

## C0. Introduction

---

### C0.1

---

#### **(C0.1) Give a general description and introduction to your organization.**

With a history dating back to 1886, American Water is the largest and most geographically diverse U.S. publicly traded water and wastewater utility company. The company employs more than 7,100 dedicated professionals who provide regulated and market-based drinking water, wastewater and other related services to more than 14 million people in 46 states. American Water provides safe, clean, affordable and reliable water services to our customers to make sure we keep their lives flowing.

We provide services to customers through two lines of business: our regulated and market-based businesses. We serve residential homes and businesses through our regulated subsidiaries, as well as perform contract operations for military bases and municipalities that own their utility systems. The company develops and implements solutions to meet the country's many water challenges, including through our own proprietary Research and Development (R&D) group consisting of 9 PhD scientists working in partnership with the Environmental Protection Agency (EPA), the Centers for Disease Control (CDC), all of our state Departments of Environmental Protection, and international water research foundations.

**PURPOSE DRIVEN.** We are driven by a purpose to be the best for our customers, employees and investors. We never forget that, at the end of every water pipe, there's a family depending on us to provide life's most critical need. At every fire hydrant, lives could depend on us, and at every wastewater treatment plant we serve as a shield against potential disease. We believe every community should be stronger because we are there. This is our calling, and it is what motivates our people every day.

**PEOPLE POWERED.** A company is its people. We are committed to making sure our people have a safe place to work, are trained and developed to reach their potential, and feel respected and valued. In 2018, we had the fewest employee injuries in our recorded history. Safety is a value and a strategy for us, and we will continue to strengthen our safety culture, because it is not acceptable for anyone to get hurt on the job. Our target is zero injuries.

Our people are also an integral part of the communities we serve. Throughout the country, our employees are constantly giving back to the community by participating in and supporting organizations such as the United Way, Special Olympics and American Heart Association. American Water employees volunteered more than 5,000 hours to community projects during 2018. We are truly People Powered, from our hearts to our hands, leaving a lasting impact on the customers and communities we serve. We donate to various critical agencies and non-profits serving the U.S. such as United Way, Habitat for Humanity, Water for People, etc. We are proud to provide a significant contribution annually to Water for People in its mission to provide safe drinking water, clean sanitation and water education to people in developing countries, predominantly Africa and South America, where thousands of children die every day from waterborne illness. In 2018, our partnership raised more than \$200,000, and to further our employee's charitable efforts, the American Water Charitable Foundation also provides annual donation of \$50,000. American Water's workplace giving campaign has raised over \$2.25 million since starting more than 10 years ago. The funds raised from our campaign each year helps thousands of people gain access to water and provides the equivalent of a day's water for about 1.5 million people.

**CUSTOMER OBSESSED.** Our customers are at the center of everything we do. Our focus is not just on customer service, but on the entire customer experience. We also know that if we don't get water quality right that nothing else we do matters. Last year, we expanded our customer experience initiative, utilizing social media, on-line customer communities, and face-to-face groups to determine how we can be easier to do business with. We are deploying innovative technology, making needed infrastructure

investments, and implementing operational efficiency improvements to keep customer bills affordable for this critical service and product.

TRUSTED SOURCE OF EVERYTHING WATER. Our customers and all our stakeholders trust in our solid execution of business fundamentals and operations. We don't take that trust for granted. We will continue to work to be the leaders in bringing together all players in the space to ensure that we have safe, reliable and affordable water. We have a long and rich history of serving and providing solutions for our customers, making the communities we serve stronger because we are there, and working with EPA, CDC, and other critical agencies on constructive water policy issues and challenges.

DOING WELL BY DOING GOOD. Finally, it is our firm belief that companies do well by doing good. We believe that the "how" is just as important as the "what" for long-term financial stability.

## C0.2

---

**(C0.2) State the start and end date of the year for which you are reporting data.**

	Start date	End date	Indicate if you are providing emissions data for past reporting years	Select the number of past reporting years you will be providing emissions data for
Row 1	January 1 2018	December 31 2018	No	<Not Applicable>

## C0.3

---

**(C0.3) Select the countries/regions for which you will be supplying data.**

United States of America

## C0.4

---

**(C0.4) Select the currency used for all financial information disclosed throughout your response.**

USD

## C0.5

---

**(C0.5) Select the option that describes the reporting boundary for which climate-related impacts on your business are being reported. Note that this option should align with your consolidation approach to your Scope 1 and Scope 2 greenhouse gas inventory.**

Financial control

## C1. Governance

---

### C1.1

---

**(C1.1) Is there board-level oversight of climate-related issues within your organization?**

Yes

**C1.1a**

**(C1.1a) Identify the position(s) (do not include any names) of the individual(s) on the board with responsibility for climate-related issues.**

Position of individual(s)	Please explain
Board-level committee	The Safety, Environmental, Technology & Operations (SETO) Committee represents/assists the Board in oversight of: employee & public safety; compliance with all environmental laws, regulations, company policies & practices, including water quality & emerging contaminants; technology policy, strategy & governance, including physical & cyber security issues; & operational performance & risks not covered by another Board Committee. SETO Committee reviews/monitors operational risk exposure and risk mitigation strategies, which cascade up from front line employees with the Audit, Finance & Risk Committee and the Board, and reviews management’s processes for assessing business continuity risks and developing related contingency plans. This also includes enterprise risks related to climate change and resulting resiliency investments and efforts, and carbon reduction and energy efficiency target progress. The SETO Committee also reviews physical and cyber security threat assessments.
Director on board	A Board Director is the SETO Committee Chair. The Committee Chairman presides over quarterly committee meetings and prepares/oversees the preparation of an agenda for each Committee meeting.

**C1.1b**

**(C1.1b) Provide further details on the board’s oversight of climate-related issues.**

Frequency with which climate-related issues are a scheduled agenda item	Governance mechanisms into which climate-related issues are integrated	Please explain
Scheduled – some meetings	<ul style="list-style-type: none"> <li>Reviewing and guiding strategy</li> <li>Reviewing and guiding major plans of action</li> <li>Reviewing and guiding risk management policies</li> <li>Reviewing and guiding business plans</li> <li>Monitoring implementation and performance of objectives</li> <li>Monitoring and overseeing progress against goals and targets for addressing climate-related issues</li> </ul>	The SETO Committee, which meets at every quarterly board meeting, oversees programs and policies with respect to protecting the environment, including the company’s sustainable efforts with respect to water conservation, climate change, emerging contaminants and greenhouse gas (GHG) emissions. The board is set up with consecutive committee meetings rather than run concurrently, and all board members (including non-committee members) are encouraged to attend all committees—and the majority of them do regularly and thus have detailed insight into the work of the SETO on climate-related details. Additionally, Environmental Leadership is one of the five defined values of the company and so reporting addresses our work there as well.

**C1.2**

**(C1.2) Provide the highest management-level position(s) or committee(s) with responsibility for climate-related issues.**

Name of the position(s) and/or committee(s)	Responsibility	Frequency of reporting to the board on climate-related issues
Safety, Health, Environment and Quality committee	Managing climate-related risks and opportunities	Quarterly
Chief Executive Officer (CEO)	Both assessing and managing climate-related risks and opportunities	More frequently than quarterly
Chief Operating Officer (COO)	Both assessing and managing climate-related risks and opportunities	More frequently than quarterly
Chief Financial Officer (CFO)	Both assessing and managing climate-related risks and opportunities	More frequently than quarterly
Other C-Suite Officer, please specify (Chief Customer, Strategy, & Technology Officer)	Both assessing and managing climate-related risks and opportunities	More frequently than quarterly
Other C-Suite Officer, please specify (Chief Environmental & Operational Excellence Officer)	Both assessing and managing climate-related risks and opportunities	More frequently than quarterly
Other, please specify (Capital Planning Management Committee (CPMC))	Both assessing and managing climate-related risks and opportunities	More frequently than quarterly

**C1.2a**

---

**(C1.2a) Describe where in the organizational structure this/these position(s) and/or committees lie, what their associated responsibilities are, and how climate-related issues are monitored (do not include the names of individuals).**

The CEO, COO, CFO, Chief Customer, Strategy, & Technology Officer, and Chief Environmental & Operational Excellence Officer, are on the Executive Leadership Team/C-Suite and are responsible for driving programs and policies that support the company's environmental goals and receive updates on climate-related issues and company metrics regularly.

**SETO Committee** -The SETO Committee assists the Board in the oversight and review of: employee and public safety; environmental policies and practices, including without limitation, with respect to water quality and emerging contaminants; technology policy, strategy and governance, including physical and cyber security issues related to the Company's operations; and operational performance and other risks not covered by another Board committee.

**CEO**-Has overall responsibility for creating, planning, implementing, and integrating the strategic direction of the company. With direct responsibility of corporate operations and strategy, the integration of climate related issues, and strategy to mitigate such risks, is integral to the success of the business.

**COO**- Has overall responsibility for creating, planning and integrating the strategic direction of regulated operations; including Operational Excellence, Meter Operations, Environmental Leadership, and Engineering, including oversight of advancement of technology within operations to improve effectiveness and efficiency as well as ensuring our operations meet current / future capacity and water quality requirements and have resiliency to withstand climate change impacts.

**CFO**-Leads the Finance & Operational Services teams, including responsibility for all aspects of financial management and strategy, including directing finance strategy, investor relations, treasury, financial planning, accounting, internal audit, risk management, and control functions.

**Chief Customer, Strategy, & Technology Officer**-Responsible for leading the company's Technology and Innovation (T&I) efforts, which are helping to support the business' efforts in achieving growth and operational efficiency. With direct oversight of corporate strategy and customer experience there is direct correlation to climate related issues both on the T&I front (in terms of application development, software, cyber security, etc.) and customer interaction and experience as a whole is ever changing. An example of the overlap of climate-related issues and T&I is the creation of customer applications to assist in conservation measures, usage tracking, and increased communication with customers regarding their use of water resources.

**Chief Environmental & Operational Excellence Officer**-Responsible for Operational Excellence, Meter Operations, Environmental Leadership, and Engineering. This includes oversight of the advancement of technology within operations to improve effectiveness and efficiency; compliance with requirements in multiple media (including drinking water, wastewater, air, and waste), stewardship of the environment upon which we rely, and oversight of the Central Lab that analyzes 80,000+ drinking water samples per year; and capital planning, asset planning, and design/construction, which includes ensuring our operations meet current/future capacity and water quality requirements and have resiliency to withstand climate change impacts.

**CPMC**-Each regulated utility company develops an annual, bottom-up capital business plan based on the infrastructure needs that engineering teams identify in their operational footprint. These plans are reviewed by the CPMC of the regulated utility companies and rolled up to and reviewed by the Service Company for ultimate approval by the Board annually. After approval, these plans are administered by the individual engineering teams, and governed by the associated regulated utilities and CPMCs, which meet monthly. Our regulated utility CPMCs include the state president and engineering, operations and finance leads, while Service Company CPMC is comprised of COO, CFO, VP Engineering, and Director Engineering-Enterprise Capital Program. We utilize a long-term planning process as part of our CPM process to evaluate our water and wastewater systems for capacity, condition and performance today and into the future. Our Comprehensive Planning Study (CPS) process evaluates a 15yr+ horizon to develop a system road map. The CPS process includes an evaluation of supply availability against projected customer usage growth; water treatment performance vs. projected changes to water quality standards and research information on emerging contaminants of importance; asset condition and performance vs. efficiency, safety and obsolescence. We conduct numerous CPS studies each year, with systems evaluated on a rotating basis based on priority. The recommended CPS studies are integrated into the capital program management. Included in our 5yr Capital Plan of \$8-8.6B, approximately \$7.3B or 84% is dedicated for regulated investment CAPEX.

---

## C1.3

**(C1.3) Do you provide incentives for the management of climate-related issues, including the attainment of targets?**

Yes

**C1.3a**

---

**(C1.3a) Provide further details on the incentives provided for the management of climate-related issues (do not include the names of individuals).**

**Who is entitled to benefit from these incentives?**

All employees

**Types of incentives**

Monetary reward

**Activity incentivized**

Other, please specify (Demonstration of Corporate Values)

**Comment**

The Annual Performance Plan (APP) is designed to incentivize eligible participants to achieve annual business objectives by providing an opportunity to earn a cash pay-out tied to corporate and individual performance. The APP performance measures chosen for 2018 reflected our primary objectives for financial performance, aligned with our core business strategies of safety, customers, people, growth and operational excellence - which includes water quality and environmental initiatives. Our five core values are the principles by which we work and live. They guide the decisions we make every day and help us educate stakeholders about what the company is about and what it represents. Employee and leadership (CEO and executive team) APP evaluation is based on meeting targets associated with financial, operational, safety and Environmental Leadership. One of these five core values is "Environmental Leadership", defined as "What" we do makes a difference in people's lives by providing a life-sustaining service. Being responsible for water and wastewater services means that we have to ensure the sustainability of these critical services. Going back to our vision, clean water does not happen without environmental leadership, and just good stewardship of the environment is not sufficient for a water services provider—we must be leaders. For APP purposes, Environmental Leadership is determined by comparing our performance to the EPA national drinking water industry average and assessing how many times better we perform compared to the industry average. We are committed to excellent water quality, protecting the environment and maintaining our history of materially complying with, and in many cases, achieving results better than minimum standards required by applicable laws and regulations. All employees, including executive leadership, share the same aligned annual goals.

---

**Who is entitled to benefit from these incentives?**

Corporate executive team

**Types of incentives**

Monetary reward

**Activity incentivized**

Other, please specify (Demonstration of corporate values)

**Comment**

The APP is designed to incentivize eligible participants to achieve annual business objectives by providing an opportunity to earn a cash pay-out tied to corporate and individual performance. The APP performance measures chosen for 2018 reflected our primary objectives for financial performance, aligned with our core business strategies of safety, customers, people, growth and operational excellence - which includes water quality and environmental initiatives. Our five core values are the principles by which we work and live. They guide the decisions we make every day and help us educate stakeholders about what the company is about and what it represents. Employee and leadership (CEO and executive team) APP evaluation is based on meeting targets associated with financial, operational, safety and Environmental Leadership. One of these five core values is "Environmental Leadership", defined as "What" we do makes a difference in people's lives by providing a life-sustaining service. Being responsible for water and wastewater services means that we have to ensure the sustainability of these critical services. Going back to our vision, clean water does not happen without environmental leadership, and just good stewardship of the environment is not sufficient for a water services provider—we must be leaders. For APP purposes, Environmental Leadership is determined by comparing our performance to the EPA national drinking water industry average and assessing how many times better we perform compared to the industry average. We are committed to excellent water quality, protecting the environment and maintaining our history of materially complying with, and in many cases, achieving results better than minimum standards required by applicable laws and regulations. All employees, including executive leadership, share the same aligned annual goals.

---

**Who is entitled to benefit from these incentives?**

---

All employees

### Types of incentives

Monetary reward

### Activity incentivized

Efficiency target

### Comment

The APP performance measures chosen for 2018 reflected our primary objectives for financial performance, aligned with our core business strategies of safety, customers, people, growth, technology and operational efficiency. Each year a specific O&M Efficiency target is included. The O&M Efficiency target is based on the ratio of adjusted regulated O&M expenses to adjusted regulated operating revenues. Additionally, it is a key performance metric because we want to focus on improving the overall cost structure of our regulated businesses and improving our return on equity. We meet our efficiency target through enhancements to customer service tools and technology for greater operational efficiency and by partnering with stakeholders to ensure customer confidence in quality of water. The operating efficiency targets can be tied to climate change through optimal management of systems to control cost as well as reduce GHG (i.e. energy, chemical dosage and associated residual water generation). These efficiencies are also critical in ensuring we can keep our costs affordable while at the same time investing sufficient capital to strengthen our water supply and infrastructure.

---

### Who is entitled to benefit from these incentives?

All employees

### Types of incentives

Other non-monetary reward

### Activity incentivized

Other, please specify (Continued attraction of Capital and Environmentally beneficial Investments)

### Comment

Demonstrating Environmental Leadership (doing good) will attract capital from investors which lowers our cost of capital and allows us to invest more in projects, including those related to climate change resiliency. This continued investment provides job stability and growth opportunities for employees while strengthening our communities and customer service.

---

## C2. Risks and opportunities

---

### C2.1

---

#### (C2.1) Describe what your organization considers to be short-, medium- and long-term horizons.

	From (years)	To (years)	Comment
Short-term	0	1	American Water tracks, monitors and studies extreme weather events on an on-going basis and is continuously taking action in this area to ensure we can continue to provide safe, reliable, and consistent water service to our customers. We are also active in conservation activities with our customers, with an eye on the potential impact related changes in water supply and usage will have on our operations.
Medium-term	1	5	American Water conducts Master Plans through CPS on each of our water and wastewater systems approximately every 5 - 7 years, and implements projects identified in these plans. We expect to spend between \$8B - \$8.6B on capital investments from 2019 - 2023 to address aging infrastructure, reduce or eliminate leaks, improve cyber and physical security, and increase resiliency of critical assets from the impacts of climate change. Capital investment projects in part go to projects that improve energy efficiency, enhance resiliency of our assets and facilities and enhance water treatment processes to ensure compliance with all environmental regulations.
Long-term	5	25	Where significant impact from climate-related droughts, flooding, or natural disasters drive major capital improvement upgrade projects, the risks will be evaluated on a longer time period such as 25 years.

### C2.2

---

**(C2.2) Select the option that best describes how your organization's processes for identifying, assessing, and managing climate-related issues are integrated into your overall risk management.**

Integrated into multi-disciplinary company-wide risk identification, assessment, and management processes

C2.2a

---

**(C2.2a) Select the options that best describe your organization's frequency and time horizon for identifying and assessing climate-related risks.**

	Frequency of monitoring	How far into the future are risks considered?	Comment
Row 1	Six-monthly or more frequently	>6 years	Climate related risks are identified during the Company's Master Planning process (Comprehensive Planning Studies (CPS)) and monitored throughout the year. The CPS are updated on average every 5-7 years. The studies typically examine risks over a 15 year horizon. Certain risks may be examined over a longer time frame. Risk mitigation steps are reviewed at least twice a year with senior leadership. Both discussions include a segment on how operational risks are being addressed. Operational risks may include aging infrastructure, climate change, health and safety, and a combination of these and other risk factors.

C2.2b

---

**(C2.2b) Provide further details on your organization's process(es) for identifying and assessing climate-related risks.**

**Company Wide Risk Identification, Assessment and Management:**

Risk mitigation steps are reviewed at least twice a year with senior leadership. Discussions include an update on how current and future operational risks are being addressed (Refer also to C2.2a). Embedded in the 5 year Capital Improvement Program development are specific projects that have been ranked based on risk mitigation and other benefits. Additionally, the risks from Natural Disasters and Climate Change are specifically reviewed by the company's Enterprise Risk Management (ERM) Committee each year and presented at least annually to the Board of Directors through the Safety, Environmental, Technology and Operations (SETO) committee, and/or the Audit, Finance and Risk Committee of the board

Substantive financial risk is elevated to the ERM Committee and managed using a heat map that defines risk into three categories (1) <\$50m, (2) \$50 - \$100m and (3) >\$100m. The heat map plots risk by substantive financial consequence and likelihood. Non-climate related risks combined with climate related risks can result in the need for higher priority mitigation steps. For these reasons, the impact of climate related risks on critical assets are considered in combination with other potential risks including the risks posed by aging infrastructure.

**Organization Process:**

Where significant impact from risks such as drought, flooding or other natural disaster impacts drive major capital improvement upgrade projects, the risks will be evaluated on a longer time period such as 25 years. In certain cases, where historic climate data is no longer appropriate for future planning decisions, additional study is performed on these parameters. For example, when new facilities or facility upgrades are constructed critical equipment is located at higher elevation, often above the 500-year flood elevation, where in the past we may have used 100-year flood elevation as the planning standard. We review current and emerging regulation across the states in our service areas relative to the siting of critical facilities. This is done to mitigate significant financial impact from storm events of increasing intensity. We further monitor the state of climate science as part of this process and use the EPA climate and risk tools where applicable.

In several service areas, this planning process includes a more detailed assessment of critical assets and threats from natural hazards. The ASTM J-100 RAMCAP Standard was used in these assessments. In 2019-2021, American Water will be performing risk and resiliency assessments and updating Emergency Response Plans (ERPs) per the 2018 America's Water Infrastructure Act. Assessments will examine climate impacts from a physical, cyber and financial perspective. The output of this work will be used to further refine our existing planning processes. Risks from natural disasters and climate change identified during the planning process are then monitored along with other risks at the local, state and enterprise levels.

**C2.2c**

**(C2.2c) Which of the following risk types are considered in your organization's climate-related risk assessments?**

	Relevance & inclusion	Please explain
Current regulation	Relevant, always included	We use current federal, state and local regulations to drive facility operations and upgrades. We often go beyond existing standards to provide environmental benefit and improved resiliency. Justification for including current regulation into our climate-related risk assessments is that failure to do so could result in a variety of repercussions including service interruptions, reputational, financial, and permit related violations. An example of this specific risk type is program related to current Pennsylvania regulation, Dam Safety and Waterway Management, Chapter 105 regulations, which is a comprehensive regulation of dams, reservoirs, water obstructions and encroachments in the Commonwealth in order to protect the health, safety, welfare and property of the people. The 2018 Scranton Lake dam project, cost approximately \$9.9 million included modifications to the current spillway providing additional capacity to meet this regulation.

	Relevance & inclusion	Please explain
Emerging regulation	Relevant, always included	Climate and environmental driven changes to source water quality are bringing a heightened focus on drinking water quality. Justification for including emerging regulation into our climate-related risk assessments is that failure to do so could result in a variety of repercussions including service interruptions, reputational, financial, and permit related violations. As an example, the EPA currently provides guidance and best practices on monitoring and planning for cyanotoxin algal blooms. American Water participates in external collaborations to remain at the forefront of regulatory and monitoring strategies. Our staff are members of the technical advisory work group for Safe Drinking Water Act (SDWA) processes and New Contaminants of the American Water Works Association (AWWA), which is charged with review and monitoring of Federal guidance on cyanotoxins and harmful algal blooms (HABs). In response to these emerging concerns, we identify and evaluate technologies to detect and control algal blooms, as well as technologies to remove cyanotoxins during water treatment. Additionally, our own proprietary R&D group consists of 9 PhD scientists working in partnership with the Environmental Protection Agency (EPA), the Centers for Disease Control (CDC), all of our state Departments of Environmental Protection (DEPs), and international water research foundations on a variety of projects. Such projects include the Water Research Foundation project entitled "Utility Responses to Cyanobacterial/Cyanotoxin Events; Case Studies and Lessons Learned." This project will provide much needed information to effectively manage HABs and cyanotoxin events by establishing streamlined recommendations for monitoring, treatment and communications between water utilities, customers and other stakeholders (e.g., public health and regulatory agencies).
Technology	Relevant, always included	We are implementing new technology and associated data management tools in numerous areas which in turn will improve efficiencies including reducing energy and fuel usage. For every \$1 saved in operational expense allows for \$8 in capital investment without affecting customer bills. Justification for including technology into our climate-related risk assessments is to ensure that we are meeting our operational efficiency targets and improved utilization of resources. By implementing advanced technology throughout the portfolio, operational efficiency increases based on factors such as more efficient pumps and run times, identification of potential unaccounted for water, and reduction of drive times. For example, we are implementing new technology in numerous areas to reduce energy and fuel usage including the implementation of a Meter Ops Application for identifying problematic meters and installation of Advanced Meter Infrastructure (AMI) that will significantly reduce vehicle travel (emissions). As American Water continues to develop applications aimed at efficiency and integrates the use of Artificial Intelligence (AI) and machine learning along with other technologies such as smart field recorders and increased usage of drone technology, all aimed at reducing water loss and increasing efficiency. Enhanced water treatment technologies (membrane, UV light research) will have an overall impact on chemical usage and associated residual waste. Additionally, in 2018, we implemented a new work management system that will reduce vehicle traffic and continue to invest capital into programs to replace outdated pumps and motors to improve operational efficiency. These larger capital investments are included in our 5-year capital planning process as referenced in 2.2, 2.2a, 2.2b.
Legal	Relevant, always included	Justification for including legal and regulatory considerations into our climate-related risk assessments is due to having regulated operations in numerous states across the nation. Legal involvement is critical to rate recovery. For example, we are authorized to use RSMs in CA, IL and NY. These mechanisms separate a utility's cost recovery from the amount of water it sells to recover its fixed costs and ongoing infrastructure investment needs. Such a mechanism adjusts rates periodically to ensure that a utility's revenue will be sufficient to cover its costs, regardless of sales volume, including recognition of declining sales resulting from reduced consumption, while providing an incentive for customers to use water more efficiently. Note that water treatment and pumping is a large user of electricity so reduction here is also typically a reduction in carbon footprint.
Market	Relevant, always included	We provide educational materials on our website and social media accounts as well as bill inserts/onserts to educate customers and community leaders on how to use water resources wisely. Justification for including market into our climate-related risk assessments is to ensure clear communication to customers about efficient water use. An example is the current use of meters with electronic registers capable of transmitting consumption to enable Field Service personnel responding to customer usage inquiries to view and discuss detailed water usage. This helps identify excessive usage as well as leak identification. The use of AMI will enhance this usage data and provide customers with the ability to monitor and manage their usage using near real time data, as well as notify when potential leaks are indicated.
Reputation	Relevant, always included	Integrating environmental, social and governance ("ESG") policies and practices into our daily operations emphasizes our belief that the only way to do business is to do it responsibly, and that the "How" is just as important as the "What" for long-term financial sustainability. Justification for including reputation into our climate-related risk assessments is the fact that we are a public water and wastewater utility that directly services over 14 million people. Reputation is imperative in our business as customer confidence is critical. For example, American Water participates in external collaborations as referenced in the emerging regulations section. We also participate in national policy and best practice committees as the leading water and wastewater provider in the nation. Reputation allows for continued growth. An important element of our growth strategy is the acquisition of distressed water and wastewater systems in order to broaden our current, and move into new, service areas for the benefit of our customers.
Acute physical	Relevant, always included	Extreme events in the past few years such as Hurricane Irene, Superstorm Sandy, the Joplin, MO service area tornado and periodic flooding along the Mississippi River have provided key lessons learned which drive our current resiliency projects as well as emergency plan enhancements. Justification for including acute physical risk into our climate-related risk assessments is to ensure clean, safe and reliable operations during future events. For example, events have highlighted the need to GPS the location of valve and service assets to allow for access and shut-off of these valves during and after extreme weather events. A pilot to GPS all customer curb valves was executed shortly before Superstorm Sandy and proved invaluable in locating and shutting off leaking services. American Water is now deploying this practice within its entire footprint.
Chronic physical	Relevant, always included	In order to ensure that we have adequate water supply, we use long-term planning processes and maintain contingency plans to minimize the potential impact on service caused by climate change and a wide range of weather fluctuations. As a part of our long-term Capital Planning Process, we design and construct renewal and resiliency projects that incorporate mitigation for these types chronic risk. Justification for including chronic physical risk is to ensure safe, reliable, and constant water and wastewater services to all customers. For example, American Water built a reservoir to store a backup water supply for the town of Bel Air, MD. The project is designed to hold 90 million gallons of water taken from the nearby Winters Run stream, enough for a 100-day supply for the treatment plant. The project is the result of discussions among the town, county, and Maryland Department of Environment regarding the need to have a backup water supply for the town in case of a drought or disaster that contaminates the stream. This project is about water sustainability and a model for meeting the water supply needs of a community.

	Relevance & inclusion	Please explain
Upstream	Relevant, always included	We maintain an industry-leading R&D program that is designed to enhance our services, help ensure compliance, and improve quality and operational effectiveness. We also continue to leverage the Company's expertise and collaborate with the EPA, CDC and various state agencies to help establish effective environmental, health and safety, and water quality standards and regulations. This relationship includes the sharing of our research, such as our treatment and distribution system optimization research. Justification for including upstream risk is to ensure safe, reliable, and constant water and wastewater services to all customers. Additionally, including this risk allows us to be proactive in monitoring and influencing federal and state regulations. For example, the implementation of source water monitors/ sensors evaluate and detect source water contamination events, with future additions of AI and machine learning to add predictive analytics capabilities.
Downstream	Relevant, always included	The wastewater collection, treatment and sludge disposal operations of our subsidiaries are subject to substantial regulations and involve environmental risks. If collection, treatment or disposal systems fail, overflow, or do not operate properly, untreated wastewater or other contaminants could spill into nearby properties or into nearby streams and rivers, causing damage to persons or property, injury to aquatic life and economic damages. The justification for including downstream risk is to minimize sewer overflows and prevent system failure. These risks are most acute during periods of substantial rainfall or flooding, which are the main causes of sewer overflow and system failure. Liabilities resulting from such damage could adversely and materially affect our business, financial condition, results of operations and cash flows. For example, we upgraded the sludge handling facilities at the Clarion, Pennsylvania wastewater treatment plant in 2018. Through replacement of aging assets, we recognized improved treatment and efficiency.

## C2.2d

### (C2.2d) Describe your process(es) for managing climate-related risks and opportunities.

**Managing climate related risk:** As identified in sections 2.2 through 2.3c, climate related risks are identified during the Company's Master Planning process (Comprehensive Planning Studies (CPS)) which are typically updated on a 5-7-year basis, however these studies and associated projects are monitored throughout the year and new project additions may be added requiring a re-prioritization of projects. One tool that is used to identify and rank new projects is the High Risk Asset Management (HRAM) process in which High Risk Assets are identified, typically from a more local and state level, to address emerging regulations and or potential assets considered high risk due to current or emerging factors. Local level management employees work along with state leads to update and maintain the HRAM registers. An example of this would be the identification and execution of projects, elevated water main crossings, after several hurricanes along the Coastal New Jersey raised the risk level of these assets. A more current example is the review of high-risk assets along flood walls in the Midwest and the potential development of projects to minimize the risk to these assets. Both of these project examples typically follow the path of being identified through ongoing state and local reviews. Larger projects are coordinated with corporate engineering and such projects are embedded into our revised capital plans. These additional projects may be localized or may be a broader approach based upon geographical areas for physical assets (flood walls along rivers) or transitional project such as increased emergency drill exercises associated increase weather related events or implementing technologies such as source water monitors coupled with AI, machine learning, to predict changes in raw water associated with flood increased runoff into rivers from large storms.

**Managing climate related opportunities:** The water and wastewater utility business is capital intensive and adapting infrastructure renewal to meet increasing regulations, of which are climate driven or may have a climate change component, smaller water and wastewater systems, especially those that have invested very little in their systems in the past struggle to invest in infrastructure to harden their assets and provide resiliency to maintain service during increased weather related events, including flooding, extended power outages or treatment plant upgrade to treat changing source water conditions (higher turbidity water from flooding, harmful algal blooms, etc.) or to meet new regulations such as New Jersey's WQAA (Water Quality Accountability Act ) and the Indiana Water Commitment Act as examples, directed at asset resiliency. Such systems that cannot provide the required funding will typically look to divest their infrastructure through formal processes to those companies that have the expertise, capital funding and knowledge to make required improvements to provide safe water and uninterrupted service to customers. Growth is a key component of our financial strategy and through American Water's reputation as a leader in the industry we look to acquire systems, typically small private or municipal systems that have decided to divest of their infrastructure.

As mentioned previously, these efforts are also reviewed by the company's ERM committee and overseen by both the SETO and Audit, Finance and Risk committees of the Board of Directors.

## C2.3

**(C2.3) Have you identified any inherent climate-related risks with the potential to have a substantive financial or strategic impact on your business?**

Yes

C2.3a

---

**(C2.3a) Provide details of risks identified with the potential to have a substantive financial or strategic impact on your business.**

**Identifier**

Risk 1

**Where in the value chain does the risk driver occur?**

Direct operations

**Risk type**

Transition risk

**Primary climate-related risk driver**

Market: Other

**Type of financial impact**

Increased production costs due to changing input prices (e.g., energy, water) and output requirements (e.g., waste treatment)

**Company- specific description**

Fuel and energy costs represent a significant portion of our annual operations budget. The risk would be to our ability to achieve full cost recovery for this added cost. Increased fuel and power costs will cause changes to the operational efficiency profile by limiting financial resources available. Our utility operations are subject to extensive economic regulation by state Public Utility Commissions (PUCs) and other regulatory agencies, which significantly affects our business, financial condition, results of operations and cash flows. Our utility operations also may be subject to fines, penalties and other sanctions for the inability to meet these regulatory requirements. As described in our 10-K, American Water's ability to successfully implement our business plan and strategy depends on the rates authorized by the various state PUCs. We periodically file rate increase applications with state PUCs. The ensuing administrative process may be lengthy and costly. Our rate increase requests may or may not be approved, or may be partially approved, and any approval may not occur in a timely manner. Moreover, a PUC may not approve a rate request to an extent that is sufficient to: • cover our expenses, including purchased water and costs of chemicals, fuel and other commodities used in our operations; • enable us to recover our investment; and • provide us with an opportunity to earn an appropriate rate of return on our investment. Our customers are at the center of everything we plan and do. In 2018 we continued to make needed infrastructure investments while implementing operational efficiency improvements to keep customer bills affordable. To further drive behavior toward efficient use of natural resources, American Water ties incentive compensation for all employees—including our unionized workers—to operational efficiency through our Operations & Maintenance (O&M) ratio. Efficient water and energy usage positively affects our O&M ratio, which allows American Water to invest \$8 for every \$1 saved, while keeping customer bills steady.

**Time horizon**

Medium-term

**Likelihood**

More likely than not

**Magnitude of impact**

Medium

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

Yes, an estimated range

**Potential financial impact figure (currency)**

<Not Applicable>

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

1900000

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

7600000

**Explanation of financial impact figure**

The financial impact would be contingent on a number of factors including, but not limited to, the energy source being impacted

---

(e.g., electricity, natural gas, etc.), whether it was a national or localized issue, the size and breadth of American Water operations being impacted, and the rate structure in the area impacted. The financial impact is based on a maximum of 8% energy price increase across the portfolio.

#### **Management method**

American Water has multiple ongoing programs that contribute to reducing the amount of water pumped, which reduces the amount of energy and fuel needed and also reduces GHG / CO2 emissions. These programs include pump replacement, generator replacement, water and sewer main replacements and the construction of new water storage tanks. Efficiency gains are achieved in each program. Old pumps are replaced with new more efficient motors and pumping units. Aged generators are replaced with more efficient and cleaner burning units. Aged water mains are replaced which results in improved efficiency, reduced leakage and improved hydraulic pumping conditions. Replacement of sewer mains also improves efficiency and reduces infiltration and in-flow from storm water into the sanitary sewers, thereby reducing treatment volume and associated energy usage. The construction of new water storage tanks in water piping networks reduce energy usage by reducing peak hourly pumpage through transmission mains. American Water expects to spend between \$8B - \$8.6B on capital investments from 2019 - 2023 to address aging infrastructure, reduce or eliminate leaks, improve cyber and physical security, and increase resiliency of critical assets from the impacts of climate change.

#### **Cost of management**

0

#### **Comment**

Fuel and energy costs represent a significant portion of our annual operations budget. The risk would be to our ability to achieve full cost recovery for this added cost. Increased fuel and power costs will cause changes to the operational efficiency profile by limiting financial resources available.

---

#### **Identifier**

Risk 2

#### **Where in the value chain does the risk driver occur?**

Direct operations

#### **Risk type**

Physical risk

#### **Primary climate-related risk driver**

Acute: Increased severity of extreme weather events such as cyclones and floods

#### **Type of financial impact**

Other, please specify (Service disruptions caused by severe weather conditions, climate change patterns or natural disasters may disrupt our operations or reduce the demand for our water services, which could adversely affect our financial condition and operations.)

#### **Company- specific description**

Service interruptions due to severe weather, climate change patterns and other natural events are possible across all our businesses. These include, among other things, storms, freezing conditions, high wind conditions, hurricanes, tornadoes, earthquakes, landslides, drought, wildfires, coastal and inter-coastal floods or high water conditions, including those in or near designated flood plains, severe electrical storms and solar flares. Weather and other natural events such as these may affect the condition or operability of our facilities, limiting or preventing us from delivering water or wastewater services to our customers, or requiring us to make substantial capital expenditures to repair any damage. Tariffs in place or cost recovery proceedings with respect to our Regulated Businesses may not provide reimbursement to us, in whole or in part, for any of these impacts. Government restrictions on water use may also result in decreased use of water services, even if our water supplies are sufficient to serve our customers, which may adversely affect our financial condition, results of operations and cash flows. Seasonal drought conditions that may impact our water services are possible across all of our service areas. Governmental restrictions imposed in response to a drought may apply to all systems within a region independent of the supply adequacy of any individual system. Moreover, reductions in water consumption, including those resulting from installation of equipment or changed consumer behavior, may persist even after drought restrictions are repealed and the drought has ended, which could adversely affect our business, financial condition, results of operations and cash flows. Shorter duration, higher intensity precipitation events will increase pathogen loading to our source waters requiring additional treatment. Warmer summers will result in increased frequency and duration of algal blooms, increasing treatment costs. Increased storm intensities will increase flooding intensity and frequency requiring construction of more robust facilities/flood walls.

#### **Time horizon**

Medium-term

#### **Likelihood**

Likely

**Magnitude of impact**

Medium

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

Yes, an estimated range

**Potential financial impact figure (currency)**

<Not Applicable>

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

49000000

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

1200000000

**Explanation of financial impact figure**

Financial impacts would be site-specific and dependent on the exact project undertaken as described in the management method below. The minimum financial impact reflects the flood wall projects completed at the Raritan-Millstone Plant in NJ, and Davenport, IA, which cost a sum of approximately \$49M. For the maximum financial impact figure we used an approximate unit cost of up to \$20M to harden facilities within a FEMA flood zone. This calculation includes approximately 600 facilities.

**Management method**

American Water expects to spend between \$8.0B - \$8.6B on capital investments from 2019 - 2023 to address aging infrastructure, reduce or eliminate leaks, improve cyber and physical security, and increase resiliency of critical assets from the impacts of climate change. For AW's most critical assets, defined as those with the highest consequence of failure, capital investments can help in further "hardening" systems vulnerable to such threats and should be considered where costs are reasonable and justifiable. Non-capital solutions also should be considered as part of the solutions toolkit to provide more system resiliency in mitigating such risks, such as more robust ERPs, Drought Management Plans, condition-based and/or reliability-centered maintenance, and other operations plans and asset management strategies that enable better preparedness and ultimately more assurance that reliable service can be maintained. As an example, in order to provide reliable water service to our customers in an emergency (loss of utility supplied electrical service), MO American installed three 3 - Megawatt emergency generators capable of supporting approximately 50 MGD of treatment capacity (approximately half of the needed capacity to meet average day demand). Although the cost of this project was \$13.4M, we are not including a Cost of Management below as we have not estimated the total cost of management at this time.

**Cost of management**

0

**Comment**

Service disruptions caused by severe weather conditions, climate change patterns or natural disasters may disrupt our operations or reduce the demand for our water services, which could adversely affect our financial condition and operations. The cost of management around risk management related to asset resiliency is a subset of our planning process that has not been quantified separately.

---

**Identifier**

Risk 3

**Where in the value chain does the risk driver occur?**

Direct operations

**Risk type**

Physical risk

**Primary climate-related risk driver**

Chronic: Changes in precipitation patterns and extreme variability in weather patterns

**Type of financial impact**

Other, please specify (Service disruptions caused by severe weather conditions, climate variability patterns or natural disasters may disrupt our operations or reduce the demand for our water services, which could adversely affect our financial condition and operations.)

**Company- specific description**

Service disruptions caused by severe weather conditions, climate variability patterns or natural disasters may disrupt our operations or reduce the demand for our water services, which could adversely affect our financial condition, results of operations, cash flows and liquidity. The issue of climate variability is receiving increasing attention nationally and worldwide. Some scientific experts are predicting a worsening of weather volatility in the future associated with climate variability. Many climate variability predictions, if true, present several potential challenges to water and wastewater utilities, such as: • increased frequency and duration of droughts; • increased precipitation and flooding; • increased frequency and severity of storms and other weather events;

• challenges associated with changes in temperature or increases in ocean levels; • potential degradation of water quality; • decreases in available water supply and changes in water usage patterns; • increases in disruptions in service; • increased costs to repair damaged facilities; or • increased costs to reduce risks associated with the increasing frequency of natural events, including to improve the resiliency and reliability of our water production and delivery facilities and systems. Because of the uncertainty of weather volatility related to climate variability, we cannot predict its potential impact on our business, financial condition, results of operations, cash flows and liquidity. Although some or all potential expenditures and costs with respect to our Regulated Businesses could be recovered through rates, infrastructure replacement surcharges or other regulatory mechanisms, there can be no assurance that state PUCs would authorize rate increases to enable us to recover such expenditures and costs, in whole or in part. Water and wastewater treatment plants are often located in low-lying areas near bodies of water. The implications of sea-level rise are significant as these facilities are likely to see increased flooding, thereby requiring a hardening of the infrastructure (e.g., flood walls, elevated mechanical systems, etc.). Sea level rise can also impact the ground water aquifers in coastal areas, through a process known as saltwater intrusion, which can raise the cost of water treatment.

**Time horizon**

Long-term

**Likelihood**

Likely

**Magnitude of impact**

Medium-high

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

No, we do not have this figure

**Potential financial impact figure (currency)**

<Not Applicable>

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

<Not Applicable>

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

<Not Applicable>

**Explanation of financial impact figure**

Financial impacts would be site-specific and dependent on the exact project undertaken as described in the Management Method below.

**Management method**

We expect to invest between \$8-\$8.6B on capital investments from 2019-2023 to address aging infrastructure, reduce/eliminate leaks, improve cyber/physical security & increase resiliency of critical assets from the impacts of climate change. Most critical assets, those with the highest consequence of failure, capital investments can help in further “hardening” systems vulnerable to such threats & should be considered where costs are reasonable & justifiable. Non-capital solutions are also considered as part of the solution toolkit to provide more system resiliency in mitigating such risks, such as more robust ERPs, Drought Management Plans, condition-based/reliability-centered maintenance & other operations plans & asset management strategies that enable better preparedness & assurance that reliable service can be maintained. For example, MD American Water constructed the Bel Air Reservoir, a 90MG off-stream storage facility supplied by Winters Run, providing for additional supply during dry weather conditions & improvement of resiliency during droughts. Although the cost of this project was \$16M, we are not including a Cost of Management below as we have not estimated that yet. In addition, our MO utility is in the early stages of a project to construct a new Shoal Creek reservoir in Joplin to address the critical & growing water supply shortage for southwest MO & relieve regional water supply challenges by alleviating pressure on the Ozark Aquifer.

**Cost of management**

0

**Comment**

Service disruptions caused by severe weather conditions, climate variability patterns or natural disasters may disrupt our operations or reduce the demand for our water services, which could adversely affect our financial condition and operations.

---

C2.4

**(C2.4) Have you identified any climate-related opportunities with the potential to have a substantive financial or strategic impact on your business?**

Yes

## C2.4a

---

**(C2.4a) Provide details of opportunities identified with the potential to have a substantive financial or strategic impact on your business.**

**Identifier**

Opp1

**Where in the value chain does the opportunity occur?**

Direct operations

**Opportunity type**

Resource efficiency

**Primary climate-related opportunity driver**

Use of more efficient production and distribution processes

**Type of financial impact**

Reduced operating costs (e.g., through efficiency gains and cost reductions)

*Reduced operating costs including energy costs and thus carbon (e.g., through efficiency gains and cost reductions)*

**Company-specific description**

Water use and efficiency is key to American Water's business—both within our own operations and our customers'. Optimizing water use, investing in technologies to prevent leaks and increasing the efficiency of water infrastructure, and educating consumers are our greatest opportunities to reduce environmental impacts while also saving money. Water efficiency measures reduce operating costs, energy consumption, the need for water infrastructure expansion, and demand on the planet's limited water supply – all benefiting our customers by helping keep rates affordable.

**Time horizon**

Long-term

**Likelihood**

Virtually certain

**Magnitude of impact**

High

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

No, we do not have this figure

**Potential financial impact figure (currency)**

<Not Applicable>

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

<Not Applicable>

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

<Not Applicable>

**Explanation of financial impact figure**

The financial impact will be site specific based on a number of factors including usage and the specific tariff. Some jurisdictions have adopted RSMs that permit us to collect state PUC-authorized revenue for a given period, which is not tied to the volume of water sold during that period. RSMs are designed to allow utilities to recover the fixed cost of operations while supporting water conservation goals. In those jurisdictions that have not adopted an RSM, operating results could continue to be affected by seasonality.

**Strategy to realize opportunity**

Use of multiple approaches to achieve improvements include: Technology: We take significant precautions to keep our water losses to a minimum by using technologies including improved metering systems, a smarter water grid, pressure management & leak detection programs. Such efficiencies reduce withdrawals from limited freshwater supplies, improving both water quality & water supply resilience—allowing us to defer capital expenditures. Customer Conservation: We encourage customers to conserve water through various programs such as tiered-rate structures, water efficiency kits/rebate programs, water-saving tips on our website & social media. Non-Revenue Water (NRW) Practice: Accurate, reliable water system reporting for NRW is critical to documenting operations, financial disclosure, budget process, managing customer needs, tracking growth, capacity planning & marketing. To standardize & ensure quality of our reporting, our NRW Practice defines the terms & supporting information to help

accurately record & report NRW & describes the information systems used to maintain such data. Revenue Stabilization Mechanism (RSM): RSM is an innovative regulatory tool we are allowed to use in CA, IL & NY. In 2018, legislation was passed in MO allowing us to request a RSM in future base rate case filings. RSM adjusts rates periodically to ensure utility revenue is sufficient to cover fixed costs regardless of throughput, while providing customer incentives to use water more efficiently.

**Cost to realize opportunity**

0

**Comment**

Water use and efficiency is key to American Water's business—both within our own operations and our customers'. Optimizing water use, investing in technologies to prevent leaks and increasing the efficiency of water infrastructure, and educating consumers are our greatest opportunities to reduce environmental impacts while also saving money. Water efficiency measures reduce operating costs, energy consumption, the need for water infrastructure expansion, and demand on the planet's limited water supply – all benefiting our customers by helping keep rates affordable.

---

**Identifier**

Opp2

**Where in the value chain does the opportunity occur?**

Direct operations

**Opportunity type**

Products and services

**Primary climate-related opportunity driver**

Development of new products or services through R&D and innovation

**Type of financial impact**

Increased revenue through new solutions to adaptation needs (e.g., insurance risk transfer products and services)

**Company-specific description**

The Water and Wastewater industry is the most fragmented of utilities with over 50,000 community water and 15,000 wastewater system. With increased climate change comes increased regulations, emerging contaminants, and the need for increased infrastructure investment, many community water and wastewater systems are strained to meet the increasing standards of operation. These strains will increase with climate-related issues, creating the potential for increased growth opportunity.

**Time horizon**

Long-term

**Likelihood**

Likely

**Magnitude of impact**

Medium

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

No, we do not have this figure

**Potential financial impact figure (currency)**

<Not Applicable>

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

<Not Applicable>

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

<Not Applicable>

**Explanation of financial impact figure**

We do not currently calculate this potential impact. Calculating the financial impact would be resource intensive and location specific.

**Strategy to realize opportunity**

American Water has a robust Business Development process that includes review of a potential acquisition's energy usage, processes (for potential efficiencies), asset renewal rates, and waste handling. We are an experienced utility with proven access to capital and financial, technical, and managerial resources with public service commission oversight. We are a solution provider and believe that many communities could benefit from receiving safe and reliable water and wastewater service.

**Cost to realize opportunity**

0

**Comment**

The Water and Wastewater industry is the most fragmented of utilities with over 50,000 community water and 15,000 wastewater system. With increased climate change comes increased regulations, emerging contaminants, and the need for increased infrastructure investment, many community water and wastewater systems are strained to meet the increasing standards of operation. These strains will increase with climate-related issues, creating the potential for increased growth opportunity.

---

**Identifier**

Opp3

**Where in the value chain does the opportunity occur?**

Supply Chain

**Opportunity type**

Resource efficiency

**Primary climate-related opportunity driver**

Use of more efficient modes of transport

**Type of financial impact**

Reduced operating costs (e.g., through efficiency gains and cost reductions)

**Company-specific description**

American Water currently employs a fleet of approximately 3,000 cars and trucks (light, medium, and heavy) that use either gasoline or diesel as fuel. Conversion of approximately 8% of our fleet to an alternative fuel vehicle would reduce our GHG emissions. Currently, we have 19 hybrid sedans in our fleet of vehicles and 4 electric charging stations at our corporate headquarters.

**Time horizon**

Long-term

**Likelihood**

Likely

**Magnitude of impact**

Medium

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

Yes, an estimated range

**Potential financial impact figure (currency)**

<Not Applicable>

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

4600000

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

10200000

**Explanation of financial impact figure**

Unit cost for a maximum of 280 sedans is based on our vehicle sourcing agreement. Additionally, we anticipate installing one Electric Vehicle (EV) charging station per 5 vehicles.

**Strategy to realize opportunity**

American Water is reviewing options for renewing our fleet with alternative energy vehicles as the current vehicles are retired; at this time, only cars are being evaluated as that is the only vehicle type with available alternatives. This will require a review of the expected lifespan of the current fleet, identification of acceptable alternative energy vehicles, and development of agreements with those vendors. American Water would also need to address ancillary concerns such as charging stations as part of the analysis.

**Cost to realize opportunity**

0

**Comment**

American Water currently employs a fleet of approximately 3,000 cars and trucks (light, medium, and heavy), approximately 280 of which are sedans that use either gasoline or diesel as fuel. Conversion of the approximately 280 sedans to an alternative fuel fleet would reduce our GHG emissions. Additionally, the financial impact includes installation of 1 EV charging station per every 5 vehicles. The cost of management would be the individual location's electric needs for the charging stations, a measure that has not been quantified yet.

---

## C2.5

### (C2.5) Describe where and how the identified risks and opportunities have impacted your business.

	Impact	Description
Products and services	Impacted for some suppliers, facilities, or product lines	American Water's Central Lab in Belleville, IL offers state-of-the-art drinking water analytical services that are available to both American Water and external customers. The increased activity around sampling related to emerging contaminants has increased the number of required samples nationwide, thus increased our testing capabilities and capacity. For example, we have purchased new lab instruments directly related to Cyanotoxins. The magnitude of this impact was Low due to our existing capabilities.
Supply chain and/or value chain	Impacted for some suppliers, facilities, or product lines	Climate change impacts either via increased rainfall and more significant storms have a direct impact on operations, especially to those systems adjacent to rivers, waterways under tidal influence as well as oceans. These significant storms can bring extended power outages requiring reliable access to fuel for standby power. Collaboration between Operations and Supply Chain in addressing emergency fuel supplies has resulted in agreements with national and regional fuel suppliers identifying us as a priority customer during such events. The origination of such agreements was a by-product of the experiences during Superstorm Sandy and the identified need to be a priority fuel customer. The magnitude of this impact was Low in terms of implementation. There is associated cost to the business to be an identified priority customer.
Adaptation and mitigation activities	Impacted for some suppliers, facilities, or product lines	American Water operational facilities maintain ERPs, and the increased frequency of significant storms has increased the focus on creating non-passive ERPs with the need to conduct more frequent drill exercises to help identify and address plan gap to help ensure business continuity. During 2018, American Water developed, led and/or participated in 14 Functional Based table top exercises in 8 states with participation of 450 internal partners and 50 external agencies. The magnitude of this impact was High due to an increase in the number of emergency exercises and resource commitments. Additionally, this has also increased the focus on company-wide coordination and technology deployment around Standard Operation Procedures and the accessibility of facility and asset data.
Investment in R&D	Impacted for some suppliers, facilities, or product lines	Investment within R&D, specifically within Technology and Innovation, American Water is developing tools to allow for utilization of data and AI to streamline customer driven work activities in an efficient manner to reduce the amount of drive time or the need to "roll" a truck thereby reducing our vehicle carbon footprint. Additionally, our R&D group is also looking to leverage AI and the various sources of data, both internal and external to assist in identifying changes in raw water quality impacted by large rainfall and flooding events to alert operating personnel of changes in order to make appropriate operational changes. The development of AI and tied to real time data will also allow for predictive analysis of future climate change events and operate equipment and facilities in a manner more efficiently.
Operations	Impacted for some suppliers, facilities, or product lines	Climate change can have a direct impact on operations and subsequent supplies during longer periods of hot dry weather. Providing for water allocation during warmer peak periods where less rainfall can have a significant impact on supplies, the increased use of Aquifer Storage Recovery (ASR) wells are utilized at several of our operations that may be strained for water supply during periods of higher temperatures and lack of rainfall by easing the higher withdrawal quantities from surface water supplies by recovering water pumped in wells during non-peak periods. Another major focus is the planned maintenance and replacement of large pumps. 90% of our own electricity consumption is related to pumping water – initially from its source to treatment and storage facilities, then later, on to customers. As the pumps age, they become less efficient, requiring more energy to move the same amount of water. Improving pump efficiency through programmed maintenance activities of through replacement with more efficient pumps allows for more efficient use of electrical power. In addition to pump efficiency, improved metering systems (giving us more accurate usage information), a smarter water grid, better pipes, pressure management and increased focus on leak detection programs utilizing continuous acoustic monitoring tools, deployment of pressure sensors as well as improved pressure control by reducing and modulating pressure in water systems lowers the amount of water leaking out of pipes and reduces the stress on pipes while still providing customers with the supply they need. These activities can save water and energy, reduce overall repair costs and help us decrease our carbon footprint. The increased use of AMI meter reading technology allows for early detection of leaks on customer plumbing, helping to reduce water/energy waste and the use of technologies, such as remote controlled service line shutoff valves allows for the ability to shut off a customer's premise either in regards to a move out situation or a non-pay situation without the need to dispatch a work order which requires "rolling" a truck, helping to reduce vehicle emissions as well. The magnitude of this impact is High because it has an overall impact on several distinct parts of our operations. Executing these efficiencies will have the largest impact on GHG emission reductions.
Other, please specify	Not evaluated	

## C2.6

**(C2.6) Describe where and how the identified risks and opportunities have been factored into your financial planning process.**

	Relevance	Description
Revenues	Impacted for some suppliers, facilities, or product lines	American Water compiled revenue for our inclining block states (CA & NY), combined that with our RSM states (NY, CA and IL) and added in the fixed meter charges from our other regulated states, which resulted in approximately 45% of our customers having adaptive rates - related to the risks and opportunities provided.
Operating costs	Impacted for some suppliers, facilities, or product lines	Climate change has had impacts to certain treatment facilities that are located in those areas that have seen increase flood events. For 2019, we expect to see an increase of approximate between 5%-10% increase on our insurance premiums (due to the catastrophic exposures). As the need for standby generators is crucial during power loss events due to increased storms, we have entered into agreements to ensure fuel delivery for emergency use. The magnitude of the impact is on average Low, due to already having contracts and facilities in place to mitigate this risk. Additionally, American Water operations maintain ERPs that provide preparedness for such events.
Capital expenditures / capital allocation	Impacted for some suppliers, facilities, or product lines	Over the next 5 years, American Water expects to invest approximately \$8B - 8.6B in our regulated footprint enabling continued infrastructure improvement that provides essential services to customers. To ensure this money is invested most effectively, American Water prioritizes our planned projects to mitigate those risks with the most significant potential impacts on our water and wastewater infrastructure and quality of service. We then support the integrity of our systems by properly maintaining, renewing, and improving infrastructure through thoughtful and continuous maintenance and investment. Over the past 10 years, the investment budget has increased to address the growing need for pipe replacement. We anticipate our investment budget will continue to rise as infrastructure ages, more intense storms require greater system resiliency, new regulations are promulgated, and growth continues. The magnitude of this impact is medium as the stated 5-year plan takes into account the identified risk mitigation and anticipated increases. Asset replacement to improve efficiency, meet regulations, ensure supplies and reduce the loss of "High Risk Assets" are core drivers for capital allocation and investment. Each of these core drivers can be impacted by climate change such as water supply or impacts to water quality or assets themselves by increased storm activity and severity. An effective and timely water main replacement program utilizing several scoring factors helps replace aging pipes on a timeline to help reduce unaccounted for water through leakage and water main breaks. Additionally, water main replacements generally improve hydraulic and pump efficiency by replacing smaller sized water mains and those that have lower "C" factors with mains that have higher "C" factors, allowing for reduced friction loss. Comprehensive Planning Studies identify systems where increased protection and reliable redundancy help mitigate the impacts of severe storms that have related flooding, tidal surges, extended power outages and potential impacts to raw water quality. Examples of capital expenditures include increased flood wall protection, increased installation of standby power systems, redundancy and interconnections with adjacent water purveyors to ensure minimal impact to systems and our customers during severe storm events through enhanced system reliability.
Acquisitions and divestments	Impacted for some suppliers, facilities, or product lines	A component of looking at potential acquisitions is the ability to integrate adjacent systems into our current infrastructure and potential of capital avoidance of building new facilities in our current foot print if we can leverage the assets of a new acquisition. Additionally, most systems that are acquired are typically systems under distress that have not been maintained. Identifying efficiencies early on through due diligence review, many with a direct impact on GHG emissions, such as aged leaking water mains and inefficient assets (pumps) are factored into our acquisition strategy. These approaches not only allow for a reduction in the existing carbon footprint through more efficient operations, but also improve customer service and satisfaction.
Access to capital	Not impacted	Traditional means of access to capital are currently not impacted. American Water has sufficient access to capital for the anticipated risk mitigation activities and capital improvement plan.
Assets	Impacted for some suppliers, facilities, or product lines	Climate change and increased storm intensities (flooding, wind, etc.) have increased our hardening of assets and focus on asset resiliency. This has resulted in asset replacement in those areas of high risk through a High-Risk Asset register review that has been adopted in several states and being rolled out through American Water. Additionally, refer to capital expenditures / capital allocation description as the two impacts are aligned. The magnitude of this impact is medium as the stated 5-year plan takes into account the identified risk mitigation activities and asset investment.
Liabilities	Impacted for some suppliers, facilities, or product lines	Our capital program planning process examines and includes projects such as flood walls that mitigate related liabilities due to climate change events. The planning process integrates several scoring factors included identification of those high-risk assets that can be impacted by several factors, including climate change impacts. Reduction of risk and hardening of high-risk assets reduces liabilities. Additionally refer to Operating Costs description and expectation of approximately 5%-10% increase on our premiums (due to the catastrophic exposures). The magnitude of the impact is on average Low, due to already having contracts and facilities in place to mitigate this risk.
Other	Not evaluated	

**C3. Business Strategy**

**C3.1**

**(C3.1) Are climate-related issues integrated into your business strategy?**

Yes

### C3.1a

---

#### **(C3.1a) Does your organization use climate-related scenario analysis to inform your business strategy?**

Yes, qualitative and quantitative

### C3.1c

---

#### **(C3.1c) Explain how climate-related issues are integrated into your business objectives and strategy.**

Our operational excellence strategy helps us to find better and more efficient ways to do business and provide safe, clean and affordable water services for our customers. As a company, American Water expects to spend between \$8.0B - \$8.6B on capital investments from 2019 - 2023, to address aging infrastructure, reduce or eliminate leaks, improve cyber and physical security, and increase resiliency of critical assets to climate change, including:

- \$7.3 billion for regulated capital expenditures
- \$0.6 billion to \$1.2 billion to acquire financially distressed municipal systems, which tend to require capital investments
- \$0.1 billion for strategic capital investments

In both our short and long-term planning, we evaluate quality, quantity, growth needs and alternate sources of water supply as well as transmission and distribution capacity. Water supply is seasonal in nature and weather conditions can have a pronounced effect on supply. In order to ensure that we have adequate water supply, we use long-term planning processes and maintain contingency plans to minimize the potential impact on service caused by climate change and a wide range of weather fluctuations. In connection with supply planning for most surface or groundwater sources, we employ models to determine safe yields under different rainfall and drought conditions. Surface and ground water levels are routinely monitored so that supply capacity deficits may, to the extent possible, be predicted and mitigated through demand management and additional supply development. An example of our use of long-term planning to ensure that we have adequate water supply is our involvement in the Monterey Peninsula Water Supply Project (the "Water Supply Project") in California. The Water Supply Project includes the construction of a desalination plant, owned by our California subsidiary, and the construction of slant wells that would supply water to the desalination plant. The slant wells employ a new design which significantly reduces or eliminates the loss of marine life from the water intakes. In addition, the Water Supply Project also includes our California subsidiary's purchase of water from a groundwater replenishment recycling/reuse project between the Monterey Regional Water Pollution Control Agency (now known as Monterey One Water) and the MPWMD. The Water Supply Project is intended, among other things, to fulfill obligations of our California subsidiary to significantly reduce diversions from the Carmel River as required under orders of the California State Water Resources Control Board (the "SWRCB").

Climate change - related issues such as energy efficiency and increased frequency of 100 & 500-year storms influence our decisions regarding the design, build, operation and maintenance of our facilities and equipment. Any new facilities or plant resiliency projects are constructed to a minimum of a 500-year flood standard. For example, the Raritan-Millstone Treatment Plant that delivers, on average, 130MGD of water daily and more than 1 million people, underwent an enhancement project that raised the current flood wall and berms to provide flood protection from storm events up to 500-year recurring frequency. This project was the culmination of a \$37 million project to protect the water treatment plant against significant weather events; and is a part of a greater \$65 million investment to help ensure protection from the increased risk of flooding during extreme weather events and maintain a sustainable water supply for more than one million people in central New Jersey. Another recent example of how these resiliency projects help protect production facilities and allow for continued service during flooding events the flood wall built at the Davenport Water Treatment Plant in Iowa that saw minimal impact to operations.

After surpassing an ambitious goal to lower our GHG emissions per volume of water produced by 16% over a 10 year period (from 2007 - 2017), American Water set a new goal to reduce GHG emissions by 40% by 2025 (from a 2007 baseline). Through December 31, 2017 we have already lowered our GHG emissions by approximately 31% since our base year of 2007. American Water has four ongoing programs that contribute to reducing GHG / CO2 emissions. These programs include pump replacement, generator replacement, water and sewer main replacements, and the construction of new water storage tanks. Each program creates efficiency gains, such as replacement with new more efficient motors and pumping units.

### C3.1d

#### (C3.1d) Provide details of your organization's use of climate-related scenario analysis.

Climate-related scenarios	Details
2DS RCP 6 Other, please specify (Army Corp of Engineers guidance document)	We use readily available climate data to assess the extent of impacts to our facilities being targeted for any assessment. For example, for a sea level rise impact study in NJ, we used available LiDAR topographic data, created a GIS base map of the facility and superimposed the FEMA flood mapping data. Then, we compared the FEMA mapping with other inundation mapping layers that were available from National Oceanic and Atmospheric Administration (NOAA). This information was used to identify the extent of flooding under different scenarios and time horizons. Precipitation and temperature scenarios were based on the regional information gathered from the National Climate Assessment, as well as other climate change planning studies that have been conducted on a state-wide scale in NJ. Our Master Plan development assesses system needs on at least a 15-year horizon. For the NJ sea level rise study, we used the years 2030 and 2070 for the two planning horizons selected: 2030 provided a nearer-term target that can easily be incorporated into existing planning horizons, while 2070 provides a longer-term vantage that aligns well with the life expectancy of built infrastructure and a longer-range forecast on shifts in climate. 2070 provides an upper bound of what might be expected by that time horizon. To date, we have examined the risk of sea level rise for one facility in NJ and use this methodology as an approach for future studies. The risk of flooding is routinely assessed for all facilities in FEMA flood zones during the master plan process. We continue to follow climate science modelling to develop better ways to model the impacts from increasing storm intensity.

## C4. Targets and performance

### C4.1

#### (C4.1) Did you have an emissions target that was active in the reporting year?

Absolute target

### C4.1a

#### (C4.1a) Provide details of your absolute emissions target(s) and progress made against those targets.

**Target reference number**

Abs 1

**Scope**

Scope 1+2 (location-based)

**% emissions in Scope**

100

**Targeted % reduction from base year**

16

**Base year**

2007

**Start year**

2007

**Base year emissions covered by target (metric tons CO<sub>2</sub>e)**

853676

**Target year**

2017

**Is this a science-based target?**

Yes, we consider this a science-based target, but this target has not been approved as science-based by the Science-Based Targets initiative

**% of target achieved**

100

**Target status**

Achieved

**Please explain**

American Water achieved our first generation GHG reduction goal and set second generation GHG reduction goal by 2017.

---

**Target reference number**

Abs 2

**Scope**

Scope 1+2 (location-based)

**% emissions in Scope**

100

**Targeted % reduction from base year**

40

**Base year**

2007

**Start year**

2007

**Base year emissions covered by target (metric tons CO2e)**

853676

**Target year**

2025

**Is this a science-based target?**

Yes, we consider this a science-based target, but this target has not been approved as science-based by the Science-Based Targets initiative

**% of target achieved**

72

**Target status**

Underway

**Please explain**

American Water has committed to reducing our GHG emissions by 40% from our base year of 2007 by 2025. Our GHG emissions as of 2018 were 608,409, meaning we achieved approximately a 30% reduction from our base year, and are 72% of the way toward our goal.

---

**C4.2**

---

**(C4.2) Provide details of other key climate-related targets not already reported in question C4.1/a/b.**

**C4.3**

---

**(C4.3) Did you have emissions reduction initiatives that were active within the reporting year? Note that this can include those in the planning and/or implementation phases.**

Yes

**C4.3a**

---

**(C4.3a) Identify the total number of initiatives at each stage of development, and for those in the implementation stages, the estimated CO2e savings.**

	Number of initiatives	Total estimated annual CO2e savings in metric tonnes CO2e (only for rows marked *)
Under investigation	5	0
To be implemented*	2	213
Implementation commenced*	1	25000
Implemented*	7	14766
Not to be implemented	0	0

## C4.3b

**(C4.3b) Provide details on the initiatives implemented in the reporting year in the table below.**

**Initiative type**

Energy efficiency: Processes

**Description of initiative**

Other, please specify (Investment in drinking water infrastructure)

**Estimated annual CO2e savings (metric tonnes CO2e)**

14000

**Scope**

Scope 2 (location-based)

**Voluntary/Mandatory**

Voluntary

**Annual monetary savings (unit currency – as specified in C0.4)**

563000

**Investment required (unit currency – as specified in C0.4)**

284000000

**Payback period**

11-15 years

**Estimated lifetime of the initiative**

>30 years

**Comment**

We implemented 5 projects/programs in 2018. Four were programs and one was a water reservoir project. There are four ongoing annual programs that contribute to reducing GHG / CO2 emissions. These programs include pump replacement, generator replacement, water and sewer main replacements and the construction of new water storage tanks. Efficiency gains are achieved in each program, such as replacement with new more efficient motors and pumping units. Aged generators are replaced with more efficient and cleaner burning units. Water main replacement which results in improved efficiency, reduced leakage and improved hydraulic pumping conditions. Replacement of sewer mains also improves efficiency and reduces infiltration and in-flow from storm water into the sanitary sewers, thereby reducing treatment volume and associated energy usage. The construction of new water storage tanks in water piping networks reduce energy usage by reducing peak hourly pumpage through transmission mains. The savings listed are based on one major pump replacement project done as part of the pump replacement program. Savings from the other projects are not available at this time. Our new corporate office utilizes a sustainable site approach, effective roofing strategies, water use reduction through an "efficiency first" approach to water conservation and energy/atmosphere strategies to reduce energy consumption to meet double (interior/exterior) Platinum LEED certification.

**Initiative type**

Energy efficiency: Building services

**Description of initiative**

Lighting

**Estimated annual CO2e savings (metric tonnes CO2e)**

676

**Scope**

Scope 2 (location-based)

**Voluntary/Mandatory**

Voluntary

**Annual monetary savings (unit currency – as specified in C0.4)**

115000

**Investment required (unit currency – as specified in C0.4)**

2000000

**Payback period**

1-3 years

**Estimated lifetime of the initiative**

21-30 years

**Comment**

American Water implemented three projects to improve energy efficiency in buildings. Our customer call center buildings in Alton, IL and Pensacola, FL were improved with LED lighting and new HVAC systems. The HVAC systems were 12-18 years old. In Alton we replaced two 5-ton Liebert floor units and two 5-ton mini mate units in the server room as well as two 30-ton Roof Top HVAC units in the main call center area. In addition, Pensacola we replaced three 40-ton Roof Top units. The state operations buildings are undergoing a continuous effort to implement LED lighting changes. In addition, American Water's new corporate office utilizes technologies recycle rainwater for grey water use and using technology to control shades to help reduce excessive cooling cost.

---

**Initiative type**

Process emissions reductions

**Description of initiative**

Changes in operations

**Estimated annual CO2e savings (metric tonnes CO2e)**

90

**Scope**

Scope 1

**Voluntary/Mandatory**

Voluntary

**Annual monetary savings (unit currency – as specified in C0.4)**

0

**Investment required (unit currency – as specified in C0.4)**

0

**Payback period**

No payback

**Estimated lifetime of the initiative**

>30 years

**Comment**

American Water implemented a telecommuting initiative in our customer call centers in August 2018. Through this program, employees are allowed to work remotely one day per week, reducing the amount of travel (and, therefore, the amount of gasoline) required. Approximately 50 employees are currently participating in this initiative.

---

C4.3c

---

### (C4.3c) What methods do you use to drive investment in emissions reduction activities?

Method	Comment
Internal incentives/recognition programs	All American Water employees must complete an annual performance review where they must describe how they demonstrated American Water's values during the review period. One of these five core values is "Environmental Leadership." Employees can justify their demonstration of the Environmental Leadership value by describing how they participated in a variety of projects that contribute to the management of climate change. A supervisor's rating in this area will add (for high-performance) or subtract (for low / no performance) a specific percentage to / from an employee's annual incentive pay. The APP is designed to incentivize eligible participants to achieve annual business objectives by providing an opportunity to earn a cash payout tied to corporate and individual performance. All employees, including executive leadership, goals are aligned.
Internal finance mechanisms	Capital projects that reduce emissions (e.g., solar installations, etc.) that are cost comparable to other alternatives are given priority as they align with our corporate value of Environmental Leadership.

## C4.5

---

### (C4.5) Do you classify any of your existing goods and/or services as low-carbon products or do they enable a third party to avoid GHG emissions?

No

## C5. Emissions methodology

---

### C5.1

---

#### (C5.1) Provide your base year and base year emissions (Scopes 1 and 2).

##### Scope 1

###### Base year start

January 1 2007

###### Base year end

December 31 2007

###### Base year emissions (metric tons CO2e)

63977

###### Comment

##### Scope 2 (location-based)

###### Base year start

January 1 2007

###### Base year end

December 31 2007

###### Base year emissions (metric tons CO2e)

789699

###### Comment

##### Scope 2 (market-based)

###### Base year start

###### Base year end

###### Base year emissions (metric tons CO2e)

###### Comment

Not applicable

## C5.2

---

**(C5.2) Select the name of the standard, protocol, or methodology you have used to collect activity data and calculate Scope 1 and Scope 2 emissions.**

The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)

## C6. Emissions data

---

### C6.1

---

**(C6.1) What were your organization's gross global Scope 1 emissions in metric tons CO2e?**

**Reporting year**

**Gross global Scope 1 emissions (metric tons CO2e)**

67146

**Start date**

January 1 2018

**End date**

December 31 2018

**Comment**

### C6.2

---

**(C6.2) Describe your organization's approach to reporting Scope 2 emissions.**

**Row 1**

**Scope 2, location-based**

We are reporting a Scope 2, location-based figure

**Scope 2, market-based**

We have operations where we are able to access electricity supplier emission factors or residual emissions factors, but are unable to report a Scope 2, market-based figure

**Comment**

American Water will be investigating how to capture and incorporate electricity supplier emission factors into future reporting.

### C6.3

---

**(C6.3) What were your organization's gross global Scope 2 emissions in metric tons CO2e?**

**Reporting year**

**Scope 2, location-based**

541263

**Scope 2, market-based (if applicable)**

<Not Applicable>

**Start date**

January 1 2018

**End date**

December 31 2018

**Comment**

**C6.4**

---

**(C6.4) Are there any sources (e.g. facilities, specific GHGs, activities, geographies, etc.) of Scope 1 and Scope 2 emissions that are within your selected reporting boundary which are not included in your disclosure?**

No

**C6.5**

---

**(C6.5) Account for your organization's Scope 3 emissions, disclosing and explaining any exclusions.**

**Purchased goods and services**

**Evaluation status**

Relevant, not yet calculated

**Metric tonnes CO2e**

<Not Applicable>

**Emissions calculation methodology**

<Not Applicable>

**Percentage of emissions calculated using data obtained from suppliers or value chain partners**

<Not Applicable>

**Explanation**

As described in 12.1a, American Water is developing a climate-related supplier engagement strategy that starts with suppliers with larger carbon footprints with which we have the highest spend (as that increases our ability to leverage the suppliers' practices).

**Capital goods**

**Evaluation status**

Relevant, not yet calculated

**Metric tonnes CO2e**

<Not Applicable>

**Emissions calculation methodology**

<Not Applicable>

**Percentage of emissions calculated using data obtained from suppliers or value chain partners**

<Not Applicable>

**Explanation**

As described in 12.1a, American Water is developing a climate-related supplier engagement strategy that starts with suppliers with larger carbon footprints with which we have the highest spend (as that increases our ability to leverage the suppliers' practices).

## Fuel-and-energy-related activities (not included in Scope 1 or 2)

### Evaluation status

Relevant, not yet calculated

### Metric tonnes CO<sub>2</sub>e

<Not Applicable>

### Emissions calculation methodology

<Not Applicable>

### Percentage of emissions calculated using data obtained from suppliers or value chain partners

<Not Applicable>

### Explanation

As described in 12.1a, American Water is developing a climate-related supplier engagement strategy that starts with suppliers with larger carbon footprints with which we have the highest spend (as that increases our ability to leverage the suppliers' practices).

## Upstream transportation and distribution

### Evaluation status

Relevant, not yet calculated

### Metric tonnes CO<sub>2</sub>e

<Not Applicable>

### Emissions calculation methodology

<Not Applicable>

### Percentage of emissions calculated using data obtained from suppliers or value chain partners

<Not Applicable>

### Explanation

As described in 12.1a, American Water is developing a climate-related supplier engagement strategy that starts with suppliers with larger carbon footprints with which we have the highest spend (as that increases our ability to leverage the suppliers' practices).

## Waste generated in operations

### Evaluation status

Relevant, not yet calculated

### Metric tonnes CO<sub>2</sub>e

<Not Applicable>

### Emissions calculation methodology

<Not Applicable>

### Percentage of emissions calculated using data obtained from suppliers or value chain partners

<Not Applicable>

### Explanation

As described in 12.1a, American Water is developing a climate-related supplier engagement strategy that starts with suppliers with larger carbon footprints with which we have the highest spend (as that increases our ability to leverage the suppliers' practices).

## Business travel

### Evaluation status

Relevant, not yet calculated

### Metric tonnes CO<sub>2</sub>e

<Not Applicable>

### Emissions calculation methodology

<Not Applicable>

### Percentage of emissions calculated using data obtained from suppliers or value chain partners

<Not Applicable>

### Explanation

As described in 12.1a, American Water is developing a climate-related supplier engagement strategy that starts with suppliers with larger carbon footprints with which we have the highest spend (as that increases our ability to leverage the suppliers' practices).

## Employee commuting

### Evaluation status

Relevant, not yet calculated

### Metric tonnes CO2e

<Not Applicable>

### Emissions calculation methodology

<Not Applicable>

### Percentage of emissions calculated using data obtained from suppliers or value chain partners

<Not Applicable>

### Explanation

As described in 12.1a, American Water is developing a climate-related supplier engagement strategy that starts with suppliers with larger carbon footprints with which we have the highest spend (as that increases our ability to leverage the suppliers' practices).

## Upstream leased assets

### Evaluation status

Not relevant, explanation provided

### Metric tonnes CO2e

<Not Applicable>

### Emissions calculation methodology

<Not Applicable>

### Percentage of emissions calculated using data obtained from suppliers or value chain partners

<Not Applicable>

### Explanation

We have no upstream leased assets

## Downstream transportation and distribution

### Evaluation status

Relevant, not yet calculated

### Metric tonnes CO2e

<Not Applicable>

### Emissions calculation methodology

<Not Applicable>

### Percentage of emissions calculated using data obtained from suppliers or value chain partners

<Not Applicable>

### Explanation

As described in 12.1a, American Water is developing a climate-related supplier engagement strategy that starts with suppliers with larger carbon footprints with which we have the highest spend (as that increases our ability to leverage the suppliers' practices).

## Processing of sold products

### Evaluation status

Not relevant, explanation provided

### Metric tonnes CO2e

<Not Applicable>

### Emissions calculation methodology

<Not Applicable>

### Percentage of emissions calculated using data obtained from suppliers or value chain partners

<Not Applicable>

### Explanation

Not relevant to the water/wastewater industry as we have no sale of products outside of water/wastewater services.

## Use of sold products

### Evaluation status

Not relevant, explanation provided

### Metric tonnes CO2e

<Not Applicable>

### Emissions calculation methodology

<Not Applicable>

### Percentage of emissions calculated using data obtained from suppliers or value chain partners

<Not Applicable>

### Explanation

No products sold outside of water/wastewater services.

## End of life treatment of sold products

### Evaluation status

Not relevant, explanation provided

### Metric tonnes CO2e

<Not Applicable>

### Emissions calculation methodology

<Not Applicable>

### Percentage of emissions calculated using data obtained from suppliers or value chain partners

<Not Applicable>

### Explanation

No products sold outside of water/wastewater services.

## Downstream leased assets

### Evaluation status

Not relevant, explanation provided

### Metric tonnes CO2e

<Not Applicable>

### Emissions calculation methodology

<Not Applicable>

### Percentage of emissions calculated using data obtained from suppliers or value chain partners

<Not Applicable>

### Explanation

We have no downstream leased assets

## Franchises

### Evaluation status

Not relevant, explanation provided

### Metric tonnes CO2e

<Not Applicable>

### Emissions calculation methodology

<Not Applicable>

### Percentage of emissions calculated using data obtained from suppliers or value chain partners

<Not Applicable>

### Explanation

We have no franchises in this area

## Investments

### Evaluation status

Not relevant, explanation provided

### Metric tonnes CO2e

<Not Applicable>

### Emissions calculation methodology

<Not Applicable>

### Percentage of emissions calculated using data obtained from suppliers or value chain partners

<Not Applicable>

### Explanation

We have no investments in this area

## Other (upstream)

### Evaluation status

Not relevant, explanation provided

### Metric tonnes CO2e

<Not Applicable>

### Emissions calculation methodology

<Not Applicable>

### Percentage of emissions calculated using data obtained from suppliers or value chain partners

<Not Applicable>

### Explanation

Not applicable

## Other (downstream)

### Evaluation status

Not relevant, explanation provided

### Metric tonnes CO2e

<Not Applicable>

### Emissions calculation methodology

<Not Applicable>

### Percentage of emissions calculated using data obtained from suppliers or value chain partners

<Not Applicable>

### Explanation

Not applicable

## C6.7

---

**(C6.7) Are carbon dioxide emissions from biologically sequestered carbon relevant to your organization?**

No

## C6.10

---

**(C6.10) Describe your gross global combined Scope 1 and 2 emissions for the reporting year in metric tons CO2e per unit currency total revenue and provide any additional intensity metrics that are appropriate to your business operations.**

**Intensity figure**

0.0002

**Metric numerator (Gross global combined Scope 1 and 2 emissions)**

608409

**Metric denominator**

unit total revenue

**Metric denominator: Unit total**

2958000000

**Scope 2 figure used**

Location-based

**% change from previous year**

0

**Direction of change**

No change

**Reason for change**

No change in per unit total revenue intensity

**C7. Emissions breakdowns**

**C7.1**

**(C7.1) Does your organization break down its Scope 1 emissions by greenhouse gas type?**

Yes

**C7.1a**

**(C7.1a) Break down your total gross global Scope 1 emissions by greenhouse gas type and provide the source of each used greenhouse warming potential (GWP).**

Greenhouse gas	Scope 1 emissions (metric tons of CO2e)	GWP Reference
CO2	67070	IPCC Fifth Assessment Report (AR5 – 100 year)
CH4	58	IPCC Fifth Assessment Report (AR5 – 100 year)
N2O	18	IPCC Fifth Assessment Report (AR5 – 100 year)

**C7.2**

**(C7.2) Break down your total gross global Scope 1 emissions by country/region.**

Country/Region	Scope 1 emissions (metric tons CO2e)
United States of America	67146

### C7.3

(C7.3) Indicate which gross global Scope 1 emissions breakdowns you are able to provide.

By activity

### C7.3c

(C7.3c) Break down your total gross global Scope 1 emissions by business activity.

Activity	Scope 1 emissions (metric tons CO2e)
Stationary Combustion	32948
Mobile Sources	32960
Process / Fugitive	26
Refrigerant	1212

### C7.5

(C7.5) Break down your total gross global Scope 2 emissions by country/region.

Country/Region	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)	Purchased and consumed electricity, heat, steam or cooling (MWh)	Purchased and consumed low-carbon electricity, heat, steam or cooling accounted in market-based approach (MWh)
United States of America	541263	0	1046300	597.73

### C7.6

(C7.6) Indicate which gross global Scope 2 emissions breakdowns you are able to provide.

By activity

### C7.6c

(C7.6c) Break down your total gross global Scope 2 emissions by business activity.

Activity	Scope 2, location-based emissions (metric tons CO2e)	Scope 2, market-based emissions (metric tons CO2e)
Electricity Usage	541263	0

### C7.9

(C7.9) How do your gross global emissions (Scope 1 and 2 combined) for the reporting year compare to those of the previous reporting year?

Increased

### C7.9a

**(C7.9a) Identify the reasons for any change in your gross global emissions (Scope 1 and 2 combined) and for each of them specify how your emissions compare to the previous year.**

	Change in emissions (metric tons CO2e)	Direction of change	Emissions value (percentage)	Please explain calculation
Change in renewable energy consumption	132	Increased	0.02	The amount listed represents the change in self-generated energy. The emissions value increased by 132 metric tons which represents .02% of our overall GHG emissions.
Other emissions reduction activities	14766	Decreased	2.4	The emissions value increased by 14,766 metric tons which represents 2.4% of our overall GHG emissions. As explained in C4.3a, American Water has implemented initiatives that will result in a total annual estimated reduction of 14,766. This refers to changes in emissions that have occurred because of proactive emissions reduction initiatives or activities, for example those listed in question C4.3b, other than those caused by a change in renewable energy consumption.
Divestment		<Not Applicable >		
Acquisitions		<Not Applicable >		
Mergers		<Not Applicable >		
Change in output		<Not Applicable >		
Change in methodology		<Not Applicable >		
Change in boundary		<Not Applicable >		
Change in physical operating conditions		<Not Applicable >		
Unidentified		<Not Applicable >		
Other	17886	Increased	2.9	The emissions value increased by approximately 17,886 metric tons which represents 2.9% of our overall GHG emissions. In 2018, American Water added new customers through acquisitions and organic growth. Acquisitions are typically of aging, less efficient systems requiring investment to meet American Water's portfolio standard. In addition to customer growth, American Water pumped a higher volume of water than in the previous year to meet the needs of customers across our footprint.

**C7.9b**

**(C7.9b) Are your emissions performance calculations in C7.9 and C7.9a based on a location-based Scope 2 emissions figure or a market-based Scope 2 emissions figure?**

Location-based

**C8. Energy**

**C8.1**

**(C8.1) What percentage of your total operational spend in the reporting year was on energy?**

More than 5% but less than or equal to 10%

**C8.2****(C8.2) Select which energy-related activities your organization has undertaken.**

	Indicate whether your organization undertakes this energy-related activity
Consumption of fuel (excluding feedstocks)	Yes
Consumption of purchased or acquired electricity	Yes
Consumption of purchased or acquired heat	No
Consumption of purchased or acquired steam	No
Consumption of purchased or acquired cooling	No
Generation of electricity, heat, steam, or cooling	Yes

**C8.2a****(C8.2a) Report your organization's energy consumption totals (excluding feedstocks) in MWh.**

	Heating value	MWh from renewable sources	MWh from non-renewable sources	Total MWh
Consumption of fuel (excluding feedstock)	Unable to confirm heating value	0	313490	313490
Consumption of purchased or acquired electricity	<Not Applicable>	0	1046300	1046300
Consumption of purchased or acquired heat	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Consumption of purchased or acquired steam	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Consumption of purchased or acquired cooling	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Consumption of self-generated non-fuel renewable energy	<Not Applicable>	3440	<Not Applicable>	3440
Total energy consumption	<Not Applicable>	3440	1359790	1363230

**C8.2b****(C8.2b) Select the applications of your organization's consumption of fuel.**

	Indicate whether your organization undertakes this fuel application
Consumption of fuel for the generation of electricity	Yes
Consumption of fuel for the generation of heat	Yes
Consumption of fuel for the generation of steam	No
Consumption of fuel for the generation of cooling	No
Consumption of fuel for co-generation or tri-generation	No

**C8.2c****(C8.2c) State how much fuel in MWh your organization has consumed (excluding feedstocks) by fuel type.**

**Fuels (excluding feedstocks)**

Diesel

**Heating value**

Unable to confirm heating value

**Total fuel MWh consumed by the organization**

41020

**MWh fuel consumed for self-generation of electricity**

0

**MWh fuel consumed for self-generation of heat**

0

**MWh fuel consumed for self-generation of steam**

<Not Applicable>

**MWh fuel consumed for self-generation of cooling**

<Not Applicable>

**MWh fuel consumed for self-cogeneration or self-trigeneration**

<Not Applicable>

**Comment**

Diesel is primarily used for emergency generators.

---

**Fuels (excluding feedstocks)**

Natural Gas

**Heating value**

Unable to confirm heating value

**Total fuel MWh consumed by the organization**

167902

**MWh fuel consumed for self-generation of electricity**

0

**MWh fuel consumed for self-generation of heat**

0

**MWh fuel consumed for self-generation of steam**

<Not Applicable>

**MWh fuel consumed for self-generation of cooling**

<Not Applicable>

**MWh fuel consumed for self-cogeneration or self-trigeneration**

<Not Applicable>

**Comment**

Natural gas is predominantly used for emergency generators and heating.

---

**Fuels (excluding feedstocks)**

Motor Gasoline

**Heating value**

Unable to confirm heating value

**Total fuel MWh consumed by the organization**

94093

**MWh fuel consumed for self-generation of electricity**

0

**MWh fuel consumed for self-generation of heat**

0

**MWh fuel consumed for self-generation of steam**

<Not Applicable>

**MWh fuel consumed for self-generation of cooling**

<Not Applicable>

**MWh fuel consumed for self-cogeneration or self-trigeneration**

<Not Applicable>

**Comment**

Motor gasoline is primarily used to fuel vehicles.

---

**Fuels (excluding feedstocks)**

Sludge Gas

**Heating value**

Unable to confirm heating value

**Total fuel MWh consumed by the organization**

663

**MWh fuel consumed for self-generation of electricity**

0

**MWh fuel consumed for self-generation of heat**

0

**MWh fuel consumed for self-generation of steam**

<Not Applicable>

**MWh fuel consumed for self-generation of cooling**

<Not Applicable>

**MWh fuel consumed for self-cogeneration or self-trigeneration**

<Not Applicable>

**Comment**

Sludge gas is a by-product of sludge digestion (flaring) and currently only occurs in our HI operations.

---

**Fuels (excluding feedstocks)**

Fuel Oil Number 2

**Heating value**

Unable to confirm heating value

**Total fuel MWh consumed by the organization**

9812

**MWh fuel consumed for self-generation of electricity**

0

**MWh fuel consumed for self-generation of heat**

0

**MWh fuel consumed for self-generation of steam**

<Not Applicable>

**MWh fuel consumed for self-generation of cooling**

<Not Applicable>

**MWh fuel consumed for self-cogeneration or self-trigeneration**

<Not Applicable>

**Comment**

Fuel oil is used in our operations.

---

**(C8.2d) List the average emission factors of the fuels reported in C8.2c.**

**Diesel**

**Emission factor**

10.21

**Unit**

kg CO<sub>2</sub>e per gallon

**Emission factor source**

Emission Factors for Greenhouse Gas Inventories - EPA Center for Corporate Climate Leadership (last modified 9 March 2018)

**Comment**

**Fuel Oil Number 2**

**Emission factor**

10.21

**Unit**

kg CO<sub>2</sub> per gallon

**Emission factor source**

Emission Factors for Greenhouse Gas Inventories - EPA Center for Corporate Climate Leadership (last modified 9 March 2018)

**Comment**

**Motor Gasoline**

**Emission factor**

8.78

**Unit**

kg CO<sub>2</sub>e per gallon

**Emission factor source**

Emission Factors for Greenhouse Gas Inventories - EPA Center for Corporate Climate Leadership (last modified 9 March 2018)

**Comment**

**Natural Gas**

**Emission factor**

0.05318

**Unit**

metric tons CO<sub>2</sub>e per million Btu

**Emission factor source**

2018 Climate Registry Default Emission Factors (May 2018) per Engie, our energy management company

**Comment**

**Sludge Gas**

**Emission factor**

0.00013

**Unit**

metric tons CO<sub>2</sub>e per million Btu

**Emission factor source**

Emission Factors for Greenhouse Gas Inventories - EPA Center for Corporate Climate Leadership (last modified 9 March 2018)

**Comment**

**C8.2e**

---

**(C8.2e) Provide details on the electricity, heat, steam, and cooling your organization has generated and consumed in the reporting year.**

	Total Gross generation (MWh)	Generation that is consumed by the organization (MWh)	Gross generation from renewable sources (MWh)	Generation from renewable sources that is consumed by the organization (MWh)
Electricity	3440	3440	3440	3440
Heat	0	0	0	0
Steam	0	0	0	0
Cooling	0	0	0	0

## C8.2f

**(C8.2f) Provide details on the electricity, heat, steam and/or cooling amounts that were accounted for at a low-carbon emission factor in the market-based Scope 2 figure reported in C6.3.**

**Basis for applying a low-carbon emission factor**

Off-grid energy consumption from an on-site installation or through a direct line to an off-site generator owned by another company

**Low-carbon technology type**

Solar PV

**Region of consumption of low-carbon electricity, heat, steam or cooling**

North America

**MWh consumed associated with low-carbon electricity, heat, steam or cooling**

579.73

**Emission factor (in units of metric tons CO2e per MWh)**

0.83

**Comment**

Data provided is for our Newburgh solar project in Indiana. The Newburgh solar project went online in February of 2018. After one year of production, the solar array was able to produce 85.7% of the amount of electricity needed to operate the facility and pump 550 MG of water to our customers. After one year of production, the electricity purchase savings totaled \$58,392.68. The payback model showed that we should have realized a savings of \$62,174.04 for this same time period. Unfavorable weather conditions in February, March, and November required more energy be purchased from the grid than was budgeted contributing to the \$3,781 savings deficit. The solar array produced 579,739.27 kWh in the first year, which saved 1,056,285 pounds of CO2 emissions; equivalent to burning 54,366 gallons of gasoline. It has also saved 753 pounds of SO2 and 928 pounds of Nitrogen Oxide from being emitted.

## C9. Additional metrics

### C9.1

**(C9.1) Provide any additional climate-related metrics relevant to your business.**

## C10. Verification

### C10.1

**(C10.1) Indicate the verification/assurance status that applies to your reported emissions.**

	Verification/assurance status
Scope 1	No third-party verification or assurance
Scope 2 (location-based or market-based)	No third-party verification or assurance
Scope 3	No third-party verification or assurance

**C10.2**

---

**(C10.2) Do you verify any climate-related information reported in your CDP disclosure other than the emissions figures reported in C6.1, C6.3, and C6.5?**

No, but we are actively considering verifying within the next two years

**C11. Carbon pricing**

---

**C11.1**

---

**(C11.1) Are any of your operations or activities regulated by a carbon pricing system (i.e. ETS, Cap & Trade or Carbon Tax)?**

No, and we do not anticipate being regulated in the next three years

**C11.2**

---

**(C11.2) Has your organization originated or purchased any project-based carbon credits within the reporting period?**

No

**C11.3**

---

**(C11.3) Does your organization use an internal price on carbon?**

No, but we anticipate doing so in the next two years

**C12. Engagement**

---

**C12.1**

---

**(C12.1) Do you engage with your value chain on climate-related issues?**

Yes, our suppliers

Yes, our customers

**C12.1a**

---

**(C12.1a) Provide details of your climate-related supplier engagement strategy.**

**Type of engagement**

Innovation & collaboration (changing markets)

**Details of engagement**

Run a campaign to encourage innovation to reduce climate impacts on products and services

Other, please specify (Work with targeted suppliers to identify opportunities to reduce climate impacts)

**% of suppliers by number**

1

**% total procurement spend (direct and indirect)**

30

**% Scope 3 emissions as reported in C6.5**

0

**Rationale for the coverage of your engagement**

American Water is developing a program that will start with the suppliers with larger carbon footprints with which we have the highest spend (as that increases our ability to leverage the suppliers' practices).

**Impact of engagement, including measures of success**

American Water is currently gathering information on an informal basis; we are in the process of developing metrics for tracking progress in this area.

**Comment**

American Water is developing a program that will start with the suppliers with larger carbon footprints with which we have the highest spend (as that increases our ability to leverage the suppliers' practices).

---

**C12.1b**

---

**(C12.1b) Give details of your climate-related engagement strategy with your customers.**

**Type of engagement**

Education/information sharing

**Details of engagement**

Run an engagement campaign to education customers about your climate change performance and strategy

**% of customers by number**

100

**% Scope 3 emissions as reported in C6.5**

0

**Please explain the rationale for selecting this group of customers and scope of engagement**

There are many challenges facing water systems today: aging infrastructure, emerging water contaminants, and increasing threats and impacts from climate change and natural disasters. American Water was at the forefront of environmental leadership when, in 2006, it became the first U.S. water or wastewater utility to join the EPA's Climate Leaders program and CDP. On both a corporate and state level, American Water is consistently communicating with customers. General messaging points from the corporate level mainly leverages digital communications that include the corporate website, social media, standard media and state specific customer portals. Our regulated state subsidiaries also communicate to customers via direct mail, bill inserts as well as electronically through our customer portals. There are many challenges facing water systems today. An example of general corporate messaging conveyed throughout the year on a consistent basis includes: • American Water expects to invest \$8B - \$8.6B in regulated capital expenditures from 2019 to 2023 to address aging infrastructure, reduce/eliminate leaks, improve cyber/physical security, and increase resiliency of critical assets to address climate change.

**Impact of engagement, including measures of success**

As we confront the challenges posed by climate change, persistent droughts, and high-energy prices across the country, nearly everyone is looking for ways to conserve resources and cut costs. We inform and educate customers on simple techniques they can employ to use water more efficiently and conserve energy, thus preserving our nation's resources for future generations. These solutions not only make environmental sense, they make economic sense as well: • Check for and repair leaks throughout your home or business. • Install a U.S. EPA EnergyStar-rated demand hot water system. • Install U.S.EPA WaterSense-rated low flow shower heads, faucet aerators, and High Efficiency Toilets (HETs). HETs use just 1.28 gallons per flush (gpf) or less as compared to the 3.5 gpf or more for toilets sold prior to 1994. • Lower your water heater thermostat to 120 degrees. Some manufacturers set water heater thermostats at 140 degrees. Lowering the temperature would reduce water heating costs by 6 - 10%. • Wrap pipes that are not insulated, or that pass through unheated spaces such as crawlspaces, basements or garages, with pre-molded foam rubber sleeves or fiberglass insulation. • Use energy and water efficient appliances (e.g., U.S. EPA EnergyStar and WaterSense rated dishwashers and clothes washers). • Use drip irrigation systems in gardens and landscaping rather than hose sprayers or sprinklers. • Wrap your water heater in an insulation blanket to help reduce heat loss. Nearly 20% of an average home energy bill goes to heating water. Our education and information-sharing engagements target 100% of our customers as nearly everyone seeks ways to cut costs and therefore conserve resources. We inform and educate all our customers on simple techniques to use water more efficiently and conserve energy, thus preserving our planet's resources for future generations. Our residential customers have saved about 1,100 gallons per customer per year – or 3.2 billion gallons annually – through conservation and efficiency measures in recent years. American Water also produces a Corporate Responsibility Report every two years that details our climate strategy and GHG emissions reduction performance. This information is made available to our customers.

---

**C12.3**

**(C12.3) Do you engage in activities that could either directly or indirectly influence public policy on climate-related issues through any of the following?**

- Direct engagement with policy makers
- Trade associations
- Funding research organizations
- Other

---

**C12.3a**

**(C12.3a) On what issues have you been engaging directly with policy makers?**

Focus of legislation	Corporate position	Details of engagement	Proposed legislative solution
<p>Other, please specify (Infrastructure Replacement, Lead Service Line Replacement)  <i>American Water's direct engagement with policy makers (individual meetings as well as participation and attendance, on a year-round basis at scheduled NARUC, NCSL, USCM, NAWC and NMSU events) includes but is not limited to:</i> • Infrastructure Replacement • Lead Service Line Replacement • Water Quality Accountability Act • Emerging Contaminants/Treatment &amp; Monitoring • Supplier &amp; Workforce Diversity • Cybersecurity • Fair Market Value • Water/Wastewater Revenue Requirement Consolidation • Affordability Programs • Capital Recovery Mechanisms • Stabilization Mechanisms • Distressed Utility Expansion • State Revolving Fund  <i>American Water Infrastructure Investment: American Water expects to invest \$7.3 billion in regulated cap-ex from 2019 to 2023 to address aging infrastructure, reduce/eliminate leaks, improve cyber/physical security, and to increase resiliency of critical assets to climate variability.</i></p>	Support	<p>American Water Infrastructure Investment: American Water is expecting to invest \$7.3 billion in regulated cap-ex from 2019 - 2023 to address aging infrastructure, reduce/eliminate leaks, improve cyber/physical security, and to increase resiliency of critical assets to climate change.</p>	We support this legislation with no exceptions
<p>Other, please specify (Emerging Contaminants/Treatment and Monitoring)</p>	Support with minor exceptions	<p>Direct engagement with policy makers through individual meetings as well as participation and attendance, on a year-round basis at scheduled National Association of Regulatory Utility Commissioners (NARUC), National Conference of State Legislatures (NCSL), U.S. Conference of Mayors (USCM), National Association of Water Companies (NAWC), and New Mexico State University (NMSU) events.</p>	<ul style="list-style-type: none"> <li>•Water Quality</li> <li>•Accountability Act</li> <li>•Fair Market Value</li> <li>•Water/Wastewater Revenue Requirement Consolidation</li> <li>•Affordability Programs</li> <li>•Capital Recovery Mechanisms</li> <li>•Stabilization Mechanisms</li> <li>•Distressed Utility Expansion</li> <li>•State Revolving Fund</li> </ul>

**C12.3b**

**(C12.3b) Are you on the board of any trade associations or do you provide funding beyond membership?**

Yes

**C12.3c**

**(C12.3c) Enter the details of those trade associations that are likely to take a position on climate change legislation.**

**Trade association**

National Association of Water Companies (NAWC)

**Is your position on climate change consistent with theirs?**

Consistent

**Please explain the trade association's position**

From <http://www.nawc.org/water-challenges/climate-change.aspx> Our climate is changing and with it our world. And while many of the ramifications of climate change — including its scope and speed — remain the subject of much discussion, there is no doubt that the world of future generations will be different than this one. Changes in climate, including changes in temperature, precipitation and other environmental variables, can greatly affect the quality and quantity of available resources, including water. Moving water greater distances consumes more energy and the economic impact of more costly water can negatively impact communities and businesses. In California, regions dependent on winter snowpack in the Sierras for water supply during warmer months will continue to experience challenges depending on winter precipitation. As temperatures rise, the situation becomes more critical. Climate change presents challenges, but there are solutions to be harnessed in the form of wise water use, conservation education and the efficient management of resources through innovative technology. Private water companies are helping to lead the way on water conservation with green, energy saving initiatives that will make a difference for the communities they serve. From Connecticut to California, our members are engaging customers from every generation about the importance of protecting natural resources and the environment.

**How have you influenced, or are you attempting to influence their position?**

American Water supports this position.

---

**C12.3d**

---

**(C12.3d) Do you publicly disclose a list of all research organizations that you fund?**

Yes

**C12.3e**

---

**(C12.3e) Provide details of the other engagement activities that you undertake.**

American Water provides support to a variety of agencies and organizations on climate-related issues via private meetings, attendance at conferences, summits and participation on subject specific panels. We routinely engage with NARUC, a non-profit organization dedicated to representing the State public service commissions. They regulate the utilities that provide essential services such as energy, telecommunications, power, water, and transportation as well as on infrastructure resiliency in the face of climate change. We have also provided similar support to the US Environmental Protection Agency (USEPA) on this topic.

We also engage with the following organizations in a similar fashion: NCSL, USCM, NAWC, and NMSU Center for Public Utilities.

Refer to: <https://amwater.com/corp/about-us/ethics-responsibility/political-contributions>

**C12.3f**

---

**(C12.3f) What processes do you have in place to ensure that all of your direct and indirect activities that influence policy are consistent with your overall climate change strategy?**

Throughout the American Water footprint consistency in messaging is held paramount. The company has identified a multitude of subject matter experts (SME) that have been trained and drilled on conveying specific messaging related to their area of expertise to a variety of audiences including elected officials, policy makers and regulators.

An additional measure to maintain messaging consistency: Only SMEs and those authorized by the American Water Communications Department, are permitted to engage with and respond to elected officials, policy makers and regulators to ensure that all public engagement is on message with the corporate position and strategy.

## C12.4

---

**(C12.4) Have you published information about your organization's response to climate change and GHG emissions performance for this reporting year in places other than in your CDP response? If so, please attach the publication(s).**

**Publication**

In voluntary sustainability report

**Status**

Underway – previous year attached

**Attach the document**

2015-2016 CR Report.pdf

**Page/Section reference**

Pages 41-42 & 52

**Content elements**

Emissions figures

Emission targets

**Comment**

The 2015-2016 Corporate Responsibility outlines Energy and Emissions metrics, American Water's GHG emissions 10-year goal, and energy consumption. We are currently drafting the 2017-2018 Sustainability Report which will disclose current emissions data.

---

**Publication**

In mainstream reports

**Status**

Complete

**Attach the document**

2018 Annual Report.pdf

**Page/Section reference**

Page 18 of the Annual Report. Section: Environmental and Sustainability Practices

**Content elements**

Emissions figures

Emission targets

**Comment**

---

## C14. Signoff

---

C-FI

---

**(C-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.**

Nothing additional to include or report.

### C14.1

**(C14.1) Provide details for the person that has signed off (approved) your CDP climate change response.**

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

### SC. Supply chain module

#### SC0.0

**(SC0.0) If you would like to do so, please provide a separate introduction to this module.**

#### SC0.1

**(SC0.1) What is your company's annual revenue for the stated reporting period?**

	Annual Revenue
Row 1	3440000000

#### SC0.2

**(SC0.2) Do you have an ISIN for your company that you would be willing to share with CDP?**

Yes

#### SC0.2a

**(SC0.2a) Please use the table below to share your ISIN.**

	ISIN country code (2 letters)	ISIN numeric identifier and single check digit (10 numbers overall)
Row 1	US	0304201033

#### SC1.1

**(SC1.1) Allocate your emissions to your customers listed below according to the goods or services you have sold them in this reporting period.**

SC1.2

---

**(SC1.2) Where published information has been used in completing SC1.1, please provide a reference(s).**

Information is not available.

SC1.3

---

**(SC1.3) What are the challenges in allocating emissions to different customers, and what would help you to overcome these challenges?**

Allocation challenges	Please explain what would help you overcome these challenges
Customer base is too large and diverse to accurately track emissions to the customer level	As a water and wastewater utility company this allocation breakdown is not available.

SC1.4

---

**(SC1.4) Do you plan to develop your capabilities to allocate emissions to your customers in the future?**

No

SC1.4b

---

**(SC1.4b) Explain why you do not plan to develop capabilities to allocate emissions to your customers.**

As a Water and Wastewater Utility company this allocation breakdown is not available.

SC2.1

---

**(SC2.1) Please propose any mutually beneficial climate-related projects you could collaborate on with specific CDP Supply Chain members.**

SC2.2

---

**(SC2.2) Have requests or initiatives by CDP Supply Chain members prompted your organization to take organizational-level emissions reduction initiatives?**

No

SC3.1

---

**(SC3.1) Do you want to enroll in the 2019-2020 CDP Action Exchange initiative?**

No

## SC3.2

---

**(SC3.2) Is your company a participating supplier in CDP's 2018-2019 Action Exchange initiative?**

No

## SC4.1

---

**(SC4.1) Are you providing product level data for your organization's goods or services?**

No, I am not providing data

## Submit your response

---

**In which language are you submitting your response?**

English

**Please confirm how your response should be handled by CDP**

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

**Please confirm below**

I have read and accept the applicable Terms