

## Welcome to your CDP Water Security Questionnaire 2019

### W0. Introduction

#### W0.1

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

Bank of America is one of the world's leading financial institutions, serving individual consumers, small and middle-market businesses and large corporations with a full range of banking, investing, asset management and other financial and risk management products and services. The company provides unmatched convenience in the United States, serving approximately 66 million consumer and small business clients with approximately 4,300 retail financial centers, including approximately 2,200 lending centers, 2,400 financial centers with a Consumer Investment Financial Solutions Advisor and 1,700 business centers; approximately 16,600 ATMs; and award-winning digital banking with more than 37 million active users, including approximately 28 million mobile users. Bank of America is a global leader in wealth management, corporate and investment banking and trading across a broad range of asset classes, serving corporations, governments, institutions and individuals around the world. Bank of America offers industry-leading support to approximately 3 million small business owners through a suite of innovative, easy-to-use online products and services. The company serves clients through operations across the United States, its territories and approximately 35 countries. Bank of America Corporation stock (NYSE: BAC) is listed on the New York Stock Exchange. (As of June 30, 2019.)

At Bank of America, we are guided by a common purpose to make financial lives better through the power of every connection. We deliver on this through a strategy of responsible growth and a focus on environmental, social and governance leadership. Through these efforts, we are driving growth—investing in the success of our employees, and helping to create jobs, develop communities, foster economic mobility and address society's biggest challenges—while managing risk and providing a return to our clients and our business.

As evidenced by the most recent United Nations Intergovernmental Panel on Climate Change's Fifth Assessment Report and the United States government's Fourth National Climate Assessment, urgent action is needed to address climate change and prevent its increasingly devastating impacts from accelerating further. At Bank of America, we recognize that climate change poses a significant risk to our business, our clients and the communities where we live and work.

As one of the world's largest financial institutions, Bank of America has a responsibility and an important role to play in helping to mitigate and build resilience to climate change by using our expertise and resources, as well as our scale, to accelerate the transition from a high-carbon to a low-carbon society. In alignment with more than 190 countries, we support the Paris Agreement on climate change, its commitment to take action to keep global temperature rise this century to below 2°C above pre-industrial levels, and its efforts to limit the temperature increase to no more than 1.5°C. Doing so will require changes in all sectors of our economy, particularly the transformation of critical areas like energy, power, transportation and real estate.

Bank of America will mobilize an additional \$300 billion in capital by 2030 through its Environmental Business Initiative. This third commitment increases the company's investment in low-carbon business activities as part of its focus on deploying capital for responsible, sustainable growth. Through lending, investing, capital raising, advisory services and developing financing solutions, this new commitment will drive innovation and help to accelerate the transition to a low-carbon, sustainable economy. The \$300 billion goal brings Bank of America's total commitment to more than \$445 billion since 2007, when the company issued its first Environmental Business Initiative. Bank of America has deployed more than \$126 billion over the past 12 years in support of environmental business efforts across the globe. In 2013, Bank of America issued its second Environmental Business Initiative commitment with a goal to deploy \$125 billion by 2025. The company will achieve this commitment by the end of 2019, six years ahead of schedule.

## W0.2

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

	Start date	End date
Reporting year	January 1, 2018	December 31, 2018

## W0.3

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

Australia  
 Brazil  
 Canada  
 China

France  
Germany  
India  
Ireland  
Italy  
Japan  
Mexico  
Russian Federation  
Saudi Arabia  
Singapore  
South Africa  
United Kingdom of Great Britain and Northern Ireland  
United States of America

## W0.4

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

USD

## W0.5

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

Companies, entities or groups over which operational control is exercised

## W0.6

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

No

## W1. Current state

### W1.1

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

	Direct use importance rating	Indirect use importance rating	Please explain
Sufficient amounts of good quality freshwater available for use	Important	Important	The primary uses of freshwater in our direct operations and our indirect operations (i.e. value chain) are employee consumption, sanitation, cooling and landscaping. We selected the importance rating for direct use because while water is not a direct input into our products and services, the availability of good quality freshwater is important to the success of our organization because it is important to provide drinking water and sanitation for our employees. Additionally, it is important to keep our facilities adequately cooled, which often requires the use of water resources. We selected the importance rating for indirect use because we purchase some products that require water as a direct input during production, and because it is important to provide drinking water and sanitation for employees. We do not anticipate that our dependence on freshwater will change in the future for our direct or indirect operations, because we have no plans to make significant changes to the way that we do business.
Sufficient amounts of recycled, brackish and/or produced water available for use	Important	Important	<p>Primary uses of recycled water in operations: cooling, landscaping, sanitary. At one of our HQ buildings, we treat and reuse contaminated groundwater. We also harvest rainwater for use in cooling systems. We selected “important” because it is important to keep our facilities adequately cooled, which often requires the use of water resources. By using recycled water in cooling and other applications that do not require potable water, we are reducing our use of freshwater resources.</p> <p>Primary uses of recycled water in value chain: cooling, landscaping, sanitary. A few of our vendors use recycled water in production. We selected “important” based on our</p>

			assessment of the publicly available 2015 CDP water responses: the most frequently selected importance rating for recycled water was “Important”. We do not anticipate that our dependence on recycled water will change for our direct or indirect operations, because we have no plans to make significant changes to the way that we do business.
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## 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	100%	We quantify water withdrawals for 100% of facilities within our operational control. For facilities where we receive water bills, water withdrawals are based on billing data which are received monthly and consolidated and reviewed bi-annually. Water withdrawal data is not available for sites at which we do not pay directly for utilities. We have a robust estimation methodology to account for water withdrawals from these sites.
Water withdrawals – volumes from water stressed areas	100%	We quantify water withdrawals for 100% of facilities within our operational control. For facilities where we receive water bills, water withdrawals are based on billing data which are received monthly and consolidated and reviewed bi-annually. Water withdrawal data is not available for sites at which we do not pay directly for utilities. We have a robust estimation methodology to account for water withdrawals from these sites. The WRI Aqueduct tool was used to determine whether a given facility was in a water stressed area. Any location receiving a score of “high” or “extremely high” for Baseline Water Stress was indicated as being in a water stressed area. In our water inventory, water withdrawals were summed for all locations in water stressed areas. Our facility locations were used as a proxy for the location of our withdrawals, as specific withdrawal location data are not available. We withdraw the vast majority of our water from municipal sources.
Water withdrawals – volumes by source	100%	We quantify water withdrawals for 100% of facilities within our operational control. For facilities where we receive water bills, water withdrawals are based on billing data which are received

		monthly and consolidated and reviewed bi-annually. Water withdrawal data is not available for sites at which we do not pay directly for utilities. We have a robust estimation methodology to account for water withdrawals from these sites. We withdraw more than 99% of our water from municipal sources. Less than 1% of our water is withdrawn from rainwater.
Water withdrawals quality	Not relevant	The vast majority of the water we withdraw is from municipal systems (99.4%). Thus, each municipality ensures that the water being delivered is of appropriate quality for human consumption. We do not anticipate that the relevance of water withdrawals quality will change for our operations, because we have no plans to make significant changes to the way that we do business.
Water discharges – total volumes	76-99	We quantify water discharges for 94% of facilities within our operational control. For facilities where we receive irrigation bills, water discharges are estimated based on billing data for water withdrawals and irrigation which are received monthly and consolidated and reviewed bi-annually. We prioritize monitoring at sites with irrigation because that is our primary consumptive water use. This level of monitoring is appropriate for our business because our quantity of discharges is relatively low and because the vast majority of our discharges are to municipal sewer systems and their associated treatment facilities. Our primary consumptive uses of water are irrigation, which is directly metered in most cases, and building cooling systems. Any consumption of water by employees is negligible, and thus no estimate of employee consumption is subtracted from withdrawals. We will continue to work on expanding our understanding of our consumptive uses of water and thus our discharges.
Water discharges – volumes by destination	76-99	We quantify water discharges for 94% of facilities within our operational control. For facilities where we receive irrigation bills, water discharges are estimated based on billing data for water withdrawals and irrigation which are received monthly and consolidated and reviewed bi-annually. We prioritize monitoring at sites with irrigation because that is our primary consumptive water use. This level of monitoring is appropriate for our business because our quantity of discharges is relatively low and because the vast majority of our discharges are to municipal sewer systems and their associated treatment facilities. Our primary consumptive uses of water are irrigation, which is directly metered in most cases, and building cooling

		systems. Any consumption of water by employees is negligible, and thus no estimate of employee consumption is subtracted from withdrawals. We will continue to work on expanding our understanding of our consumptive uses of water and thus our discharges.
Water discharges – volumes by treatment method	Less than 1%	The vast majority of the water we discharge is discharged to municipal sewer systems and their associated treatment facilities (>99%). Thus, it is not feasible to quantify water discharges by treatment method at this time. We do not have any plans to track discharges by treatment method in the future beyond ensuring that we are compliant with all applicable environmental regulations.
Water discharge quality – by standard effluent parameters	Less than 1%	The vast majority of the water we discharge is discharged to municipal sewer systems and their associated treatment facilities (>99%). Thus, it is not feasible to quantify water discharges by standard effluent parameters at this time. We do not have any plans to track discharges by standard effluent parameters in the future beyond ensuring that we are compliant with all applicable environmental regulations.
Water discharge quality – temperature	Less than 1%	The vast majority of the water we discharge is discharged to municipal sewer systems and their associated treatment facilities (>99%). Thus, it is not feasible to quantify water discharges by standard temperature at this time. We do not have any plans to track discharges by temperature in the future beyond ensuring that we are compliant with all applicable environmental regulations.
Water consumption – total volume	76-99	We quantify water consumption for 94% of facilities within our operational control. For facilities where we receive irrigation bills, water consumption is based on billing data which are received monthly and consolidated and reviewed bi-annually. We prioritize monitoring at sites that have irrigation needs because that is our primary consumptive water use. We feel that this level of monitoring is appropriate for our business because our total consumption is relatively low. The primary consumptive uses of water in our operations are irrigation, which is directly metered in most cases, and use in building cooling systems. Any consumption of water by employees is negligible, and not estimated. We will continue to work on expanding our understanding of our consumptive uses of water and thus our discharges.

Water recycled/reused	100%	We have two significant rainwater and groundwater harvesting systems installed in the US. The rainwater harvesting system is used to irrigate several facilities in Florida, and the groundwater system is a dewatering system that was installed in North Carolina. Both systems are metered and tracked on an annual basis.
The provision of fully-functioning, safely managed WASH services to all workers	100%	We provide fully-functioning WASH services to all employees at 100% of our facilities.

## 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	7,716	About the same	In 2017, total volume of withdrawals was 8090 megaliters. In 2018, we reduced our water use by 5.3% through a variety of means, including water efficiency and conservation projects, and HVAC upgrades that will reduce our water use by approximately 10,000,000 gallons per year. We consider any change in water withdrawals, consumption, or discharges less than 10% to be “about the same” as the prior year. We anticipate future volumes to continue to decrease incrementally, as they have in previous years. Total withdrawals equals the sum of total discharges and total consumption ( $W = D + C$ ), because discharges are estimated to be total withdrawals minus total consumption.
Total discharges	6,038	About the same	In 2017, total volume of discharges was 6375 megaliters. In 2018, we reduced our water discharges by 5.3%. Additionally, the proportion of water discharged to water withdrawn remained the same, at 78%. We consider any change in water withdrawals, consumption, or discharges less than 10% to be “about the same” as the prior year. We anticipate future volumes to continue to decrease in line with withdrawals and consumption. Total discharges equals total



			withdrawals minus total consumption ( $D = W - C$ ), because discharges are estimated to be total withdrawals minus total consumption.
Total consumption	1,678	About the same	In 2017, total volume of consumption was 1764 megaliters. In 2018, we reduced our water consumption by 4.9%, through a reduction in irrigation water in the US. We consider any change in water withdrawals, consumption, or discharges less than 10% to be “about the same” as the prior year. We anticipate future volumes to continue to decrease in line with withdrawals. Total consumption equals total withdrawals minus total discharges ( $C = W - D$ ), because discharges are estimated to be total withdrawals minus total consumption.

## W1.2d

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

	% withdrawn from stressed areas	Comparison with previous reporting year	Identification tool	Please explain
Row 1	51	This is our first year of measurement	WRI Aqueduct	<p>The percentage of water withdrawn from stressed areas compared to the previous reporting year cannot be assessed, because this is our first year of measurement.</p> <p>The WRI Aqueduct tool was used to assess all 6,000+ global locations that have water withdrawals. Due to the number of locations, which exceeds Aqueduct’s current 250-location maximum, we used the GIS databases provided by Aqueduct to conduct the analysis. All locations were entered into a GIS tool and overlaid on the Aqueduct GIS data to determine water stress. The Baseline Water Stress metric was used to determine whether a given location was in a water stressed area. Any location receiving a score of “high” or “extremely high” for Baseline Water Stress was indicated as being in a water stressed area. This information was incorporated into our water inventory, and water withdrawals were summed for all locations in water stressed areas.</p> <p>Our facility locations were used as a proxy for the location of our withdrawals, as specific</p>

				withdrawal location data are not available. We withdraw the vast majority of our water from municipal sources.
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## 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	51	About the same	Water withdrawals from fresh water are relevant because we have two significant rainwater and groundwater harvesting systems installed in the US. The rainwater harvesting system is used to irrigate several facilities in Florida, and the groundwater system is a dewatering system that was installed in North Carolina in 2013. Volumes increased 4.9% from 2017 to 2018. We consider any change in water withdrawals, consumption, or discharges less than 10% to be “about the same” as the prior year. We anticipate future volumes to continue to fluctuate year-to-year based on weather patterns and irrigation needs.
Brackish surface water/Seawater	Not relevant			Brackish surface water and seawater are not relevant to Bank of America because we do not withdraw water from these sources. 99% of our water withdrawals are from municipal sources, with the remaining being from fresh surface water. We do not anticipate withdrawing water from this source in the future.
Groundwater – renewable	Not relevant			Renewable groundwater is not relevant to Bank of America because we do not withdraw water from this source. 99% of our water withdrawals are from municipal sources, with the remaining being from fresh surface water. We do not anticipate withdrawing water from this source in the future.

Groundwater – non-renewable	Not relevant			Non-renewable groundwater is not relevant to Bank of America because we do not withdraw water from this source. 99% of our water withdrawals are from municipal sources, with the remaining being from fresh surface water. We do not anticipate withdrawing water from this source in the future.
Produced/Entrained water	Not relevant			Produced/entrained water is not relevant to Bank of America because we do not withdraw water from this source. 99% of our water withdrawals are from municipal sources, with the remaining being from fresh surface water. We do not anticipate withdrawing water from this source in the future.
Third party sources	Relevant	7,665	About the same	Water withdrawals from third party sources is relevant because we withdraw 99% of our water from municipal sources. In 2017, total volume of withdrawals was 8090 megaliters. In 2018, we reduced our water use by 5.3% through a variety of means, including water efficiency and conservation projects, and HVAC upgrades. We consider any change in water withdrawals, consumption, or discharges less than 10% to be “about the same” as the prior year. We anticipate future volumes to continue to decrease incrementally, as they have in previous years.

## W1.2i

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

	Relevance	Volume (megaliters/year)	Comparison with previous reporting year	Please explain
Fresh surface water	Not relevant			Fresh surface water is not relevant to Bank of America because we do not discharge water to this destination. Over 99% of our water discharges are to

				municipal sewer systems. We do not anticipate discharging water to this destination in the future.
Brackish surface water/seawater	Not relevant			Brackish surface water and seawater are not relevant to Bank of America because we do not discharge water to this destination. Over 99% of our water discharges are to municipal sewer systems. We do not anticipate discharging water to this destination in the future.
Groundwater	Not relevant			Groundwater is not relevant to Bank of America because we do not discharge water to this destination. Over 99% of our water discharges are to municipal sewer systems. We do not anticipate discharging water to this destination in the future.
Third-party destinations	Relevant	6,038	About the same	Water discharges to third party destinations is relevant because we discharge over 99% of our water to municipal sewer systems. In 2017, total volume of discharges was 6375 megaliters. In 2018, we reduced our water discharges by 5.3%. Additionally, the proportion of water discharged to water withdrawn remained the same, at 78%. We consider any change in water withdrawals, consumption, or discharges less than 10% to be “about the same” as the prior year. We anticipate future volumes to continue to decrease in line with withdrawals and consumption.

## W1.2j

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

	% recycled and reused	Comparison with previous reporting year	Please explain
Row 1	Less than 1%	Higher	We have two significant rainwater and groundwater harvesting systems installed in the US. The rainwater harvesting system is used to irrigate several facilities in Florida, and the groundwater system is a dewatering system that was installed in North Carolina in 2013. While the total volume of water recycled did not change

			considerably from 2017 to 2018, the proportion of water recycled increased (by 11%), because the total volume of water withdrawn decreased. The actual impact of this reuse is a reduction of our dependence on freshwater by over 13 million US gallons per year. We anticipate future volumes to continue to fluctuate year-to-year based on weather patterns and irrigation needs.
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## W1.4

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

Yes, our suppliers

Yes, our customers or other value chain partners

## W1.4a

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

#### Row 1

#### % of suppliers by number

Less than 1%

#### % of total procurement spend

Less than 1%

#### Rationale for this coverage

In 2018, we engaged with two key paper suppliers on water-related issues by conducting an in-person visit of each provider's primary paper production facility. These suppliers were selected due to the significant water use typical of paper producers; as significant water consumers, water issues are of great importance to paper suppliers. These two suppliers were also selected because they supply over 75% of Bank of America's total paper usage. In 2019, we will resume the water-related questions included in the Annual Business Review; we have also planned a visit to an additional paper production facility.

### **Impact of the engagement and measures of success**

The site visits included a tour and explanation on their water systems and waste water treatment procedures, allowing us to view the systems in person. We use this information to inform future discussions around water-related issues, track potential risks, and inform our CDP Water Security response. Success is measured by evaluating the water systems in place at the paper production facilities; the 2018 visits confirmed that the water systems in place are in-line with Bank of America's expectations.

### **Comment**

## **W1.4b**

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

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### **Type of engagement**

Innovation & collaboration

### **Details of engagement**

Educate suppliers about water stewardship and collaboration

### **% of suppliers by number**

Less than 1%

### **% of total procurement spend**

Less than 1%

### **Rationale for the coverage of your engagement**

In 2017, we completed a Life Cycle Assessment (LCA) comparison of electronic and paper statements. We worked with our primary statement paper provider, who supplies more than 99% of the paper used in customer statements, to collect data and complete the LCA. We also engaged other third party stakeholders to complete this study. This study was conducted to meet the requests of the bank's stakeholders who are interested in the GHG emission and water impacts associated with delivering statements electronically and in paper format through the mail.

### **Impact of the engagement and measures of success**

Through this activity, we learned that, based on the assumptions in the study, available data, and under a scenario where 25% of customers print their online statements at home, the reduction in GHG emissions between paper and online statements is estimated to be 67 g CO<sub>2</sub>e and the reduction in blue water consumption (BWC) is 0.25 gallons of water per statement. If all of Bank of America statements mailed in a year (551 million statements) were delivered online instead of mailed as paper statements, this would result in a reduction of approximately 37,000 metric tons of GHG emissions and 136 million gallons of blue water consumed when using electronic instead of paper delivery. The success of the supplier engagement was measured by the successful completion of the study, which leveraged the data and expertise of our largest statement paper provider.

### **Comment**

## **W1.4c**

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

We engage with our clients on GHG emissions and climate change strategies in a variety of ways. On individual transactions, we engage with clients when our review indicates the need for mitigation to minimize certain environmental impacts associated with the deal in question. We prioritize these types of engagements based on an evaluation of the severity of environmental risks associated with each of these transactions.

Importantly, we are incorporating a discussion of ESG factors into our regular client engagement routines with clients in the energy and power sector to encourage their transition to low-carbon energy sources and discuss new innovative ways to finance their investment in this transition. We are also actively engaged with clients in other sectors, driving increased investment in low-carbon technologies/activities and the successful delivery of our \$125 billion environmental business goal. By way of example, we have reached out to numerous commercial, corporate and municipal clients to encourage participation in the growing green bond market, and we have incorporated ESG/Impact Investing into our regular engagement with individual and institutional investor clients to grow that platform.

The growth of our green bond, ESG investing and overall low carbon business initiatives are measures of success for our client engagement. As an indication of the impact of this engagement, increasing client demand helped us deliver \$21.5 billion towards our environmental business initiative in 2018. Another measure of success is whether we can come to agreement among the involved parties on appropriate mitigation activities.

## W2. Business impacts

### W2.1

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

No

### 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**

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**Coverage**

Full

**Risk assessment procedure**

Water risks are assessed as part of an enterprise risk management framework

**Frequency of assessment**

Annually

**How far into the future are risks considered?**

>6 years

**Type of tools and methods used**

Databases

Other

**Tools and methods used**

Regional government databases

Internal company methods

External consultants

Other, please specify

Public data from private and government sites

**Comment**

We conduct an annual assessment of physical risks to our facilities from factors including severe weather, wildfires and flooding . Assessments prioritize risk based on scores derived through the analysis of the severity and likelihood of occurrence for each risk category. These scores are informed by data from private and government sources, and internal company knowledge. The operational scope of the risk assessment includes our major locations.

**Supply chain**

**Coverage**

Partial

**Risk assessment procedure**

Water risks are assessed as part of an enterprise risk management framework

**Frequency of assessment**

Annually

**How far into the future are risks considered?**

>6 years

**Type of tools and methods used**

Databases

Other

**Tools and methods used**

Regional government databases

Internal company methods

External consultants

Other, please specify

Public data from private and government sites

**Comment**

We have completed an assessment to identify supplier categories at highest risk from flooding and we have developed detailed business continuity plans for suppliers in high risk categories . If flooding were to occur at a supplier facility, there is a documented plan to move the work to an alternate site. For example, a print vendor with operations in New Jersey is exposed to risks related to flooding and storm surge. The business continuity plan includes 4 backup facilities to which to move production in the event of flood or storm impacts.

**Other stages of the value chain**

**Coverage**

Full

**Risk assessment procedure**

Water risks are assessed as part of an enterprise risk management framework

**Frequency of assessment**

Annually

**How far into the future are risks considered?**

>6 years

**Type of tools and methods used**

Databases

Other

**Tools and methods used**

Regional government databases

Internal company methods

External consultants

Other, please specify

Public data from private and government sites

**Comment**

We conduct an annual assessment of physical risks to our facilities from factors including severe weather, wildfires and flooding . Assessments prioritize risk based on scores derived through the analysis of the severity and likelihood of occurrence for each risk category. The purpose of our assessments is to ensure that we are able to continue to provide service to clients during severe weather or flooding. In such an event, clients are encouraged to use online banking, mobile telephone banking, and contact centers. We have a large, distributed ATM network and reciprocal agreements for our clients to use ATMs operated by other banks. We have a fleet of mobile financial centers and mobile ATMs strategically located within the U.S. for immediate deployment to areas impacted by natural disasters.

**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, sometimes included	In 2014, in an effort to reduce water withdrawals and mitigate the risk of potential stakeholder conflicts in water-constrained communities, we piloted drought-tolerant landscaping at six California financial centers. This pilot was projected to reduce water usage by up to 50 percent at each center. In 2016, the California pilot saved more than 3.7 million gallons of water, and we expect these savings to continue going forward. Internal company knowledge of the potential for stakeholder conflicts around water resources in California and Texas was leveraged to assess risk and design the risk mitigation program. Additionally, our Real Estate Services team was made aware of California Executive Order B-29-15, which called for a 25 percent reduction in potable urban water usage by 2016, and this information was used to inform further investment in water reductions at over 700 of our California facilities. Bank of America exceeded this target by achieving a reduction in potable water use of 35% from 2014 to 2016 at our California facilities. Tools used: Regional government databases, Internal company methods, External consultants, Publicly-available data from private and government websites.
Water quality at a basin/catchment level	Not relevant, explanation provided	This issue has been considered and has been found not a substantive risk for our operations, primarily because our operations rely primarily on municipal water, and we do not discharge large volumes of water. Because we withdraw 99% of water from municipal sources, we are ensured high quality water for our operations due to local water treatment and quality standards. Additionally, the vast majority (99%) of the water we discharge is discharged to municipal sewer systems and their associated treatment facilities. We are committed to complying with applicable legislation related to local water quality. It is not anticipated that this will become relevant in the future, as we have no plans to significantly change our use of water resources.
Stakeholder conflicts concerning water resources at a basin/catchment level	Relevant, sometimes included	In 2014, in an effort to reduce water withdrawals and mitigate the risk of potential stakeholder conflicts in water-constrained communities, we piloted drought-tolerant landscaping at six California financial centers. This pilot was projected to reduce water usage by up to 50 percent at each center. In 2016, the California pilot saved more than 3.7 million gallons of water, and we expect these savings to continue going forward. Internal company knowledge of the potential for stakeholder conflicts around water resources in California and Texas was leveraged to assess risk and design the risk mitigation program.

		<p>Additionally, our Real Estate Services team was made aware of California Executive Order B-29-15, which called for a 25 percent reduction in potable urban water usage by 2016, and this information was used to inform further investment in water reductions at over 700 of our California facilities. Bank of America exceeded this target by achieving a reduction in potable water use of 35% from 2014 to 2016 at our California facilities. Tools used: Regional government databases, Internal company methods, External consultants, Publicly-available data from private and government websites</p>
Implications of water on your key commodities/raw materials	Relevant, sometimes included	<p>We have completed an assessment to identify supplier categories at highest risk from flooding. We reviewed 54 vendors and prioritized them based on vendors who provide us with a physical product (e.g., paper for statements) and those who are used enterprise-wide. We have also developed detailed disaster recovery plans for suppliers in high risk categories. If flooding were to occur at a supplier facility, there is a documented plan to move the work to an alternate site. For example, a print vendor with operations in New Jersey is exposed to risks related to flooding and storm surge, particularly during peak hurricane season from June through November. The seasonal nature of this vendor's production for our operations overlaps with peak flood risks. Thus, a business continuity plan was developed, in which four backup facilities were identified to which to move production in the event of flood or storm impacts. We plan to expand this analysis to include more vendors in the future. This assessment leveraged regional government databases, publicly-available data from private and government websites and internal company knowledge regarding the location of our vendors. Tools used: Regional government databases, Internal company methods, Publicly-available data from private and government websites</p>
Water-related regulatory frameworks	Relevant, always included	<p>This risk type is relevant and included in our risk assessments because we are indirectly exposed to credit and reputational risk related to the direct impacts of regulation, including water related legislation on our clients. If not effectively anticipated and managed, such regulations could adversely impact our clients' profitability and this in turn could have financial implications for our company by impacting their ability to service debts or make new investments. We assess risks from current regulation through implementation of our Environmental and Social Risk Policy Framework (ESRPF). Regulatory risk is a standard component of our client onboarding and due diligence processes. Recognizing that certain sectors may be more exposed to climate change and water related risks than others, for business activities in these sectors we engage in enhanced client and transactional review and due diligence,</p>

		involving subject matter experts as needed to evaluate the associated risks, including identification of physical, regulatory and reputational risks. This risk type is also relevant and included because our direct operations are subject to water-related regulations in some jurisdictions. While they are not deemed substantive for our organization, we are committed to complying with applicable legislation and have processes in place to monitor regulatory requirements and associated risks. We employ an Environmental Management System that relies on a comprehensive compliance database to help the Global Real Estate Services Environmental Risk team identify, manage and mitigate risk, and improve performance across our corporate real estate portfolio. Tools used: Regional government databases, Internal company methods, Publicly-available data from private and government websites
Status of ecosystems and habitats	Not relevant, explanation provided	This issue has been considered and has been found not a substantive risk for our operations, primarily because our operations do not require significant water resources from the local river basins. Our water withdrawals are almost entirely from municipal sources (99%), which do not disrupt local ecosystems and habitats. It is not anticipated that this will become relevant in the future, as we have no plans to significantly change our use of water resources.
Access to fully-functioning, safely managed WASH services for all employees	Relevant, always included	We provide fully-functioning WASH services to all employees. Our Business Continuity assessments include consideration of the ability of employees to adequately travel to bank facilities and recover critical business operations after a flooding event. After an event, a recovery action plan dictates whether a site will be temporarily closed. This plan considers issues related to employee comfort and safety, such as access to sanitary services and potable water, and the functionality of fire suppression systems. Tools used: Regional government databases, Internal company methods, Publicly-available data from private and government websites
Other contextual issues, please specify	Relevant, always included	Current Flooding Issues: We conduct an annual assessment of physical risks to our facilities from factors including severe weather, wildfires and flooding. Our Business Continuity group assesses risks associated with planned recovery facilities for our major locations. The assessment results are reported to business units using the major recovery facilities who then remediate the risk (e.g. by using another site) or escalate the risk for senior management review. Assessments also consider proximity risk, i.e., potential shared risk between production and recovery facilities based on probable risks for a given geography and the specific locations of the production and recovery sites. For example, a production

		and recovery facility located a short distance apart from each other on the Florida south coast may have a shared hurricane risk. This assessment leverages regional government databases, publicly-available data from private and government websites and internal company knowledge regarding the location of our facilities and the history of flooding at each location. Tools used: Regional government databases, Internal company methods, External consultants, Publicly-available data from private and government websites
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### 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	<p>We conduct an annual assessment of physical risks to our facilities from factors including severe weather, wildfires and flooding. Our Business Continuity group assesses risks associated with planned recovery facilities that have a low geo-dispersion rating. The assessment results are reported to business units using the recovery facilities who then remediate the risk (e.g. by using another site) or escalate the risk for senior management review. Assessments also consider proximity risk, i.e., potential shared risk between production and recovery facilities based on probable risks for a given geography and the specific locations of the production and recovery sites. For example, a production and recovery facility located a short distance apart from each other on the Florida south coast may have a shared hurricane risk.</p> <p>The purpose of our Business Continuity assessments is to ensure that we are able to continue to provide service to clients during severe weather, wildfires or flooding. After an event, a recovery action plan dictates whether a site will be temporarily closed. This plan considers issues related to client comfort and safety, such as access to sanitary services and the functionality of fire suppression systems. We engage our clients on water-related issues as they arise. In such an event, clients are encouraged to use online banking, mobile telephone banking, and contact centers. We have a large, distributed ATM network and reciprocal agreements for our clients to use ATMs operated by other banks. We have a fleet of mobile financial centers and mobile ATMs strategically located within the U.S. for immediate deployment to areas impacted by natural disasters.</p>

Employees	Relevant, always included	<p>We conduct an annual assessment of physical risks to our facilities from factors including severe weather, wildfires and flooding. Our Business Continuity group assesses risks associated with planned recovery facilities that have a low geo-dispersion rating. The assessment results are reported to business units using the recovery facilities who then remediate the risk (e.g. by using another site) or escalate the risk for senior management review. Assessments also consider proximity risk, i.e., potential shared risk between production and recovery facilities based on probable risks for a given geography and the specific locations of the production and recovery sites. For example, a production and recovery facility located a short distance apart from each other on the Florida south coast may have a shared hurricane risk.</p> <p>We evaluate the size and scope of identified risks through our Global ESG Committee activities, implementation of our ESRPF and Proximity Risk Assessment processes. Our Business Continuity assessments include consideration of the ability of employees to adequately travel to bank facilities and recover critical business operations after a flooding event. After an event, a recovery action plan dictates whether a site will be temporarily closed. This plan considers issues related to employee comfort and safety, such as access to sanitary services and potable water, and the functionality of fire suppression systems. We engage with our employees through annual risk management and business continuity training. In partnership with vendors, the Business Continuity team delivers preparedness and response training for natural disasters. Through the provision of laptop, tablets and fobs, many employees can work remotely and are able to support operations should an impact occur. We use ENACT (Emergency notification and associate communication tool) to communicate with employees during and after a business continuity or crisis event.</p>
Investors	Relevant, always included	<p>We conduct an annual assessment of physical risks to our facilities from factors including severe weather, wildfires and flooding. Our Business Continuity group assesses risks associated with planned recovery facilities that have a low geo-dispersion rating. The assessment results are reported to business units using the recovery facilities who then remediate the risk (e.g. by using another site) or escalate the risk for senior management review. Assessments also consider proximity risk, i.e., potential shared risk between production and recovery facilities based on probable risks for a given geography and the specific locations of the production and recovery sites. For example, a production and recovery facility located a short distance apart from each other on the Florida south coast may have a shared hurricane risk.</p>



		<p>We evaluate the size and scope of identified risks through our Global ESG Committee activities, implementation of our ESRPF and Proximity Risk Assessment processes. Our Business Continuity assessments focus on issues that could impact our operations, which in turn impact key stakeholders, including investors. After an event, a recovery action plan dictates whether a site will be temporarily closed. The method for engagement with investors is to consider and communicate the potential impact to our investors throughout this risk assessment process.</p>
Local communities	Relevant, always included	<p>In 2014, in an effort to reduce water withdrawals and mitigate the risk of potential stakeholder conflicts in water-constrained communities, we piloted drought-tolerant landscaping at six California financial centers. This pilot was projected to reduce water usage by up to 50 percent at each center. In 2016, the California pilot saved more than 3.7 million gallons of water, and we expect these savings to continue going forward. Internal company knowledge of the potential for stakeholder conflicts around water resources in California and Texas was leveraged to assess risk and design the risk mitigation program. Additionally, our Real Estate Services team was made aware of California Executive Order B-29-15, which called for a 25 percent reduction in potable urban water usage by 2016, and this information was used to inform further investment in water reductions at over 700 of our California facilities. Bank of America exceeded this target by achieving a reduction in potable water use of 35% from 2014 to 2016 at our California facilities. The method of engagement is through press releases regarding these programs, as well as work with regulators to understand the expectations of our facilities.</p>
NGOs	Not relevant, explanation provided	<p>Our operations do not require significant water resources from local river basins. Therefore, NGOs are not relevant to our water risk assessments. It is not anticipated that this will become relevant in the future, as we have no plans to significantly change our use of water resources.</p>
Other water users at a basin/catchment level	Relevant, sometimes included	<p>In 2014, in an effort to reduce water withdrawals and mitigate the risk of potential stakeholder conflicts in water-constrained communities, we piloted drought-tolerant landscaping at six California financial centers. This pilot was projected to reduce water usage by up to 50 percent at each center. In 2016, the California pilot saved more than 3.7 million gallons of water, and we expect these savings to continue going forward. Internal company knowledge of the potential for stakeholder conflicts around water resources in California and Texas was leveraged to assess risk and design the risk mitigation program. Additionally, our Real Estate Services team was made aware of California Executive Order B-29-15, which called for a 25 percent reduction in</p>

		potable urban water usage by 2016, and this information was used to inform further investment in water reductions at over 700 of our California facilities. Bank of America exceeded this target by achieving a reduction in potable water use of 35% from 2014 to 2016 at our California facilities. The method of engagement is through press releases regarding these programs, as well as work with regulators to understand the expectations of our facilities.
Regulators	Relevant, always included	This stakeholder is relevant and included in our risk assessments because we are indirectly exposed to credit and reputational risk related to the direct impacts of regulation on our clients. Many of our business clients are already subject to climate change regulation. If not effectively anticipated and managed, such regulations could adversely impact our clients' profitability and in turn have financial implications for our company by impacting their ability to service debts or make new investments. We assess risks from regulation through implementation of our Environmental and Social Risk Policy Framework (ESRPF). Regulatory risk is a standard component of our client onboarding and due diligence processes. Because certain sectors may be more exposed to climate change related risks than others, for business activities in these sectors we engage in enhanced client and transactional review and due diligence, involving subject matter experts as needed to evaluate the associated risks, including identification of physical, regulatory and reputational risks. This risk type is also relevant and included because our direct operations are subject to regulations, including in some jurisdictions, water related regulations. While they are not deemed substantive for our organization, we are committed to complying with applicable legislation and have processes in place to monitor regulatory requirements and associated risks. We employ an Environmental Management System that relies on a comprehensive compliance database to help the Global Real Estate Services Environmental Risk team identify, manage and mitigate risk, and improve performance across our corporate real estate portfolio. An example is California Executive Order B-29-15, which called for a 25 percent reduction in potable urban water usage by 2016. The method of engagement was to work with regulators closely to understand the expectations of our facilities in California to ensure we would be able to comply.
River basin management authorities	Relevant, sometimes included	In areas with high water stress, particularly from drought, we communicate with river basin management authorities to ensure that we remain within any water withdrawal limits. In 2014, in an effort to reduce water withdrawals and mitigate the risk of potential stakeholder conflicts in water-constrained communities, we piloted drought-tolerant landscaping at six California financial centers. This pilot was projected to reduce water usage by up to 50 percent at each center. In 2016, the California pilot saved more than 3.7 million gallons of

		<p>water, and we expect these savings to continue going forward. Internal company knowledge of the potential for stakeholder conflicts around water resources in California and Texas was leveraged to assess risk and design the risk mitigation program. Additionally, our Real Estate Services team was made aware of California Executive Order B-29-15, which called for a 25 percent reduction in potable urban water usage by 2016, and this information was used to inform further investment in water reductions at over 700 of our California facilities. Bank of America exceeded this target by achieving a reduction in potable water use of 35% from 2014 to 2016 at our California facilities. The method of engagement was to work with regulators closely to understand the expectations of our facilities in California to ensure we would be able to comply.</p>
Statutory special interest groups at a local level	Not relevant, explanation provided	<p>Our operations do not require significant water resources from the local river basins. Therefore, local statutory special interest groups are not relevant to our water risk assessments. It is not anticipated that this will become relevant in the future, as we have no plans to significantly change our use of water resources.</p>
Suppliers	Relevant, sometimes included	<p>We have completed an assessment to identify supplier categories at highest risk from flooding. We have also developed detailed disaster recovery plans for suppliers in high risk categories. If flooding were to occur at a supplier facility, there is a documented plan to move the work to an alternate site either with the same vendor or with an alternate vendor. We engaged our suppliers in this effort to determine the location of their facilities and whether they had alternate facilities in other locations that could be used should an impact occur. For example, a print vendor with operations in New Jersey is exposed to risks related to flooding and storm surge, particularly during peak hurricane season from June through November. The seasonal nature of this vendor's production for our operations overlaps with peak flood risks. Thus, a business continuity plan was developed, in which four backup facilities were identified to which to move production in the event of flood or storm impacts.</p>
Water utilities at a local level	Relevant, sometimes included	<p>In areas with high water stress, particularly from drought, we communicate with river basin management authorities, including water utilities, to ensure that we remain within any water withdrawal limits. In 2014, in an effort to reduce water withdrawals and mitigate the risk of potential stakeholder conflicts in water-constrained communities, we piloted drought-tolerant landscaping at six California financial centers. This pilot was projected to reduce water usage by up to 50 percent at each center. In 2016, the California pilot saved more than 3.7 million gallons of water, and we expect these savings to continue going forward. Internal company knowledge of the potential for stakeholder conflicts around water resources in California and Texas was</p>

		leveraged to assess risk and design the risk mitigation program. Additionally, our Real Estate Services team was made aware of California Executive Order B-29-15, which called for a 25 percent reduction in potable urban water usage by 2016, and this information was used to inform further investment in water reductions at over 700 of our California facilities. Bank of America exceeded this target by achieving a reduction in potable water use of 35% from 2014 to 2016 at our California facilities. The method of engagement was to work with regulators closely to understand the expectations of our facilities in California to ensure we would be able to comply.
Other stakeholder, please specify		

### 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.**

We engage stakeholders to determine which environmental issues should be included in our Environmental and Social Risk Policy Framework (ESRPF) - describes how we identify, evaluate and control environmental risks). The ESRPF is reviewed by the Global ESG Committee every two years, or as necessary, and environmental and social issues are discussed regularly at ESG Committee meetings to ensure the ESRPF reflects emerging issues.

We conduct an annual assessment of physical risks to our facilities from factors including severe weather, wildfires and flooding. The assessment results are reported to business units using the major recovery facilities who then remediate the risk (e.g. by using another site) or escalate the risk for senior management review. We evaluate the size and scale of identified risks through our Global ESG Committee, implementation of our ESRPF and Proximity Risk Assessment processes.

Our ESRPF is aligned to our overall Risk Framework, which outlines our approach to risk management and each employee's responsibilities for managing risk. This alignment helps to ensure that environmental and social risks, including climate-related risks, are an integral part of the bank's assessment and weighing of all risks. As part of our client due diligence and other onboarding processes, front line units and risk teams determine if a proposed transaction or relationship presents potential environmental and/or social risks. Subject matter experts, including Global Environmental Group

members and external consultants, participate in the environmental and social risk management process and help to determine the relative significance of these risks in relation to other risks. If due diligence reveals that a business activity presents significant environmental and/or social risk, that activity may be escalated to the appropriate committee responsible for risk management for further evaluation. These committees are comprised of the business heads and senior executives from our Global ESG, Global Risk, Global Compliance and Legal groups, and are responsible for weighing the environmental and social risks against other aspects of the business activity and determining whether to approve, conditionally approve or decline the activity.

The level of coverage for water-related risk assessment is partial for both direct operations and supply chain. We consider a timeframe of 3-6 years. We go beyond 6 years in certain circumstances, such as our 10-year environmental business goal and our ESRPF.

## 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 impact:

For CDP reporting, we consider risks and opportunities with potential financial implications for our business of over \$10 million per year to be substantive. The metric used to identify substantive change is financial impact in USD. The threshold indicating substantive change is \$10 million per year. This applies to our direct operations and supply chain.

Example of substantive impact considered:

With offices in Hong Kong, Japan, the Philippines, Taiwan, China and Australia, our Asian and Australian operations are vulnerable to an increase in the severity, duration and/or frequency of tropical storms experienced in these regions. Our operations in the southern and eastern United States, including our headquarters in Charlotte, North Carolina, are also vulnerable to an increase in the severity, duration and frequency of seasonal storms and potential for severe weather conditions. We operate 4,000+ U.S. retail financial centers, some of which are vulnerable to the physical impacts of climate risk with the potential to disrupt the accessibility of our retail outlets to our clients. Physical risks in the U.S. take the form of increased frequency and severity of storms with related flooding, particularly affecting the coastal southern and eastern states, and extreme heat events resulting in drought conditions and numerous wildfires across the West, Central and Southeast regions. This could lead to temporary, or in the event of severe damage, permanent closure of one of our financial centers. Physical climate risks in the U.S. are compounded by aging infrastructure, critical infrastructure dependencies, expanding urban areas in tornado zones, coastal population expansion, rising temperatures, precipitation and sea level rise and a lack of associated forward investment as highlighted in a November 2018 report by National Climate Assessment. Our U.S. operations experienced 61 Natural Disaster events related to hurricanes, tropical storms, flooding, wildfires, heavy snow and earthquakes in 2018. Our Asia Pacific and Latin America operations are also vulnerable to climate change impacts. There were 13 Natural Disaster events (tropical storms, typhoons and flooding) in these geographies in 2018. Climate change may contribute to less predictability around the types, timing and location of severe weather events, and we account for this in our business continuity planning.

## 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	25	Less than 1%	

## W4.1c

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

---

Country/Region

India

**River basin**

Other, please specify

Kalu

**Number of facilities exposed to water risk**

1

**% company-wide facilities this represents**

Less than 1%

**% company's total global revenue that could be affected**

Less than 1%

**Comment**

---

**Country/Region**

United States of America

**River basin**

Mississippi River

**Number of facilities exposed to water risk**

7

**% company-wide facilities this represents**

Less than 1%

**% company's total global revenue that could be affected**

Less than 1%

**Comment**

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**Country/Region**

Japan

**River basin**

Shinano, Chikuma

**Number of facilities exposed to water risk**

1

**% company-wide facilities this represents**

Less than 1%

**% company's total global revenue that could be affected**

Less than 1%

**Comment**

---

**Country/Region**

United Kingdom of Great Britain and Northern Ireland

**River basin**

Thames



**Number of facilities exposed to water risk**

3

**% company-wide facilities this represents**

Less than 1%

**% company's total global revenue that could be affected**

Less than 1%

**Comment**

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**Country/Region**

United States of America

**River basin**

Sacramento River - San Joaquin River

**Number of facilities exposed to water risk**

1

**% company-wide facilities this represents**

Less than 1%

**% company's total global revenue that could be affected**

Less than 1%

**Comment**

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**Country/Region**

United States of America

**River basin**

Trinity River (Texas)

**Number of facilities exposed to water risk**

12

**% company-wide facilities this represents**

Less than 1%

**% company's total global revenue that could be affected**

Less than 1%

**Comment**

## W4.2

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

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**Country/Region**

United States of America

**River basin**

Other, please specify

Multiple river basins in which we operate

**Type of risk**

Physical

**Primary risk driver**

Severe weather events

**Primary potential impact**

Closure of operations

**Company-specific description**

Our operations in the southern and eastern United States, including our headquarters in Charlotte, North Carolina, are vulnerable to an increase in the severity, duration and frequency of seasonal storms and potential for severe weather conditions. This could lead to temporary or in the event of severe damage, permanent closure of one of our financial centers. Physical climate risks in the U.S. are compounded by aging infrastructure, critical infrastructure dependencies, expanding urban areas in tornado zones, coastal population expansion, rising temperatures, precipitation and sea level rise and a lack of associated forward investment as highlighted in a November 2018 report by National Climate Assessment. Our U.S. operations experienced 61 Natural Disaster events related to hurricanes, tropical storms, flooding, wildfires, heavy snow and earthquakes in 2018. Our Asia Pacific and Latin America operations are also vulnerable to climate change impacts. There were 13 Natural Disaster events (tropical storms, typhoons and flooding) in these geographies in 2018.

Method for identifying impact: annual assessments that consider physical risks to facilities. Results are reported to business units using major recovery facilities who remediate the risk (e.g. by using another site) or escalate the risk for senior management review.

**Timeframe**

1 - 3 years

**Magnitude of potential impact**

Medium

**Likelihood**

About as likely as not

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

Yes, a single figure estimate

**Potential financial impact figure (currency)**

33,000,000

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

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

**Explanation of financial impact**

Implications include retail outlet closures, facility repair costs, lost work time, increased utility costs, lost revenue, and increased insurance premiums. To illustrate the financial implications of specific events, the total operational losses from the direct impacts on our facilities were approximately \$33 million from Superstorm Sandy and approximately \$2 million from hurricanes and wildfires occurring in the US in 2018. These costs are based on natural disaster tracking records from our real estate and business continuity teams. We track work order costs of repairs after severe weather events and as the dataset develops over time, we will use it to understand trends associated with climate risk.

**Primary response to risk**

Amend the Business Continuity Plan

**Description of response**

Our Building Disaster Recovery Planning (BDRP) team prepares our facilities for natural disasters. During 2018, the team managed response and recovery for 128 global events, 74 of which were natural disasters. In partnership with vendors, the team delivers preparedness and response training for natural disasters, including hurricanes. Through the provision of laptop, tablets and fobs, many employees can work remotely and are able to support operations should an impact occur. In such an event, clients are encouraged to use online banking, mobile telephone banking, and contact centers. We have a large, distributed ATM network and reciprocal agreements for our clients to use ATMs operated by other banks. We have a fleet of mobile financial centers and mobile ATMs strategically located within the U.S. for immediate deployment to areas impacted by natural disasters. In 2018, our U.S. Regional Support team prepared for significant natural disasters—multiple hurricanes, winter storms, wildfires and flooding, driving broader awareness of the threats and enabling central coordination of continuity plans for business lines. Our systems, platforms, and applications all performed without interruption, despite record-setting hurricane force winds, driving rains, substantial flooding, and widespread power outages.

**Cost of response**

1,000,000

**Explanation of cost of response**

We calculated the cost of management by estimating the additional costs of business continuity planning and recovery due to climate induced changes.

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**Country/Region**

United States of America

**River basin**

Other, please specify

Multiple river basins in which we operate

**Type of risk**

Physical

**Primary risk driver**

Flooding

**Primary potential impact**

Other, please specify

Increased credit risk

**Company-specific description**

For our mortgage clients, flooding is an area of potential exposure for our company. There is scientific consensus that flood risks are increasing in many regions due to climate change. According to a 2013 FEMA study, rising seas and increasingly severe weather are expected to increase the areas of the U.S. at risk of floods by up to 45% by 2100. Increased flood incidence and severity could lead to our clients defaulting on their mortgage payments if, for example, flood insurance premiums become unaffordable. In addition, customers outside flood zones, who may not have flood insurance, are now being impacted by climate-related flooding, which could lead those customers to default on their mortgage payments. Clients may also find themselves in a negative equity situation due to housing values being impacted when insurance

costs rise due to expanding flood hazard zones and increased flood incidence and severity. Of our current portfolio of U.S. real estate secured loans, 4% are in a FEMA designated special flood hazard area.

The method for identifying this impact is our ESRPF, which is aligned to our Risk Framework that outlines our approach to risk management and each employee's responsibilities for managing risk. Subject matter experts, including Global Environmental Group (GEG) members and external consultants, determine the relative significance of risks. Activities with significant environmental risk may be escalated to the appropriate committee for further evaluation.

**Timeframe**

1 - 3 years

**Magnitude of potential impact**

Medium-high

**Likelihood**

Likely

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

Yes, a single figure estimate

**Potential financial impact figure (currency)**

10,000,000

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

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

**Explanation of financial impact**

Water could impose a financial cost on our clients, for example through direct damage to their facilities, increased insurance premiums, and lost revenue due to facility closures, lost work time and production or distribution delays. This in turn could impact their ability to service debts or

make new investments, with potential negative financial implications for our business of greater than \$10 million annually. This estimate is based on professional judgment by our subject matter experts within the business

#### **Primary response to risk**

Greater due diligence

#### **Description of response**

In 2018, as part of our TCFD work, we partnered with a global climate risk firm to assess the exposure of selected business portfolios to physical climate risks including hurricanes, floods, droughts, tornadoes and wildfires. Phase 1 of the project aims to provide a diagnostic to identify exposed regions and main hazards, through detailed geographic analysis on a consumer mortgage portfolio. The Willis Towers Watson Global Peril Diagnostic model was used to produce visualizations of the portfolio's exposure to eight natural hazard types and quantification of potential financial vulnerability in terms of value at risk. This analysis is ongoing and additional outputs will include interactive geospatial visualizations to inform a view of which assets are most susceptible to climate risk and which hazards are of most concern. A second phase of work will build on the findings from Phase 1 to produce a more detailed quantitative analysis for those areas with the largest value exposed to physical climate risks.

#### **Cost of response**

12,000,000

#### **Explanation of cost of response**

By supporting the effective integration of environmental risk management activities across our business and by coordinating our TCFD work, our GEG is central to our management of this risk. We calculated the cost of management based on the GEG's total annual operating cost.

### **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
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Row 1	Risks exist, but no substantive impact anticipated	<p>Potential flooding impacts at our suppliers' facilities is the main water-related physical risk to our supply chain. The potential for flooding represents a real and serious risk to the operations of our suppliers. Extreme flooding, such as that in Thailand in 2011, has the potential to impact the supply of materials or services to our business operations teams. The method for identifying the impact was through an assessment to identify supplier categories at highest risk from flooding. We reviewed 54 vendors and prioritized them based on vendors who provide us with a physical product (e.g., paper for statements) and those who are used enterprise-wide. We plan to expand this analysis to include more vendors in the future. This assessment leveraged regional government databases, publicly-available data from private and government websites and internal company knowledge regarding the location of our vendors. We feel that this risk has a low probability of occurrence, and we believe that the magnitude of the potential impact is below our threshold for substantiveness.</p> <p>We developed detailed disaster recovery plans for a subset of suppliers in high risk categories. If flooding were to occur at a supplier facility, there is a documented plan to move the work to an alternate site. For example, a print vendor with operations in New Jersey is exposed to risks related to flooding and storm surge, particularly during peak hurricane season from June through November. The seasonal nature of this vendor's production for our operations overlaps with peak flood risks. Thus, a business continuity plan was developed, in which four backup facilities were identified to which to move production in the event of flood or storm impacts. We plan to expand this analysis to include more vendors in the future.</p>
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### 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**

Products and services

**Primary water-related opportunity**

Sales of new products/services

**Company-specific description & strategy to realize opportunity**

We believe that bond issuances are one of the best tools for companies, municipalities and other entities to finance the \$140 to \$300 billion of investment annually that UNEP's 2016 Climate Change Adaptation Finance Gap Report estimates will be needed by 2030 for global climate change adaptation. This, in turn, creates an opportunity for us to provide additional products and services. Green bonds are fixed income, liquid financial instruments for raising debt capital for climate mitigation and adaptation initiatives and were created to increase funding of such initiatives by accessing the \$100 trillion bond market and expanding the investor base for climate projects. We have been a leader in developing the green bond market since it began a decade ago. We worked with peers to develop the Green Bond Principles to ensure the credibility of the market, we were the first corporation to issue a benchmark sized green bond, and we have led the market in underwriting. Since 2007, we have underwritten \$38 billion in green bonds on behalf of over 100 clients, supporting more than 220 deals and providing critical funding to environmental projects. In 2018 alone, we underwrote \$9.8 billion (pro-rata basis) in corporate green bonds on behalf of 40 unique clients.

**Estimated timeframe for realization**

4 to 6 years

**Magnitude of potential financial impact**

Medium-high

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

Yes, a single figure estimate

**Potential financial impact figure (currency)**

9,000,000,000

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

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

**Explanation of financial impact**

Green bond issuances are an area of significant growth opportunity for the bank. We anticipate more than \$9 billion of annual business activity in the green bonds space for our company. This estimate is based on our monitoring of the evolving market and our performance to date

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**Type of opportunity**

Markets

**Primary water-related opportunity**

Stronger competitive advantage

**Company-specific description & strategy to realize opportunity**

Factors including increased understanding and awareness about climate change and its causes and effects, as well as policy, reputational and financial factors are driving increased client demand for our low-carbon products and services. During 2018, our Commercial Real Estate and Community Development Banking business provided \$1.6 billion towards financing of LEED and EPA ENERGY STAR certified buildings while our Global Leasing business provided \$3.2 billion in equipment and tax equity financing for energy-efficiency projects and renewable-energy projects.

In 2018 our Global Research team published the report “ABCs of ESG,” the latest in a series of research focused on why investors and companies should be paying attention to environmental, social and governance factors. As we note in this report, trends in the US investment landscape indicate that trillions of dollars could be allocated to ESG-oriented equity investments, and thus to stocks that are attractive on ESG metrics. The Merrill Lynch 2018 Global Wealth & Investment Management Survey found that nearly 20% of financial advisors use ESG factors today and 43% are considering their use, suggesting adoption is in its early stages.

These trends create substantial opportunities for our Global Wealth and Investment Management (GWIM) business to support clients seeking to take ESG factors into account in their investing decisions. As of the end of 2018, GWIM clients had nearly \$18 billion in assets with an ESG approach.

**Estimated timeframe for realization**

1 to 3 years

**Magnitude of potential financial impact**

Medium-high

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

Yes, a single figure estimate

**Potential financial impact figure (currency)**

125,000,000,000

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

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

**Explanation of financial impact**

We estimated that changing client demand for low-carbon financing represents an opportunity for \$125 billion in additional business for us from 2013 to 2025. This represents the lending, equipment finance, capital markets and advisory activities, and carbon markets finance to clients around the world to be delivered through our current \$125 billion initiative. As an illustration of this opportunity, increasing client demand helped us deliver \$21.5 billion towards our environmental business initiative in 2018.

## W5. Facility-level water accounting

### W5.1

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

---

**Facility reference number**

Facility 1

**Facility name (optional)**

**Country/Region**

United States of America

**River basin**

Sacramento River - San Joaquin River

**Latitude**

**Longitude**

**Total water withdrawals at this facility (megaliters/year)**

30

**Comparison of withdrawals with previous reporting year**

Much lower

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

27

**Comparison of discharges with previous reporting year**

Much lower

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

3

**Comparison of consumption with previous reporting year**

Much lower

**Please explain**

Withdrawals: -30% from '17 to '18. Discharges: -30% from '17 to '18. Consumption -30% from '17 to '18. Definitions: >+25% Much higher; +10%-25% Higher; +/-10% About the same; -10%-25% Lower; >-25% Much lower. Water data are not available. We have a robust estimation methodology based on actual data for similar facilities. Consumption is irrigation. Location information is confidential.

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**Facility reference number**

Facility 2

**Facility name (optional)**

**Country/Region**

United States of America

**River basin**

Mississippi River

**Latitude**

**Longitude**

**Total water withdrawals at this facility (megaliters/year)**

84

**Comparison of withdrawals with previous reporting year**

About the same

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

60

**Comparison of discharges with previous reporting year**

About the same

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

24

**Comparison of consumption with previous reporting year**

About the same

**Please explain**

Withdrawals: -1% from '17 to '18. Discharges: -2% from '17 to '18. Consumption 0% from '17 to '18. Definitions: >+25% Much higher; +10%-25% Higher; +/-10% About the same; -10%-25% Lower; >-25% Much lower. Water data are not available. We have a robust estimation methodology based on actual data for similar facilities. Consumption is irrigation. Location information is confidential.

---

**Facility reference number**

Facility 3

**Facility name (optional)**

**Country/Region**

United States of America

**River basin**

Mississippi River

**Latitude**

**Longitude**

**Total water withdrawals at this facility (megaliters/year)**

25

**Comparison of withdrawals with previous reporting year**

About the same

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

25

**Comparison of discharges with previous reporting year**

About the same

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

0

**Comparison of consumption with previous reporting year**

About the same

**Please explain**

Withdrawals: -1% from '17 to '18. Discharges: -1% from '17 to '18. Consumption 0% from '17 to '18. Definitions: >+25% Much higher; +10%-25% Higher; +/-10% About the same; -10%-25% Lower; >-25% Much lower. Water data are not available. We have a robust estimation methodology based on actual data for similar facilities. If no irrigation, consumption is assumed to be negligible. Location information is confidential.

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**Facility reference number**

Facility 4

**Facility name (optional)**

**Country/Region**

United States of America

**River basin**

Mississippi River

**Latitude**

**Longitude**

**Total water withdrawals at this facility (megaliters/year)**

3

**Comparison of withdrawals with previous reporting year**

Lower

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

3

**Comparison of discharges with previous reporting year**

About the same

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

1

**Comparison of consumption with previous reporting year**

Much lower



**Please explain**

Withdrawals: -13% from '17 to '18. Discharges: 10% from '17 to '18. Consumption -54% from '17 to '18. Definitions: >+25% Much higher; +10%-25% Higher; +/-10% About the same; -10%-25% Lower; >-25% Much lower. Consumption is irrigation. Location information is confidential.

---

**Facility reference number**

Facility 5

**Facility name (optional)**

**Country/Region**

United States of America

**River basin**

Mississippi River

**Latitude**

**Longitude**

**Total water withdrawals at this facility (megaliters/year)**

22

**Comparison of withdrawals with previous reporting year**

About the same

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

16

**Comparison of discharges with previous reporting year**

About the same

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

6

**Comparison of consumption with previous reporting year**

About the same

**Please explain**

Withdrawals: -1% from '17 to '18. Discharges: -2% from '17 to '18. Consumption 0% from '17 to '18. Definitions: >+25% Much higher; +10%-25% Higher; +/-10% About the same; -10%-25% Lower; >-25% Much lower. Water data are not available. We have a robust estimation methodology based on actual data for similar facilities. Consumption is irrigation. Location information is confidential.

---

**Facility reference number**

Facility 6

**Facility name (optional)**

**Country/Region**

United States of America

**River basin**

Mississippi River

**Latitude**

**Longitude**

**Total water withdrawals at this facility (megaliters/year)**

3

**Comparison of withdrawals with previous reporting year**

Much lower

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

2

**Comparison of discharges with previous reporting year**

Much lower

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

1

**Comparison of consumption with previous reporting year**

Much lower

**Please explain**

Withdrawals: -81% from '17 to '18. Discharges: -81% from '17 to '18. Consumption -81% from '17 to '18. Definitions: >+25% Much higher; +10%-25% Higher; +/-10% About the same; -10%-25% Lower; >-25% Much lower. Water data are not available. We have a robust estimation methodology based on actual data for similar facilities. Consumption is irrigation. Location information is confidential.

---

**Facility reference number**

Facility 7

**Facility name (optional)**

**Country/Region**

United States of America

**River basin**

Mississippi River

**Latitude**

**Longitude**

**Total water withdrawals at this facility (megaliters/year)**

3

**Comparison of withdrawals with previous reporting year**

Much lower

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

3

**Comparison of discharges with previous reporting year**

Much lower

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

0

**Comparison of consumption with previous reporting year**

About the same

**Please explain**

Withdrawals: -90% from '17 to '18. Discharges: -90% from '17 to '18. Consumption 0% from '17 to '18. Definitions: >+25% Much higher; +10%-25% Higher; +/-10% About the same; -10%-25% Lower; >-25% Much lower. If no irrigation, consumption is assumed to be negligible. Location information is confidential.

**Facility reference number**

Facility 8

**Facility name (optional)**

**Country/Region**

United States of America

**River basin**

Mississippi River

**Latitude**

**Longitude**

**Total water withdrawals at this facility (megaliters/year)**

15

**Comparison of withdrawals with previous reporting year**

About the same

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

12

**Comparison of discharges with previous reporting year**

About the same

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

2

**Comparison of consumption with previous reporting year**

About the same

**Please explain**

Withdrawals: 0% from '17 to '18. Discharges: 0% from '17 to '18. Consumption 0% from '17 to '18. Definitions: >+25% Much higher; +10%-25% Higher; +/-10% About the same; -10%-25% Lower; >-25% Much lower. Consumption is irrigation. Location information is confidential.

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**Facility reference number**

Facility 9

**Facility name (optional)**

**Country/Region**

United States of America

**River basin**

Trinity River (Texas)

**Latitude**

**Longitude**

**Total water withdrawals at this facility (megaliters/year)**

48

**Comparison of withdrawals with previous reporting year**

About the same

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

41

**Comparison of discharges with previous reporting year**

About the same

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

8

**Comparison of consumption with previous reporting year**

About the same

**Please explain**

Withdrawals: 0% from '17 to '18. Discharges: 0% from '17 to '18. Consumption 0% from '17 to '18. Definitions: >+25% Much higher; +10%-25% Higher; +/-10% About the same; -10%-25% Lower; >-25% Much lower. Water data are not available. We have a robust estimation methodology based on actual data for similar facilities. Consumption is irrigation. Location information is confidential.

---

**Facility reference number**

Facility 10

**Facility name (optional)**

**Country/Region**

United States of America

**River basin**

Trinity River (Texas)

**Latitude**

## Longitude

### Total water withdrawals at this facility (megaliters/year)

53

### Comparison of withdrawals with previous reporting year

About the same

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

38

### Comparison of discharges with previous reporting year

About the same

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

15

### Comparison of consumption with previous reporting year

About the same

### Please explain

Withdrawals: -1% from '17 to '18. Discharges: -2% from '17 to '18. Consumption 0% from '17 to '18. Definitions: >+25% Much higher; +10%-25% Higher; +/-10% About the same; -10%-25% Lower; >-25% Much lower. Water data are not available. We have a robust estimation methodology based on actual data for similar facilities. Consumption is irrigation. Location information is confidential.

---

### Facility reference number

Facility 11

### Facility name (optional)



**Country/Region**

United States of America

**River basin**

Trinity River (Texas)

**Latitude**

**Longitude**

**Total water withdrawals at this facility (megaliters/year)**

45

**Comparison of withdrawals with previous reporting year**

Much lower

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

22

**Comparison of discharges with previous reporting year**

Much lower

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

23

**Comparison of consumption with previous reporting year**

Much higher

**Please explain**

Withdrawals: -38% from '17 to '18. Discharges: -64% from '17 to '18. Consumption 126% from '17 to '18. Definitions: >+25% Much higher; +10%-25% Higher; +/-10% About the same; -10%-25% Lower; >-25% Much lower. Consumption is irrigation. Location information is confidential.

---

**Facility reference number**

Facility 12

**Facility name (optional)**

**Country/Region**

United States of America

**River basin**

Trinity River (Texas)

**Latitude**

**Longitude**

**Total water withdrawals at this facility (megaliters/year)**

33

**Comparison of withdrawals with previous reporting year**

About the same

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

21

**Comparison of discharges with previous reporting year**

About the same

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

12

**Comparison of consumption with previous reporting year**

Lower

**Please explain**

Withdrawals: -10% from '17 to '18. Discharges: -3% from '17 to '18. Consumption -20% from '17 to '18. Definitions: >+25% Much higher; +10%-25% Higher; +/-10% About the same; -10%-25% Lower; >-25% Much lower. Consumption is irrigation. Location information is confidential.

---

**Facility reference number**

Facility 13

**Facility name (optional)**

**Country/Region**

United States of America

**River basin**

Trinity River (Texas)

**Latitude**

**Longitude**

**Total water withdrawals at this facility (megaliters/year)**

58

**Comparison of withdrawals with previous reporting year**

Lower

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

53

**Comparison of discharges with previous reporting year**

About the same

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

4

**Comparison of consumption with previous reporting year**

Much lower

**Please explain**

Withdrawals: -11% from '17 to '18. Discharges: -7% from '17 to '18. Consumption -41% from '17 to '18. Definitions: >+25% Much higher; +10%-25% Higher; +/-10% About the same; -10%-25% Lower; >-25% Much lower. Consumption is irrigation. Location information is confidential.

---

**Facility reference number**

Facility 14

**Facility name (optional)**

**Country/Region**

United States of America

**River basin**

Trinity River (Texas)

**Latitude**

**Longitude**

**Total water withdrawals at this facility (megaliters/year)**

11

**Comparison of withdrawals with previous reporting year**

Higher

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

2

**Comparison of discharges with previous reporting year**

Much higher

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

9

**Comparison of consumption with previous reporting year**

Higher

**Please explain**

Withdrawals: 21% from '17 to '18. Discharges: 27% from '17 to '18. Consumption 19% from '17 to '18. Definitions: >+25% Much higher; +10%-25% Higher; +/-10% About the same; -10%-25% Lower; >-25% Much lower. Consumption is irrigation. Location information is confidential.

**Facility reference number**

Facility 15

**Facility name (optional)**

**Country/Region**

United States of America

**River basin**

Trinity River (Texas)

**Latitude**

**Longitude**

**Total water withdrawals at this facility (megaliters/year)**

22

**Comparison of withdrawals with previous reporting year**

Lower

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

8

**Comparison of discharges with previous reporting year**

Lower

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

14

**Comparison of consumption with previous reporting year**

Lower

**Please explain**

Withdrawals: -20% from '17 to '18. Discharges: -21% from '17 to '18. Consumption -19% from '17 to '18. Definitions: >+25% Much higher; +10%-25% Higher; +/-10% About the same; -10%-25% Lower; >-25% Much lower. Consumption is irrigation. Location information is confidential.

---

**Facility reference number**

Facility 16

**Facility name (optional)**

**Country/Region**

United States of America

**River basin**

Trinity River (Texas)

**Latitude**

**Longitude**

**Total water withdrawals at this facility (megaliters/year)**

27

**Comparison of withdrawals with previous reporting year**

About the same

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

20

**Comparison of discharges with previous reporting year**

About the same

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

8

**Comparison of consumption with previous reporting year**

About the same

**Please explain**

Withdrawals: -1% from '17 to '18. Discharges: -2% from '17 to '18. Consumption 0% from '17 to '18. Definitions: >+25% Much higher; +10%-25% Higher; +/-10% About the same; -10%-25% Lower; >-25% Much lower. Water data are not available. We have a robust estimation methodology based on actual data for similar facilities. Consumption is irrigation. Location information is confidential.

---

**Facility reference number**

Facility 17

**Facility name (optional)**

**Country/Region**

United States of America

**River basin**

Trinity River (Texas)

**Latitude**



## Longitude

### Total water withdrawals at this facility (megaliters/year)

19

### Comparison of withdrawals with previous reporting year

About the same

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

14

### Comparison of discharges with previous reporting year

About the same

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

5

### Comparison of consumption with previous reporting year

About the same

### Please explain

Withdrawals: -1% from '17 to '18. Discharges: -2% from '17 to '18. Consumption 0% from '17 to '18. Definitions: >+25% Much higher; +10%-25% Higher; +/-10% About the same; -10%-25% Lower; >-25% Much lower. Water data are not available. We have a robust estimation methodology based on actual data for similar facilities. Consumption is irrigation. Location information is confidential.

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### Facility reference number

Facility 18

### Facility name (optional)

**Country/Region**

United States of America

**River basin**

Trinity River (Texas)

**Latitude**

**Longitude**

**Total water withdrawals at this facility (megaliters/year)**

29

**Comparison of withdrawals with previous reporting year**

About the same

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

24

**Comparison of discharges with previous reporting year**

About the same

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

5

**Comparison of consumption with previous reporting year**

About the same

**Please explain**

Withdrawals: 0% from '17 to '18. Discharges: 0% from '17 to '18. Consumption 0% from '17 to '18. Definitions: >+25% Much higher; +10%-25% Higher; +/-10% About the same; -10%-25% Lower; >-25% Much lower. Water data are not available. We have a robust estimation methodology based on actual data for similar facilities. Consumption is irrigation. Location information is confidential.

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**Facility reference number**

Facility 19

**Facility name (optional)**

**Country/Region**

United States of America

**River basin**

Trinity River (Texas)

**Latitude**

**Longitude**

**Total water withdrawals at this facility (megaliters/year)**

75

**Comparison of withdrawals with previous reporting year**

About the same

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

38

**Comparison of discharges with previous reporting year**

About the same

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

37

**Comparison of consumption with previous reporting year**

About the same

**Please explain**

Withdrawals: 0% from '17 to '18. Discharges: 0% from '17 to '18. Consumption 0% from '17 to '18. Definitions: >+25% Much higher; +10%-25% Higher; +/-10% About the same; -10%-25% Lower; >-25% Much lower. Water data are not available. We have a robust estimation methodology based on actual data for similar facilities. Consumption is irrigation. Location information is confidential.

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**Facility reference number**

Facility 20

**Facility name (optional)**

**Country/Region**

United States of America

**River basin**

Trinity River (Texas)

**Latitude**

**Longitude**

**Total water withdrawals at this facility (megaliters/year)**

9

**Comparison of withdrawals with previous reporting year**

About the same

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

7

**Comparison of discharges with previous reporting year**

About the same

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

2

**Comparison of consumption with previous reporting year**

Much higher

**Please explain**

Withdrawals: 1% from '17 to '18. Discharges: -9% from '17 to '18. Consumption 89% from '17 to '18. Definitions: >+25% Much higher; +10%-25% Higher; +/-10% About the same; -10%-25% Lower; >-25% Much lower. Consumption is irrigation. Location information is confidential.

---

**Facility reference number**

Facility 21

**Facility name (optional)**

**Country/Region**

United Kingdom of Great Britain and Northern Ireland

**River basin**

Thames

**Latitude**

**Longitude**

**Total water withdrawals at this facility (megaliters/year)**

15

**Comparison of withdrawals with previous reporting year**

About the same

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

15

**Comparison of discharges with previous reporting year**

About the same

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

0

**Comparison of consumption with previous reporting year**

About the same

**Please explain**

Withdrawals: -1% from '17 to '18. Discharges: -1% from '17 to '18. Consumption 0% from '17 to '18. Definitions: >+25% Much higher; +10%-25% Higher; +/-10% About the same; -10%-25% Lower; >-25% Much lower. If no irrigation, consumption is assumed to be negligible. Location information is confidential.

**Facility reference number**

Facility 22

**Facility name (optional)**

**Country/Region**

United Kingdom of Great Britain and Northern Ireland

**River basin**

Thames

**Latitude**

**Longitude**

**Total water withdrawals at this facility (megaliters/year)**

5

**Comparison of withdrawals with previous reporting year**

Much lower

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

5

**Comparison of discharges with previous reporting year**

Much lower

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

0

**Comparison of consumption with previous reporting year**

About the same

**Please explain**

Withdrawals: -35% from '17 to '18. Discharges: -35% from '17 to '18. Consumption 0% from '17 to '18. Definitions: >+25% Much higher; +10%-25% Higher; +/-10% About the same; -10%-25% Lower; >-25% Much lower. If no irrigation, consumption is assumed to be negligible. Location information is confidential.

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**Facility reference number**

Facility 23

**Facility name (optional)**

**Country/Region**

United Kingdom of Great Britain and Northern Ireland

**River basin**

Thames

**Latitude**

**Longitude**

**Total water withdrawals at this facility (megaliters/year)**

41

**Comparison of withdrawals with previous reporting year**

About the same



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

41

**Comparison of discharges with previous reporting year**

About the same

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

0

**Comparison of consumption with previous reporting year**

About the same

**Please explain**

Withdrawals: 1% from '17 to '18. Discharges: 1% from '17 to '18. Consumption 0% from '17 to '18. Definitions: >+25% Much higher; +10%-25% Higher; +/-10% About the same; -10%-25% Lower; >-25% Much lower. If no irrigation, consumption is assumed to be negligible. Location information is confidential.

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**Facility reference number**

Facility 24

**Facility name (optional)**

**Country/Region**

India

**River basin**

Other, please specify

Kalu

**Latitude**

## Longitude

### Total water withdrawals at this facility (megaliters/year)

11

### Comparison of withdrawals with previous reporting year

About the same

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

11

### Comparison of discharges with previous reporting year

About the same

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

0

### Comparison of consumption with previous reporting year

About the same

### Please explain

Withdrawals: 0% from '17 to '18. Discharges: 0% from '17 to '18. Consumption 0% from '17 to '18. Definitions: >+25% Much higher; +10%-25% Higher; +/-10% About the same; -10%-25% Lower; >-25% Much lower. Water data are not available. We have a robust estimation methodology based on actual data for similar facilities. If no irrigation, consumption is assumed to be negligible. Location information is confidential.

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### Facility reference number

Facility 25

**Facility name (optional)**

**Country/Region**

Japan

**River basin**

Shinano, Chikuma

**Latitude**

**Longitude**

**Total water withdrawals at this facility (megaliters/year)**

2

**Comparison of withdrawals with previous reporting year**

Much higher

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

2

**Comparison of discharges with previous reporting year**

Much higher

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

0

**Comparison of consumption with previous reporting year**

About the same

**Please explain**

Withdrawals: 570% from '17 to '18. Discharges: 570% from '17 to '18. Consumption 0% from '17 to '18. Definitions: >+25% Much higher; +10%-25% Higher; +/-10% About the same; -10%-25% Lower; >-25% Much lower. If no irrigation, consumption is assumed to be negligible. Location information is confidential.

---

**Facility reference number**

Facility 26

**Facility name (optional)**

**Country/Region**

**River basin**

**Latitude**

**Longitude**

**Total water withdrawals at this facility (megaliters/year)**

**Comparison of withdrawals with previous reporting year**

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

**Comparison of discharges with previous reporting year**

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

**Comparison of consumption with previous reporting year**

**Please explain**

## **W5.1a**

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

---

**Facility reference number**

Facility 1

**Facility name**

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

0

**Brackish surface water/seawater**

0

**Groundwater - renewable**

0

**Groundwater - non-renewable**

0

**Produced/Entrained water**

0

**Third party sources**

30

**Comment**

---

**Facility reference number**

Facility 2

**Facility name**

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

0

**Brackish surface water/seawater**

0

**Groundwater - renewable**

0

**Groundwater - non-renewable**

0

**Produced/Entrained water**

0

**Third party sources**

84

**Comment**

---

**Facility reference number**

Facility 3

**Facility name**

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

0

**Brackish surface water/seawater**

0

**Groundwater - renewable**

0

**Groundwater - non-renewable**

0

**Produced/Entrained water**

0

**Third party sources**

25

**Comment**

---

**Facility reference number**

Facility 4

**Facility name**

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

0

**Brackish surface water/seawater**

0

**Groundwater - renewable**

0

**Groundwater - non-renewable**

0

**Produced/Entrained water**

0

**Third party sources**

3

**Comment**

---



**Facility reference number**

Facility 5

**Facility name**

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

0

**Brackish surface water/seawater**

0

**Groundwater - renewable**

0

**Groundwater - non-renewable**

0

**Produced/Entrained water**

0

**Third party sources**

22

**Comment**

---

**Facility reference number**

Facility 6

**Facility name**

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

0

**Brackish surface water/seawater**

0

**Groundwater - renewable**

0

**Groundwater - non-renewable**

0

**Produced/Entrained water**

0

**Third party sources**

3

**Comment**

---

**Facility reference number**

Facility 7

**Facility name**

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

0

**Brackish surface water/seawater**

0

**Groundwater - renewable**

0

**Groundwater - non-renewable**

0

**Produced/Entrained water**

0

**Third party sources**

3

**Comment**

---

**Facility reference number**

Facility 8

**Facility name**

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

0

**Brackish surface water/seawater**

0

**Groundwater - renewable**

0

**Groundwater - non-renewable**

0

**Produced/Entrained water**

0

**Third party sources**

15

**Comment**

---

**Facility reference number**

Facility 9

**Facility name**

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

0

**Brackish surface water/seawater**

0

**Groundwater - renewable**

0

**Groundwater - non-renewable**

0

**Produced/Entrained water**

0

**Third party sources**

48

**Comment**

---

**Facility reference number**

Facility 10

**Facility name**

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

0

**Brackish surface water/seawater**

0

**Groundwater - renewable**

0

**Groundwater - non-renewable**

0

**Produced/Entrained water**

0

**Third party sources**

53

**Comment**

---

**Facility reference number**

Facility 11

**Facility name**

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

0

**Brackish surface water/seawater**

0

**Groundwater - renewable**

0

**Groundwater - non-renewable**

0

**Produced/Entrained water**

0

**Third party sources**

45

**Comment**

---

**Facility reference number**

Facility 12

**Facility name**

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

0

**Brackish surface water/seawater**

0

**Groundwater - renewable**

0

**Groundwater - non-renewable**

0

**Produced/Entrained water**

0

**Third party sources**

33

**Comment**

---

**Facility reference number**

Facility 13

**Facility name**

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

0

**Brackish surface water/seawater**

0

**Groundwater - renewable**

0

**Groundwater - non-renewable**

0

**Produced/Entrained water**

0

**Third party sources**

58

**Comment**

---

**Facility reference number**

Facility 14

**Facility name**

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



0

**Brackish surface water/seawater**

0

**Groundwater - renewable**

0

**Groundwater - non-renewable**

0

**Produced/Entrained water**

0

**Third party sources**

11

**Comment**

---

**Facility reference number**

Facility 15

**Facility name**

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

0

**Brackish surface water/seawater**

0

**Groundwater - renewable**

0

**Groundwater - non-renewable**

0

**Produced/Entrained water**

0

**Third party sources**

22

**Comment**

---

**Facility reference number**

Facility 16

**Facility name**

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

0

**Brackish surface water/seawater**

0

**Groundwater - renewable**

0

**Groundwater - non-renewable**

0

**Produced/Entrained water**

0

**Third party sources**

27

**Comment**

---

**Facility reference number**

Facility 17

**Facility name**

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

0

**Brackish surface water/seawater**

0

**Groundwater - renewable**

0

**Groundwater - non-renewable**

0

**Produced/Entrained water**

0

**Third party sources**

19

**Comment**

---

**Facility reference number**

Facility 18

**Facility name**

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

0

**Brackish surface water/seawater**

0

**Groundwater - renewable**

0

**Groundwater - non-renewable**

0

**Produced/Entrained water**

0

**Third party sources**

29

**Comment**

---

**Facility reference number**

Facility 19

**Facility name**

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

0

**Brackish surface water/seawater**

0

**Groundwater - renewable**

0

**Groundwater - non-renewable**

0

**Produced/Entrained water**

0

**Third party sources**

75

**Comment**

**Facility reference number**

Facility 20

**Facility name**

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

0

**Brackish surface water/seawater**

0

**Groundwater - renewable**

0

**Groundwater - non-renewable**

0

**Produced/Entrained water**

0

**Third party sources**

9

**Comment**

---

**Facility reference number**

Facility 21

**Facility name**

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

0

**Brackish surface water/seawater**

0

**Groundwater - renewable**

0

**Groundwater - non-renewable**

0

**Produced/Entrained water**

0

**Third party sources**

15

**Comment**

---

**Facility reference number**

Facility 22

**Facility name**

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

0

**Brackish surface water/seawater**

0

**Groundwater - renewable**

0

**Groundwater - non-renewable**

0

**Produced/Entrained water**

0

**Third party sources**

5

**Comment**

---

**Facility reference number**

Facility 23

**Facility name**

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

0

**Brackish surface water/seawater**

0

**Groundwater - renewable**



0

**Groundwater - non-renewable**

0

**Produced/Entrained water**

0

**Third party sources**

41

**Comment**

---

**Facility reference number**

Facility 24

**Facility name**

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

0

**Brackish surface water/seawater**

0

**Groundwater - renewable**

0

**Groundwater - non-renewable**

0

**Produced/Entrained water**

0

**Third party sources**

11

**Comment**

---

**Facility reference number**

Facility 25

**Facility name**

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

0

**Brackish surface water/seawater**

0

**Groundwater - renewable**

0

**Groundwater - non-renewable**

0

**Produced/Entrained water**

0

**Third party sources**

2

**Comment**

## W5.1b

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

---

**Facility reference number**

Facility 1

**Facility name**

**Fresh surface water**

0

**Brackish surface water/Seawater**

0

**Groundwater**

0

**Third party destinations**

27

**Comment**

---

**Facility reference number**

Facility 2

**Facility name**

**Fresh surface water**

0

**Brackish surface water/Seawater**

0

**Groundwater**

0

**Third party destinations**

60

**Comment**

---

**Facility reference number**

Facility 3

**Facility name**

**Fresh surface water**

0

**Brackish surface water/Seawater**

0

**Groundwater**

0

**Third party destinations**

25

**Comment**

---

**Facility reference number**

Facility 4

**Facility name**

**Fresh surface water**

0

**Brackish surface water/Seawater**

0

**Groundwater**

0

**Third party destinations**

3

**Comment**

---

**Facility reference number**

Facility 5

**Facility name**

**Fresh surface water**

0

**Brackish surface water/Seawater**

0

**Groundwater**

0

**Third party destinations**

16

**Comment**

---

**Facility reference number**

Facility 6

**Facility name**

**Fresh surface water**

0

**Brackish surface water/Seawater**

0

**Groundwater**

0

**Third party destinations**

2

**Comment**

---

**Facility reference number**

Facility 7

**Facility name**

**Fresh surface water**

0

**Brackish surface water/Seawater**

0

**Groundwater**

0

**Third party destinations**

3

**Comment**

---

**Facility reference number**

Facility 8

**Facility name**

**Fresh surface water**

0

**Brackish surface water/Seawater**

0

**Groundwater**

0

**Third party destinations**

12

**Comment**

---

**Facility reference number**

Facility 9

**Facility name**



**Fresh surface water**

0

**Brackish surface water/Seawater**

0

**Groundwater**

0

**Third party destinations**

41

**Comment**

---

**Facility reference number**

Facility 10

**Facility name**

**Fresh surface water**

0

**Brackish surface water/Seawater**

0

**Groundwater**

0

**Third party destinations**

38

**Comment**

---

**Facility reference number**

Facility 11

**Facility name**

**Fresh surface water**

0

**Brackish surface water/Seawater**

0

**Groundwater**

0

**Third party destinations**

22

**Comment**

---

**Facility reference number**

Facility 12

**Facility name**

**Fresh surface water**

0

**Brackish surface water/Seawater**

0

**Groundwater**

0

**Third party destinations**

21

**Comment**

---

**Facility reference number**

Facility 13

**Facility name**

**Fresh surface water**

0

**Brackish surface water/Seawater**

0

**Groundwater**

0

**Third party destinations**

53

**Comment**

---

**Facility reference number**

Facility 14

**Facility name**

**Fresh surface water**

0

**Brackish surface water/Seawater**

0

**Groundwater**

0

**Third party destinations**

2

**Comment**

**Facility reference number**

Facility 15

**Facility name**

**Fresh surface water**

0

**Brackish surface water/Seawater**

0

**Groundwater**

0

**Third party destinations**

8

**Comment**

---

**Facility reference number**

Facility 16

**Facility name**

**Fresh surface water**

0

**Brackish surface water/Seawater**

0

**Groundwater**

0

**Third party destinations**

20

**Comment**

---

**Facility reference number**

Facility 17

**Facility name**

**Fresh surface water**

0

**Brackish surface water/Seawater**

0

**Groundwater**

0

**Third party destinations**

14

**Comment**

---

**Facility reference number**

Facility 18

**Facility name**

**Fresh surface water**

0

**Brackish surface water/Seawater**

0

**Groundwater**

0

**Third party destinations**

24

**Comment**

---

**Facility reference number**

Facility 19

**Facility name**

**Fresh surface water**

0

**Brackish surface water/Seawater**

0

**Groundwater**

0

**Third party destinations**

38

**Comment**

---

**Facility reference number**

Facility 20

**Facility name**

**Fresh surface water**

0

**Brackish surface water/Seawater**

0

**Groundwater**

0

**Third party destinations**

7

**Comment**



---

**Facility reference number**

Facility 21

**Facility name**

**Fresh surface water**

0

**Brackish surface water/Seawater**

0

**Groundwater**

0

**Third party destinations**

15

**Comment**

---

**Facility reference number**

Facility 22

**Facility name**

**Fresh surface water**

0

**Brackish surface water/Seawater**

0

**Groundwater**

0

**Third party destinations**

5

**Comment**

---

**Facility reference number**

Facility 23

**Facility name**

**Fresh surface water**

0

**Brackish surface water/Seawater**

0

**Groundwater**

0

**Third party destinations**

41

**Comment**

---

**Facility reference number**

Facility 24

**Facility name**

**Fresh surface water**

0

**Brackish surface water/Seawater**

0

**Groundwater**

0

**Third party destinations**

11

**Comment**

---

**Facility reference number**

Facility 25

**Facility name**

**Fresh surface water**

0

**Brackish surface water/Seawater**

0

**Groundwater**

0

**Third party destinations**

2

**Comment**

## W5.1c

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

---

**Facility reference number**

Facility 1

**Facility name**

**% recycled or reused**

Not relevant

**Comparison with previous reporting year**

About the same

**Please explain**

Water reuse and recycling is not relevant at this facility because no system is installed at this time. We do not anticipate installing a system in the future.

---

**Facility reference number**

Facility 2

**Facility name**

**% recycled or reused**

Not relevant

**Comparison with previous reporting year**

About the same

**Please explain**

Water reuse and recycling is not relevant at this facility because no system is installed at this time. We do not anticipate installing a system in the future.

---

**Facility reference number**

Facility 3

**Facility name**

**% recycled or reused**

Not relevant

**Comparison with previous reporting year**

About the same

**Please explain**

Water reuse and recycling is not relevant at this facility because no system is installed at this time. We do not anticipate installing a system in the future.

---

**Facility reference number**

Facility 4

**Facility name**

**% recycled or reused**

Not relevant

**Comparison with previous reporting year**

About the same

**Please explain**

Water reuse and recycling is not relevant at this facility because no system is installed at this time. We do not anticipate installing a system in the future.

---

**Facility reference number**

Facility 5

**Facility name**

**% recycled or reused**

Not relevant

**Comparison with previous reporting year**

About the same

**Please explain**

Water reuse and recycling is not relevant at this facility because no system is installed at this time. We do not anticipate installing a system in the future.

---

**Facility reference number**

Facility 6

**Facility name**

**% recycled or reused**

Not relevant

**Comparison with previous reporting year**

About the same

**Please explain**

Water reuse and recycling is not relevant at this facility because no system is installed at this time. We do not anticipate installing a system in the future.

**Facility reference number**

Facility 7

**Facility name**

**% recycled or reused**

Not relevant

**Comparison with previous reporting year**

About the same

**Please explain**

Water reuse and recycling is not relevant at this facility because no system is installed at this time. We do not anticipate installing a system in the future.

---

**Facility reference number**

Facility 8

**Facility name**

**% recycled or reused**

Not relevant

**Comparison with previous reporting year**

About the same

**Please explain**

Water reuse and recycling is not relevant at this facility because no system is installed at this time. We do not anticipate installing a system in the future.



---

**Facility reference number**

Facility 9

**Facility name**

**% recycled or reused**

Not relevant

**Comparison with previous reporting year**

About the same

**Please explain**

Water reuse and recycling is not relevant at this facility because no system is installed at this time. We do not anticipate installing a system in the future.

---

**Facility reference number**

Facility 10

**Facility name**

**% recycled or reused**

Not relevant

**Comparison with previous reporting year**

About the same

**Please explain**

Water reuse and recycling is not relevant at this facility because no system is installed at this time. We do not anticipate installing a system in the future.

---

**Facility reference number**

Facility 11

**Facility name**

**% recycled or reused**

Not relevant

**Comparison with previous reporting year**

About the same

**Please explain**

Water reuse and recycling is not relevant at this facility because no system is installed at this time. We do not anticipate installing a system in the future.

---

**Facility reference number**

Facility 12

**Facility name**

**% recycled or reused**

Not relevant

**Comparison with previous reporting year**

About the same

**Please explain**

Water reuse and recycling is not relevant at this facility because no system is installed at this time. We do not anticipate installing a system in the future.

---

**Facility reference number**

Facility 13

**Facility name**

**% recycled or reused**

Not relevant

**Comparison with previous reporting year**

About the same

**Please explain**

Water reuse and recycling is not relevant at this facility because no system is installed at this time. We do not anticipate installing a system in the future.

---

**Facility reference number**

Facility 14

**Facility name**

**% recycled or reused**

Not relevant

**Comparison with previous reporting year**

About the same

**Please explain**

Water reuse and recycling is not relevant at this facility because no system is installed at this time. We do not anticipate installing a system in the future.

---

**Facility reference number**

Facility 15

**Facility name**

**% recycled or reused**

Not relevant

**Comparison with previous reporting year**

About the same

**Please explain**

Water reuse and recycling is not relevant at this facility because no system is installed at this time. We do not anticipate installing a system in the future.

---

**Facility reference number**

Facility 16

**Facility name**

**% recycled or reused**

Not relevant

**Comparison with previous reporting year**

About the same

**Please explain**

Water reuse and recycling is not relevant at this facility because no system is installed at this time. We do not anticipate installing a system in the future.

---

**Facility reference number**

Facility 17

**Facility name**

**% recycled or reused**

Not relevant

**Comparison with previous reporting year**

About the same

**Please explain**

Water reuse and recycling is not relevant at this facility because no system is installed at this time. We do not anticipate installing a system in the future.

---

**Facility reference number**

Facility 18

**Facility name**

**% recycled or reused**

Not relevant

**Comparison with previous reporting year**

About the same

**Please explain**

Water reuse and recycling is not relevant at this facility because no system is installed at this time. We do not anticipate installing a system in the future.

---

**Facility reference number**

Facility 19

**Facility name**

**% recycled or reused**

Not relevant

**Comparison with previous reporting year**

About the same

**Please explain**

Water reuse and recycling is not relevant at this facility because no system is installed at this time. We do not anticipate installing a system in the future.

---

**Facility reference number**

Facility 20

**Facility name**

**% recycled or reused**

Not relevant

**Comparison with previous reporting year**

About the same

**Please explain**

Water reuse and recycling is not relevant at this facility because no system is installed at this time. We do not anticipate installing a system in the future.

---

**Facility reference number**

Facility 21

**Facility name**

**% recycled or reused**

Not relevant

**Comparison with previous reporting year**

About the same

**Please explain**

Water reuse and recycling is not relevant at this facility because no system is installed at this time. We do not anticipate installing a system in the future.

---

**Facility reference number**

Facility 22

**Facility name**

**% recycled or reused**

Not relevant

**Comparison with previous reporting year**

About the same

**Please explain**

Water reuse and recycling is not relevant at this facility because no system is installed at this time. We do not anticipate installing a system in the future.

---

**Facility reference number**

Facility 23

**Facility name**

**% recycled or reused**

Not relevant

**Comparison with previous reporting year**



About the same

**Please explain**

Water reuse and recycling is not relevant at this facility because no system is installed at this time. We do not anticipate installing a system in the future.

---

**Facility reference number**

Facility 24

**Facility name**

**% recycled or reused**

Not relevant

**Comparison with previous reporting year**

About the same

**Please explain**

Water reuse and recycling is not relevant at this facility because no system is installed at this time. We do not anticipate installing a system in the future.

---

**Facility reference number**

Facility 25

**Facility name**

**% recycled or reused**

Not relevant

**Comparison with previous reporting year**

About the same

**Please explain**

Water reuse and recycling is not relevant at this facility because no system is installed at this time. We do not anticipate installing a system in the future.

**W5.1d**

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

**Water withdrawals – total volumes**

**% verified**

76-100

**What standard and methodology was used?**

International Standard on Assurance Engagements (ISAE) 3000 (water withdrawal). See verification statement attached in section W-FI.

**Water withdrawals – volume by source**

**% verified**

Not verified

**What standard and methodology was used?**

This aspect is not verified.

**Water withdrawals – quality**

**% verified**

Not verified

**What standard and methodology was used?**

This aspect is not verified.

**Water discharges – total volumes**

---

**% verified**

Not verified

**What standard and methodology was used?**

This aspect is not verified.

**Water discharges – volume by destination**

---

**% verified**

Not verified

**What standard and methodology was used?**

This aspect is not verified.

**Water discharges – volume by treatment method**

---

**% verified**

Not verified

**What standard and methodology was used?**

This aspect is not verified.

**Water discharge quality – quality by standard effluent parameters**

**% verified**

Not verified

**What standard and methodology was used?**

This aspect is not verified.

**Water discharge quality – temperature**

**% verified**

Not verified

**What standard and methodology was used?**

This aspect is not verified.

**Water consumption – total volume**

**% verified**

Not verified

**What standard and methodology was used?**

This aspect is not verified.

**Water recycled/reused**

**% verified**

76-100

**What standard and methodology was used?**

International Standard on Assurance Engagements (ISAE) 3000 (water withdrawal). See verification statement attached in section W-FI.

## W6. Governance

### W6.1

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

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

### W6.1a

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

	Scope	Content	Please explain
Row 1	Company-wide	Description of business dependency on water Description of business impact on water Description of water-related performance standards for direct operations Description of water-related standards for procurement	Bank of America recognizes the importance of water and our aim is to protect this crucial resource for future generations. Our publicly available company-wide water policy includes a variety of components, such as: - Our goal to reduce water withdrawals 45% from 2010-2020; - The vendor code of conduct expects our vendors to measure, reduce and mitigate their environmental impacts; - Our Environmental Management System encourages stringent compliance with applicable environmental laws and recognizes the human right to water, sanitation and hygiene through our Human Rights Commitment; - Our Environmental and Social Risk Policy Framework (ESRPF) identifies the topics of importance to us and our stakeholders. The rationale for choosing this scope is to address water in our operations, supply chain, and the communities in which we operate. Additionally, we feel this scope allows us to work toward our aim of protecting water resources for future generations.

		<p>Reference to international standards and widely-recognized water initiatives</p> <p>Company water targets and goals</p> <p>Commitment to align with public policy initiatives, such as the SDGs</p> <p>Commitments beyond regulatory compliance</p> <p>Commitment to water-related innovation</p> <p>Commitment to stakeholder awareness and education</p> <p>Commitment to water stewardship and/or collective action</p> <p>Acknowledgement of the human right to water and sanitation</p> <p>Recognition of environmental linkages, for example, due to climate change</p> <p>Other, please specify</p> <p>Commitment to employee education</p>	
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## 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
Board-level committee	The Corporate Governance Committee (CGC) of the Board of Directors has ultimate responsibility for overseeing management of climate change-related risks and opportunities. As stated in its Charter, this Committee is responsible for periodically reviewing the company's strategy, policies and practices regarding environmental, social and related governance (ESG) matters that are significant to the company. The board receives updates from the Global ESG Committee, which is the management-level committee responsible for significant ESG activities. Climate change oversight is assigned to the CGC because it is included within the scope of ESG matters that are significant to the company.

**W6.2b**

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

	Frequency that water-related issues are a scheduled agenda item	Governance mechanisms into which water-related issues are integrated	Please explain
Row 1	Scheduled - some meetings	Monitoring implementation and performance Reviewing and guiding major plans of action Reviewing and guiding risk management policies	Other: Monitoring and overseeing progress against goals and targets for addressing water-related issues The Global ESG Committee meets at least four times a year and reports to the Corporate Governance Committee (CGC) of the Board of Directors. The chair of our Global ESG Committee discusses ESG topics with the CGC during scheduled meetings. During 2018, ESG topics were discussed at three of seven scheduled CGC meetings. The discussions

	Reviewing and guiding strategy Reviewing and guiding corporate responsibility strategy Reviewing innovation/R&D priorities Setting performance objectives Other, please specify Monitoring and overseeing (see explain)	included an update on the bank's approach to the Taskforce for Climate Related Financial Disclosure recommendations and proposed updates to our Environmental and Social Risk Policy Framework.  ESG metrics are included in our Executive Management team's performance measurement dashboard. This team comprises all direct reports to the CEO. The metrics include for example progress towards our \$125 billion environmental business goal. The Global Environmental Group which tracks this goal provides a quarterly update on progress that is incorporated into the dashboard by our Corporate Strategy team and included in an update for Board members.
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## W6.3

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

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

Other C-Suite Officer, please specify

Vice Chairman

### **Responsibility**

Both assessing and managing water-related risks and opportunities

### **Frequency of reporting to the board on water-related issues**

Quarterly

### **Please explain**



Our Vice Chairman is the executive management team member with direct responsibility for leading the company's ESG efforts, reports to the chief executive officer and chairs our Global ESG Committee. The Committee is comprised of senior leaders from every business line and support group. The Global ESG Committee meets at least three times a year and reports to the Corporate Governance Committee of the Board of Directors, which ensures that emerging ESG issues are integrated into our core business decisions and are being reviewed and managed at the highest levels of the company.

Responsible Growth: we have added Environmental, Social and Governance (ESG) metrics to our Executive Management team's performance dashboard. These metrics include progress towards our \$125 billion environmental business goal, the value of ESG assets under management and our performance in ESG ratings/rankings. These metrics are tracked quarterly and reported to the Board.

## 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?**

No

## W6.6

**(W6.6) Did your organization include information about its response to water-related risks in its most recent mainstream financial report?**

No, and we have no plans to do so

## 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	16-20	<p>Our Global ESG Committee is responsible for identifying, raising and overseeing our response to emerging ESG risks and opportunities, promoting our adoption of ESG best practices and determining key metrics for ESG success. To help ensure our ESG approach is fully-integrated across our eight lines of business, the Committee is comprised of senior leaders from every business line and support group.</p> <p>The Global Environmental Group (GEG), which is part of the Global Marketing and Corporate Affairs group, operates under the direction of our Global Environmental Executive. The GEG establishes environmental goals for the company – our \$125 billion environmental business commitment, GHG and water use reduction goals, and other goals – and develops strategies and implements initiatives to ensure that resources across the company are mobilized to meet these goals.</p> <p>In 2018, as part of our TCFD work, we partnered with a global climate risk firm to assess the exposure of selected business portfolios to physical climate risks including hurricanes, floods, droughts, tornadoes and wildfires. Phase 1 of the project aims to provide a diagnostic to identify exposed regions and main hazards, through detailed geographic analysis on a consumer mortgage portfolio. The Willis Towers Watson Global Peril Diagnostic model was used to produce visualizations of the portfolio's exposure to eight natural hazard types and quantification of potential financial vulnerability in terms of value at risk .</p>
Strategy for achieving long-term objectives	Yes, water-related issues are integrated	16-20	<p>Our Global ESG Committee is responsible for identifying, raising and overseeing our response to emerging ESG risks and opportunities, promoting our adoption of ESG best practices and determining key metrics for ESG success. To help ensure our ESG approach is fully-integrated across our eight lines of business, the Committee is comprised of senior leaders from every business line and support group.</p> <p>The Global Environmental Group (GEG), which is part of the Global Marketing and Corporate Affairs group, operates under the direction of our Global Environmental Executive. The GEG establishes environmental goals for the company – our \$125 billion environmental business commitment, GHG and water use reduction goals, and other goals – and develops strategies and implements initiatives</p>

			<p>to ensure that resources across the company are mobilized to meet these goals.</p> <p>In 2018, as part of our TCFD work, we partnered with a global climate risk firm to assess the exposure of selected business portfolios to physical climate risks including hurricanes, floods, droughts, tornadoes and wildfires. Phase 1 of the project aims to provide a diagnostic to identify exposed regions and main hazards, through detailed geographic analysis on a consumer mortgage portfolio. The Willis Towers Watson Global Peril Diagnostic model was used to produce visualizations of the portfolio's exposure to eight natural hazard types and quantification of potential financial vulnerability in terms of value at risk .</p>
Financial planning	Yes, water-related issues are integrated	16-20	<p>In 2018, as part of our TCFD work, we partnered with a global climate risk firm to assess the exposure of selected business portfolios to physical climate risks including hurricanes, floods, droughts, tornadoes and wildfires. Phase 1 of the project aims to provide a diagnostic to identify exposed regions and main hazards, through detailed geographic analysis on a consumer mortgage portfolio. The Willis Towers Watson Global Peril Diagnostic model was used to produce visualizations of the portfolio's exposure to eight natural hazard types and quantification of potential financial vulnerability in terms of value at risk. This analysis is ongoing and additional outputs will include interactive geospatial visualizations to inform a view of which assets are most susceptible to climate risk and which hazards are of most concern. A second phase of work will build on the findings from Phase 1 to produce a more detailed quantitative analysis for those areas with the largest value exposed to physical climate risks.</p> <p>By supporting the effective integration of environmental risk management activities across our business and by coordinating our TCFD work, our Global Environmental Group (GEG) is central to our management of this risk.</p>

## 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)**

391

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

0

**Water-related OPEX (+/- % change)**

2

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

0

**Please explain**

In 2017, we implemented 4 water projects, while in 2018 we implemented 10 water projects. We estimate these 2018 projects will result in savings in excess of 10 million gallons.

Water operational expenditure increased 2% from 2017 to 2018. Cost per gallon increased 4% from 2017 to 2018.

## W7.3

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

	Use of climate-related scenario analysis	Comment
Row 1	Yes	

## W7.3a

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

No

## W7.4

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

#### Row 1

#### Does your company use an internal price on water?

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

#### Please explain

We have not considered an internal price on water at this time

## 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	Targets are monitored at the corporate level Goals are monitored at the corporate level	In 2016, we set an aggressive operational goal to reduce water withdrawals 45% by 2020 from a 2010 base year. We set this target because it is important to our company to include a water conservation target in our set of comprehensive environmental operational goals. Throughout our goal-setting process, we consulted a variety of internal and external stakeholders to ensure that our goal was sufficiently aggressive to drive real and significant changes throughout our business. Specifically, we looked at each of our key building types – financial centers, operations and data centers – to determine where we could make reductions. We discovered several opportunities to reduce water, including smart irrigation at financial centers and faucet aerators at retail financial centers and operations sites, and projected water use reductions from these projects.

			<p>Our \$125 billion environmental business initiative includes a range of financial services and products that assist our clients in reducing or avoiding GHG emissions and reducing demands on important natural resources. Since 2013, we have financed nearly \$105 billion of clean energy, energy efficiency, water conservation, sustainable transportation, and other environmentally supportive activities.</p> <p>Our water investments focus on innovative new technologies and infrastructure development, including water purification. We adopted this goal because we believe it is important to support business activities that address climate change and demands on natural resources.</p>
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## 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 withdrawals

### Level

Company-wide

### Primary motivation

Water stewardship

### Description of target

In 2016, we announced an aggressive operational goal to reduce water withdrawals 45% by 2020 from a 2010 base year. This target builds on our prior target of 20% from 2010 to 2015. We set this target because it is important to our company to include a water conservation target in our set of comprehensive environmental operational goals. Throughout our goal-setting process, we consulted a variety of internal and external stakeholders to ensure that our goal was sufficiently aggressive to drive real and significant changes in operation throughout our business.

Specifically, we looked at each of our key building types – retail financial centers, operations and data centers – to determine where we could make reductions. We discovered several opportunities to reduce water, including smart irrigation at retail financial centers and faucet aerators at retail financial centers and operations sites, and projected water use reductions from these projects.

**Quantitative metric**

Absolute reduction in total water withdrawals

**Baseline year**

2010

**Start year**

2016

**Target year**

2020

**% achieved**

94

**Please explain**

**W8.1b**

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

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**Goal**

Other, please specify

Environmental business initiative

**Level**

Company-wide

**Motivation**

Water stewardship

**Description of goal**

Our \$125 billion environmental business initiative includes a range of financial services and products that assist our clients in reducing or avoiding GHG emissions and reducing demands on important natural resources. Since 2013, we have invested nearly \$105 billion in clean energy, energy efficiency, water conservation, sustainable transportation, and other environmentally supportive activities.

Our water investments focus on innovative new technologies and infrastructure development, including water purification. We adopted this goal at the enterprise level because we believe it is important to support business activities that address climate change and demands on natural resources, including water.

We engage with our clients on GHG emissions and climate change strategies in a variety of ways.

Importantly, we are incorporating a discussion of ESG factors into our regular client engagement routines with clients in the energy and power sector. Through this and other engagement with clients, we are driving increased investment in low-carbon technologies/activities and the successful delivery of our \$125 billion environmental business goal. By way of example, we have reached out to numerous commercial, corporate and municipal clients to encourage participation in the growing green bond market, and we have incorporated ESG/Impact Investing into our regular engagement with individual and institutional investor clients to grow that platform.

**Baseline year**

2015

**Start year**

2015

**End year**

2025

**Progress**



The growth of our green bond, ESG investing and overall low carbon business initiatives are measures of success for our client engagement. As an indication of the impact of this engagement, increasing client demand helped us deliver \$17 billion towards our environmental business initiative in 2017. Another measure of success is whether we can come to agreement among the involved parties on appropriate mitigation activities. In 2017 we were the lead bookrunner for NWB Bank's \$500 million Water Bond, which will fund projects by the Dutch Water Authorities that target climate change mitigation and adaptation through waterway management, flood protection, and biodiversity projects.

## W9. Linkages and trade-offs

### W9.1

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

Yes

### W9.1a

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

#### Linkage or tradeoff

Tradeoff

#### Type of linkage/tradeoff

Increased energy use

#### Description of linkage/tradeoff

Water-Cooled Mechanical Systems: We are often confronted with the trade-off between energy/greenhouse gas (GHG) savings and water savings when choosing mechanical systems. For example, water-cooled mechanical systems typically consume less energy, but consume more on-site water. By the same token, air cooled chillers consume less on-site water, but consume more energy.

### Policy or action

While utility costs (energy and water) are considered, reliability often is the determining factor when making choices regarding mechanical systems. At one of our headquarters buildings, we employ an innovative system that allows us to treat and reuse contaminated groundwater. We also harvest rainwater for use in cooling systems at several locations. These management programs allow us to capitalize on the energy efficiency benefits of water-cooled mechanical systems without increasing the use of potable water. The measurement for the impact of this tradeoff on the environment is volume of water. In 2017, we completed the first phase of a switch from water cooled chillers to air cooled chillers, and the project was continued in 2018. We anticipate that this project will save approximately 8.5 million US gallons of water per year at this location.

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### Linkage or tradeoff

Linkage

### Type of linkage/tradeoff

Decreased energy use

### Description of linkage/tradeoff

The energy-water nexus is two-fold: the delivery of water consumes energy, and the production of energy consumes water. We have opportunities to reduce energy consumption through reduced water use, and to reduce water use through reduced energy consumption. Delivery of Water: The quantity of water that we use and the distance that water travels both directly influence the greenhouse gas (GHG) emissions associated with water consumption. As we continue to reduce our water withdrawals, the associated GHG emissions will also decrease.

### Policy or action

One management policy and action is to reduce global water withdrawals. The resulting strategic choice was our goal to reduce global water use by 45% from 2010 to 2020. Thus far, we have reduced our water withdrawals by 42% since 2010, which in turn reduces global GHG emissions that result from the delivery of water. The measurement for the impact of this linkage on the environment is volume of water. From 2017 to 2018, we reduced water withdrawals by over 111,000,000 US gallons.

**Linkage or tradeoff**

Linkage

**Type of linkage/tradeoff**

Decreased GHG emissions

**Description of linkage/tradeoff**

The energy-water nexus is two-fold: the delivery of water consumes energy, and the production of energy consumes water. We have opportunities to reduce energy consumption through reduced water use, and to reduce water use through reduced energy consumption.

Generation of Electricity: The quantity of energy that we use influences the quantity of water that is consumed to generate that electricity. Thus, reducing our energy consumption will result in a reduction in water usage by those producing that energy.

**Policy or action**

One management policy and action is to reduce global energy use. The resulting strategic choice was our goal to reduce our location-based Scope 1 and 2 GHG emissions by 50% from 2010 to 2020. Thus far, we have seen a 52% reduction in Scope 1 and 2 GHG emissions, which was due in part to greatly improved energy efficiency in retail banking centers, office buildings, and operations centers. The measurement for the impact of this linkage on the environment is electricity consumption. From 2016 to 2017, we reduced electricity consumption by over 62,000 MWh.

## W10. Verification

### W10.1

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

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

## W11. Sign off

### W-FI

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

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### W11.1

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

	Job title	Corresponding job category
Row 1	Chief Financial Officer (CFO)	Chief Financial Officer (CFO)