

## Welcome to your CDP Water Security Questionnaire 2021

### W0. Introduction

#### W0.1

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

At Microsoft, our mission is to empower every person and every organization on the planet to achieve more. We enable digital transformation for the era of an intelligent cloud and an intelligent edge. We strive to create local opportunity, growth, and impact in communities around the globe, and we're working to ensure that our technology is creating an inclusive, trusted, and more sustainable world.

Getting ahead of the world's imminent water crisis will require a reduction in the amount of water used to operate economies and societies while ensuring there is sufficient and clean water for all. This will require a transformation in the way water data is collected and managed and the way we build solutions and approaches to water, as well as a concerted effort for all organizations to properly account for and balance their water use.

Microsoft's water stewardship strategy focuses on increasing our understanding of water-related risks and impacts to the business and communities in which we operate. Our approach focuses on improving our water efficiency across operations, collaborating with non-governmental organizations (NGOs) and corporate partners to invest in projects that generate volumetric and ecological benefits in the communities in which we operate, and using our platforms and products to advance innovative solutions to water challenges.

This is part of a broader company sustainability strategy that focuses on using digital technology and data to address the world's most pressing environmental issues, specifically focusing on water, carbon, ecosystems, and waste. We follow our policies and comply with international environmental laws and regulations and the specific local environmental requirements of each country and region where we do business.



## 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	July 1, 2019	June 30, 2020

## W0.3

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

## 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	Vital	Important	Direct use: The primary use for good-quality freshwater in our direct operations is for cooling systems for some offices, labs, and datacenters. Direct use of water is vital (especially for datacenters) to ensure continuous delivery of customer services and to provide drinking water for employees. Our future dependency on good-quality freshwater is likely to decrease because we are piloting water recycling/reuse technologies to reduce water consumption per megawatt in our direct operations. For example, our new Herzliya, Israel campus features water-efficient plumbing fixtures that increase water conservation by 35 percent. Our new Silicon Valley campus will be among the first large office buildings in the world to be certified by a third party as a net zero water facility. Indirect use: The primary use of good-quality freshwater by our suppliers includes process and domestic use. Our lifecycle analysis indicates that water quality is very important for the manufacture of magnets, integrated circuits, printed wiring boards, aluminum, enclosures, fabrics, and packaging. Also, we recognize access to drinking water and sanitation for supplier employees as a human right and require that suppliers provide workers with ready access to clean toilet facilities and potable water as a condition of doing business with Microsoft. We do not anticipate any change in water dependency for indirect use in the future because sufficient freshwater supply will remain an important component of supplier operations and employee wellbeing.
Sufficient amounts of recycled, brackish and/or	Important	Important	Direct use: The primary use for lower quality freshwater in our direct operations is for cooling systems in our datacenters. We use recycled or industrial water where available unless potable water is required (e.g. with adiabatic cooling). We also use lower quality freshwater

<p>produced water available for use</p>		<p>for flush fixtures, cooling, and irrigation for some offices and labs globally. Access to lower quality freshwater is important because it reduces our dependency on limited potable water. For example, our Beijing campus installed a greywater harvesting system in FY20. New campus developments in Herzliya, Puget Sound, Hyderabad, and Silicon Valley will treat greywater and/or harvest rainwater to use for non-potable water such as in flush fixtures, cooling tower makeup, and irrigation. Because we will be increasing our use of these systems, future dependency on recycled water will increase in our direct operations. Indirect use: The primary use of lower quality freshwater by our suppliers includes process use (e.g. surface treatment, cooling processes) and limited domestic use (e.g. toilet flushing, landscaping). Lower quality freshwater use is important because it reduces demand for potable water—an increasingly scarce resource—and increases resiliency against water scarcity. We expect future dependency on lower quality freshwater for our indirect operations and supplier sites to increase because of efforts we are helping drive at those manufacturing supplier sites to implement waste/wastewater recycling practices, thereby increasing supply resiliency and providing significant reputational value in many parts of the world.</p>
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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
<p>Water withdrawals – total volumes</p>	<p>100%</p>	<p>We are reporting water withdrawals for 100 percent of our facilities (including datacenters, offices, labs, retail). Water withdrawals are based on data from utility bills from our largest sites (and other sites with access to water utility data) and, in some cases, estimations. We have a robust estimation methodology for sites that do not report primary data that accounts for square footage (offices), electricity consumption (datacenters), and cooling type (datacenters). We updated this methodology in FY18 to account for varying withdrawal rates of different cooling types at our datacenters. For most other facilities, utility data at individual sites is</p>



		collected monthly. The global water inventory, which includes estimations, is aggregated annually.
Water withdrawals – volumes by source	100%	We are reporting water withdrawals for 100 percent of our facilities (including datacenters, offices, labs, retail). Water withdrawals are based on data from utility bills from our largest sites (and other sites with access to water utility data) and, in some cases, estimations. We have a robust estimation methodology for sites that do not report primary data that accounts for square footage (offices), electricity consumption (datacenters), and cooling type (datacenters). For most other facilities, utility data at individual sites is collected monthly. The global water inventory is aggregated annually. The vast majority of metered withdrawals come from municipal sources. Where water withdrawals are estimated, we assume they come from municipal sources. In FY19 we expanded water data collection to include the source of supply for key facilities.
Water withdrawals quality	1-25	At most of our sites (including datacenters, offices, labs, retail), water quality is monitored at the municipal level. We monitor water withdrawals for quality at the site level where required. For example, we engage a third-party organization in China to annually check bacteria levels and other water quality metrics at water dispensers at our Beijing West, Suzhou, and Shanghai Zizhu campuses (offices and labs) as well as our Shanghai Huaxin, Hangzhou, Nanjing, Chengdu, Chongqing, Shenzhen Comt, Guangzhou, Fuzhou, JiNan, Shenyang, and Wuxi office sites.
Water discharges – total volumes	100%	Most of our sites (including datacenters, offices, labs, retail) do not have discharge meters. Water consumption is low at many of our office sites and so for these sites we know that discharges are close to withdrawals. Where there is water consumption (such as for landscaping, evaporative coolers, cooling towers, settling ponds), we ensure that discharge equals the difference between withdrawals and consumption when we complete our annual water inventory. We use blowdown meters in Beijing to monitor discharge from our HVAC water treatment system. Where discharges are not metered, we estimate them annually as part of our global water inventory aggregation process. We are continuing to confirm our consumption numbers to establish a solid baseline for reporting and internal goal setting.

Water discharges – volumes by destination	100%	Most of our sites (including datacenters, offices, labs, retail) do not have discharge meters. Water consumption is low at many of our office sites; for these, we know that discharges are close to withdrawals. Where there is consumption (such as for landscaping, evaporative coolers, cooling towers, settling ponds) we ensure discharge equals the difference between withdrawals and consumption in our annual water inventory. For most Microsoft-owned sites, discharges go directly to the (non-Microsoft-owned) wastewater treatment plant. Thus, monthly utility invoices are a proxy for discharge volumes by destination (wastewater treatment plants) for sites that we own and operate. Where discharges are not metered, we estimate them annually as part of our global water inventory aggregation process. We are continuing to confirm our consumption numbers to establish a solid baseline for reporting and internal goal setting.
Water discharges – volumes by treatment method	100%	The vast majority of Microsoft water discharges go directly to the wastewater treatment plant. Most of our sites (including datacenters, offices, labs, retail) do not have discharge meters. Water consumption is low at many of our office sites and so for these sites we know that discharges are close to withdrawals. Where there is water consumption (such as for landscaping, evaporative coolers, cooling towers, settling ponds), we ensure that discharge equals the difference between withdrawals and consumption when we complete our annual water inventory. Where discharges are not metered, we estimate them annually as part of our global water inventory aggregation process.
Water discharge quality – by standard effluent parameters	1-25	The majority of our discharges (including from datacenters, offices, labs, retail) are conveyed to municipal treatment plants. Water quality is monitored during process use, and discharge quality is monitored where required. Where it is required, we provide this information to the appropriate reporting agency. Water discharge quality is measured inline daily to monthly, depending on the requirements of each individual site. As part of this reporting exercise, we are identifying gaps in reporting capabilities and will be performing an analysis on what it would cost to add infrastructure to have the ability to report on this in the future.
Water discharge quality – temperature	1-25	Where required by a discharge permit, we monitor the discharge water temperature at specific intervals and timing.



Water consumption – total volume	100%	Most of our sites (including datacenters, offices, labs, retail) do not have discharge meters. For these sites, water consumption is assumed to be 10 percent of withdrawals unless they have landscaping that requires irrigation or a water-based cooling system. Our Beijing office site is an example of where we meter consumption; we use a flow meter to regularly monitor makeup water for the cooling tower system. Where consumption is not metered, we estimate it annually as part of our global water inventory aggregation process.
Water recycled/reused	100%	We measure and monitor reused water at sites that procure recycled water from utilities or that have water recycling capability. At datacenters that use recycled/reused water, meters collect real-time data on usage. At all other facilities, where present, recycled/reused water data is measured. Our Johannesburg office greywater treatment plant (completed FY18) is separately metered to track water reused monthly. Our Silicon Valley office campus will be a net zero water facility; we have established a water budget to quantify the amount of water captured, recycled, and reused onsite. Our Herzliya office campus, located in a water-stressed region, will use water collected from air conditioners exclusively to water plants onsite. In FY20, our Beijing campus installed a greywater treatment system that allows the recycling of HVAC condensed water, followed by water purification, to increase water reuse in this water-stressed region.
The provision of fully-functioning, safely managed WASH services to all workers	100%	We provide fully functioning water, sanitation, and hygiene (WASH) services for all workers at all our sites (including datacenters, offices, labs, retail). WASH services are cleaned and monitored as part of daily custodial services. In FY19, by joining the United Nations (UN) Global Compact CEO Water Mandate, we formally acknowledged that access to safe water and sanitation is a human right and we have expressed a formal commitment to safely managed water access and sanitation in our offices and datacenters, in alignment with UN Sustainable Development Goal (SDG) 6 (ensure availability and sustainable management of water and sanitation for all). At some sites, we undertake water quality testing at the site level; e.g. we engage a third party in China to annually check bacteria levels and other water quality metrics at water dispensers at our Beijing West, Suzhou, and Shanghai Zizhu campuses (offices and labs) as well as multiple office sites.

## 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	7,618.09	About the same	Water withdrawals are based on data from utility bills from our largest sites and other sites with access to water utility data (including datacenters, offices, and labs); in cases where metered data is unavailable, we use estimations. We have a robust estimation methodology for sites that do not report primary data that accounts for square footage (offices), electricity consumption (datacenters), and cooling type (datacenters). Even so, there exists uncertainty of +/-10 percent in the data due to data gaps, metering/measuring constraints, and extrapolation methodology. In FY20, our total measured water withdrawals were approximately the same as reported for the previous reporting period—a change of less than +/- 10 percent—because, although our business has continued to grow, this growth has been balanced by increased water efficiency. As we reach limits of water efficiency, we anticipate withdrawals to increase along with our business over the next several years.
Total discharges	3,651.45	About the same	Most of our sites (including datacenters, offices, labs, and retail) do not have discharge meters. In most cases, water consumption is low, and so for these sites we know that discharges are close to withdrawals. We estimate discharges at each site by subtracting metered/estimated consumption from total withdrawals. There exists uncertainty of +/-20 percent in the data due to data gaps, metering/measuring constraints, and extrapolation methodology. Because total withdrawals and total consumption were approximately the same as reported for the previous reporting period, our total estimated water discharges are about the same as the previous reporting period—a change of less than +/-10 percent. We anticipate an increase in proportion to withdrawals as our business grows over the next several years.





Total consumption	3,966.64	About the same	Most of our sites (including datacenters, offices, labs, and retail) do not have discharge meters or consumption meters. Therefore, we must estimate consumption for nearly all of our sites. For office facilities, water consumption is estimated as a percentage of withdrawals, based on whether water is used for irrigation at the site. For datacenters, water consumption is estimated as a percentage of withdrawals based on the cooling type of the facility and region. There exists uncertainty of +/-20 percent in the data due to data gaps, metering/measuring constraints, and extrapolation methodology. In FY20, our total measured water consumption was approximately the same as reported for the previous reporting period—a change of less than +/- 10 percent—because, although our business has continued to grow, this growth has been balanced by increased water efficiency. As we reach limits of water efficiency, we anticipate an increase in water consumption in proportion to withdrawals as our business grows over the next several years. We are working to increase water reductions across our operations in support of our 2030 water positive goal (set in FY21).
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## W1.2d

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

	Withdrawals are from areas with water stress	% withdrawn from areas with water stress	Comparison with previous reporting year	Identification tool	Please explain
Row 1	Yes	11-25	About the same	WRI Aqueduct	Each year, we conduct annual water risk assessments that consider the current and near-future water needs for our business facilities (including offices and labs) and datacenters using the WRI Aqueduct tool because it reveals a broad spectrum of key water-related risks at the level of individual river basins. We consider sites to be in a water-stressed area if they sit in a water basin rated as having at least "High (40-80%)" baseline water stress according to the WRI Aqueduct tool. There was a less than 10 percent change in this value from the previous reporting period because our site portfolio and proportion of withdrawals from each location



					<p>remained consistent. We concluded that we do not have substantive risk at the enterprise level even though we do have several important sites that are being monitored for potential water availability risks in the future and we are currently taking proactive steps to manage those risks. We are integrating the results into our siting and operational planning to mitigate the identified risk. Our risk assessment is based on the location of our facilities, which does not always align with where water is procured from by the local water utility. In FY19, we expanded water data collection to include the source of supply (for example, specific river basin or groundwater source from which the water utilities procure water) for key facilities. In FY19, we also adopted a water replenishment target in which we committed to balance our water consumption in our operations by replenishing water in water-stressed basins where we operate by 2030, and we invested in several replenishment projects in the United States and India as part of this commitment. In FY20, we increased our replenishment project portfolio by nearly 700 percent over FY19 (an increase of 1,621,629 m3); to date, we have invested in nearly 20 replenishment projects in six states and two countries through partnerships with organizations such as The Nature Conservancy, Trout Unlimited, and Ducks Unlimited. In FY21, we committed to becoming water positive by 2030, by reducing the water intensity of our direct operations, replenishing more water than we consume globally in water-stressed regions where we operate, and enabling access to sustainable, safe drinking water and sanitation services for more than 1.5 million people.</p>
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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	89.11	Lower	This source is relevant to Microsoft as we capture rainwater at three of our office locations. These withdrawal volumes are metered and decreased in FY20 from the previous year as a result of local reductions in rainfall—a decrease of greater than 10 but less than 50 percent (depending on annual rainfall). We expect future withdrawal volumes from fresh surface water to remain roughly the same.
Brackish surface water/Seawater	Not relevant			This source is not relevant to Microsoft as we do not withdraw any brackish surface water/seawater. We expect future withdrawal volumes from brackish surface water/seawater to remain unchanged (that is, we do not anticipate withdrawing from this source in the future).
Groundwater – renewable	Relevant	15.64	Much lower	This source is relevant to Microsoft as we withdraw groundwater at several of our office campuses, such as Bengaluru and Hyderabad. These withdrawal volumes are metered and decreased in FY20 from the previous year—a decrease of greater than 50 percent—because of a decrease in water withdrawals at some of our Hyderabad sites. We expect future withdrawal volumes from renewable groundwater to remain relatively flat.
Groundwater – non-renewable	Not relevant			This source is not relevant to Microsoft as we do not withdraw any nonrenewable groundwater. We expect future withdrawal volumes from nonrenewable groundwater to remain unchanged (that is, we do not anticipate withdrawing from this source in the future).
Produced/Entrained water	Relevant	428.11	Higher	This source is relevant to Microsoft because municipally treated wastewater is used for cooling at some of our datacenters and for landscape irrigation at several of our office campus locations. These withdrawal volumes are metered and increased in FY20 from the



				previous year—an increase of greater than 10 percent but less than 50 percent. We expect future withdrawal volumes from produced/process water to increase as more sites start to use it.
Third party sources	Relevant	7,085.23	About the same	This source is relevant to Microsoft because most of our water withdrawals (including for datacenters, offices, labs, and retail) come from the local municipal supply. These water withdrawals are based on data from utility bills from our largest sites (and other sites with access to water utility data); in cases where metered data is unavailable, we use estimations. We have a robust estimation methodology for sites that do not report primary data that accounts for square footage (offices), electricity consumption (datacenters), and cooling type (datacenters). In FY20, our total measured water withdrawals were approximately the same as reported for the previous reporting period—a change of less than +/- 10 percent—because, although our business has continued to grow, this growth has been balanced by our increased focus on water efficiency. As we reach limits of water efficiency, we anticipate withdrawals to increase along with our business growth over the next several 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			This destination is not relevant to Microsoft as we do not discharge any water to fresh surface water sources. We expect future discharge volumes to fresh surface



				water to remain unchanged (that is, we do not anticipate discharging to this source in the future).
Brackish surface water/seawater	Not relevant			This destination is not relevant to Microsoft as we do not discharge any water to brackish surface water/seawater sources. We expect future discharge volumes to brackish surface water/seawater to remain unchanged (that is, we do not anticipate discharging to this source in the future).
Groundwater	Not relevant			This destination is not relevant to Microsoft as we do not discharge any water to groundwater sources. We expect future discharge volumes to groundwater to remain unchanged (that is, we do not anticipate discharging to this source in the future).
Third-party destinations	Relevant	3,651.45	About the same	This destination is relevant to Microsoft, as the water that is not consumed at our sites (including datacenters, offices, labs, and retail) is discharged to local municipal treatment plants (we are unaware if municipally treated water is recycled for further use). Most of our sites do not have discharge meters. In most cases, water consumption is low, and so for these sites we know that discharges are close to withdrawals. We estimate discharges at each site by subtracting metered/estimated consumption from total withdrawals. Our total estimated water discharges in FY20 were approximately the same as reported for the previous reporting period—a change of less than +/-10 percent—because, although our business has continued to grow, this growth has been balanced by increased water efficiency. As we reach limits of water efficiency, we anticipate an increase in water discharge volumes in proportion to withdrawals as our business grows over the next several years.

## W1.2j

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

	Relevance of treatment level to discharge	Volume (megaliters/year)	Comparison of treated volume with previous reporting year	% of your sites/facilities/operations this volume applies to	Please explain
Tertiary treatment	Not relevant				Tertiary treatment of water is not relevant to our operations because we do not have onsite water recycling and treatment plants, as we are not required to conduct onsite tertiary treatment of our discharge by any environmental regulation or standard.
Secondary treatment	Not relevant				Secondary treatment of water is not relevant to our operations because we do not have onsite water recycling and treatment plants, as we are not required to conduct onsite secondary treatment of our discharge by any environmental regulation or standard.
Primary treatment only	Not relevant				Primary treatment of water is not relevant to our operations because we do not have onsite water recycling and treatment plants, as we are not required to conduct onsite primary treatment of our discharge by any environmental regulation or standard.
Discharge to the natural environment without treatment	Not relevant				Discharge to the natural environment without treatment is not relevant to our operations as we discharge 100 percent of our untreated discharge to local municipal treatment plants.

Discharge to a third party without treatment	Relevant	3,651.45	About the same	100%	<p>Discharge to a third party without treatment is relevant because the water that is not consumed at Microsoft sites (including datacenters, offices, labs, and retail) is discharged to local municipal treatment plants (we are unaware if municipally treated water is recycled for further use). We estimate discharges at each site by subtracting metered/estimated consumption from total withdrawals. Our total estimated water discharges in FY20 were approximately the same as reported for the previous reporting period—a change of less than +/-10 percent—because, although our business has continued to grow, this growth has been balanced by increased water efficiency. As we reach limits of water efficiency, we anticipate an increase in water discharge volumes in proportion to withdrawals as our business grows over the next several years.</p>
Other	Not relevant				<p>Other treatment of water is not relevant to our operations. We do not have onsite water recycling and treatment plants, as we are not required to conduct onsite treatment of our discharge by any environmental regulation or standard, and we discharge 100 percent of our untreated discharge to local municipal treatment plants.</p>

### 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

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**% of suppliers by number**

Less than 1%

**% of total procurement spend**

26-50

**Rationale for this coverage**

We focus engagements on our top suppliers in spend because they represent our areas of greatest reliance and potential supplier carbon footprint and water usage. In FY20, we participated in the CDP Supply Chain water security program, requesting responses from 261 suppliers representing 98 percent of direct/manufacturing supplier spend and tier 1 datacenter server suppliers, 161 of which responded. Suppliers are incentivized to report through supplier contracts, which require conformance with sustainability standards. We also encourage direct/manufacturing supplier participation through our sourcing managers.

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

We request information from these suppliers on water accounting, impacts, and risks. We use this data to understand supplier water usage and risk exposure (for example, for direct/manufacturing suppliers, it helps us identify and better understand carbon emission and water usage hot spots, indicators of which suppliers we should partner with first to reduce manufacturing carbon emissions and water usage). We measure success by CDP response rate. Our preliminary target for hardware manufacturing suppliers is a 100 percent response rate from requested suppliers representing 95 percent of direct/manufacturing supplier spend.

**Comment**



## W1.4b

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

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#### Type of engagement

Onboarding & compliance

#### Details of engagement

Requirement to adhere to our code of conduct regarding water stewardship and management

#### % of suppliers by number

Less than 1%

#### % of total procurement spend

1-25

#### Rationale for the coverage of your engagement

We maintain a supplier audit program for our hardware and packaging suppliers as part of our onboarding and compliance process. Water management requirements are included in the audit program. All directly contracted hardware manufacturing suppliers are included in the audit program because we consider compliance with environmental, health and safety, and labor and ethics (EHS&LE) policies important to our business. Microsoft is committed to responsible sourcing, and we expect our suppliers to adhere to the same standards of conduct and behavior that we expect from our own organization. We start with our directly contracted suppliers, who are expected to then cascade these expectations and requirements to their own supply chain.

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

For our hardware and packaging suppliers, water management requirements in our supplier audit program mainly include water monitoring, water conservation, wastewater treatment, and water contamination prevention. For example, suppliers are required to implement a water management program that documents, characterizes, and monitors water sources, use, and discharge; seeks opportunities to conserve water; and controls channels of contamination. The audit program gives us a clear understanding of suppliers' compliance status and, as a tool, drives closure of findings identified at suppliers' sites. We measure the success of the water management portion of the audit program by assessing

the quality of the audits and auditors, mitigating relevant compliance risks, and ultimately driving suppliers' improvement in water protection and conservation.

## **Comment**

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### **Type of engagement**

Innovation & collaboration

### **Details of engagement**

Educate suppliers about water stewardship and collaboration

Other, please specify

Provide expertise and support to improve water efficiency

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

Less than 1%

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

Less than 1%

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

We have an onsite waste coolant treatment and recycling project as part of a waste reduction program. Water, separated from the treatment processes, can be recycled in production. The project was piloted at one direct/manufacturing supplier's factory from mid-FY17, with sustained operation in FY18, FY19, and FY20. We intend to introduce the project to a broader scope of suppliers that generate significant amounts of waste coolant in the coming years.

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

For the supplier included in this engagement, this project helps to ease the pressure of water scarcity while reducing waste. We measure the success of this project mainly by water recycling and waste reduction rates, based on the proper operation of the onsite treatment systems.

Based on the actual practices at the pilot factory, the wastewater reduction rate reached 77 percent in FY20. As the next step, we expect to involve more suppliers in this project, which will have a positive impact on our supply chain.

## **Comment**

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### **Type of engagement**

Other

### **Details of engagement**

Other, please specify

Provide expertise and support to improve water recovery

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

Less than 1%

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

1-25

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

We have monitored the water consumption of selected top tier 1 direct/manufacturing suppliers since approximately 2016. These suppliers were selected as they represent the majority of our spend from our manufacturing supply chain. Currently, only domestic water consumption is included in the monitoring as process water consumption is very limited at these suppliers' sites.

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

This program enables us to track and understand the water management practices of the participating direct/manufacturing suppliers, which are major actors in our Devices supply chain. We collect relevant information from these suppliers once every month. The information is then compiled and analyzed to identify any indications of significant changes in water consumption that may require our attention, based on our understanding of the operations at these supplier sites. We measure the success of this work by the accuracy and sufficiency of information provided by the suppliers and the establishment and continuous improvement of water consumption information tracking and reporting

methods/systems. This work gives us a clear understanding of the water consumption amount and trend associated with our production lines at these supplier sites while enabling us to identify potential opportunities to reduce water consumption in our supply chain.

### 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?**

Partners we engage with: Customers, business partners, other stakeholders

Method/strategy of engagement: We activate multisector partnerships to advance solutions addressing water-related challenges; develop new cloud-based solutions; and enable people and organizations to quantify and address water-related risks. Our overarching water stewardship strategy guides our engagement process, focusing on (1) understanding our basin water risks in places where we operate; (2) implementing our water positive commitment; (3) scaling our water positive commitment by engaging partners, customers, and stakeholders and participating in collaborative platforms; and (4) advancing the digital transformation of water through innovative technology solutions to shared water challenges for our customers and society. We prioritize engagements that accelerate water digitization, use Microsoft platforms and AI capabilities, or help us implement our water goals. For example, we partnered with two organizations—The Freshwater Trust and Upstream Tech—to deploy a watershed assessment tool called Basin Scout Platform on Azure and configure it for the Sacramento Valley to identify potential replenishment projects that we, and potentially other companies, could support to meet our replenishment commitment. Through our AI for Earth program, we are also supporting startups and non-profits capitalizing on the cloud, data, and AI to accelerate the pace of innovation in water.

Measurement: Success is measured by our ability to quantify our own operational water risks, the number of replenishment projects we support, and the anticipated volumetric benefits of those projects. Through AI for Earth, individuals and organizations gain access to cloud and AI computing resources to create data-driven environmental solutions. Success is measured by the number of grants awarded and applications developed, as well as the impact of AI for Earth-supported projects.

## 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 other company-wide risk assessment system

**Frequency of assessment**

More than once a year

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

More than 6 years

**Type of tools and methods used**

Tools on the market  
Enterprise Risk Management  
International methodologies  
Databases  
Other

**Tools and methods used**

WRI Aqueduct  
IPCC Climate Change Projections  
Regional government databases  
Internal company methods  
External consultants  
Other, please specify  
Regulatory restrictions; ISO 14001 significant aspect and impacts review process

**Comment**

Multiple business groups across Microsoft, including our corporate Environmental Sustainability (ES) team, perform risk assessments using these tools (with varying frequencies; for example, ISO 14001 assessments are conducted annually). The ES team shares the results biannually with our Enterprise Risk Management team, which identifies, assesses, and prioritizes risks and, through regular reporting and discussion, assists senior management and the Board with governance of risk. We are also beginning to explore the use of artificial intelligence (AI) and sentiment analysis to expand water risk characterization beyond conventional means.

## Supply chain

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### Coverage

Full

### Risk assessment procedure

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

### Frequency of assessment

More than once a year

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

More than 6 years

### Type of tools and methods used

International methodologies

Databases

Other

### Tools and methods used

IPCC Climate Change Projections

Regional government databases

Internal company methods

External consultants

Other, please specify

Federal Emergency Management Agency (FEMA) data; Proprietary modeled flood data; CDP Supply Chain Program

### Comment

Our hardware manufacturing supplier audit program audits suppliers annually, biannually, or triennially based on supplier risk. The CDP Supply Chain program runs annually. Other supply chain risk assessments are completed as required.

## Other stages of the value chain

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**Coverage**

Full

**Risk assessment procedure**

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

**Frequency of assessment**

Not defined

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

More than 6 years

**Type of tools and methods used**

Other

**Tools and methods used**

Internal company methods

Other, please specify

Community listening sessions and surveys

**Comment**

Other risk assessments for other stages of the value chain are completed as required. Community listening sessions and surveys to document perceptions (negative or positive) with respect to Microsoft facilities in their communities inform program decisions to contribute to social license to operate, prosperity, and workforce availability (as needed).

**W3.3b**

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

	Relevance & inclusion	Please explain
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<p>Water availability at a basin/catchment level</p>	<p>Relevant, always included</p>	<p>Water availability at a basin/catchment level is relevant, always included because when selecting locations, access to freshwater or industrial supply is one of our criteria. Tools: We use WRI Aqueduct to assess the issue for existing offices, labs and datacenters. For datacenter projects, water availability is also assessed through regular third-party risk assessments. We also engage with utilities (water/sewer/power/fiber); capacity and quality are vetted and service agreements put in place prior to completing the transaction. For planned capacity increases, we obtain commitments from utilities indicating that they can provide for future demand (often subject to expansion of existing infrastructure) (internal company methods). Assessment: In FY20, we conducted a quantitative and qualitative climate scenario analysis aligned with the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD), using two scenarios: 1) business-as-usual, where the world warms over 4°C above pre-industrial temperatures and 2) 2°C aligned. We screened our top 400 facilities and assessed the financial impact of physical and transition climate risks on our operations and business continuity, including the potential for water stress at a local level. We concluded that we do not have substantive current/future risk at the enterprise level, although we do have several important sites being monitored for potential water availability risks in the future, and we are currently taking proactive steps to manage those risks. In FY20/FY21, we have been conducting facility-level climate risk, resilience and adaptive capacity site assessments to validate our scenario analysis results and enhance our understanding of our adaptive capacity on the ground to prepare for these climate risks. Water availability at the basin level is particularly relevant to our corporate Environmental Sustainability team, which has invested in nearly 20 projects through a replenishment program focused on ~40 highly stressed water basins where we have operations. For example, we are supporting the National Forest Foundation in decommissioning seldom-used roads to support wetland and riparian improvement, water replenishment and sediment reduction in the Pole Mountain area near Cheyenne, Wyoming (one of our datacenter regions). As of 2020, over 6 acres of national forest have been restored, helping to increase water yield, decrease erosion and protect the quality of Cheyenne’s drinking water.</p>
<p>Water quality at a basin/catchment level</p>	<p>Relevant, always included</p>	<p>Water quality at a basin/catchment level is relevant, always included, because when selecting locations, access to freshwater or industrial supply is a basic and fundamental criterion. Tools: For our existing locations, we use the WRI Aqueduct tool to assess the issue for our offices, labs, and datacenters. For our datacenter projects, we engage with utilities (water/sewer/power/fiber) prior to concluding a transaction.</p>

		<p>Withdrawal/discharge capacity and water quality are vetted and service agreements put in place prior to completing the transaction. For planned capacity increases, we obtain commitments from the utilities indicating that they can support future demand (tool: internal company methods). Assessment: If those conditions change, we reevaluate our impact at the basin level and how we can address the issue. For example, we have acted upon improving the quality of our discharge and that of other industrial users by providing significant additional infrastructure to meet regulatory quality requirements. We also engage communities and local stakeholders in high-priority regions facing water risks. For example, we are supporting the National Audubon Society to restore and enhance riparian grassland, wetland, and woodland habitats along the Red River in Fargo, North Dakota and Moorhead, Minnesota; the restoration of 44 acres of wetland and prairie habitat will improve water storage and quality and enhance urban wildlife habitat. In FY20, Microsoft also organized a river cleanup of the Gila River through Rio Reimagined and coordinated 59 volunteers that removed 85 pounds of trash over 5 miles of river; these projects are designed to produce tangible benefits that are meaningful for the aquatic environment and for the agricultural sector in the area.</p>
<p>Stakeholder conflicts concerning water resources at a basin/catchment level</p>	<p>Relevant, always included</p>	<p>Stakeholder conflicts concerning water are relevant, always included, because if we did not engage with the local communities in the areas of our operations—in particular, in the areas where we operate datacenters, where our presence will have the most impact—the result could be a loss of local goodwill and negative effects on our brand value. Tools: We assess the risk of stakeholder conflicts as applicable for our facilities globally through our corporate Environmental Sustainability governance model; where required, we work with local subsidiaries to conduct more detailed analyses (surveys, focus groups, collaboration with community groups, multi-stakeholder meetings with NGOs and other stakeholders). Assessment: Since our offices and labs are not significant users of water, there is generally no need for further assessment of stakeholder conflicts for these facilities; were an issue to be identified, it would be assessed through this model. For our datacenters, water supply and discharge are preapproved during site selection due diligence processes (internal company methods); we meet with key local representatives to determine the likelihood of future potential issues and site viability. Microsoft engages communities and local stakeholders in high-priority regions facing water risks on an ongoing basis and participates in multi-stakeholder water replenishment programs in a variety of areas. For example, in Quincy, Washington, we installed a water reuse system. Industrial water reuse systems are designed to address growing water</p>

		supply deficiencies in water-stressed areas while avoiding the need to develop additional potable water supplies. In South Africa, we supported the installation of water meters at 46 public hospitals in the Cape Town region. These water meters should provide greater visibility into water consumption patterns and enable alarms to be set for possible leak detection. In addition, when sourcing water replenishment projects, we take into account contextual conditions of the watershed and aim to invest in projects that align with site-specific scientific assessments and have local stakeholder support.
Implications of water on your key commodities/raw materials	Relevant, always included	Implications of water on our key commodities/raw materials are relevant, always included, because direct/manufacturing suppliers' access to freshwater or industrial supply is a basic and fundamental criterion, both to provide adequate working conditions for supplier employees (access to drinking water and sanitation is a human right) and as a critical manufacturing input. Tools and assessment: The effect of our direct/manufacturing suppliers' operations on water sources is covered by our Devices team's supply chain audit program and CDP reporting through the CDP Supply Chain program. For key raw materials in our supply chain, we also assess the current and future risk of impact on water sources at the materials' extraction sites (using an internal company method). In addition, in FY18, we assessed the vulnerability of key Microsoft suppliers to the physical impacts of climate change; this assessment included a scenario analysis based on the IPCC RCP 8.5 projection out to 2030 (tools: FEMA flood data, IPCC data on future precipitation and sea level rise, WRI Aqueduct tool, downscaled sea level rise estimates provided by regional and local government authorities, and proprietary flood modeling products). For all other suppliers, the issue is not relevant because we do not source commodities/raw materials from these suppliers.
Water-related regulatory frameworks	Relevant, always included	Water-related regulatory frameworks are relevant, always included, because all our facilities are subject to local regulatory frameworks with varying compliance requirements (including for water). Tools and assessment: We assess this issue using internal company methods (corporate governance model, plus our datacenter-specific Threat, Vulnerability, and Risk Assessment process). Our corporate Environmental Sustainability governance model brings together leaders from across the corporation—including finance, regulatory/policy, technology, and environmental professionals, as well as external subject matter experts—to identify risks. Where applicable, it transitions identified risks to subsidiaries for further evaluation. Since our offices and labs are not significant users of water, no further assessment of water-related regulatory risks has been conducted for these facilities; we are not aware of any regulations or tariffs to which we are subject. If an issue were to be identified, it would be assessed through this model.



		<p>For our datacenters, we identify permitting and regulatory requirements for water acquisition using the tools we have developed as part of site due diligence—our Threat, Vulnerability, and Risk Assessment process—and work with water providers and regulatory agencies to obtain required permits, approvals, and/or water rights. Water-related requirements implemented by local, state, regional, or federal agencies provide a good indicator for risk to our facilities, so evaluating and understanding existing and proposed requirements is an important risk assessment tool in and of itself.</p>
<p>Status of ecosystems and habitats</p>	<p>Relevant, always included</p>	<p>The status of ecosystems and habitats is relevant, always included, because (1) it is considered by default based on the federal, state, and local permitting regulations and (2) the health of the communities and local environments in which we operate is highly relevant for Microsoft. We have an ethical responsibility to give back to the communities in the areas in which we operate, and helping preserve local ecosystems and habitats is central to our commitment to water stewardship. This is particularly true in high-risk basins, for which we have made a commitment to replenish more water than we consume globally in our operations by 2030. Tools and assessment: For permitting regulations, before we purchase land for our datacenters and office buildings, we generally have an environmental impact assessment performed. We do not see this as a highly relevant risk for our offices or labs because they are not significant users of water. The status of ecosystems and habitats is particularly relevant to our corporate Environmental Sustainability team, which has invested in nearly 20 projects—many of which will generate ecosystem benefits—through a replenishment program focused on roughly 40 highly stressed water basins where we have operations. In FY20, we supported a project led by the Colorado Indian Tribes that allocates 150,000 acre-feet of “system conservation” water to shore up levels of Lake Mead. Project benefits include fostering stabilized water levels in Lake Mead, preventing shortages in California, Arizona, and Nevada, and supporting tribal water plans and infrastructure development. We also supported the National Audubon Society to restore and enhance riparian grassland, wetland, and woodland habitats along the Red River in Fargo, North Dakota and Moorhead, Minnesota. The restoration of 44 acres of wetland and prairie habitat will improve water storage and quality and enhance urban wildlife habitat.</p>
<p>Access to fully-functioning, safely managed WASH services for all employees</p>	<p>Relevant, always included</p>	<p>Access to fully-functioning, safely managed water, sanitation, and hygiene (WASH) services for all employees is relevant, always included, because it is essential for the well-being of our employees. Tools and assessment: For our existing locations, we use the current water availability metrics within the WRI Aqueduct tool to assess this issue for our offices, labs, and datacenters. Facilities identified as being at risk</p>



		<p>for water shortages are also considered at risk for access to WASH services. We are working with Water.org to implement part of our commitment to ensure that more than 1.5 million people have access to sustainable, safe drinking water and sanitation, focused on seven countries. We started this work in 2020 and will grow it in 2021. Previous to adopting that commitment, we collaborated with WaterAid and have supported a project near Hyderabad, India, that is focused on increasing access to water. In addition, we require our manufacturing suppliers to provide access to clean toilet facilities and potable water for drinking at their factories through a requirement in our supplier audit guidance.</p>
<p>Other contextual issues, please specify</p>		

### W3.3c

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

	<b>Relevance &amp; inclusion</b>	<b>Please explain</b>
<p>Customers</p>	<p>Relevant, always included</p>	<p>We always include customers in our water-related risk assessment because customers are indirectly or directly relevant to everything Microsoft does and are crucial to our business. Our current customers are concerned about how we treat the environment and therefore their perspectives are relevant when we make decisions about how deeply we engage the community, for example for grant opportunities from Microsoft related to improving local water quality and quantity. If we do not engage with our current and future customers in the areas of our operations—in particular, in the areas where we operate datacenters, where our presence will have the most impact—the result could be a loss of local goodwill, negative effects on our brand value, and a loss of business. We keep our customers informed of our water commitments and progress through an annual report submitted to the CEO Water Mandate under the United Nations Global Compact (UNGC). We also deliver briefings on our sustainability strategy (including water stewardship strategy and commitments) with individual customers, and we share information on our overall approach to water through the corporate social responsibility (CSR) section of our company website. A water risk indirectly related to our customers would be if a water-related impact (such as flooding, extreme weather, drought, sea level rise/storm surges) compromised the reliability of our cloud</p>

		<p>services, which would be unacceptable to Microsoft and potentially damaging to our customers. Therefore, we prioritize ongoing global business continuity and resilience, monitoring risks and implementing business continuity and resilience measures to help ensure continued reliability. Beyond our datacenters and cloud services, the water-related customer impact of our operations is minimal and indirect, because our products are not water intensive in creation or use. Method of engagement: direct engagement (such as Executive Briefing Center meetings), collaboration through the CEO Water Mandate, Water Resilience Coalition, California Water Action Collaborative, bilateral discussions, corporate website.</p>
Employees	Relevant, always included	<p>We always include employees in our water-related risk assessments because, when selecting business locations, access to freshwater is a basic and fundamental criterion for us to be able to provide fully functioning water, sanitation, and hygiene (WASH) services for all workers at all of our sites (in compliance with all local legal requirements). Access to freshwater is important for employee consumption, restrooms, and cooking (some locations). Access to potable water for our onsite employees is critical. Without such access, we would not be able to operate our facilities, jeopardizing our ability to provide continuous customer services; this risk is particularly relevant to water-stressed areas where we have facilities, such as in India. In areas with water restrictions, it is also important that our employees understand and prioritize any water conservation measures that are in place. We engage with employees through internal company surveys (requesting their views on Microsoft environmental sustainability performance) and facilitate the sharing of best practices for water reduction measures implemented throughout our office and lab facilities; we also provide employees with water-savings tools, such as dual-flush toilets with educational signage at some locations, as a daily reminder of our commitment to water conservation and action employees can take. The Microsoft Sustainability Speaker Series gives visibility to topics such as global water sustainability issues to employees across Microsoft through in-person and online seminars. Some of our risk assessments consider interdependencies among employees, communities, and utilities, viewing these as an “ecosystem” for which certain triggering events could affect water delivery and quality. Method of engagement: surveys, daily use of office water systems, communication through our website, in-person speaker series, employee volunteer events for our water replenishment projects (such as the ones in central Washington, Cheyenne, and Chennai).</p>
Investors	Relevant, always included	<p>We always include investors in our water-related risk assessments because investors are increasingly concerned about the environmental performance and impact of the companies in which they invest, including water-related issues. We have reported our annual water use, water-related risks, and governance of water publicly through</p>



		<p>CDP since 2011 at the request of investors. We also publish detailed information on our water stewardship commitment and action on our website and, from 2021, through our annual Environmental Sustainability Report. Method of engagement: responding to CDP, communicating our progress on water stewardship on our corporate website and through our annual Environmental Sustainability Report.</p>
Local communities	Relevant, always included	<p>We always include local communities in our water-related risk assessment because the health of the communities in which we operate is highly relevant for Microsoft. If we did not engage with the local communities in the areas of our operations—in particular, in the areas where we operate datacenters, where our presence will have the most impact—the result could be a loss of local goodwill and negative effects on our brand value. We include stakeholder support as a key selection criterion when sourcing water replenishment projects as part of our water replenishment commitment. We also have an ethical responsibility to give back to the communities in the areas in which our operations have the greatest impact. As part of our commitment to water stewardship, we engage communities and local stakeholders in high-priority regions facing water risks. For example, Cloud Operations + Innovation (CO+I)—responsible for the datacenters that power Microsoft cloud services—has a dedicated team and budget to support local partnerships to solve critical local environmental issues, focusing on each community’s priorities. Our community engagement programs focus on addressing community freshwater needs, alleviating competition for water resources, and improving local water quality and accessibility. For example, in Quincy, Washington, we installed a water reuse system. Industrial water reuse systems are designed to address growing water supply deficiencies in water-stressed areas while avoiding the need to develop additional potable water supplies. In South Africa, we supported the installation of water meters at 46 public hospitals in the Cape Town region. These water meters should provide greater visibility into water consumption patterns and enable alarms to be set for possible leak detection. Some of our risk assessments consider interdependencies among employees, communities, and utilities, viewing these as an “ecosystem” for which certain triggering events could affect water delivery and quality. Method of engagement: surveys, collaboration with community groups, partnering with municipalities and non-governmental organizations (NGOs).</p>
NGOs	Relevant, always included	<p>The most significant water-related risk that we face regarding NGOs is reputational. We always include NGOs in our water-related risk assessments because we would be subject to criticism and scrutiny from any local NGOs that advocate for ecosystem preservation or social justice if one of our sites were operating with sufficient water but the local community ecosystem were not. For our offices and labs, we are not substantial water users in the river basins in which we operate; however, datacenters can at times be large users of water. We factor the role of</p>

		<p>NGOs in protecting water resources into our risk assessment by virtue of ensuring that we assess, identify, and mitigate any potential impact on susceptible river basins. We also engage with NGOs in high-priority regions facing water risks, including working with Water.org as a partner in our efforts to implement a portion of our commitment to ensure that more than 1.5 million people have access to sustainable, safe drinking water and sanitation services in seven countries (we started this work in 2020 and will grow it in 2021). In FY19 we continued our engagement with the California Water Action Collaborative, a platform that we joined as a member in FY18 alongside other companies and NGOs seeking to address water issues in California through collective action projects. Microsoft also continued to engage with other companies and NGOs as an endorser of the UN CEO Water Mandate, a public-private partnership under the United Nations Global Compact (UNGC) that we joined in FY18. Microsoft is a founding member of the Water Resilience Coalition—launched in 2020 and an initiative of the CEO Water Mandate—which includes 18 industry-leading corporations that have pledged to work collectively on availability, quality, and accessibility issues in water-stressed locations. NGOs are a particularly relevant stakeholder to our corporate Environmental Sustainability team, which was actively partnering with NGOs in FY20 to deliver replenishment projects in high-risk basins. As part of our water replenishment strategy, we are engaging with NGOs to identify projects that are scientifically sound and supported by local stakeholders. For example, we partner with Trout Unlimited, TNC, WaterAid, Plumas Corporation, National Forest Foundation, Ducks Unlimited, National Audubon Society, and other NGOs. Method of engagement: direct engagement, multi-stakeholder meetings with NGOs and other stakeholders.</p>
<p>Other water users at a basin/catchment level</p>	<p>Relevant, sometimes included</p>	<p>We sometimes include “other water users at a basin/catchment level” in our water-related risk assessments, where applicable, because where there is high demand for water (particularly in areas of water stress) from other users, this could affect the availability of the water that we require to run our datacenters. During our risk assessment processes we continue to assess whether the demands for water from other users will affect the available supply for our datacenters in high-priority regions facing water risks, and we engage communities and local stakeholders as appropriate. For our offices and labs, Microsoft is not a substantial water user in the river basins in which we operate; therefore, we do not have a significant impact on the water sources for other water users and so we do not generally need to consider other water users in our risk assessments for these facilities. Other water users at a basin/catchment level are a particularly relevant stakeholder to our corporate Environmental Sustainability team, which is pursuing nearly 20 projects through a replenishment program focused on roughly 40 highly stressed water basins where we have operations. For example, through our</p>





		participation in the CEO Water Mandate’s Water Action Hub, we are attempting to identify opportunities to collaborate with other water users to support collective action in addressing water challenges in shared water basins. Methods of engagement: direct engagement through the online platform hosted by CEO Water Mandate’s Water Action Hub.
Regulators	Relevant, always included	We always include regulators in our water-related risk assessments because our datacenters depend on having sufficient water supply. Regulatory requirements (including restrictions, water rights, and drought provisions) can affect the availability of local water. For datacenters, quantity and quality requirements are vetted in advance and are often included in our service agreements with the local utility company. However, a potential risk that we factor into our ongoing risk assessments is the likelihood that, in cases of severe or extended droughts, our water allocations may be revised. Accordingly, our datacenter teams continue to work with appropriate agencies (through phone calls and meetings) following the site selection, construction, and commissioning phases, in case new circumstances dictate a reduction in water availability and therefore a change in operations. For our offices and labs, Microsoft is not a substantial water user in the river basins in which we operate; therefore, water regulators do not play a significant role in our water risk assessments for these locations. Where applicable, we work directly with regulators when installing and upgrading water systems (for example, we recently engaged with regulators to obtain permits for our Silicon Valley campus water reuse system, and our Puget Sound campus used municipal rebates when upgrading the irrigation water system in FY18 and FY19). Methods of engagement: direct engagement (such as through permit applications, email, phone calls, meetings).
River basin management authorities	Relevant, sometimes included	We include river basin management authorities in our water-related risk assessments where applicable because if any were to impose restrictions on water rights or use, it would restrict our ability to operate our facilities—particularly for our datacenters, for which access to sufficient freshwater is vital for cooling. If we could not source enough water to cool a facility so that it could run at capacity, this could affect our ability to deliver continuous customer services. Only where water rights are required do we engage with bureau or basin management agencies. In those cases, the water permits are regulated and coordinated with those authorities. Method of engagement: direct engagement (such as through site visits and permit applications).
Statutory special interest groups at a local level	Relevant, sometimes included	We include statutory special interest groups at a local level in our water-related risk assessments where applicable because our relationships with these groups can have a direct impact on our reputation both locally and more broadly; in addition, statutory special interest groups work in the interests of protecting local watershed



		<p>health, which influences the availability and quality of local water supply (essential for Microsoft facilities, in particular datacenters). The quantity and quality requirements of our water supply and discharge are vetted in advance and are often included in our service agreements with the local utility company. We also engage statutory special interest groups at a local level in regions facing water risks. For our offices and labs, Microsoft is not a substantial water user in the river basins in which we operate. However, during FY18, our Johannesburg office, for example, built a greywater treatment plant (GWTP) and began collecting rainwater to reduce the amount of water our local office needed to operate; since then, we've built on this approach at other campuses around the globe. We have also engaged local third-party groups in some regions to conduct ongoing water quality samples. When our Real Estate &amp; Security (RE&amp;S) group builds new sites, it engages environmental consultants to review this issue. We consider a threat to watersheds not only in the context of our operations, but also to other water users. For example, through the Microsoft Community Development Fund, we have actively sought out organizations that we could assist in improving watershed health. We review applications for assistance to improve watershed health from statutory special interest groups such as conservancy groups located in the area of our operations. Method of engagement: direct engagement (such as through phone calls), third-party water quality sampling, collaboration with conservancy groups, project funding.</p>
Suppliers	Relevant, always included	<p>We always include suppliers in our water-related risk assessments because water is often an essential input to manufacturing (for example, it is particularly important for the manufacture of magnets, certain integrated circuits, printed wiring boards, and aluminum) and other supplier activities. We engage those suppliers where we deem it important based on water risks or level of priority to Microsoft. We focus engagements on suppliers that represent the majority of our supplier spend and impact. We annually request our top direct/manufacturing suppliers and our tier 1 datacenter server suppliers to participate in the CDP Supply Chain water security program. In addition, through our supplier audit program, we monitor directly contracted manufacturing suppliers' water management practices and water/wastewater compliance to ensure that their water risks are minimized. An example of a risk considered is the risk of higher operating costs and of plant/production disruption leading to reduced output from increased water risk or projected water scarcity; in FY20, 46 percent of our suppliers responding to the CDP Supply Chain water questionnaire reported water-related risks with the potential for substantive financial or strategic impact, and 22 percent were able to provide a figure or range for the potential financial impact from these risks. Based on our analysis, however, these do not represent substantive risk to Microsoft. For our datacenter projects, we engage with utilities (water/sewer/power/fiber) prior to concluding a</p>



		transaction. Capacity and quality are vetted and service agreements put in place prior to completing the transaction. Method of engagement: CDP, surveys, training, audits, collaboration on water efficiency, water recovery projects, internal company methods.
Water utilities at a local level	Relevant, always included	We always include water utilities at a local level in our water-related risk assessments because access to sufficient freshwater is vital for our operations—in particular our datacenters, to help ensure our ability to deliver continuous customer services. As part of implementing our water replenishment strategy, we look for opportunities to materially improve the source of water supply we rely on. For example, we are supporting the National Forest Foundation in decommissioning seldom-used roads to support wetland and riparian improvement, water replenishment, and sediment reduction in the Pole Mountain area near Cheyenne, Wyoming, home to one of our datacenter regions; as of 2020, over 6 acres of national forest were restored, which is helping to increase water yield, decrease erosion, and protect the quality of Cheyenne’s drinking water. Our datacenter teams work with local water utilities throughout the lifecycle of each building’s construction and operations. For datacenters, water supply and discharge are preapproved; therefore, quantity and quality requirements are vetted in advance and are often included in our service agreements with the local utility company. For our offices and labs, Microsoft is not a substantial water user in the river basins in which we operate; therefore, since we have determined that there is no risk associated with these stakeholders, we do not consider water utilities any further in our water risk assessments for these facilities. Some of our risk assessments consider interdependencies among employees, communities, and utilities, viewing these as an “ecosystem” for which certain triggering events could affect water delivery and quality. Method of engagement: direct engagement (such as through contract reviews, phone calls, meetings), partnering with municipalities.
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.**

**Direct operations:** Level of coverage: Water-related risk identification, assessment, and response covers all our direct operations. At an asset level, we apply the following tools: (1) WRI Aqueduct, to evaluate current basin water-related risks (time horizon 1–3 years); (2) a third-party global water

stress index tool, used annually as part of datacenter threat vulnerability risk assessments (time horizon 1–3 years); and (3) Microsoft Devices ISO 14001 certification, identifying risk using the significant aspects and impacts review process (time horizon 1 year). At a company level, we apply the following tools: (1) Enterprise Risk Management (ERM) program, which identifies, assesses, and prioritizes risks and, through regular reporting and discussion, assists senior management and the Board with governance of risk (time horizon typically ~1–3 years); (2) a TCFD-aligned physical and transition risk assessment using two scenarios with a time horizon of 2100: a business-as-usual scenario where the world warms by over 4°C above pre-industrial temperatures and a 2°C-aligned scenario; and (3) Microsoft Global Treasury & Financial Services annual property risk assessments to value global property insurance using industry-standard risk models to estimate probable impact from hazards like hurricanes, floods, and supply chain disruptions (time horizon 1–3 years).

**Supply chain:** We apply the following primary tools at an asset and company level to assess water-related risk in our supply chain: (1) annual CDP Supply Chain water security program, using supplier responses to fully understand supplier water usage and exposure to risk (time horizon 1 year); (2) hardware manufacturing supplier audit program, using internal company methods to assess the water/wastewater compliance status of the suppliers and minimize water-related risks (time horizon 1 year); and (3) assessment of the vulnerability of key Microsoft suppliers to the physical impacts of climate change, based on the IPCC RCP 8.5 scenario, using FEMA flood data, IPCC data on precipitation and sea level rise predictions, WRI Aqueduct tool, downscaled sea level rise estimates provided by regional and local government databases, proprietary modeled flood data, and external consultants (time horizon to 2030).

**Other value chain:** To identify risks in our value chain, we conduct community listening sessions and surveys that document perceptions (negative or positive) with respect to Microsoft facilities within communities (as needed). We also prioritize ongoing global business continuity, monitoring, and assessing risks through our Enterprise Resilience program (using internal company methods, including its Continuity & Resilience and Service Resilience Standards) and implementing business continuity measures to help ensure continued reliability for our customers. Scenarios for annual testing of Microsoft’s critical services and business processes vary but can involve loss of facilities, systems, workforce, or critical third-party suppliers of goods/services, community resources such as water, electricity, and emergency services, cybersecurity events, or a combination of two or more of those scenarios.

**Risk response decision-making process examples:** In FY20, sites with high WRI Aqueduct water risk scores were evaluated for inclusion in Microsoft’s replenishment program. Similarly, following the TCFD-aligned quantitative scenario analysis, we started in FY20 and we continued in FY21 to conduct a series of facility-level climate risk, resilience, and adaptive capacity site assessments to validate our scenario analysis results and enhance our understanding of the facility and staff’s adaptive capacity on the ground to prepare for these climate risks. Microsoft Global Treasury & Financial Services annual property risk assessments are used to represent Microsoft’s risk exposure to underwriters and to benchmark the choice of

coverages (by type/category) and coverage limits (by dollar value) that we purchase. The outputs of the annual assessment as part of Microsoft Devices ISO 14001 certification are used to define our significant environmental impacts and aspects (“water usage” does not currently meet our definition of “significant” for the areas covered by this assessment). The community listening sessions and surveys inform program decisions to contribute to social license to operate, prosperity, and workforce availability.

## 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?**

No

### W4.1a

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

Microsoft defines substantive strategic or financial impact from water-related risks as follows: an impact that significantly affects our business strategy or our ability to deliver continuous customer services. This applies to both direct operations and supply chain.

Subject matter leadership on water-related risk resides with our Environmental Sustainability (ES) team, led by our Chief Environmental Officer. This team assesses Microsoft’s water-related risks and opportunities across the business portfolio using quantitative and qualitative scenario analyses (including an assessment of climate-related physical risks conducted in FY17–FY18 and an FY20 TCFD-aligned assessment of climate-related physical and transition risks and opportunities), along with other risk assessments (including the use of WRI Aqueduct and other internal company methods). Water-related risks assessed include both physical risks (such as water stress/scarcity, water quality, and climate-related water risks such as sea level rise, flooding, and increasing severity of storms) and transition risks (such as reputational impacts, regulatory changes, and market changes), for both our direct operations and our supply chain. The results from these analyses are assessed and validated through consultation with subject matter experts across the company and then used to inform Microsoft’s formal, robust, and rigorous enterprise risk assessment process led by the Enterprise Risk Management (ERM) program. In addition, our datacenter site selection process prescreens for a broad range of risks and includes



preapproval for water supply and discharge; we meet with key local representatives to determine the likelihood of future potential issues and site viability.

Our ERM program identifies, assesses, and prioritizes risks and, through regular reporting and discussion, assists senior management and the Board with governance of risk. The ERM program’s formal risk assessment process is used to assess the size, scope, financial impact, and relative significance of any risk that Microsoft may face, today and into the future, including those related to water. The process involves categorizing risks according to their inherent impact on a scale of 1 (minimal) to 5 (critical) in four categories: trust or reputational; operational scope; legal, compliance, or environmental; and enterprise value. Risks are then rated according to their inherent likelihood on a scale of 1 (remote) to 5 (expected). These two ratings are used to produce an inherent risk score and are then aggregated with a management action/control effectiveness rating for a residual risk calculation. For water security, the amount of change that indicates a substantive impact depends on the most relevant inherent impact category with a probability over 35 percent that would likely occur and either create a significant loss of trust with customers, partners, members, or shareholders; have a significant impact on business operations within one or more business units or geographies; prohibit the company from conducting business in certain product lines or markets; or cause a significant reduction in market capitalization.

An example of a substantive impact considered is the potential for facility damage from an acute weather event, such as flooding. To mitigate this risk, Microsoft has an established Enterprise Resilience program, to help ensure the existence of effective, reliable, well-tested plans, systems, and processes that can be counted on during a disruptive event to support continuity of business operations and minimize adverse impacts. The Enterprise Resilience program works with the ERM team to ensure consistent alignment among risks and risk ratings. (Note that this risk is not substantive; central to Microsoft cloud services design is geographic redundancy, which reduces our vulnerability to physical impacts, including flooding, and offers customers the option of a resilient alternative to on-premises datacenters.)

## W4.2b

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

	Primary reason	Please explain
Row 1	Risks exist, but no substantive impact anticipated	Consultation with subject matter experts across the organization and other water risk assessments (including our FY17–18 physical climate risk assessment and use of the WRI Aqueduct tool) have not revealed any substantive water risk across our global portfolio. Our FY20 TCFD-aligned quantitative and qualitative climate scenario analysis revealed that we may



		<p>experience significant impacts, but these do not exceed our internally defined threshold for substantive impact. In FY20/FY21, we have been conducting facility-level climate risk, resilience and adaptive capacity site assessments to validate our scenario analysis results and enhance our understanding of our adaptive capacity on the ground to prepare for these climate risks. None of the identified risks have the potential to affect our ability to deliver continuous customer services or force a change in our business strategy. For our offices and labs, each local operation is a relatively small contributor, and most functions are mobile. Potential risks include water rationing, which would first affect landscaping and in extreme cases reduce work hours, though remote work locations would be available to employees. While our Johannesburg office provides an example from FY18 where a water rationing incident reduced work hours, the impact was minimized because employees were able to work remotely, and we installed a system to collect and treat water for non-potable reuse onsite. For our datacenters, although access to freshwater is vital for cooling, central to our cloud services design is geographic redundancy, which inherently reduces our vulnerability to water impacts (whether from excess water or drought). To reduce our dependence on freshwater in high water stress regions, we use recycled or industrial water where available unless potable water is required (e.g. with adiabatic cooling). We also have a water crisis response plan. Ongoing business continuity and resilience strategies, such as monitoring identified risks and implementing business continuity and resilience measures, help ensure continued reliability. Capacity and quality are vetted with utilities and service agreements put in place prior to construction. The results of our assessments inform an executive review process led by the Microsoft Enterprise Risk Management (ERM) program, which identifies, assesses and prioritizes risks and, through regular reporting and discussion, assists senior management and the Board with governance of risk.</p>
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### W4.2c

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

	Primary reason	Please explain
Row 1	Risks exist, but no substantive impact anticipated	Although freshwater is important to our supplier operations, none of the identified risks have the potential to affect our ability to deliver continuous customer services or force a change in our business strategy. We annually request our top direct/manufacturing and our tier 1 datacenter server suppliers to participate in the CDP Supply Chain water security program. For our directly contracted hardware manufacturing suppliers, we also assess supplier performance in environmental, health and safety, and labor and ethics (EHS&LE) areas, including water management, through our supplier audit program (typically

		<p>on an annual basis). From these analyses, in combination with business importance and spend, we have determined that there are no substantive water risks. For example, in FY20, 46 percent of our suppliers responding to the CDP Supply Chain water questionnaire reported water-related risks with the potential for financial or strategic impact, and 22 percent were able to provide a figure or range for the potential financial impact from these risks. Based on our analysis, however, these do not represent substantive risk to Microsoft. For our datacenter projects, we engage with utilities (water/sewer/power/fiber) prior to construction. Capacity and quality are vetted and service agreements put in place prior to completing the transaction.</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**

New R&D opportunities

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

This opportunity is strategic to our business because it supports our ambition to be the leading provider of technology solutions to environmental challenges. The opportunity is twofold: (1) Provide IT services resilient to physical impacts of climate change, such as flooding from sea level rise/extreme precipitation. With a cloud provider with georedundant datacenters, customers affected by a weather-related disaster can resume operations as soon as they restore Internet access. Actions to realize the opportunity: We are investing in cloud solutions across our product





lines; two of our most significant services for businesses are Microsoft 365 and Microsoft Azure. Our global cloud service operations are supported by one of the largest physical networks in the world, with several industry certifications including ISO/IEC 27001:2005 and SAS70 Type II. We use geo-replicated customer workloads to improve reliability. (2) Help accelerate the world's understanding and management of critical water-related resources through technology innovation using Internet of Things (IoT) scenarios and artificial intelligence (AI) models on the Azure platform. Actions to realize the opportunity: Our strategy consists of activating multisector partnerships to advance solutions to water challenges; developing new solutions that take advantage of cloud-based technologies to address water challenges; and enabling people and organizations to quantify and address water-related risks. Example of the strategy in action: our AI for Earth program empowers people and organizations to develop innovative solutions to monitor, model, manage, and preserve Earth's natural systems—including water. We provide our AI for Earth grantees with access to the world's critical environmental datasets, as well as a computing platform to analyze those datasets on.

**Estimated timeframe for realization**

Current - up to 1 year

**Magnitude of potential financial impact**

Low-medium

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

Yes, an estimated range

**Potential financial impact figure (currency)**

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

1

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

4,290,000,000

**Explanation of financial impact**

It is difficult to quantify the potential financial implications. Theoretically if we were to win—for example—up to 3 percent additional business because we offered technology to help organizations and governments manage the water-related impacts of climate change (through resilient



cloud services and AI computing resources), the impact based on FY20 (the reporting period) revenue of \$143 billion would be an increase of up to \$4.29 billion.

## 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 Reference to international standards and widely-recognized water initiatives Company water targets and goals	Microsoft’s global sustainability strategy—including water—is relevant to our operations throughout the world. Our companywide water policy is available on the environmental sustainability portion of our CSR website. We have a water stewardship strategy with four main objectives: (1) understand basin water risks in places where we operate; (2) implement our water positive commitment; (3) scale our water positive commitment by engaging partners, customers, and stakeholders and participating in collaborative platforms; and (4) advance the digital transformation of water through innovative technology solutions to shared water challenges for our customers and society. Having a companywide water policy is essential to achieving our objectives. Each of the “Content” elements selected falls within at least one of the objectives of our water stewardship strategy and directly supports our efforts to go beyond regulatory compliance. Each provides guidance to help ensure alignment internally (from the corporate level down to the facility level) and externally (in how our business groups engage suppliers, customers and other partners) in all water-related decisions and actions. For example, our water-related standards for procurement are reflected in how we require our manufacturing suppliers to provide access to clean toilet facilities and potable water for drinking

	<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>Commitment to safely managed Water, Sanitation and Hygiene (WASH) in the workplace</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>at their factories. Our commitment to align with public policy initiatives such as the SDGs and drive water-related innovation are supported by our investment in our AI for Earth program, which empowers people and organizations to develop innovative solutions to monitor, model, manage and preserve Earth’s natural systems—including water—by providing access to critical environmental datasets and a computing platform to analyze those datasets on. Included in our company water targets and goals is our commitment to become water positive by 2030 (set in FY21): reducing the water intensity of our direct operations, replenishing more water than we consume globally in water-stressed regions where we operate, and enabling access for 1.5 million people. And our commitment to become water positive is reflected in our participation in the Water Resilience Coalition (founding member), CEO Water Mandate, and California Water Action Collaborative. By including this information on our website, it also makes us publicly accountable to our objectives and the supporting targets and commitments.</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	<p>Board-level responsibility for water-related issues belongs to the Regulatory and Public Policy Committee of our Board of Directors; the committee’s charter identifies among its responsibilities the requirement to “review and provide guidance to the Board and management about legal, regulatory, and compliance matters concerning competition and antitrust, privacy, trade, digital safety, artificial intelligence, and environmental sustainability.” Water fits into the environmental sustainability part of this mandate. Each year, our President and Chief Legal Officer (CLO) presents to the Committee on these topics. This includes an update and agreement on decisions related to our environmental sustainability strategy (including our water positive commitment) and decisions on programmatic investments. The membership of the committee consists of at least two directors of the Board and currently includes four directors of the Board.</p>

## 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	<ul style="list-style-type: none"> <li>Reviewing and guiding major plans of action</li> <li>Reviewing and guiding strategy</li> <li>Reviewing and guiding corporate responsibility strategy</li> </ul>	<p>The Regulatory and Public Policy Committee meets at least three times a year with a varied agenda including updates on the company’s commitments to environmental sustainability (which includes water). During at least one meeting each year and on an as-needed basis, our President and Chief Legal Officer (CLO) and our Chief Environmental Officer present to this committee on our overall sustainability agenda and solicit high-level input on major plans of action. The charter for the Regulatory and Public Policy Committee identifies the following among its responsibilities: “review and provide guidance to the Board and management about legal, regulatory, and compliance matters concerning competition and antitrust, privacy, trade, digital safety, artificial intelligence, and environmental sustainability.” Microsoft’s Chief Environmental Officer met with the Regulatory and Public Policy Committee twice during our FY20 reporting period.</p>

## 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).**

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

President

**Responsibility**

Both assessing and managing water-related risks and opportunities

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

Annually

**Please explain**

In FY20, the President/Chief Legal Officer was responsible for our Corporate, External and Legal Affairs group—the legal, public policy and social responsibility arm of the company. Each year, our President presents to the Regulatory and Public Policy Committee of the Board of Directors on the company's policies/programs related to corporate citizenship, including environmental sustainability as appropriate. The President's water-related responsibilities include establishing the breadth, scope and timing of public-facing water goals and commitments, such as our FY21 commitment to become water positive by 2030. In FY20, the President monitored water-related issues and the company's progress on water objectives through regular business reviews with the Vice President, Technology and Corporate Responsibility, and Chief Environmental Officer, as well as in individual meetings as appropriate. There is a direct line of escalation to the President and senior leadership team, when required.

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

Other, please specify

Vice President, Technology and Corporate Responsibility



**Responsibility**

Both assessing and managing water-related risks and opportunities

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

Annually

**Please explain**

In FY20, our Vice President (VP) of Technology and Corporate Responsibility (TCR) was responsible for governance of environmental issues across the organization, including water. This role also had executive-level oversight of the Chief Environmental Officer role and corporate Environmental Sustainability team, including the company's water actions, and received updates on water strategy/issues monthly.

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

Other C-Suite Officer, please specify  
Chief Environmental Officer

**Responsibility**

Both assessing and managing water-related risks and opportunities

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

Annually

**Please explain**

In FY20, our Chief Environmental Officer reported into the Corporate, External, and Legal Affairs (CELA) Technology and Corporate Responsibility (TCR) group. Our Chief Environmental Officer was appointed in FY19 to lead our overall environmental sustainability vision, strategy, and program execution. This role led our corporate Environmental Sustainability team, the charter of which includes assessment and management of issues related to water. By focusing on operations, products, partners, and policy, the team strives to reduce our company's environmental footprint while empowering societal change through technology. The Environmental Sustainability team assesses progress on our environmental sustainability programs and supports our overall commitment to environmental sustainability goals, including those related to water.

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

Environment/Sustainability manager

**Responsibility**

Both assessing and managing water-related risks and opportunities

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

Annually

**Please explain**

The Water Program Manager role, within our corporate Environmental Sustainability team, was created in FY18 as a part of Microsoft's efforts to ramp up activities around water stewardship. In FY20, our Water Program Manager reported into the Corporate, External, and Legal Affairs (CELA) Technology and Corporate Responsibility (TCR) group. Our Water Program Manager leads Microsoft's water stewardship efforts, which include assessment and management of issues related to water. By focusing on operations, products, partners, and policy, the Environmental Sustainability team strives to reduce our company's environmental footprint while empowering societal change through technology. The team assesses progress on our environmental sustainability programs and supports our overall commitment to environmental sustainability goals, including those related to water.

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

Risk manager

**Responsibility**

Assessing water-related risks and opportunities

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

Annually

**Please explain**



Our Environmental Compliance and Climate Risk + Resilience (CR+R) Lead, also part of the Environmental Sustainability team, leads our new CR+R Working Group to oversee our CR+R Management Plan. The physical risks assessed as part of the CR+R Management Plan include those related to the projected water impacts of climate change, such as future water stress. The CR+R Working Group contains members that represent Microsoft key business groups.

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

Sustainability committee

**Responsibility**

Both assessing and managing water-related risks and opportunities

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

Annually

**Please explain**

In FY20, Microsoft established a Climate Council, comprising a number of executives from across the company charged with monitoring climate-related risks and opportunities (including those related to water) and coordinating and providing oversight for sustainability initiatives across the organization.

**W6.4**

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

	Provide incentives for management of water-related issues	Comment
Row 1	Yes	

**W6.4a**

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



	Role(s) entitled to incentive	Performance indicator	Please explain
Monetary reward	Other C-suite Officer Chief Environmental Officer	Implementation of water-related community project	Details on the indicator chosen: The Chief Environmental Officer is accountable for our water-related commitments. In FY19, we committed to replace what our operations consume in water-stressed regions by 2030 and, in FY21, we set an even more ambitious commitment to be water positive by 2030. This means we will reduce our water use intensity, replenish more water than we consume globally in water-stressed regions where we operate by 2030, and enable access to drinking water and/or sanitation services for 1.5 million people. Rationale for the chosen indicators to measure performance: Our Chief Environmental Officer is responsible for our company’s overall environmental sustainability vision, strategy, and program execution, including leading our corporate Environmental Sustainability team, the charter of which includes assessment and management of issues related to water. This role’s annual bonus and performance ratings are directly connected with performance against our environmental commitments (including our FY20 water replenishment and FY21 water positive commitments) as part of the annual review process.
Non-monetary reward	No one is entitled to these incentives		Our current strategy is not focused on offering non-monetary incentives; this may change in the future as we continue to develop our approach to water stewardship.

## W6.5

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

- Yes, direct engagement with policy makers
- Yes, trade associations
- Yes, other

## W6.5a

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

Our participation in the political process is transparent and based on our principles. We are pleased that Microsoft ranks in the first tier of rating given by the CPA-Zicklin Index of Corporate Political Accountability and Disclosure for our policies that ensure the accountability and transparency of our public policy engagement. (The corporate social responsibility [CSR] section of the Microsoft website provides guidelines on our policy engagement and details of campaign contributions and advocacy spending.) Our Director of Sustainability Policy (responsible for the company's policy efforts on sustainability issues) and our Water Program Manager (within our corporate Environmental Sustainability team) communicate regularly to ensure consistency in our policy engagement and that our advocacy work is consistent with our water stewardship and sustainability strategy. Both roles are part of our Corporate, External, and Legal Affairs (CELA) organization, which helps ensure consistency in our water-related programmatic and policy work. The Water Program Manager also engages and coordinates with regional government and corporate affairs managers as appropriate. Should any inconsistency between Microsoft activities that influence public policy on water and our water stewardship strategy be discovered, we would first ensure that these roles were aware of it and determine whether they could resolve it. If not, the issue would be escalated to the office of the President.

## W6.6

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

Yes (you may attach the report - this is optional)

 MSFT\_FY20Q4\_10K.docx

## 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	> 30	Microsoft can significantly improve water use and stewardship with a cross-company water strategy and specific goals. Our opportunity is to fulfill our broader sustainability commitments to mitigate risk and create long-term value around water stewardship. We consider water in our long-term real estate investments because securing water supply is important for business continuity. These long-lived assets have strategic value, and investment decisions are made on a time horizon >30 years. Our water stewardship strategy includes long-lived assets and facilities as well as technologies and service offerings. It has four main objectives: (1) understand basin water risks in places where we operate; (2) implement our water positive commitment; (3) scale our water positive commitment by engaging partners, customers, and stakeholders and participating in collaborative platforms; and (4) advance the digital transformation of water through innovative technology solutions to shared water challenges for our customers and society. The cloud and IoT can improve water resource management, including better infrastructure monitoring and more accurate water metering. Combined with the potential for AI to anticipate and respond to resource challenges, there is opportunity for digital transformation within Microsoft and in the water sector over the next decade. Our ability to deliver these transformational experiences will be enhanced by our water stewardship efforts.
Strategy for achieving long-term objectives	Yes, water-related issues are integrated	11-15	In expanding our water risk assessment across our operations and supply chain in FY20, we identified approximately 40 highly stressed water basins where we have operations that are now the focus of our water replenishment initiative. This has enabled us to prioritize resources on the water basins and facilities that have the greatest potential for water risk (time horizon 11–15 years) and engage facilities and communities to improve water stewardship and mitigate potential risks. In FY17 and FY18, we improved water resource management, including water metering within our Cloud Operations + Innovation (CO+I) division to improve data collection and provide us with real-time data that will better inform decision making. We engage stakeholders, including local communities, in high-priority regions facing water risks to address local water supply issues. We also joined the California Water Action Collaborative and UN CEO Water Mandate (and co-founded its Water



			Resilience Coalition in FY20, the reporting period) to engage with local communities, NGOs, and other companies in basins facing shared water risks, such as water scarcity. We will continue to identify and pursue these opportunities as part of our corporate water stewardship and datacenter community engagement efforts. Key activities include identifying opportunities for technology innovation, establishing pilot projects, sharing best practices and evaluating scalability, and identifying commercialization opportunities.
Financial planning	Yes, water-related issues are integrated	> 30	We consider water in our financial planning for our facilities through both capital expenditures (such as for water-saving, water reuse, and cooling systems) and operational expenses (both for ongoing maintenance of these systems and for the utility costs of water withdrawals for our sites). Investment decisions are made with consideration of water issues on a long-term time horizon of >30 years, as there is strategic value in our long-lived real estate assets. For example, budgets and resources are allocated to ensure our progress towards our water positive goal, including investments in sustainable building design, such as our net zero water campus in Silicon Valley (due to come online in 2021), and investments in water replenishment and water accessibility projects in communities where we operate. These investments demonstrate our long-term financial planning and investment in water stewardship.

## 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)**

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



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

31

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

33

**Please explain**

Microsoft does not track water-related CAPEX separately. The water-related OPEX change from FY19 to FY20 provided reflects our Cloud Operations + Innovation (CO+I) group only (responsible for the datacenters that power Microsoft cloud services), for all owned datacenter sites and a few leased sites that provide a separate water bill; this change reflects increased datacenter water withdrawals, a result of an increase in the number of datacenters in our fleet. The anticipated forward trend for OPEX reflects projected increased withdrawals from ongoing datacenter growth but at the same time, we are working to increase water reductions across our operations as we work towards achieving our 2030 water positive goal.

**W7.3**

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

	Use of climate-related scenario analysis	Comment
Row 1	Yes	

**W7.3a**

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

Yes

**W7.3b**

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

	Climate-related scenarios and models applied	Description of possible water-related outcomes	Company response to possible water-related outcomes
Row 1	Other, please specify RCP 4.5, RCP 8.5	<p>In FY17, we conducted a qualitative scenario analysis of the physical impacts of climate change based on the IPCC RCP 8.5 scenario; this analysis identified risks such as water shortage from extended drought at our Beijing, Chennai and Pune facilities and coastal flooding due to sea level rise at our Mumbai facility. In FY20, we conducted a quantitative and qualitative scenario analysis aligned with the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD). We screened Microsoft’s top 400 facilities and assessed the financial impact of various climate hazards (physical and transition) on our operations and business continuity, including the potential for water stress at a local level. Scenarios included 1) a business-as-usual scenario where the world warms over 4°C above pre-industrial temperatures (RCP 8.5) and 2) a 2°C-aligned scenario (RCP 4.5). This analysis revealed that we may experience significant impacts (though these do not exceed our internally defined threshold for substantive impact). These facilities are most vulnerable to temperature extremes, water stress, storm damage and coastal flooding. In FY20 we started and in FY21 we continued to conduct a series of facility-level climate risk, resilience, and adaptive capacity site assessments to validate our scenario analysis results and enhance our understanding of the facility and staff’s adaptive capacity on the ground to prepare for these climate risks, including water stress.</p>	<p>Our response to possible water-related outcomes is multifaceted. It is currently ongoing and will extend through 2030 and beyond. To build resilience to climate events affecting the water cycle, we are innovating in water collection, treatment, reuse and water use intensity at our operations across the globe. Our cloud services use geo-replicated customer workloads (keeping multiple copies of workloads in multiple locations) to improve reliability and provide resiliency assurance. We consider water stress when we relocate older facilities or site new facilities; any office construction projects in water-stressed regions prioritize water reduction/reuse strategies. We plan to increase capital investment in water conservation. For example, our new Silicon Valley campus will feature a rainwater collection system and waste treatment plant to ensure 100% of the site’s non-potable water comes from onsite recycled sources. In FY18, our Johannesburg office built an onsite greywater treatment plant (GWTP) and rainwater harvesting system to reduce our water use in a water-stressed region. The GWTP is separately metered to track water reused monthly. Our Beijing campus installed a greywater treatment system in FY20, to recycle HVAC condensate water for use in flush fixtures. Our new Herzliya campus (opening in FY21) will collect water from air conditioners to be used exclusively to water plants onsite, while</p>

			water-efficient plumbing fixtures will increase water conservation by 35%.
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## 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, but we are currently exploring water valuation practices

#### Please explain

We have deployed the Water Risk Monetizer tool at one of our facilities and found that the risk-adjusted water bill, representing the full value of water to Microsoft operations, is more than 11 times greater than our current water bill for that location. This type of information could help Microsoft in setting an internal price on water, although the context-based value of water doesn't lend itself particularly well to one globally applicable price of water.

## W8. Targets

### W8.1

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

	Levels for targets and/or goals	Monitoring at corporate level	Approach to setting and monitoring targets and/or goals
Row 1	Company-wide targets and goals	Targets are monitored at the corporate level	We identify and prioritize targets/goals relevant to our water risks, impacts and opportunities through our Environmental Sustainability governance model (which involves consultation with subject matter experts from across our organization); this process helps ensure that our targets/goals reflect geographic, regulatory and other contextual factors (e.g. we conduct annual water risk assessments to identify basins in



	<p>Business level specific targets and/or goals</p> <p>Basin specific targets and/or goals</p>	<p>Goals are monitored at the corporate level</p>	<p>high water stress regions). Our formal motivation for setting water targets/goals is our commitment to actions contributing to global water security as outlined in our water stewardship strategy and aligned with the UN Global Compact CEO Water Mandate (addressing SDG 6: ensure availability and sustainable management of water and sanitation for all) and the California Water Action Collaborative. We use the results of our forward-looking water-related risk assessments to guide our decisions on water-related commitments; for example, our FY20 water risk assessment helped to identify high-risk basins that are the focus of our water replenishment work. In FY19 we adopted a corporate-wide target to balance the water consumption in our operations in water-stressed areas by 2030, and in FY21 we made a corporate commitment to become water positive by 2030, established annual targets and began monitoring progress in achieving those targets. To this end, we are investing in water replenishment and access projects led by NGOs and community groups. We source these projects through RFPs, by working with project brokers, and through multi-year collaborative partnerships. In FY20, we increased our replenishment portfolio by nearly 700% from FY19; to date we have invested in nearly 20 projects in six states and two countries. We are working towards developing additional specific, measurable goals and targets at the basin, business group, and corporate levels. At the basin level, we have set water availability targets for stressed water basins where we operate; we identified these basins through a water risk assessment using the WRI Water Risk Atlas, identifying basins where (1) Microsoft has operational facilities that are projected to have high water consumption in the future and (2) for two or more months of the year there is currently “high-extremely high” monthly baseline water stress. At the business group level, in FY21, Real Estate &amp; Security (RE&amp;S) initiated a study of current water use and implementable water-positive solutions for five sites located in high water stress regions in Asia. These opportunities inform global sustainability goals and water reduction targets, to be monitored at the corporate level, and support our FY21 goal to be water positive by 2030. At the corporate level, we are exploring how best to tailor water commitments to reflect the varying water conditions that exist across our locations and help ensure that we are addressing the most salient issues, be it water quantity, quality, or access.</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.**



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**Target reference number**

Target 1

**Category of target**

Other, please specify  
Water replenishment

**Level**

Company-wide

**Primary motivation**

Water stewardship

**Description of target**

We announced a target/commitment to balance our water consumption in our operations in water-stressed regions by 2030 by investing in water replenishment and water access projects. We are implementing this target by identifying water-stressed and other priority locations annually, using our water data inventory, WRI Aqueduct, and staff insights, and by sourcing water replenishment projects by issuing requests for proposal (RFPs)/requests for information (RFIs) and by engaging project brokers.

**Quantitative metric**

Other, please specify  
Balance 100% of water consumption by volume with water replenishment in 100% of identified high-priority basins

**Baseline year**

2019

**Start year**

2019

**Target year**

2030

**% of target achieved**

13

**Please explain**

The “% of target achieved” listed represents the consumption volume of water balanced through water replenishment projects at the basin level by the end of FY20. Note that the baseline and target years refer to Microsoft fiscal years (baseline of FY19, from July 1, 2018, to June 30, 2019, and target year of FY30, from July 1, 2029, to June 30, 2030). In FY21 (outside the reporting period), we announced a new corporate commitment to become water positive by 2030.

## 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**

Engagement with suppliers to help them improve water stewardship

**Level**

Business

**Motivation**

Water stewardship

**Description of goal**

Promote water conservation by driving adoption of various waste/wastewater onsite and recycling techniques at supplier sites. The techniques enable water to be separated from waste/wastewater and reused in production, which helps conserve water. It is important to our company as adoption of these techniques decreases the water dependency of these suppliers and makes our supply chain more resilient in terms of water security. This goal is set at the business level because it is specific to our direct/manufacturing suppliers. It has been implemented at select suppliers since FY17 and will be expanded to a wider scope in the future.



**Baseline year**

2017

**Start year**

2017

**End year**

2020

**Progress**

We assess our progress against this goal using the following indicators: progress of the waste reduction project and the results of the project on the factory operations. Our threshold for success is progress of the factory as shown by the data reported. In FY17, we launched an onsite waste coolant treatment project at a pilot (supplier) factory. We introduced treatment techniques to the supplier and then had waste coolant treatment facilities installed at the factory. After a series of equipment/facility adjustments and process optimization, the waste treatment practices have been carried out at the pilot factory properly. Based on the information provided by the supplier, the waste coolant treatment system reached a waste reduction rate of approximately 77 percent in FY20; 288 cubic meters of water were recovered and reused in production.

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**Goal**

Engagement with suppliers to reduce the water-related impact of supplied products

**Level**

Business

**Motivation**

Reduced environmental impact

**Description of goal**

Increase the number of Microsoft direct/manufacturing suppliers that respond to the CDP water security questionnaire. This goal is important to our company as it will help us in our reporting on supplier water engagement. It is relevant to the goal of achieving water security because with



supplier water data, we will have better insights into water usage across our whole value chain. This goal is set at the business level because it is specific to our direct/manufacturing suppliers. We are implementing it by partnering directly with our suppliers on the topic. We have held a supplier forum during which Microsoft requested suppliers complete the CDP water security questionnaire. We have also recorded a training course on CDP reporting and placed it in our supplier training portal.

**Baseline year**

2017

**Start year**

2019

**End year**

2020

**Progress**

This is an ongoing goal, measured annually. We assess our progress for this goal based on the number of suppliers that respond to the CDP water security survey. Our threshold for success is a 100 percent response rate from suppliers constituting 95 percent of direct/manufacturing spend, which we surpassed in FY20 (with responses from suppliers representing 98 percent of direct/manufacturing supplier spend).

## W9. Verification

### W9.1

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

Yes

 2020-Microsoft-Water-Verification-Statement.pdf

### W9.1a

**(W9.1a) Which data points within your CDP disclosure have been verified, and which standards were used?**



Disclosure module	Data verified	Verification standard	Please explain
W1 Current state	Total withdrawals	ISAE 3000	Microsoft annually has our total global water withdrawals independently verified. Of Microsoft water data, withdrawal data is the most accurate and complete, as a large portion is metered, and we use a robust methodology to calculate estimated withdrawals for sites that are not metered.

## W10. Sign off

### W-FI

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

### W10.1

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

	Job title	Corresponding job category
Row 1	President and Chief Legal Officer	President