboard solutions. As part of our Vision 2025, we challenged our team to achieve significant improvements. In the next few years, we intend to reduce greenhouse gas emissions, non-renewable energy usage, and mill water effluents by 15%, and reduce the use of low-density polyethylene (LDPE) by 40%. In addition, we have established a 100% recyclability goal for all Graphic Packaging products. We are committed to continuous improvement to benefit the communities in which we live and work, and we will provide updates on milestones achieved in our annual sustainability reports.

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 2020 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 2020	December 31 2020

W0.3

(W0.3) Select the countries/areas 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.	Represented in this CDP Water response is approximately 99.7% of water use. Water use at Graphic Packaging is primarily driven by our virgin and recycled paperboard mills. These mills represent approximately 99% of our water usage. In addition, we have included this year and in 2020 in our current state assessment data from some of our offices and carton manufacturing facilities, where we were able to collect the data (representing an additional 0.7% of our total footprint based on average water intensity from non-mill sites). Corporate and divisional offices and carton manufacturing facilities, where no data was collected (represents approx. 0.3% of total water footprint) have been excluded as these facilities represent a small percentage of Graphic Packaging's water footprint and won't have a significant impact on water-related concerns.

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 chains, 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 (vitaly 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 and our future dependency on recycled, brackish or produced water for our manufacturing processes could increase if there isn't enough freshwater supply or there are stricter regulations that would require the use of recycled water. Indirect Use: Produced water 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 wood chips. Poor quality or lower quantities of accessible fiber could negatively affect Graphic Packaging's production output. Future water dependency is not expected to change (vitaly important for direct and indirect use) given that 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 discharges at our paperboard mill operations. The paperboard mills represent a significant amount of water used 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 the plan and against prior year. Water withdrawal is monitored for virtually all facilities and is conducted on a monthly and annual basis. 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 discharges at our paperboard mill operations. The paperboard mills represent a significant amount of water used 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 the plan and against prior year. Water withdrawal is monitored for virtually all facilities and is conducted on a monthly and annual basis. 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 sector]	<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 a monthly and 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 discharges 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 the plan and against the prior year. Water withdrawal is monitored for virtually all facilities and is conducted on a monthly and annual basis. 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 discharges 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 the plan and against the prior year. Water withdrawal is monitored for virtually all facilities and is conducted on a monthly and annual basis. 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 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	153020.49	Lower	The 9,297 megaliters decrease year over year or 5.7% is driven primarily by the decrease in surface water withdrawals, representing approximately 73.6% of the 5.7% decrease. Of the sites within Graphic Packaging's portfolio, the 8 mills represent the highest water flow. We anticipate total water withdrawal to remain relatively the same in the future. Much lower / much higher is defined as a % change of 10% or more.
Total discharges	135379.88	Much lower	The 17,707 megaliters decrease year over year or 11.6% is primarily driven by an decrease in discharge at the Augusta mill. This represents the highest discharge of all of Graphic's mills and was the most significant contributor to the decrease in waste water discharge compared to 2019. We anticipate total water discharge to remain relatively the same in the future. Much lower / much higher is defined as a % change of 10% or more.
Total consumption	17640.6	Much higher	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 increased year over year by approximately 8,409 megaliters or 91.1%. We anticipate total water discharge to remain relatively the same in the future. Much lower / much higher is defined as a % change of 10% or more.

W1.2d

(W1.2d) Indicate whether water is withdrawn from areas with water stress and provide the proportion.

	Withdrawals are from areas with water stress	% withdrawn from areas with water stress	Comparison with previous reporting year	Identification tool	Please explain
Row 1	Yes	Less than 1%	About the same	WRI Aqueduct	The WRI Aqueduct tool was used to assess the proportion of withdrawal associated with all sites, and particularly our mills, that are located in river basins that are considered as having high or extremely high baseline water stress. In the reporting year, 8 of our sites but 0 of our mills, which represent approximately 99% of our water withdrawal, met this threshold. In 2018, 2 mills were located in river basins that met this baseline water stress threshold and no mills were located in stressed areas in 2019 or 2020. Therefore, since the number of mills that are characterized as being in locations with high baseline water stress remains 0, the % of withdrawal that represents these sites is the same compared to 2019.

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	124798.13	Lower	Fresh surface water (river water) is monitored & tracked for use as process water and cooling. We anticipate that future changes will support our 2025 Sustainability Vision. Compared to PY, there was an decrease of approximately 6,845 ML or 5.2%. 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 % of our 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 temp, reducing energy demands. We anticipate that future changes will support our 2025 Sustainability Vision. We define "Much higher/much lower" as a change in excess of +/- 10%.
Brackish surface water/Seawater	Not relevant	<Not Applicable>	<Not Applicable>	Brackish surface water/seawater is not used as a water source for Graphic Packaging.
Groundwater – renewable	Relevant	3476.93	Higher	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 increased by approximately 122 ML or 3.63%. 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. We define "Much higher/much lower" as a change in excess of +/- 10%.
Groundwater – non-renewable	Relevant	11643.88	Much lower	Graphic Packaging tracks groundwater - nonrenewable withdrawal from 1 mill, in which, per direct measurements, the year over year withdrawal has decreased by approximately 1,331 ML or 10.26%. 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. We define "Much higher/much lower" as a change in excess of +/- 10%.
Produced/Entrained water	Relevant	3793.25	Much lower	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 year over year produced water usage decreased by approximately 565 ML or 12.96%. The Company anticipates that future changes will support our 2025 Sustainability Vision. We define "Much higher/much lower" as a change in excess of +/- 10%.
Third party sources	Relevant	9308.27	Lower	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 decrease of approximately 678 ML or 6.79% year over year was observed. The Company anticipates that future changes will support our 2025 Sustainability Vision. We define "Much higher/much lower" as a change in excess of +/- 10%.

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	5690.32	Much lower	Fresh surface water discharge represents all non-contact river water used for cooling that is returned to rivers. Compared to the prior year, this discharge is much lower by approximately 1615 ML or 22.11%. The Company anticipates that future changes will support our 2025 Sustainability Vision. We define "Much higher/much lower" as a change in excess of +/- 10%.
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	129689.55	Much lower	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 decreased by 16,092 ML or 11.04%. The Company anticipates that future changes will support our 2025 Sustainability Vision. We define "Much higher/much lower" as a change in excess of +/- 10%.

W1.2j

(W1.2j) Within your direct operations, indicate the highest level(s) to which you treat your discharge.

	Relevance of treatment level to discharge	Volume (megaliters/year)	Comparison of treated volume with previous reporting year	% of your sites/facilities/operations this volume applies to	Please explain
Tertiary treatment	Not relevant	<Not Applicable>	<Not Applicable>	<Not Applicable>	
Secondary treatment	Relevant	126844.72	This is our first year of measurement	1-10	Graphic Packaging discharges water used at the Augusta, Macon, Texarkana, and West Monroe mills after secondary treatment. The City of Macon provides tertiary treatment for the Macon mill's discharge. At Augusta, Texarkana, and West Monroe, onsite waste water treatment systems are used, and the treated water is discharged to the river. The estimate of this type of effluent discharge is approximately 114,700 megaliters.
Primary treatment only	Relevant	1229.53	This is our first year of measurement	1-10	Graphic Packaging discharges water used at the Kalamazoo plant after primary treatment.
Discharge to the natural environment without treatment	Relevant	5690.33	This is our first year of measurement	1-10	Graphic Packaging utilizes non-contact cooling water at the Battle Creek and Macon mills. This type of fresh surface water discharge represents all non-contact river water used for cooling that is returned to rivers.
Discharge to a third party without treatment	Relevant	1615.31	This is our first year of measurement	91-99	All other water discharges are sent to third-party treatment facilities.
Other	Not relevant	<Not Applicable>	<Not Applicable>	<Not Applicable>	

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?

Rationale: 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 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.

Strategy for prioritizing engagement: We engage with our communities on water sources and discharge. For example, the community of the West Monroe mill raised a concern to the Company regarding withdrawal of 10M gallons from the local aquifer daily. They approached the Company with a project to replace water from the aquifer with treated water from the water treatment facility, ensuring 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 paper making process. As a result, water withdrawn from the aquifer was reduced by 50%. The Company continues to explore strategies to reduce our draw on the local aquifer.

We also engage with the Texarkana Water Utility, operating under their permit, to supplement the local community with additional potable water in order to meet local demand. In 2020, we continued our work installing a new recycled paperboard machine in Kalamazoo, MI as part of our \$600M CRB platform optimization project. In addition to producing the highest quality CRB at an unmatched cost, this purchase is a strategic investment in sustainable packaging. We expect an approximately 1% reduction in water use. and a reduction in water withdrawal by 300M gallons annually.

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 the total financial impact.

Country/Area & River basin

United States of America	Mississippi River
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Type of impact driver & Primary impact driver

Physical	Increased water stress
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Primary impact

Upfront costs to adopt/deploy new practices and processes

Description of impact

The Sparta aquifer is a primary source of ground water for industrial, municipal and agricultural uses in southern Arkansas and northern Louisiana. In the 1990s it was discovered that the aquifer was severely overdrawn, and stakeholders – including the affected communities, companies, and governmental and non-governmental organizations – have been working to decrease draw. Graphic Packaging uses water from the aquifer as process water for making paperboard at our West Monroe, Louisiana plant. Though Graphic Packaging was not required to decrease our water draw from the aquifer, the Company has invested capital and staff time to decrease the amount of water withdrawn from the aquifer. Because of the measures Graphic Packaging is taking to address the water concerns, we do not consider the scale of this impact to be substantive.

Primary response

Adopt water efficiency, water reuse, recycling and conservation practices

Total financial impact

1000000

Description of response

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. The \$1,000,000 financial impact represents capital expenses from our West Monroe plant associated with testing to confirm water quality as well as trials with customers. Each new update has a public comment period during which the community can voice concerns and Graphic Packaging can address them as needed. This is a requirement for any changes in permitting. Graphic Packaging continues to work with the community to increase our water draw from the city waste treatment facility rather than the Sparta aquifer.

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?

No

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

More than once a year

How far into the future are risks considered?

More than 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 when new assets are acquired. Physical risks are reviewed twice per year to assess whether the Company's physical assets 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 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 ops for the enterprise strategic risk report, which the Audit Committee 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. We undertook a materiality assessment in 2021 that provided insight on the impacts of net use of water and the quality of water discharge as material items, which will be refreshed biannually.

Supply chain

Coverage

Full

Risk assessment procedure

Water risks are assessed as part of other company-wide risk assessment system

Frequency of assessment

Annually

How far into the future are risks considered?

More than 6 years

Type of tools and methods used

Other

Tools and methods used

Internal company methods

Comment

Water-related supply chain risks are included in Graphic Packaging's annual climate change risk assessment. Supply chain risks have not yet presented a risk. Graphic Packaging undertook a materiality assessment in 2021 that identified the environmental impact of our supply chain as a material item. We will refresh the materiality assessment biannually.

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 concerns 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 concerns along with scope which may have an impact on capital investment. 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. 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 concerns 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. As an example, 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 withdrew 10M gallons from the local aquifer daily. They approached the Company with a project 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 continues to explore strategies to reduce our draw on the local aquifer. As an example, 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 withdrew 10M gallons from the local aquifer daily. They approached the Company with a project 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 continues to explore strategies to reduce our draw on the local aquifer.
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. 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. 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. 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 concerns 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-related regulatory frameworks	Relevant, always included	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 water-related regulatory changes are closely observed. The Vice President of Government Affairs and Sustainability provides the strategic direction and also monitoring the impacts of water-related emerging regulations. Assessments include current and emerging concerns 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 concerns 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 the 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 facilities.
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	Why these stakeholders are included in the risk assessment: 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 specifications are met. Method of engagement: Graphic Packaging engages with customers on performance testing and providing documentation on the specification of the paperboard.
Employees	Relevant, always included	Graphic Packaging ensures that our employees have access to good quality water, especially drinking water. Why these stakeholders are included in the risk assessment: Employees are essential to our operations and will continue to comprise our consideration of current and future stakeholders. Method of engagement: Graphic Packaging includes our employees in our biennial materiality assessment as stakeholders. During our 2021 materiality assessment, employees shared that water management is a priority and that Graphic Packaging is currently addressing it adequately.
Investors	Relevant, always included	Why these stakeholders are included in the risk assessment: 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's management of our water resources is critical. Investors are current and future stakeholders. Method of engagement: Investors are included in our biennial materiality assessment. Graphic Packaging also receives queries from investors frequently, including on water-related disclosures. Investor interest in water-related issues has increased and Graphic Packaging is adjusting our disclosures to meet investor needs.
Local communities	Relevant, always included	Why these stakeholders are included in the risk assessment: Local communities are considered an important stakeholder. Water is assessed at each community and actions are taken when relevant. Method of engagement: Our methods of engaging with local communities vary to meet the needs of each community. 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. Graphic Packaging continues to work with the community to increase our water draw from the city waste treatment facility. Graphic Packaging is also working with the local communities of the Savannah River Basin, which is experiencing low oxygen levels. We are investing over \$50 million over five years to help meet the higher oxygen levels recommended by the EPA, though we have not contributed to the low oxygen levels. Local communities are considered current and future stakeholders.
NGOs	Relevant, always included	Why these stakeholders are included in the risk assessment: Water is critical to the process of paperboard manufacturing and all factors that could impact availability and quality of withdrawn water, including input from NGOs, are evaluated annually and as needed. Further, factors related to water discharge are evaluated from a regulatory and ecological framework point of view. The analysis and decisions are completed at a local, division and corporate level. Method of engagement: 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	Why these stakeholders are included in the risk assessment: Water is critical to the process of paperboard manufacturing and all factors that could impact availability and quality of withdrawn water, including input from other water users at a basin/catchment level, are evaluated annually and as needed. Further, factors related to water discharge are evaluated from a regulatory and ecological framework point of view. Method of engagement: 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	Why these stakeholders are included in the risk assessment: Water is critical to the process of paperboard manufacturing and all factors that could impact availability and quality of withdrawn water, including input from and actions of regulators, are evaluated annually and as needed. Further, factors related to water discharge are always evaluated from a regulatory and ecological framework point of view. Method of engagement: 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. For example, in 2015 the U.S. Environmental Protection Agency (EPA) initiated risk policies to be imposed in the calculation of certain water quality standards which were, in many cases, unattainable and could cost municipal and industrial dischargers billions of dollars. The impacts of the policies if put into law were assessed by Graphic Packaging and used to determine priority for our Government Affairs advocacy and in our long-range planning. In 2019, the EPA began reconsidering those policies and Graphic Packaging advocated that the agency to expeditiously complete that reconsideration. On October 22, 2019, the Environmental Protection Agency and Department of the Army (the agencies) published a final rule (Step One) to repeal the 2015 Rule defining "waters of the United States" and re-codify the regulatory text that existed prior to the 2015 Rule. The final Step One rule became effective on December 23, 2019. The Step One rule will be replaced by the Navigable Waters Protection Rule upon its effective date of June 22, 2020. Through the efforts of Graphic Packaging and the forest products industry, a more effective regulation is anticipated.
River basin management authorities	Relevant, always included	Water is critical to the process of our paperboard at our mills and all factors that could impact the 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 basin management authorities are considered current and future stakeholders.
Statutory special interest groups at a local level	Relevant, always included	Why these stakeholders are included in the risk assessment: Water is critical to the process of our paperboard at our mills and all factors that could impact the availability and quality of withdrawn water, including input from statutory local special interest groups, are evaluated annually and as needed. Method of engagement: Water-related issues that may be of interest to local statutory special interest groups are evaluated from a regulatory and ecological framework. The analysis and decisions are completed at a local, division, and corporate level. Any major changes to our mills' operations is accompanied by a public comment period during which the community can voice concerns and Graphic Packaging can address them, as is required for any changes in permitting. Special interest groups are considered current and future stakeholders.
Suppliers	Relevant, always included	Why these stakeholders are included in the risk assessment: Continuity of supply is very important to Graphic Packaging's business. As such, we have laid out expectations for suppliers that may experience water impacts and ensure that those suppliers have addressed them adequately. Method of engagement: Graphic Packaging provides a "Suppliers Expectations" document for our suppliers. Further, effective in 2020, Graphic Packaging has asked all suppliers to acknowledge our Global Supplier Code of Conduct. At this time, all Tier 1 suppliers have acknowledged the code of conduct and we are currently working with our 250 Tier 2 suppliers to do so as well. 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	Why these stakeholders are included in the risk assessment: Graphic Packaging paperboard mill discharge water is processed at some local community water treatment facilities. Method of engagement: 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 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 water-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 three 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 packaging end of life 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?

Definition of substantive financial or strategic impact & threshold which indicates substantive change: Graphic Packaging defines significant financial impact as a loss of key alliances and customers, sustained serious loss in market share or Company value with a long-term impact on reputation, litigation and/or regulatory/legislative response significance, and whether the event requires engagement of the Executive Committee and Board for all strategic risks including climate-related risks. 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.

While Graphic Packaging does not specifically quantify what constitutes a material financial or operational impact in a general statement, the Company does disclose financial and strategic impacts in its filings with the SEC and communications with investors as appropriate to provide context on the business implications of extreme weather-related events. We do this to be transparent with our stakeholders. For instance, in 2019 the company disclosed the financial implications of the tornado that destroyed parts of the wood conveying system at our West Monroe, Louisiana mill. The publicly disclosed financial cost was approximately \$10 million. The extreme winter storm and damaging ice during the period of February 12-16, 2021 resulted in impacts to our Texarkana, Texas and West Monroe, Louisiana mill facilities. The company filed an 8-K on February 24 detailing the damages and provided an early anticipated impact to first quarter of 2021 financial results. When the company reported quarterly results, the total financial impact to the company from outages and storm related costs was quantified at \$29 million.

Graphic Packaging has identified specific Water Security related commitments and they are included in our most recent 2019 Environmental, Social and Governance Report. These commitments are focused on a reduction of the environmental impact of the organization. Our Vision 2025 goals include a 15% reduction in greenhouse gas emissions, non-renewable 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 the end of 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	3	Less than 1%	Graphic Packaging's Paperboard mills are responsible for a significant portion of water use (more than 97%) 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. Therefore, we have only included our mills in the risk assessment scope. There have been and will continue to be weather events or geographical changes, which may impact the ability of Graphic Packaging to conduct operations. Based on the latest assessment using WRI Aqueduct tool, three mills have been identified to be exposed to the future water-stress risks, and two of these mills are anticipated to be closed, per the company public disclosures. Therefore, we have identified that only one mill – Kalamazoo – is exposed to significant water-related risks in the future. We will continue to monitor water stress at our mills and prioritize activity to any water-stressed facilities.

W4.1c

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

Country/Area & River basin

United States of America	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

1-10

Comment

Based on the latest assessment using WRI Aqueduct tool, two mills have been identified to be exposed to the future water-stress risks, and both of these mills are anticipated to be closed, per the company public disclosures. We have identified that only one Mill – Kalamazoo – is exposed to significant water-related risks in the future. We will continue to monitor water stress at our mills and prioritize activity to any water-stressed facilities.

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/Area & River basin

United States of America	St. Lawrence
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Type of risk & Primary risk driver

Physical	Increased water stress
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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, and based on Aqueduct assessment only 1 Mill is exposed to high water stress in the future . The Mill is focused on pretreatment of incoming supply and water conservation measures that have resulted in successful operation throughout varying conditions.

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

In September 2019, we announced our intent to invest \$600 million into our Coated Recycled Board (CRB) platform with the purchase of a new recycled paperboard machine in Kalamazoo, Michigan. In addition to producing the highest quality CRB at an unmatched cost, this purchase is a strategic investment in sustainable packaging. We estimate that the new paperboard machine will allow us to reduce our global greenhouse gases and purchased electricity by 4% annually. We also expect an approximately 1% reduction in water use. With respect specifically to our CRB paperboard mill manufacturing footprint, we anticipate that the addition of this recycled paperboard machine will save 300 million gallons of water annually. The Company will keep working on improvement of water efficiency and water recycling in the future

Cost of response

600000000

Explanation of cost of response

In 2020, we began to realize our investment of a new world-class Coated Recycled Board (CRB) machine in our Kalamazoo, MI site. The new machine is part of our transformational, \$600 million CRB platform optimization investment and will have a positive environmental impact by reducing water usage by 300 million gallons annually, as well as reducing greenhouse gas emissions, purchased energy, and associated transitional risks

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?

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

W4.3a

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

Type of opportunity

Efficiency

Primary water-related opportunity

Improved water efficiency in operations

Company-specific description & strategy to realize opportunity

The Graphic Packaging mill system represents 85% of our greenhouse gas generation and 99% of our water impact. Paperboard mills are energy-intensive, and we continually assess our mill footprint to test cost and environmental effects. Through this assessment process, we concluded that a rebalancing of our recycled paperboard mill manufacturing was appropriate. In 2019, we began our investment in a transformational \$600 million CRB platform optimization project which has included the purchase of a new recycled paperboard machine in Kalamazoo, Michigan. In addition to producing the highest quality CRB at an unmatched cost, this new CRB paperboard machine is a strategic investment in sustainable packaging. We estimate that the new paperboard machine and platform optimization will allow us to reduce our global greenhouse gases and purchased electricity by 4% annually. We also expect an approximate annual decrease in water use of 300 million gallons. With respect specifically to our CRB paperboard mill manufacturing footprint, we anticipate that the addition of this recycled paperboard machine will decrease greenhouse gases by 16%, fossil fuel-based energy by 18% and water effluent by 33%.

Estimated timeframe for realization

1 to 3 years

Magnitude of potential financial impact

Low-medium

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

100000000

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact

The Company expects the investment will be capacity neutral by eliminating higher cost production at other facilities and will deliver an incremental \$100 million in annualized EBITDA upon full ramp up in 2022 (\$50 million in 2022 and \$50 million in 2023). The increase in EBITDA will be driven by cost savings from significantly increased scale production, reduced raw material consumption, and lower fixed costs. \$100 million * 1 year (annual) = \$100 million annual impact.

W5. Facility-level water accounting

W5.1

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

Facility reference number

Facility 1

Facility name (optional)

Augusta Mill

Country/Area & River basin

United States of America	Other, please specify (Gulf of Mexico, North Atlantic Coast)
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Latitude

33.322971

Longitude

-81.956734

Located in area with water stress

No

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)

57246.24

Comparison of total withdrawals with previous reporting year

Much lower

Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

56142.19919

Withdrawals from brackish surface water/seawater

0

Withdrawals from groundwater - renewable

0

Withdrawals from groundwater - non-renewable

0

Withdrawals from produced/entrained water

857.4640456

Withdrawals from third party sources

246.5779382

Total water discharges at this facility (megaliters/year)

50964.17

Comparison of total discharges with previous reporting year

Much lower

Discharges to fresh surface water

0

Discharges to brackish surface water/seawater

0

Discharges to groundwater

0

Discharges to third party destinations

50964.17227

Total water consumption at this facility (megaliters/year)

6282.06

Comparison of total 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. We define "Much higher/much lower" as a change in excess of +/- 10%.

Facility reference number

Facility 2

Facility name (optional)

Battle Creek

Country/Area & River basin

United States of America	St. Lawrence
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Latitude

42.314983

Longitude

-85.186171

Located in area with water stress

Yes

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)

2054.59

Comparison of total withdrawals with previous reporting year

Much higher

Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

683.6760293

Withdrawals from brackish surface water/seawater

0

Withdrawals from groundwater - renewable

1046.274946

Withdrawals from groundwater - non-renewable

0

Withdrawals from produced/entrained water

0

Withdrawals from third party sources

324.6482708

Total water discharges at this facility (megaliters/year)

1933.86

Comparison of total discharges with previous reporting year

Much higher

Discharges to fresh surface water

1297.658085

Discharges to brackish surface water/seawater

0

Discharges to groundwater

0

Discharges to third party destinations

636.2103725

Total water consumption at this facility (megaliters/year)

120.73

Comparison of total consumption with previous reporting year

Lower

Please explain

Annual withdrawal and discharge represent metered data. This is the second 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. We define "Much higher/much lower" as a change in excess of +/- 10%.

Facility reference number

Facility 3

Facility name (optional)

East Angus

Country/Area & River basin

Canada	St. Lawrence
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Latitude

45.481688

Longitude

-71.664126

Located in area with water stress

No

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)

576.76

Comparison of total withdrawals with previous reporting year

Much higher

Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

542.3264898

Withdrawals from brackish surface water/seawater

0

Withdrawals from groundwater - renewable

0

Withdrawals from groundwater - non-renewable

0

Withdrawals from produced/entrained water

0

Withdrawals from third party sources

34.4400008

Total water discharges at this facility (megaliters/year)

305.2

Comparison of total discharges with previous reporting year

Lower

Discharges to fresh surface water

0

Discharges to brackish surface water/seawater

0

Discharges to groundwater

0

Discharges to third party destinations

305.2079998

Total water consumption at this facility (megaliters/year)

271.55

Comparison of total 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. We define "Much higher/much lower" as a change in excess of +/- 10%.

Facility reference number

Facility 4

Facility name (optional)

Kalamazoo

Country/Area & River basin

United States of America	St. Lawrence
--------------------------	--------------

Latitude

42.305634

Longitude

-85.578998

Located in area with water stress

Yes

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)

2273.62

Comparison of total withdrawals with previous reporting year

Much higher

Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

382.8951586

Withdrawals from brackish surface water/seawater

0

Withdrawals from groundwater - renewable

331.4037163

Withdrawals from groundwater - non-renewable

0

Withdrawals from produced/entrained water

0

Withdrawals from third party sources

1559.328461

Total water discharges at this facility (megaliters/year)

1229.53

Comparison of total discharges with previous reporting year

Much lower

Discharges to fresh surface water

0

Discharges to brackish surface water/seawater

0

Discharges to groundwater

0

Discharges to third party destinations

1229.532022

Total water consumption at this facility (megaliters/year)

1044.09

Comparison of total 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. We define "Much higher/much lower" as a change in excess of +/- 10%.

Facility reference number

Facility 5

Facility name (optional)

Macon, GA (Mill)

Country/Area & River basin

United States of America	Other, please specify (Gulf of Mexico, North Atlantic Coast)
--------------------------	--

Latitude

32.773784

Longitude

-83.631841

Located in area with water stress

No

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)

17467.65

Comparison of total withdrawals with previous reporting year

Lower

Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

15527.15346

Withdrawals from brackish surface water/seawater

0

Withdrawals from groundwater - renewable

474.8916085

Withdrawals from groundwater - non-renewable

0

Withdrawals from produced/entrained water

925.0630624

Withdrawals from third party sources

540.5452194

Total water discharges at this facility (megaliters/year)

15422.56

Comparison of total discharges with previous reporting year

Lower

Discharges to fresh surface water

4392.667538

Discharges to brackish surface water/seawater

0

Discharges to groundwater

0

Discharges to third party destinations

11029.89499

Total water consumption at this facility (megaliters/year)

2045.09

Comparison of total 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. We define "Much higher/much lower" as a change in excess of +/- 10%.

Facility reference number

Facility 6

Facility name (optional)

Middletown

Country/Area & River basin

United States of America	Mississippi River
--------------------------	-------------------

Latitude

39.519179

Longitude

-84.390795

Located in area with water stress

No

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)

1669.94

Comparison of total withdrawals with previous reporting year

Lower

Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

0

Withdrawals from brackish surface water/seawater

0

Withdrawals from groundwater - renewable

1624.364677

Withdrawals from groundwater - non-renewable

0

Withdrawals from produced/entrained water

0

Withdrawals from third party sources

45.58446244

Total water discharges at this facility (megaliters/year)

1545.39

Comparison of total discharges with previous reporting year

About the same

Discharges to fresh surface water

0

Discharges to brackish surface water/seawater

0

Discharges to groundwater

0

Discharges to third party destinations

1545.395729

Total water consumption at this facility (megaliters/year)

124.55

Comparison of total consumption with previous reporting year

Much 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. We define "Much higher/much lower" as a change in excess of +/- 10%.

Facility reference number

Facility 7

Facility name (optional)

Texarkana Mill

Country/Area & River basin

United States of America	Mississippi River
--------------------------	-------------------

Latitude

33.250537

Longitude

-94.076775

Located in area with water stress

No

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)

39767.36

Comparison of total withdrawals with previous reporting year

Lower

Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

39004.26974

Withdrawals from brackish surface water/seawater

0

Withdrawals from groundwater - renewable

0

Withdrawals from groundwater - non-renewable

0

Withdrawals from produced/entrained water

763.0976327

Withdrawals from third party sources

0

Total water discharges at this facility (megaliters/year)

39456.68

Comparison of total discharges with previous reporting year

Lower

Discharges to fresh surface water

0

Discharges to brackish surface water/seawater

0

Discharges to groundwater

0

Discharges to third party destinations

39456.6885

Total water consumption at this facility (megaliters/year)

310.67

Comparison of total 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. Consumption data is estimated by the difference between annual withdrawal and discharge. The Company anticipates that future changes will support our 2025 Sustainability Vision. We define "Much higher/much lower" as a change in excess of +/- 10%.

Facility reference number

Facility 8

Facility name (optional)

West Monroe (Mills) - 31

Country/Area & River basin

United States of America	Mississippi River
--------------------------	-------------------

Latitude

32.48675

Longitude

-92.15005

Located in area with water stress

No

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)

31294.71

Comparison of total withdrawals with previous reporting year

Lower

Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

12515.61067

Withdrawals from brackish surface water/seawater

0

Withdrawals from groundwater - renewable

0

Withdrawals from groundwater - non-renewable

11643.88

Withdrawals from produced/entrained water

1247.632873

Withdrawals from third party sources

5887.585399

Total water discharges at this facility (megaliters/year)

24055.15

Comparison of total discharges with previous reporting year

Much lower

Discharges to fresh surface water

0

Discharges to brackish surface water/seawater

0

Discharges to groundwater

0

Discharges to third party destinations

24055.15624

Total water consumption at this facility (megaliters/year)

7239.55

Comparison of total 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. We define "Much higher/much lower" as a change in excess of +/- 10%.

W5.1a

(W5.1a) 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?
<Not Applicable>

Water withdrawals – volume by source

% verified
Not verified

What standard and methodology was used?
<Not Applicable>

Water withdrawals – quality

% verified
Not verified

What standard and methodology was used?
<Not Applicable>

Water discharges – total volumes

% verified
Not verified

What standard and methodology was used?
<Not Applicable>

Water discharges – volume by destination

% verified
Not verified

What standard and methodology was used?
<Not Applicable>

Water discharges – volume by treatment method

% verified
Not verified

What standard and methodology was used?
<Not Applicable>

Water discharge quality – quality by standard effluent parameters

% verified
Not verified

What standard and methodology was used?
<Not Applicable>

Water discharge quality – temperature

% verified
Not verified

What standard and methodology was used?
<Not Applicable>

Water consumption – total volume

% verified
Not verified

What standard and methodology was used?
<Not Applicable>

Water recycled/reused

% verified
Not verified

What standard and methodology was used?
<Not Applicable>

W6. Governance

W6.1

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

Yes, we have a documented water policy, but it is not publicly available

W6.1a

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

	Scope	Content	Please explain
Row 1	Company-wide	Description of business dependency on water Description of business impact on water Description of water-related performance standards for direct operations Reference to international standards and widely-recognized water initiatives Company water targets and goals Commitments beyond regulatory compliance Commitment to water-related innovation Commitment to stakeholder awareness and education Commitment to water stewardship and/or collective action Acknowledgement of the human right to water and sanitation	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. Our impact on water may be significant, especially from our mills. 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. Due to the high level of water use in our mills Graphic Packaging has prioritized our water strategy to these facilities which represents 97% of our total company wide water withdrawal, therefore we consider our water policy applied on corporate level. Our water policy reflects our commitments to water stewardship. The company has set water effluent and water monitoring goals. As previously stated, monthly monitoring is being assessed. One of the goals is the reduction of mill water effluent by 15% (1,000 gal/ saleable ton). These goals are disclosed on our corporate website in our Sustainability Vision 2025 Goals. We also provide further information on these commitments in our Human Rights Policy (available online) and our ESG report.

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
Chief Executive Officer (CEO)	The CEO has ultimate responsibility for the implementation of sustainability practices across the Company. The CEO is a proponent of the strategy to achieve the company's water targets and meets with the Executive Leadership Team on more than a quarterly basis to monitor progress towards those goals. Example of water-related decision made by the CEO: The CEO approved the 2025 Vision water goals as well as the Kalamazoo capital investment and its related water saving outcomes.
Other C-Suite Officer	The individual on the leadership team with responsibility to reporting to the Board of Directors for water-related concerns 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 concerns have been assigned to this position and the Business Unit leaders, including the EVP Mills, President of the America's division and the SVP of Europe because they have indirect and direct oversight of the VP of HS&E as well as the VP of Government Affairs and Sustainability, who maintain direct management of these areas.
Board-level committee	Nomination and Governance Committee – Chairman of the Board is the Chair of the Committee. They have strategic oversight of ESG program, including water-related matters. They report to every board meeting on ESG matters and have a formal review to release the yearly ESG report.

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	Overseeing major capital expenditures Reviewing and guiding business plans Reviewing and guiding risk management policies Reviewing and guiding strategy	HS&E committee meetings are held approximately every two months. Safety, water-related risks, CapEx projects, and other related topics are discussed as appropriate. Key programs and KPIs are reviewed and a summary is 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. Enterprise risk management (ERM) includes water-related risks on an annual basis, any concerns occurring with water-related concerns are brought up to the executive team immediately.

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)

Chief Executive Officer (CEO)

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 CEO receives monthly reports of water usage and trends every 60 days. The CEO reviews this information and provides guidance before communicating it to the board. The EVP of Mills provides these reports to the CEO, as he has overall responsibility of the water-related operational aspects including water availability and discharges. The HS&E Steering Committee also reports frequently to the CEO on water-related matters. The Committee includes representatives from Sustainability, HS&E, Ops, Legal, Human Resources and Risk Mgmt. It reviews reports from the VP of Gov Affairs and Sustainability and the VP of HS&E every two months. It reports on progress on water-related risks & opps and performance to targets & goals. The progress is reported to the CEO and board, in particular questions of water availability, water-related regulations, and other water aspects. The VP of Gov Affairs and Sustainability provides strategic direction and monitors the impacts of water-related regulations.

W6.4

(W6.4) Do you provide incentives to C-suite employees or board members for the management of water-related issues?

	Provide incentives for management of water-related issues	Comment
Row 1	Yes	Targets are established for key environmental metrics, including water efficiency (water consumption per short ton of product) and water quality. These environmental metrics are monitored and tied to financial and productivity metrics which also have monetary incentives associated with them. The metrics are monitored monthly in our Mill division, as that business unit represents a significant percentage of the Graphic Packaging environmental profile. Environmental KPIs are embedded into performance management framework and along with other metrics serve as a basis for remuneration and the salary review process.

W6.4a

(W6.4a) What incentives are provided to C-suite employees or board members for the management of water-related issues (do not include the names of individuals)?

	Role(s) entitled to incentive	Performance indicator	Please explain
Monetary reward	Corporate executive team	Reduction of water withdrawals Improvements in efficiency - direct operations	Targets are established for key environmental metrics. These environmental metrics are monitored and tied to financial and productivity metrics which also have monetary incentives associated with them. The metrics are monitored monthly in our Mill division, as that business unit represents a significant percentage of the Graphic Packaging environmental profile. Environmental KPIs, including water efficiency (consumption of water per product, as it is correlated with energy costs in operation process), are embedded into the performance management framework and, along with other metrics, serve as a basis for remuneration and salary review process.
Non-monetary reward	Corporate executive team	Implementation of employee awareness campaign or training program	There is a plan to reduce water across all our mills, and a report is prepared on monthly basis, which measures water consumption against the prior period and against targets. The Mill leadership team meets on a regular basis and discusses KPIs and best practices in operation, including water-related performance. The Center for Excellence has a water expert who works with Mills to improve their water management and works with the facilities to improve water-related KPIs and share best practices, encouraging innovation across all facilities and exchange of successful examples.

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. When there is legislation that Graphic Packaging considers significant to our operations or community, we meet with legislators and review concerns surrounding 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.

Graphic Packaging's VP of Government Affairs and Sustainability provides strategic direction and ensures that the direct and indirect activities regarding water related policies are consistent with the strategy. The strategy is reviewed formally each year on an ad-hoc basis. Graphic Packaging's President and CEO and other members of the Executive Team participate in policy discussions at the Federal and State levels.

If inconsistency is discovered, for example in the case of an emerging regulation that will impact our strategy, the company business team along with the VP of Government affairs reviews the impact, identifies adequate measures to address it, assesses investment required, and proposes measures accordingly.

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. We communicate to our customers and communities how our resource use and operational processes are making a positive impact on the environment. Graphic Packaging is continually monitoring technologies associated with reducing water use and will implement those that have relevance to mills and are economically justifiable in the context of meeting our water use and monitoring commitments that make up our Sustainability Vision 2025 goals. The time horizon is targeted for 2025 and targets are reviewed against a 2016 baseline. For example, as part of our business objectives, we engage with regulators. In 2015 the EPA initiated risk policies to be imposed in the calculation of certain water quality standards which were, in many cases, unattainable. The impacts of the risk policies if put into law were assessed by Graphic Packaging and used to determine priority for our Gov Affairs advocacy and in our long-range planning. In 2019, the EPA began reconsidering those policies and Graphic Packaging advocated to the agency to expeditiously complete that reconsideration. We continue to advocate and continue our dialogue with EPA around future drinking water standards.
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. Over the course of the next few years, we plan to implement various CAPEX investments to keep working on reduction of water consumption and increase water recycling to align with our 2025 target. Doing so 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. As an example, in 2020, we began to realize our investment of a new world-class Coated Recycled Board (CRB) machine in our Kalamazoo, MI site. The new machine is part of our transformational, \$600 million CRB platform optimization investment and will have a positive environmental impact by reducing water usage by 300 million gallons annually, as well as reducing greenhouse gas emissions, purchased energy, and associated transitional risks.
Financial planning	Yes, water-related issues are integrated	5-10	Water related concerns 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. Therefore, in 2020, we began to realize our investment of a new world-class Coated Recycled Board (CRB) machine in our Kalamazoo, MI site. The new machine is part of our transformational, \$600 million CRB platform optimization investment and will have a positive environmental impact by reducing water usage by 300 million gallons annually, as well as reducing greenhouse gas emissions, purchased energy, and associated transitional risks. The Company expects the investment will be capacity neutral by eliminating higher cost production at other facilities and will deliver an incremental \$100 million in annualized EBITDA once fully ramped in 2022.

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's CAPEX will increase in the years 2020, 2021 and 2022 due to the installation of the new paperboard machine at the Kalamazoo mill. We anticipate that, as a result of these investments, water will be reduced by 300 million gallons per year. Once the project is complete the company's CAPEX will return to typical levels of approximately 5% of revenue. Graphic Packaging does not anticipate that CapEx will materially change from the 2020 levels of approximately \$646 million. It will stay adequate to support investment strategy.

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. New water brought in and energy costs are part of the calculations for water efficiency and re-use projects (energy costs), therefore we have heat exchangers and water circulation system in place to reduce energy costs. Mill managers take into account water re-use as important factor to reduce costs

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 the 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 preserving 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

15% 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

% of target achieved

49.76

Please explain

Graphic Packaging notes that water discharge decreased approximately 5.01% since 2016 on an absolute basis and by 7.46% since 2016 per ton of paperboard produced on an intensity basis. Since absolute discharge decreased compared to 2016 while saleable tons also increased, we have observed a decrease in the overall metric. The decrease in water discharge per unit of production is currently aligned with the Company's water intensity effluent reduction goal.

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 97% of water used by the company. 55% of our carton manufacturing plants and all of our office locations' water use is included in the CDP survey. That represents another 2.7% of the company's water usage. Although the company does not have 100% of the sites reporting we are monitoring and reporting 99.7% of our water usage.

Quantitative metric

% sites monitoring water discharge total volumes

Baseline year

2016

Start year

2016

Target year

2025

% of target achieved

61.8

Please explain

Graphic Packaging notes that the quantitative disclosure of our reporting water facilities has increased to 61.8% or 55 of our 89 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

Graphic Packaging goal is to ensure that the Waters of the US legislation is achievable in its intent to improve water quality. This goal is important because the proposed legislation sets standards for water effluent, an issue of relevance and importance to the Company. Graphic Packaging is implementing the goal currently by educating the new Administration on the achievability of potential legislative targets and criteria.

Baseline year

2016

Start year

2016

End year

2025

Progress

In 2015 the U.S. Environmental Protection Agency (EPA) initiated risk policies to be imposed in the calculation of certain water quality standards which were, in many cases, unattainable and could cost municipal and industrial dischargers billions of dollars. The impacts of the risk policies if put into law were assessed by Graphic Packaging and used to determine priority for our Government Affairs advocacy and in our long-range planning. In 2019, the EPA began reconsidering those policies and Graphic Packaging advocated that the agency expeditiously complete that reconsideration. On October 22, 2019, the Environmental Protection Agency and Department of the Army (the agencies) published a final rule (Step One) to repeal the 2015 Rule defining "waters of the United States" and re-codify the regulatory text that existed prior to the 2015 Rule. The final Step One rule became effective on December 23, 2019. The Step One rule will be replaced by the Navigable Waters Protection Rule upon its effective date of June 22, 2020. Through the efforts of Graphic Packaging and the forest products industry, more effective regulation is anticipated. Threshold of success: The Company will consider our efforts a success if our comments lead to adjustments to the regulation draft that will make the regulations both relevant and a positive step for our industry.

W9. Verification

W9.1

(W9.1) Do you verify any other water information reported in your CDP disclosure (not already covered by W5.1a)?

No, we do not currently verify any other water information reported in our CDP disclosure

W10. 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.

W10.1

(W10.1) Provide details for the person that has signed off (approved) your CDP water response.

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

W10.2

(W10.2) 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	6559900000

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) Could any of your facilities reported in W5.1 have an impact on a requesting CDP supply chain member?

This is confidential

SW1.2

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

	Are you able to provide geolocation data for your facilities?	Comment
Row 1	No, this is confidential data	

SW2.1

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

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.

Submit your response

In which language are you submitting your response?

English

Please confirm how your response should be handled by CDP

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

Please confirm below

I have read and accept the applicable Terms

