Welcome to your CDP Water Security Questionnaire 2020

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.

Water is a crucial resource that requires global stewardship. Around the world, water systems are increasingly stressed by the combined effects of population growth, rapid economic development, and climate change. These challenges, in turn, are driving an imbalance between water supply and demand and affecting water quality and access in ways that could jeopardize human health, agricultural productivity, economic development, and the ability to maintain sustainable ecosystems.

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.

<table>
<thead>
<tr>
<th>Reporting year</th>
<th>Start date</th>
<th>End date</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>July 1, 2018</td>
<td>June 30, 2019</td>
</tr>
</tbody>
</table>

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.

<table>
<thead>
<tr>
<th>Sufficient amounts of good quality freshwater available for use</th>
<th>Direct use importance rating</th>
<th>Indirect use importance rating</th>
<th>Please explain</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sufficient amounts of recycled, brackish and/or</td>
<td>Important</td>
<td>Important</td>
<td>Direct use: The primary use for lower quality freshwater in our direct operations is for cooling systems in our datacenters. When process water is required, we use recycled, reused, or</td>
</tr>
</tbody>
</table>

Direct use: The primary use for good-quality freshwater in our direct operations is for cooling systems for some offices, labs, and datacenters. This 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 various water recycling/reuse technologies to reduce water consumption per megawatt in our direct operations. We installed water-saving irrigation nozzles throughout the Redmond campus in FY18 and improved the campus irrigation system controls in FY19. At our new Silicon Valley campus, we are planning to develop an onsite wastewater system to recycle rainwater, stormwater, wastewater, and greywater and use it for irrigation and plumbing. This will be the first campus designed to achieve net-zero non-potable water certification under the Living Building Challenge. Indirect use: The primary use of good-quality freshwater by our suppliers includes process and domestic use. Our lifecycle analysis model indicates that water is important for the manufacture of magnets, integrated circuits, printed wiring boards, and aluminum. Also, we recognize access to drinking water and sanitation for supplier employees as a human right. 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. Our products/services have minimal water impacts in other stages of the value chain.
produced water available for use

industrial water where available unless potable water is required (e.g. with adiabatic cooling). We also use lower quality freshwater for flush fixtures, cooling, and irrigation for some offices and labs globally. Access to lower quality freshwater is important because it reduces our operation’s dependency on limited potable water. For example, our Johannesburg office, located in a water-stressed region, has a greywater and rainwater harvesting system. Our Beijing campus installed a greywater harvesting system in FY20, to complement its existing rainwater harvesting system. Because we will be increasing our use of these systems, future dependency on recycled water will be increasing in our direct operations. Indirect use: The primary use of lower quality freshwater by our suppliers includes process use (e.g. surface treatment and cooling processes) and limited domestic use (e.g. toilet flushing and landscaping). Lower quality freshwater use is important because it reduces demand for potable water, which is 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 the efforts we are helping drive at our manufacturing supplier sites to implement waste/wastewater recycling practices, thereby increasing supply resiliency and providing significant reputational value in many parts of the world. Our products/services have minimal water impacts in other stages of the value chain.

W1.2

(W1.2) Across all your operations, what proportion of the following water aspects are regularly measured and monitored?

<table>
<thead>
<tr>
<th>% of sites/facilities/operations</th>
<th>Please explain</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water withdrawals – total volumes</td>
<td>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 leased sites that accounts for square footage, electricity consumption, building type, and cooling type. We updated this methodology in FY18 to account for varying withdrawal rates of different cooling types at our datacenters. For all other facilities,</td>
</tr>
</tbody>
</table>


| 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 leased sites that accounts for square footage, electricity consumption, building type and cooling type. For all other facilities, utility data at individual sites is collected monthly or estimated. 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. Only at specific sites are water withdrawals monitored for quality at the site level. 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 Puget Sound to track water discharges from our cooling towers and 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 have completed a datacenter fleet update of our water |
meters on the intake and discharge side and are continuing to confirm our consumption numbers to establish a solid baseline for reporting and internal goal setting.

<p>| 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 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 have completed a datacenter fleet update of water meters on the intake and discharge side and 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. We have completed a datacenter fleet update of our water meters on the intake and discharge side and are continuing to confirm our consumption numbers to establish a solid baseline for reporting and internal goal setting. |
| 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 discharge quality is measured at only some of our datacenters; water discharge quality effluent parameter reporting is on a site-by-site basis. 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 |</p>
<table>
<thead>
<tr>
<th>Water discharge quality – temperature</th>
<th>Not relevant</th>
<th>Microsoft is not required to monitor water discharge quality for temperature by any regulations in the areas in which we operate, and therefore this water aspect is not relevant to our business.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water consumption – total volume</td>
<td>100%</td>
<td>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.</td>
</tr>
<tr>
<td>Water recycled/reused</td>
<td>100%</td>
<td>We measure and monitor reused water at sites that have water recycling capability, though very few sites (including datacenters, offices, labs, retail) recycle/reuse water. 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 collected monthly. Our Johannesburg office greywater treatment plant (completed FY18) is separately metered to track water reused monthly. We are redeveloping our Silicon Valley office campus to be a net-zero non-potable water campus and 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 feature cooling tower optimization, where condensate water will be collected and treated onsite to meet non-potable water irrigation needs. In FY20, our Beijing campus will install a greywater harvesting system to increase water reuse in this water-stressed region.</td>
</tr>
<tr>
<td>The provision of fully-functioning, safely managed WASH services to all workers</td>
<td>100%</td>
<td>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, we added an acknowledgement of the human right to water and sanitation and a commitment to safely managed water access and sanitation in our offices and datacenters to our companywide water policy as part of joining the</td>
</tr>
</tbody>
</table>
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?

<table>
<thead>
<tr>
<th></th>
<th>Volume (megaliters/year)</th>
<th>Comparison with previous reporting year</th>
<th>Please explain</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total withdrawals</td>
<td>7,989.77</td>
<td>Higher</td>
<td>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) and, in cases where metered data is unavailable, estimations. We have a robust estimation methodology for leased sites that accounts for square footage, electricity consumption, building type, and cooling type. Even so, there exists uncertainty of +/-10 percent in the data due to data gaps, metering/measuring constraints, and extrapolation methodology. Because of business growth, our total measured water withdrawals increased from the previous reporting period—an increase of greater than 10 percent but less than 50 percent. We anticipate withdrawals to increase along with our business over the next several years.</td>
</tr>
<tr>
<td>Total discharges</td>
<td>3,774.38</td>
<td>About the same</td>
<td>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</td>
</tr>
</tbody>
</table>
withdrawals and total consumption increased more or less equally, 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 | 4,215.39 | Higher | 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. There exists uncertainty of +/-20 percent in the data due to data gaps, metering/measuring constraints, and extrapolation methodology. Because of business growth and in line with the corresponding increase in our withdrawal volume, our total estimated water consumption grew from the previous reporting period—an increase of greater than 10 percent but less than 50 percent. We anticipate an increase in proportion to withdrawals as our business grows over the next several years. |

**W1.2d**

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

<table>
<thead>
<tr>
<th>Withdrawals are from areas with water stress</th>
<th>% withdrawn from areas with water stress</th>
<th>Comparison with previous reporting year</th>
<th>Identification tool</th>
<th>Please explain</th>
</tr>
</thead>
<tbody>
<tr>
<td>Row 1</td>
<td>Yes</td>
<td>1-10</td>
<td>About the same</td>
<td>WRI Aqueduct</td>
</tr>
</tbody>
</table>

Each year, we conduct annual water risk assessments that consider the near future 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. Note that in the past year, WRI has updated its
methodology for determining the stress level of water basins, resulting in a decrease in Microsoft's percent withdrawn from stressed areas for both FY18 and FY19. Using the new methodology for both years, 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 remained consistent. We concluded that we do not have a substantive risk at the enterprise level, 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 because we don’t currently have the location of withdrawal sources available. In FY19 we expanded water data collection to include the source of supply (for example, specific river basin or groundwater source) for key facilities. In FY19, we also adopted a water replenishment target in which we committed to balance our water consumption in our operations in water-stressed basins by 2030 by investing in water replenishment projects. In FY19, we invested in several replenishment projects in the United States and India as part of this commitment.

W1.2h

(W1.2h) Provide total water withdrawal data by source.

<table>
<thead>
<tr>
<th>Relevance</th>
<th>Volume (megaliters/year)</th>
<th>Comparison with previous reporting year</th>
<th>Please explain</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fresh surface water, including rainwater, water</td>
<td>Relevant</td>
<td>104.15</td>
<td>About the same</td>
</tr>
<tr>
<td>Source</td>
<td>Relevance</td>
<td>Volume (Gallons)</td>
<td>Change from Previous Year</td>
</tr>
<tr>
<td>------------------------------------</td>
<td>-----------</td>
<td>-----------------</td>
<td>--------------------------</td>
</tr>
<tr>
<td>from wetlands, rivers, and lakes</td>
<td>Not relevant</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brackish surface water/Seawater</td>
<td>Not relevant</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Groundwater – renewable</td>
<td>Relevant</td>
<td>34.49</td>
<td>Higher</td>
</tr>
<tr>
<td>Groundwater – non-renewable</td>
<td>Not relevant</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Produced/Entrained water</td>
<td>Relevant</td>
<td>290.78</td>
<td>About the same</td>
</tr>
<tr>
<td>Third party sources</td>
<td>Relevant</td>
<td>7,560.35</td>
<td>Higher</td>
</tr>
</tbody>
</table>

- **from wetlands, rivers, and lakes**: Annual rainfall each year because we did not expand rainwater collection efforts. We expect future withdrawal volumes from fresh surface water to remain roughly the same.

- **Brackish surface water/Seawater**: 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**: This source is relevant to Microsoft as we withdraw groundwater at several of our office campuses, such as Bangalore and Hyderabad. These withdrawal volumes are metered and increased in FY19 from the previous year—an increase of greater than 10 percent but less than 50 percent—because of growth at some of the sites that use renewable groundwater. We expect future withdrawal volumes from renewable groundwater to remain relatively flat.

- **Groundwater – non-renewable**: 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**: This source is relevant to Microsoft because municipally treated wastewater is used for cooling at one of our datacenters and for landscape irrigation at several of our office campus locations. These withdrawal volumes are metered and roughly remained the same compared with the previous year (a change of less than +/-10 percent). We expect future withdrawal volumes from produced/process water to increase as more sites start to use it.

- **Third party sources**: 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) and, in cases where metered data is unavailable, estimations. We have a robust estimation methodology for leased sites that accounts for square footage, electricity consumption, building type, and cooling type. Because of business growth and an increased need for cooling water, our total measured water withdrawals in FY19 grew from the previous reporting period—an increase of greater than 10 percent but less than 50 percent. 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.**

<table>
<thead>
<tr>
<th>Destination</th>
<th>Relevance</th>
<th>Volume (megaliters/year)</th>
<th>Comparison with previous reporting year</th>
<th>Please explain</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fresh surface water</td>
<td>Not relevant</td>
<td></td>
<td></td>
<td>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).</td>
</tr>
<tr>
<td>Brackish surface water/seawater</td>
<td>Not relevant</td>
<td></td>
<td></td>
<td>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).</td>
</tr>
<tr>
<td>Groundwater</td>
<td>Not relevant</td>
<td></td>
<td></td>
<td>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).</td>
</tr>
</tbody>
</table>
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. Because of business growth and an increased need for cooling water, our total estimated water discharges in FY19 remained about the same as the previous reporting period (a change of less than +/-10 percent), and we anticipate an increase in water discharge volumes in proportion to withdrawals as our business grows over the next several years.

<table>
<thead>
<tr>
<th>Third-party destinations</th>
<th>Relevant</th>
<th>3,774</th>
<th>About the same</th>
</tr>
</thead>
</table>

W1.4

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

Yes, our suppliers
Yes, our customers or other value chain partners

W1.4a

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

Row 1

% of suppliers by number
Less than 1%

% of total procurement spend
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 FY19, we participated in the CDP Supply Chain water security program, requesting responses from 305 suppliers (representing 95% of direct/manufacturing supplier spend, as well as top indirect/nonmanufacturing and tier 1 datacenter server suppliers), 147 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. The Cloud Supply Chain Sustainability team works with our datacenter hardware suppliers to gather and analyze data on our hardware environmental footprint; it is reviewing the feasibility/value of collating primary supplier water data linked to the manufacturing and recycling of our equipment.

Impact of the engagement and measures of success
We request information from suppliers on water accounting, impacts and risks. We use this data to understand supplier water usage and risk exposure (e.g. 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 targets are a 100% response rate from requested direct/manufacturing suppliers representing 95% of direct/manufacturing supplier spend and >80% response rate from requested indirect/nonmanufacturing suppliers. We have not yet set targets for tier 1 datacenter server suppliers, as this group is relatively new to the program. For indirect/nonmanufacturing suppliers, our goal is ongoing evolution of the program, to have our suppliers share their practices and then segment and reward suppliers based on CDP performance.

Comment

W1.4b

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

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 employees. 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
  Water management requirements in the audit program for our hardware and packaging suppliers 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

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 and FY19. 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
- 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 water recycling rate reached 75 percent in FY19. As the next step, we expect to involve more suppliers in this project, which will have a positive impact on our supply chain.

Comment

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 direct/manufacturing suppliers that have a major business in our 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: Our strategy is to 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. We prioritize engagements that have the potential to amplify our positive impact on addressing global water challenges. Our overarching water stewardship strategy guides our engagement process, focusing on (1) understanding our basin and operational water risk and business impact in places where we operate, (2) setting goals and improving water use, (3) launching and scaling replenishment projects through local engagement 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. For example, we are partnering with Ecolab by providing a platform to host a publicly available financial modeling tool, the Water Risk Monetizer (WRM), to help businesses fully quantify water risks to support decision making and drive digital transformation. Similarly, our AI for Earth program builds on our commitment to use technology to amplify human ingenuity and advance sustainability through ongoing projects and partnerships that use AI to accelerate people’s ability to observe environmental systems and convert data into useful information.

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?
W3. Procedures

W3.3

(W3.3) Does your organization undertake a water-related risk assessment?

  Yes, water-related risks are assessed

W3.3a

(W3.3a) Select the options that best describe your procedures for identifying and assessing water-related risks.

  **Direct operations**

    **Coverage**
    
    Full

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

  **Frequency of assessment**
  
  More than once a year

  **How far into the future are risks considered?**
  
  More than 6 years

  **Type of tools and methods used**
  
  Tools on the market
  Enterprise Risk Management
  International methodologies
Databases
Other

**Tools and methods used**
- WRI Aqueduct
- IPCC Climate Change Projections
- Maplecroft Global Water Security Risk Index
- Regional government databases
- Internal company methods
- External consultants
- Other, please specify
  - Federal Emergency Management Agency (FEMA) data; Proprietary modeled flood data; 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, the 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**

**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 biannually or more frequently 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

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?

<table>
<thead>
<tr>
<th>Water availability at a basin/catchment level</th>
<th>Relevance &amp; inclusion</th>
<th>Please explain</th>
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<tbody>
<tr>
<td>Relevant, always included</td>
<td></td>
<td>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. Where future expansion plans are unknown, when possible we get commitment letters from utilities indicating that they can provide for future demand (often subject to expansion of existing infrastructure) (internal company methods). Assessment: In 2017, we assessed the vulnerability of our operations to the physical impacts of climate change, including the potential for diminished water availability at a local level (expanded in FY18 to include LinkedIn facilities and key suppliers). These</td>
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assessments 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, downscaled sea level rise estimates provided by regional and local government authorities, proprietary flood modeling products). We concluded that we do not have a substantive risk at the enterprise level, though 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. This analysis will be updated in FY20–21, focusing on quantitative climate risk and opportunity assessment. We are integrating the results into our siting and operational planning to mitigate the identified risk. Water availability at the basin level is particularly relevant to our corporate Environmental Sustainability team, which is pursuing a replenishment program in high-risk basins. For example, in FY18, Microsoft announced a partnership with Trout Unlimited and the Bonneville Environmental Foundation to facilitate water replenishment in central Washington, to support projects that increase flows and habitat conditions for migrating fish, remove fish passage barriers, and test new irrigation techniques that can improve the quality and quantity of fruit while using less water. In FY19, we expanded our replenishment program to include several new projects.

Water quality at a basin/catchment level

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. Withdrawal/discharge capacity and water quality are vetted and service agreements put in place prior to completing the transaction. Where future expansion plans are unknown, when possible we obtain commitment letters from the utilities indicating that they can support future demand (tool: internal company methods). If those conditions change, we reevaluate our impact at the basin level and how we can address the issue. Assessment: 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, in FY19, Microsoft continued our partnership with Trout Unlimited and the Bonneville Environmental Foundation to facilitate water replenishment in central Washington. The partnership supports projects that will increase flows and habitat conditions for migrating fish, remove fish passage barriers, and test new irrigation techniques that can improve the quality and quantity of fruit while using less water.
water. In FY19, Microsoft volunteers participated in a workday on the eastern slopes of the Cascade Mountains, building beaver dam analogs as part of a water replenishment project that Microsoft is undertaking with Trout Unlimited and other partners. In FY20, Microsoft 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.

Stakeholder conflicts concerning water resources at a basin/catchment level

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<tr>
<th>Relevant, always included</th>
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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 transfer risks to 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 FY19, Microsoft collaborated with the City of Quincy to construct a municipal water reuse facility (MWRF), benefiting both Microsoft and the city, as well as other industrial users in the area. The MWRF, which is anticipated to be operational in December 2020, will receive cooling water discharge from Microsoft datacenter operations and provide the datacenters with reuse water. Through this collaboration, Microsoft will eliminate discharge of water from datacenter cooling operations to the city’s municipal water treatment facility, as well as reduce, and potentially eliminate, the use of potable water for cooling operations. The MWRF further supports the city’s need to reduce potable water demand and enables them to continue to meet regulatory requirements for water treatment and wastewater discharge. 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 that have local stakeholder support.

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<tr>
<th>Implications of water on your key commodities/raw materials</th>
<th>Relevant, always included</th>
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<tr>
<td>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 in the 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.</td>
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<th>Water-related regulatory frameworks</th>
<th>Relevant, always included</th>
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<tr>
<td>Water-related regulatory frameworks are relevant, always included, because all of 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 leaders from across the corporation—including finance, regulatory/policy, technology, and environmental professionals, as well as external subject matter experts—together 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. 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</td>
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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.

| Status of ecosystems and habitats | Relevant, always included | 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 our operations have the greatest impact, 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 balance site-level water consumption 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 began pursuing a replenishment program in high-risk basins in FY19. In FY19, Microsoft volunteers participated in a workday on the eastern slopes of the Cascade Mountains, building beaver dam analogs as part of a water replenishment project that Microsoft is undertaking with Trout Unlimited and other partners. In addition, we have supported a project in central Washington that aims to increase flows and habitat conditions for migrating salmonids, remove fish passage barriers, and test new irrigation techniques that can improve the quality and quantity of fruit, while using less water. In FY19, we expanded our replenishment program to include several new projects that also take into account ecosystem benefits. |

| Access to fully-functioning, safely managed WASH services for all employees | Relevant, always included | 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 for water shortages are also considered at risk for access to WASH services. For example, in collaboration with WaterAid, we 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. |
Other contextual issues, please specify

### W3.3c

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

<table>
<thead>
<tr>
<th>Stakeholders</th>
<th>Relevance &amp; inclusion</th>
<th>Please explain</th>
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<tbody>
<tr>
<td>Customers</td>
<td>Relevant, always included</td>
<td>We always include customers in our water-related risk assessment because customers are indirectly or directly relevant to everything Microsoft does, and they 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 services, which would be unacceptable to Microsoft and damaging to our customers. Therefore, we prioritize ongoing global business continuity, monitoring risks and implementing business continuity 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, bilateral discussions, corporate website.</td>
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<tr>
<td>Employees</td>
<td>Relevant, always included</td>
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<tr>
<td>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). If we didn’t provide potable water for our employees, we would not be able to operate our facilities, which would jeopardize 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. Each year, the Environmental Sustainability team hosts a workshop to brief sustainability leaders within our business groups on Microsoft’s environmental priorities (including water) and how to apply for sustainability funding for internal projects. 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), internal workshops.</td>
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<tr>
<th>Investors</th>
<th>Relevant, always included</th>
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<tr>
<td>We always include investors in our water-related risk assessment 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 CDP since 2011 at the request of investors. We also publish detailed information on our water stewardship commitment and action on our website. Method of engagement: responding to CDP and communicating our progress on water stewardship on our corporate website.</td>
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<tr>
<td>Local communities</td>
<td>Relevant, always included</td>
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<tr>
<td>NGOs</td>
<td>Relevant, always included</td>
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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, and in FY19, we submitted to the UNGC our first communication on progress. NGOs are a particularly relevant stakeholder to our corporate Environmental Sustainability team, which was actively partnering with NGOs in FY19 to deliver replenishment projects in high-risk basins. As part of our water replenishment strategy, we are actively 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, National Forest Foundation, and other NGOs. Method of engagement: direct engagement, multi-stakeholder meetings with NGOs and other stakeholders.

| Other water users at a basin/catchment level | Relevant, sometimes included | 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. Datacenters can at times be large users of water. Water supply and discharge for our datacenters are preapproved; therefore, quantity and quality requirements are vetted in advance and are often included in our service agreements with the local utility company. 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 began pursuing replenishment projects in high-risk basins in FY19. For example, through our 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, and regulatory changes (including, for example, restrictions or permitting) could affect this. 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).

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<tr>
<th>River basin management authorities</th>
<th>Relevant, sometimes included</th>
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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).

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<thead>
<tr>
<th>Statutory special interest groups at a local level</th>
<th>Relevant, sometimes included</th>
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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 health, which influences the availability and quality of local water supply (essential for Microsoft facilities, in particular datacenters). Datacenters can at times be large users of water. 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 high-priority 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, our Johannesburg office, for example, installed a greywater treatment plant (GWTP) during FY18 and engaged local third-party groups to conduct ongoing water quality samples. When our Real Estate & Security (RE&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.

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<tr>
<th>Suppliers</th>
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<td>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, some indirect/nonmanufacturing 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 FY19, 38 percent of our indirect suppliers responding to the CDP Supply Chain water questionnaire reported water-related risks, and of these 11 percent saw potential financial impacts 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 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.</td>
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<tr>
<th>Water utilities at a local level</th>
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<td>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. For example, as part of implementing our water replenishment strategy, we look for opportunities to materially improve the source of water supply we rely on. Near Cheyenne, we support a project to remove roads in the watershed that serves as one of the sources of supply for the City of Cheyenne. 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</td>
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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

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(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 facility 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) companywide assessment of vulnerabilities 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); and (3) Microsoft Treasury 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 Business Continuity Management program (using internal company methods, including its Business Continuity Standard and Service Resilience Standard) 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, loss of systems, loss of workforce, loss of critical third-party suppliers of goods/services, cybersecurity events, or a combination of two or more of those scenarios.

**Risk response decision-making process examples:** In FY19, sites with high WRI Aqueduct water risk scores were evaluated for inclusion in Microsoft’s replenishment program. Similarly, the results obtained through the IPCC RCP 8.5 scenario-based vulnerability assessment are used to inform our siting and operational planning to mitigate identified risk. Microsoft Treasury 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. Our products and services have minimal water impacts in other stages of the value 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 and an assessment of climate-related physical and transition risks and opportunities initiated in FY19), 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), both for our direct operations and 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. The 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 Business Continuity Management (EBCM) 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 EBCM 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?

<table>
<thead>
<tr>
<th>Row</th>
<th>Primary reason</th>
<th>Please explain</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Risks exist, but no substantive impact anticipated</td>
<td>Consultation with subject matter experts across the organization and other water risk assessments (including our FY17–18 assessment of physical climate risks and our use of the WRI Aqueduct tool) have not revealed any substantive water risk across our global portfolio. 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 (outside the reporting period) 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). We also have a water crisis response plan. Ongoing business continuity strategies such as monitoring identified risks and implementing business continuity measures help ensure continued reliability. Furthermore, 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.</td>
</tr>
</tbody>
</table>
**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?

<table>
<thead>
<tr>
<th>Primary reason</th>
<th>Please explain</th>
</tr>
</thead>
<tbody>
<tr>
<td>Row 1</td>
<td>Risks exist, but no substantive impact anticipated</td>
</tr>
</tbody>
</table>

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, some indirect/nonmanufacturing suppliers, 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 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 FY19, 38 percent of our indirect suppliers responding to the CDP Supply Chain water questionnaire reported water-related risks, and of these, 11 percent saw 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. Our products and services have minimal water impacts in other stages of the value chain.

**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 solve global environmental challenges—including in water—by increasing access to AI tools and educational opportunities while accelerating innovation.

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)
3,800,000,000

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 FY19 (the reporting period) revenue of $125.84 billion would have been an increase of up to $3.8 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.

<table>
<thead>
<tr>
<th>Scope</th>
<th>Content</th>
<th>Please explain</th>
</tr>
</thead>
<tbody>
<tr>
<td>Company-wide</td>
<td>Description of business dependency on water</td>
<td>Water is a global issue, and so 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</td>
</tr>
<tr>
<td>Description of business impact on water</td>
<td>four main objectives: (1) understand our basin and operational water risk and business impact in places where we operate; (2) set goals and improve water use; (3) launch and scale water replenishment projects through local engagement and participate 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 elements selected in the Content column falls within at least one of the four main 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 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 solve global environmental challenges—including in water—by increasing access to AI tools and educational opportunities while accelerating innovation. Included in our company water targets and goals is our commitment to balance our water consumption in our operations in water-stressed basins by 2030 by investing in water replenishment projects. And our commitment to water stewardship and/or collective action is reflected in our participation in the Water Resilience Coalition (founding member), CEO Water Mandate, and the 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.</td>
<td></td>
</tr>
<tr>
<td>Description of water-related performance standards for direct operations</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Description of water-related standards for procurement</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reference to international standards and widely-recognized water initiatives</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Company water targets and goals</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Commitment to align with public policy initiatives, such as the SDGs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Commitments beyond regulatory compliance</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Commitment to water-related innovation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Commitment to stakeholder awareness and education</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Commitment to water stewardship and/or collective action</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Commitment to safely managed Water, Sanitation and Hygiene (WASH) in the workplace</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acknowledgement of the human right to water and sanitation</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
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.

<table>
<thead>
<tr>
<th>Position of individual</th>
<th>Please explain</th>
</tr>
</thead>
<tbody>
<tr>
<td>Board-level committee</td>
<td>Board-level responsibility for water-related issues belongs to the Regulatory and Public Policy Committee of our Board of Directors because its charter is to “review and provide guidance to the board and management about the company's policies and programs that relate to corporate social responsibility, including accessibility, environmental sustainability, ethical business practices, human rights, philanthropy, privacy and cybersecurity, and responsible sourcing.” 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 replenishment target) and decisions on programmatic investments (including the decision to fund our AI for Earth program). The membership of the Committee consists of at least two directors of the board and currently includes five.</td>
</tr>
</tbody>
</table>

W6.2b

(W6.2b) Provide further details on the board’s oversight of water-related issues.
W6.3

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

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

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 FY19, 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 corporate water replenishment goal. To achieve this, in FY19, 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.

**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 FY19, 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 FY19, 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.

Name of the position(s) and/or committee(s)
Other, please specify
Water Program 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 is a new role created within our corporate Environmental Sustainability team in FY18 as a part of Microsoft’s efforts to ramp up activities around water stewardship. In FY19, 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.

W6.4

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

<table>
<thead>
<tr>
<th>Provide incentives for management of water-related issues</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td></td>
</tr>
</tbody>
</table>

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)?

<table>
<thead>
<tr>
<th>Role(s) entitled to incentive</th>
<th>Performance indicator</th>
<th>Please explain</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monetary reward</td>
<td>Other C-suite Officer</td>
<td>Implementation of water-related community project</td>
</tr>
<tr>
<td></td>
<td>Chief Environmental Officer</td>
<td>Details on the indicator chosen: The Chief Environmental Officer role has accountability for our commitment to water replenishment. In FY19, the reporting period for this response, we committed to replace what our operations consume in water-stressed regions by 2030. We will achieve this commitment by investing in water replenishment projects in high-risk basins. 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</td>
</tr>
</tbody>
</table>
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 water replenishment commitment) 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 gained the second highest 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 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)

Microsoft-FY19-10k.pdf

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?

<table>
<thead>
<tr>
<th>Long-term business objectives</th>
<th>Are water-related issues integrated?</th>
<th>Long-term time horizon (years)</th>
<th>Please explain</th>
</tr>
</thead>
<tbody>
<tr>
<td>Long-term business objectives</td>
<td>Yes, water-related issues are integrated</td>
<td>&gt; 30</td>
<td>Microsoft can significantly improve our 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 &gt;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 our basin and operational water risk/business impact in places where we operate; (2) set goals and improve water use; (3) launch and scale replenishment projects through local engagement and participate in collaborative platforms; and (4) advance the digital transformation of water through innovative</td>
</tr>
</tbody>
</table>
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.

<table>
<thead>
<tr>
<th>Strategy for achieving long-term objectives</th>
<th>Yes, water-related issues are integrated</th>
<th>11-15</th>
</tr>
</thead>
<tbody>
<tr>
<td>In expanding our water risk assessment across our operations and supply chain in FY17, we identified high-risk basins 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. In FY19 (reporting period), we expanded water data collection to include sources of supply for key sites, to better understand water availability. 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 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.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Financial planning</th>
<th>Yes, water-related issues are integrated</th>
<th>&gt; 30</th>
</tr>
</thead>
<tbody>
<tr>
<td>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 &gt;30 years, as there is strategic value in our long-lived real estate assets. For example, we partnered with a local government and water utility in 2011 to help create a water reuse system using excess water from food processing plants to provide water for datacenter cooling systems. This investment demonstrates our long-term financial planning and investment in water stewardship.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
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)

24

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

18

Please explain

Microsoft does not track water-related CAPEX separately. The water-related OPEX change from FY18 to FY19 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.

W7.3

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

<table>
<thead>
<tr>
<th>Use of climate-related scenario analysis</th>
<th>Comment</th>
</tr>
</thead>
</table>

## 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?

<table>
<thead>
<tr>
<th>Climate-related scenarios and models applied</th>
<th>Description of possible water-related outcomes</th>
<th>Company response to possible water-related outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Row 1 Other, please specify RCP 8.5</td>
<td>During FY16, we initiated a scenario analysis focused on the risks associated with the physical impacts of climate change. We relied on RCP 8.5 because it is the publicly available and peer-reviewed scenario with the greatest potential physical risk. Although our analysis did not reveal any material risks, it did present the possibility at several of our facilities of water shortages from extended drought (such as at our Beijing, Chennai, and Pune facilities, which are also our largest water users) and increased coastal flooding risk due to sea level rise (such as at our Mumbai facility). During FY18, we began evaluating scenarios for our assessment of transition risk, and we expect to have a substantially greater understanding of our transition risk by FY20.</td>
<td>Our response to possible water-related outcomes is multifaceted. It is currently ongoing and will extend through 2030. We rigorously create redundancy in our datacenter operations, using geo-replicated customer workloads (keeping multiple copies of workloads in multiple locations) to improve reliability. We are currently exploring and implementing approaches to reduce our water usage. We identify alternative water sources that do not require the provision of municipal water (e.g. water reuse). 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, including large-scale campus redevelopment projects in Silicon Valley (FY20). In FY18,</td>
</tr>
</tbody>
</table>
our Johannesburg office completed a greywater treatment plant (GWTP) and rainwater harvesting system to increase water reuse in a water-stressed region. The GWTP is separately metered to track water reused on a monthly basis. Our Beijing campus installed a greywater harvesting system in FY20, to complement its existing rainwater harvesting system. Located in a water-stressed region, our Herzliya campus redevelopment (FY20) will feature cooling tower optimization, where condensate water will be treated onsite to meet lower quality freshwater irrigation needs.

**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 (WRM) 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.
<table>
<thead>
<tr>
<th>Levels for targets and/or goals</th>
<th>Monitoring at corporate level</th>
<th>Approach to setting and monitoring targets and/or goals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Company-wide targets and goals</td>
<td>Targets are monitored at the corporate level</td>
<td>We identify and prioritize targets and goals relevant to our water risks, impacts, and opportunities through our Environmental Sustainability governance model (which involves consultation with leaders from across our corporation and with subject matter experts external to our company); this process also helps ensure that our targets and goals reflect geographic, regulatory, and other contextual factors (for example, we conduct annual water risk assessments to identify basins in high and extremely high water stress regions). Our formal motivation for setting water targets and goals is our commitment to actions contributing to global water security as outlined in our water stewardship strategy; our water replenishment target supports our commitments as part of the United Nations (UN) Global Compact CEO Water Mandate (in alignment with UN Sustainable Development Goal 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 FY17 scenario analysis on the physical impacts of climate change on our business 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. We are implementing this target by investing in water replenishment and access projects led by non-governmental organizations (NGOs) and community groups. We source these projects through requests for proposal (RFPs) and by working with project brokers. In FY19, we invested in 11 projects and will continue to source and invest in additional projects going forward. Motivated by our commitment to water stewardship, we are working towards developing additional specific, measurable goals and targets at the site/facility, business group, and corporate levels. At the site/facility level, our approach is focused on our datacenters: developing intelligent systems to gather real-time data; monitoring and servicing those systems to ensure that the data accurately represents site-level conditions; and using the data to justify additional investments in water-related efficiency projects. At the business group level, in FY19, Real Estate &amp; Security (RE&amp;S) initiated water audits at major campuses to uncover opportunities to reduce water use and improve efficiency. These opportunities inform global sustainability goals and water reduction targets, to be monitored at the corporate level. At the corporate level, we are exploring how best to tailor water commitments to reflect the</td>
</tr>
<tr>
<td>Business level specific targets and/or goals</td>
<td>Goals are monitored at the corporate level</td>
<td></td>
</tr>
<tr>
<td>Site/facility specific targets and/or goals</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Monitoring at corporate level**

- Targets are monitored at the corporate level
- Goals are monitored at the corporate level
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.

W8.1a

(W8.1a) Provide details of your water targets that are monitored at the corporate level, and the progress made.

<table>
<thead>
<tr>
<th>Target reference number</th>
<th>Target 1</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Category of target</strong></td>
<td>Other, please specify&lt;br&gt;Water replenishment</td>
</tr>
<tr>
<td><strong>Level</strong></td>
<td>Company-wide</td>
</tr>
<tr>
<td><strong>Primary motivation</strong></td>
<td>Water stewardship</td>
</tr>
<tr>
<td><strong>Description of target</strong></td>
<td>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.</td>
</tr>
<tr>
<td><strong>Quantitative metric</strong></td>
<td>Other, please specify&lt;br&gt;Balance 100% of water consumption by volume with water replenishment in 100% of identified high-priority basins</td>
</tr>
</tbody>
</table>
Baseline year
  2019

Start year
  2019

Target year
  2030

% of target achieved
  7

Please explain
  To date, we have invested nearly $2 million in water replenishment and water access projects. The “% of target achieved” listed represents the consumption volume of water balanced through water replenishment projects at the basin level by the end of FY19. 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).

W8.1b

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

Goal
  Engagement with 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
2019

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 in 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 75 percent in FY19; 347 metric tons of water were recovered and reused in production. In FY20, we have planned to involve more factories generating significant amounts of waste coolant in this project to further benefit our supply chain and the environment.

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 would 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 held a supplier forum during which Microsoft requested suppliers to complete the CDP water security questionnaire. We also recorded a training course on CDP reporting and placed it in our supplier training portal.

Baseline year
2017

Start year
2018

End year
2019

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 100 percent response rate from suppliers constituting 80 percent spend. In FY19, we requested suppliers representing 95 percent of direct/manufacturing supplier spend to respond to the questionnaire and received 60 responses. In FY20, we will be increasing reach to 99 percent of direct/manufacturing suppliers.
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

0 2019-Microsoft-Water-Verification-Statement.pdf

W9.1a

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

<table>
<thead>
<tr>
<th>Disclosure module</th>
<th>Data verified</th>
<th>Verification standard</th>
<th>Please explain</th>
</tr>
</thead>
<tbody>
<tr>
<td>W1 Current state</td>
<td>Total withdrawals</td>
<td>ISAE 3000</td>
<td>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 estimate withdrawals for sites that are not metered.</td>
</tr>
</tbody>
</table>

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.

<table>
<thead>
<tr>
<th>Row 1</th>
<th>Job title</th>
<th>Corresponding job category</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>President and Chief Legal Officer</td>
<td>President</td>
</tr>
</tbody>
</table>

W10.2

(W10.2) Please indicate whether your organization agrees for CDP to transfer your publicly disclosed data on your impact and risk response strategies to the CEO Water Mandate’s Water Action Hub [applies only to W2.1a (response to impacts), W4.2 and W4.2a (response to risks)].

Yes