



# FY23 ESG+R REPORT







Inside cover: Two DC Water employees working in the field.  
Cover: Looking north to the Blue Plains Advanced Wastewater Treatment Plant from across the Potomac River.

# OBSERVATIONS ON ESG FROM THE CHIEF FINANCIAL OFFICER

Matthew Brown, Chief Financial Officer and Executive Vice President, Finance, Procurement, and Compliance & Ivan Boykin, Vice President, Finance

## ESG reporting is important to DC Water

As the provider of water and wastewater services in the nation's capital, we strive to be transparent in all that we do. Our motto is Water is Life, and we take that responsibility seriously. We need to be mindful of the impact that we have on our customers, the environment, the business community, and residents.

Our ratepayers are those who pay for the services that we provide, so it is important that we reinvest those dollars in the local community both in lifting people up who are providing services for us, through job training programs and fostering and developing staff here at DC Water. These initiatives make us good financial stewards. And we are focused on the impact of all that we do. As a large user of energy, we are focused on reducing energy use, which benefits both our bottom line but the environment.

The Environmental, Social, and Governance (ESG) report plays a crucial role in showcasing the organization's commitment to various aspects of its operations beyond water quality, including environmental impact, energy use efficiency, and our robust customer assistance programs that help make our water and wastewater services affordable for households afford.

By highlighting these efforts, DC Water aims to not only do the right thing but also create a positive impact on the lives of those residing in the nation's capital. The things that we track in the ESG report help us not only to demonstrate progress, but also help drive us forward.

## Stakeholder Engagement and ESG disclosure

DC Water acknowledges the varied interests of its external stakeholders. Our Green Bond investors are focused on the Clean Rivers program, but we know that every capital project that improves our infrastructure benefits people and the environment. The disclosures in our ESG report align with our strategic plan, Blueprint 2.0, which reflects our priorities and goals. Our investments that improve the environment and our efforts to strengthen the community, make us a good corporate citizen and a good investment.

Customers are also a crucial stakeholder group. DC Water emphasizes its role as a trusted partner regarding rates. For instance, the Clean Rivers Program, funded by 700,000 District residents, demonstrates responsible investment of customer funds. Visible improvements in the District showcase DC Water's positive impact, reinforcing its reputation as a good investment and neighbor.

Each year, we discuss our risks as an organization which helps us be transparent, but also ensures that we are identifying and mitigating risk. Those disclosures also help those who are interested in purchasing revenue bonds that finance about 40 percent of our \$7.7 billion capital improvement program.

## ESG disclosure and frameworks inform decision making, investments, and measurement of progress.

Our ESG reporting focuses on demonstrating progress across various areas as we adapt to evolving stakeholder needs. By aligning the ESG report with our strategic plan, we set ambitious goals and work toward achieving them.

Safety and risk mitigation are top priorities as we work to continue to improve the safety of our work environment for employees and contractors. Affordability is another key focus, given the challenges of our aging system. With numerous competing priorities, the ESG disclosure and frameworks help us prioritize and strategize investments to meet both immediate and long-term needs.

While ESG reporting is still relatively new in the utility industry, we are proud of the work that we have done to lead in this area. We recognize its importance to our stakeholders and to our organization. As momentum builds within our industry, we anticipate that others will also begin providing similar types of disclosure information in the future.



# ABOUT DC WATER

**Our mission is to exceed expectations by providing high quality water services in a safe, environmentally friendly, and efficient manner.**

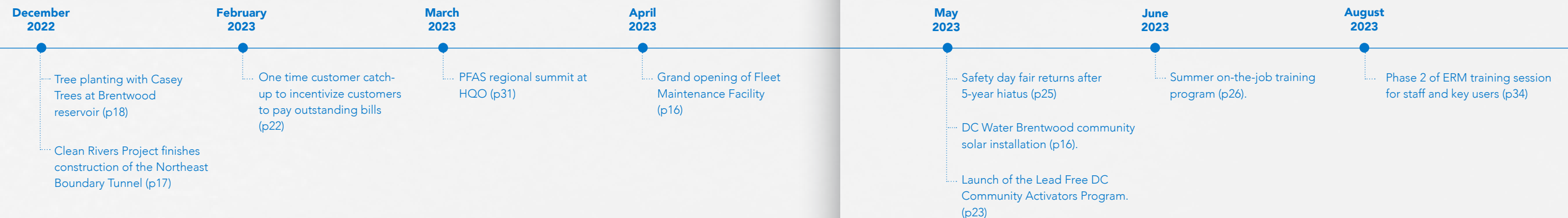
Our vision at DC Water is to be known for superior service, ingenuity, and stewardship that aims to advance the health and well-being of our diverse communities and workforce. Our mission is to exceed expectations by providing high quality water services in a safe, environmentally friendly, and efficient manner. We provide essential water and wastewater services to approximately 700,000 District of Columbia residents and 21.3 million annual visitors to the nation's capital.

Additionally, we serve an area of approximately 725 square miles and treat wastewater for approximately 1.8 million people in neighboring jurisdictions, including the State of Maryland's Montgomery and Prince George's counties, and Fairfax and Loudoun counties in the Commonwealth of Virginia. Our values of accountability, trust, teamwork, customer focus, safety, and wellbeing guide our decision-making and reflect our culture, enabling us to deliver on our mission and values for the communities we serve.



HQO, the headquarters for DC Water.

## FY23 ESG MILESTONES





# UNITED NATIONS SUSTAINABLE DEVELOPMENT GOALS

The United Nations recognizes 17 Sustainable Development Goals (SDGs) that require global coordination to create a planet with shared peace and prosperity.

As a water and wastewater utility, DC Water has a particular duty to our communities, both near and far, to act as a responsible steward of the earth and society. DC Water has focused on the SDGs as a foundational guide in the development of our strategic plan, Blueprint 2.0.

**In our commitment to aligning to the UN SDGs, we highlight the following goals that our initiatives support:**



As one of our Strategic Imperatives, Equity is a key focus area for the Authority with strong commitments from leaders and members from across the organization.



DC Water addresses inequality in all that it does, prioritizing investment in underserved areas through to employment programs that offer opportunities to all.



Our core function as a water and wastewater utility is to deliver safe, reliable, resilient, and sustainable water and wastewater services to our customers.



We convert wastewater into renewable energy, soil conditioner, and clean water that restores our local waterways.



We are committed to help the District of Columbia meet its aggressive carbon reduction goal outlined in Clean Energy DC.



To continue to provide reliable water services to our customers, DC Water addresses the potential risks of climate change through our asset management processes.



Through out Capital Improvement Plan we are constantly striving to improve our infrastructure, evidenced by our Clean Rivers Program and Lead Free DC.



As stewards of our local water resources, we are continuously exploring ways to become a more regenerative water utility.





# OUR APPROACH TO ESG

In FY23, we continued the integration of strategy, risk management, and ESG across our entire organization. Since our inaugural ESG report three years ago, we have further advanced our ESG ambitions and integrated ESG into many facets of our daily operations. In FY22 we incorporated our Enterprise Risk Management (ERM) program as a key component of our ESG approach. This allowed us to identify key ESG risks and opportunities, continue to focus on our Blueprint 2.0 strategic plan, and prioritize mitigation strategies for risks most material to our organization and operations. This financial year, we implemented Phase 2 of our ERM program – deepening our understanding of the main drivers of risks specific to the Authority and the community we serve. This prepares us to act on risk management priorities next year.

As we did in our FY22 ESG report, this year we continued reporting on our FY23 performance against targets included in last year's report. The Authority also set goals for FY24 and beyond. As a part of our ESG+R program, we again include a Resilience section in our report. This section focuses on our approach to identifying and advancing climate, financial, and operational resiliency. Our resilience efforts allow us to be better prepared for and respond to unexpected events as they occur. In FY23, we continued to solidify our governance structure and practices. The Governance section highlights our advances in strategy and innovation and efforts to improve cybersecurity and risk management across our organization.

This year, many of the highlights center around

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**DC Water continues to advance its approach to ESG and its role in the authority's decision making.**

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## **DC Water actively engages in innovation and research efforts to support the ESG agenda.**

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Innovation and Research. Our ESG+R efforts are designed to keep DC Water at the forefront of innovation in the water sector and developing forward-looking solutions to meet future goals, emerging risks, and community needs. Investments in research and innovation have helped us develop programs to both improve customer service and implement technologies to improve our wastewater treatment capacity.

This is our second year reporting under both the Taskforce for Climate Related Financial Disclosures (TCFD) and the Sustainability Accounting Standards Board (SASB) disclosure frameworks. The TCFD framework supports us in evaluating and reporting on our climate related risks and opportunities and understanding how these are integrated into decision making, risk management, and overall strategy. This year, we built on the FY22 report and explored efforts to align climate resilience with our broader strategic roadmap. We also completed a peer assessment of our TCFD maturity, evaluating our activities against other water utilities to inform our ESG development and climate resilience journey. In the SASB section, we include our disclosure from FY21 and FY22 to show our progress.

This report highlights our continued progress and new initiatives to advance ESG+R at DC Water. We hope that you enjoy reading about new and existing projects underway and the milestones we have accomplished in the past financial year. We look forward to continuing our progress and are proud to share the work we have accomplished to advance our ESG initiatives this financial year.



**DC Water's Advanced Wastewater Treatment Plant, Blue Plains, which processes over 300m gallons of wastewater every day.**



# INNOVATION AND RESEARCH

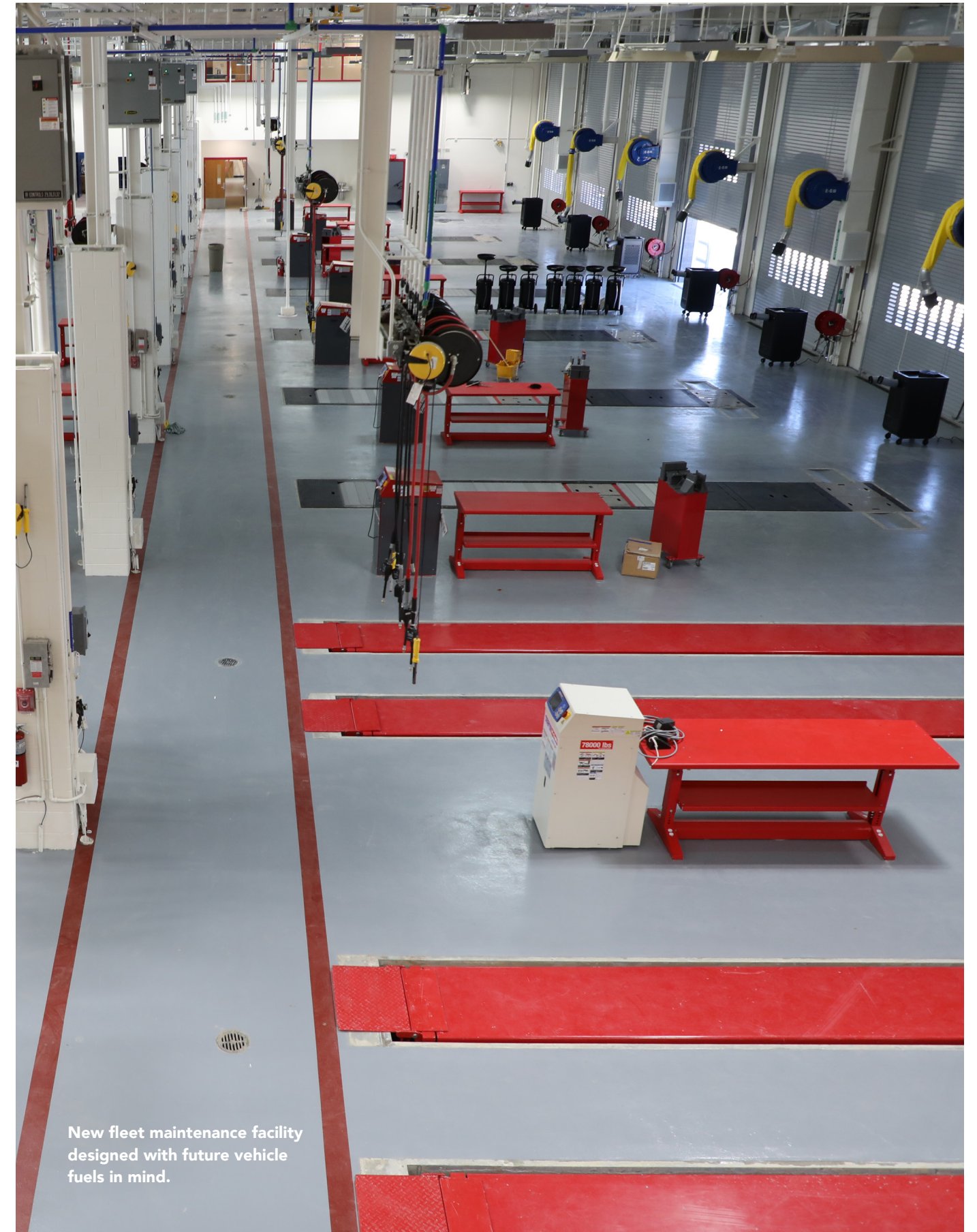
Research and innovation have become ever more vital for organizations as factors such as worldwide competition and supply chain disruptions increase in both volume and scale. To identify and prepare for the risks and opportunities associated with advancing technology and a globalized marketplace, we consider the investment in research and innovation as a crucial step for improving the reliability, resilience and affordability of our water services. Research and innovation are key to DC Water advancing its approach to ESG by expanding the organization's capabilities, reaching and surpassing sustainability targets, improving organizational and infrastructural resiliency, and further advancing the enterprise's strategic objectives.

DC Water has long been recognized as an industry leader for its use of advanced technologies such as the Cambi thermal hydrolysis process used to create Bloom, a Class A Exceptional Quality soil amendment, and automated metering infrastructure to provide more accurate water billing and give customers tools to help them manage and track their water usage. In 2023, our team brought fresh energy to the innovation program by researching a particular set of advanced technologies that could provide solutions for risks and strategic opportunities facing DC Water, a portion of which is currently being further investigated for near term investment. We were recognized for our commitment to advancing water technology with the Innovation in Field Automation award, presented to us at the annual CS Week Conference attended by utility professionals from across the globe.

At DC Water, innovation is not just about new technology. We have also pursued innovative methods of engaging with our staff and community to come up with solutions for improving our infrastructure and services. In 2023, we held three crowdsourcing challenges to spark ideas from all corners of our workforce. This enabled creative problem solving that helps our business thrive. We offered training to our personnel on generative artificial intelligence, enterprise risk management, cybersecurity awareness, and numerous other topics that enable our staff to use powerful tools to help them perform at their best while promoting a culture that is both risk-aware and innovation-forward.

One of our innovative programs we are most proud of is the Lead Free DC Community Activators program. The purpose of the program is to develop the consensus needed for important capital projects requiring residents' approval, such as replacing lead pipes in private properties, while also providing skills training and job shadowing opportunities to our volunteers. We believe no one is better suited to talk to DC residents about choices affecting the health and safety of their water than other local community members, which is why the Activators have played a vital role in connecting with our customers and meeting the needs of the local community.

Showing potential for positive impact around the globe, we are proud of our flagship research program and its work on partial denitrification anammox (PdNA), also known as DETOUR technology, to short-cut the nitrogen removal process in wastewater treatment plants. We started this research in 2012 and continue to see progress towards full implementation at the Blue Plains Advanced Wastewater Treatment Plant. This technology can increase nutrient removal capacity with our existing infrastructure and can reduce chemical requirements, energy demands, and emissions. Further details can be found in the Strategy and Innovation section.



New fleet maintenance facility designed with future vehicle fuels in mind.





Agricultural land application of our Bloom soil conditioner product.

# ENVIRONMENTAL

DC Water's commitment to sustainability is rooted in the firm belief that what is good for the environment is good for DC Water's customers and stakeholders. Enacting this commitment starts with putting an environmental perspective at the heart of our decision making. Not only do we ask how a project can be delivered more sustainably, but we also prioritize projects that enable our ability to deliver safe, reliable, resilient, and sustainable water and wastewater services. DC Water seeks to exceed expectations and set a new precedent for environmental stewardship in the utility industry, by reaching beyond our nation's borders and outside the water sector to embrace cutting-edge practices and technology. Recognizing our role in the intricate ecosystems that we belong to drives us to search for innovative ways to minimize our carbon footprint and maximize our resource efficiency. We do this through using solar panels to generate renewable energy credits, converting biosolids to soil conditioner for local agricultural and domestic use, and using green infrastructure to manage stormwater, among many other environment-focused initiatives. Our environmental disclosure is organized to showcase the environmental factors that we find most material to DC Water and the broader water and wastewater industry.

## Water

Maintaining clean, safe, and reliable water for our customers and ecosystems is crucial to everything we do as a water utility.

## Energy and Emissions

As the largest single site consumer of electricity in the District of Columbia, we have an important role to reduce fossil fuel energy consumption and associated emissions.

## Infrastructure

We complete impactful projects, large and small, through our various initiatives (such as Lead Free DC) and our \$6.4b Capital Improvement Plan.

## Biodiversity

Maintenance and improvement of our waterways and our actions above land is key to supporting improved biodiversity and the health of our ecosystems.

## Waste and Resources

We utilize waste as a resource to minimize our footprint, increase revenue, reduce costs, and contribute to the circular economy.



## Water

DC Water is committed to delivering safe, clean, and reliable water services to customers. Our Annual Drinking Water Quality Report not only outlines how we source and treat water but also shares our monitoring program results. We perform thousands of tests on water samples taken throughout the city to ensure we meet or exceed the Safe Drinking Water Act standards. These results are shared in our water quality report. In 2023, DC Water received a single violation that was non-health related. More details can be found on the water report page on our website.

In 2023, we continued to monitor contaminants of emerging concern in our water supply for the health and safety of our customers, including Polyfluorinated Substances (PFAS). Our test results indicated levels are below the U.S. Environmental Protection Agency (EPA)'s proposed Maximum Contaminant Level (MCL) in drinking water as shared on our website. We started collaborating with other regional utilities to better understand the occurrence of PFAS in the Potomac River Watershed, our source water, and developed a collaborative research project with the Water Research Foundation. We also worked on a national water

sampling and testing study for the occurrence of Legionella - the bacteria that causes Legionnaires disease - in drinking water distribution systems through the Water Research Foundation. These research efforts help us stay at the forefront of emerging issues in drinking water and mitigate emerging risks.

**We were able to secure \$143m in grant funding from the Bipartisan Infrastructure Law for lead service line replacement in disadvantaged areas.**

DC Water continues to meet all EPA standards for lead in water. In addition, we continue efforts in our Lead Free DC (LFDC) program, which aims to replace all lead services lines in the District. Despite external challenges, in 2023, DC Water managed to replace 1,157 lead service lines.

We also launched the Lead Free DC Community Activators program, further described in the Social Impact and Equity section, to help develop community outreach skills in support of Lead Free DC. We published an updated interactive Lead Service Line Map and Lead Service Line Replacement Plan and held a webinar to roll these out. These publications emphasize the necessary actions to accelerate lead line replacement efforts and help homeowners learn if they have a lead service line through user-friendly tools. The Lead Service Line Replacement Plan includes an updated lead service line inventory from 28,000 to 42,000 lines, an updated cost estimate of \$1.51b over the program's lifecycle, and a 10 year construction plan. We were able to secure \$143m in grant funding from the Bipartisan Infrastructure Law for lead service line replacement in disadvantaged areas. Our updated Lead Plan prioritizes lead service line replacement in blocks with a high density of underserved and vulnerable populations, while minimizing noise and traffic disruption to residents. We aim to replace all lead service lines serving customers who participate in the LFDC Program in disadvantaged communities by 2030.

## Energy and Emissions

As the largest site consumer of electricity in the District, we have made significant efforts to increase the proportion of renewable energy that we use to mitigate our impact on climate change. We strive to play a significant role in helping the District meet its carbon goal of net zero by 2045, thereby improving our operational resilience while also preserving resources for generations to come.

Across DC Water's portfolio of locations, we source 48% of our energy from renewable sources. This includes a combination of purchased clean energy from the grid as well as on-site energy and steam generation (avoided natural gas purchase). In FY23, we made significant efforts to strengthen our portfolio of renewable energy projects to maintain our alignment with the District's carbon reduction objectives that strive to reduce emissions by 50% by 2032 before reaching carbon neutrality in 2045. This evaluation provided the added benefit of a current state assessment, allowing us to understand how well-positioned we are for changes that will move us towards a more sustainable state in the future. The projects chosen

for implementation were those that best aligned with our imperatives and goals set out in our long-term strategy, Blueprint 2.0. These initiatives were strategically selected so that we contribute to the District's objectives for environmental sustainability while also balancing the needs for reliable, equitable, and high-quality services for our customers.

In partnership with our innovation team, several energy projects were authorized in FY23 to advance DC Water's Blueprint 2.0 sustainability goals. Our Phase 2 Solar Program at Blue Plains was approved and will provide 11 to 16 MW of renewable energy annually. Our Phase 2 Solar Program follows the existing 3.4 MW of installed solar assets as a part of the Phase 1 Solar Program at Blue Plains. Fort Stanton #2 is another approved solar project that will produce an estimated 2 MW of renewable energy.

In April 2023, we celebrated a significant milestone, the commissioning of the Brentwood Community Solar installation with the US Department of Energy. The 1.8 MW solar installation includes approximately 4,000 solar panels that will generate over 2.5 million kWh/year on an 18-acre property



**HQO chiller replacement project. L-R: Harold Jusse, New AC Mechanic 10, William Shackelford, New HVAC Foreman, Matthias Frazier, AC Mechanic 10, flanked by two new chillers at the CMF building at Blue Plains.**

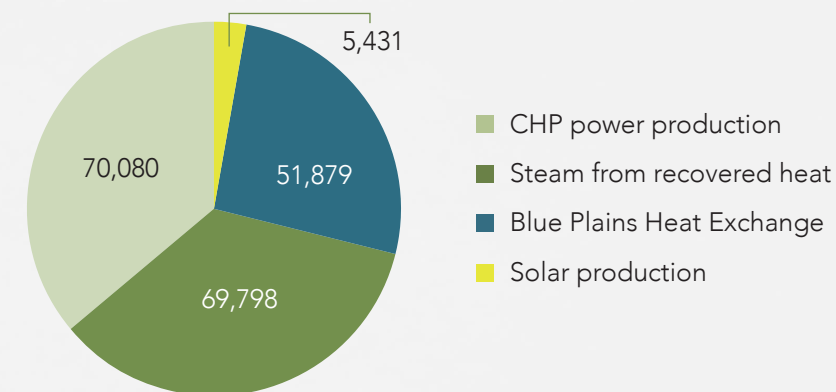


**Visualization of the 60kW solar installation on Ames Place commissioned in FY23.**

Environmental metrics for energy and infrastructure.

Category	FY23 goal	FY23 actual	FY24 goal	FY28 goal
RECs sold (\$m)	3.7	5.8	3.2	3.5
Renewable energy produced by DC Water as a % of total energy consumed (%)	43	48	49	50
Energy Produced On-Site (MWh)	185,500	197,000	195,000	200,000
Clean Rivers Tunnel Volume in Service (Million Gallons)	105	190	105	157

Sources of renewable energy generated at DC Water (MWh)

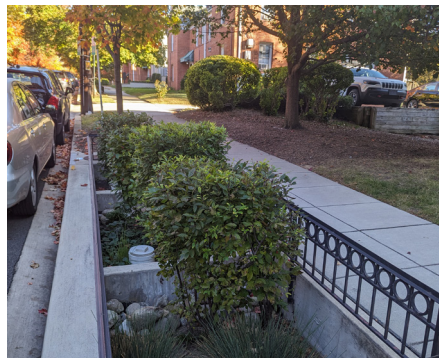


**11 CONSECUTIVE YEARS awarded Platinum Peak Performance Award from the National Association of Clean Water Agencies for 100 percent compliance with regulatory permits**





One of the fox dens installed on DC Water property.



A bio-retention feature, a form of green infrastructure design to attenuate water from heavy rainfall.

occupied by the Brentwood reservoir. When fully operational, this community solar project will provide green energy for 500 income-qualified families over the next 20 years. The \$1.76m in funding from the Solar for All grant helped support the development of this project and has allowed us to work extensively on community engagement to provide subsidized energy and power for low-income communities.

Currently, our onsite generation provides economic benefits through Renewable Energy Credits (RECs). This year's RECs totaled over \$5.8m in value, significantly surpassing the \$3.7m FY23 target. Increased onsite renewable energy production has the added benefit of improving DC Water's resilience by partially insulating the business from price fluctuations in the energy market. Furthermore, it helps build the case for implementing a microgrid at the Blue Plains Advanced Wastewater Treatment Plant as a dependable energy resource. This also reduces our Scope 1 emissions.

Another important way to reduce our emissions and energy

consumption is through greater resource efficiency. In FY23, we completed a project to replace two large chillers in the Blue Plains Central Maintenance Facility (CMF) building. This upgrade provides significant HVAC improvements and leverages the DC Sustainable Energy Utility sponsorship.

Emissions\* in 2022 showed moderate changes from 2021, primarily through small reductions in methanol and electricity usage. This was mostly offset by an increase in grid emissions (data provided by the EPA on the RFCE region which includes the District of Columbia). Electricity emissions have remained stable (outside of 2020), due to decreasing grid intensity and corresponding increase of electrical usage by the Authority.

### Infrastructure

The Clean Rivers Project is a landmark, 25-year plan being implemented under a Federal Consent Decree to reduce Combined Sewer Overflows (CSOs) to the district's waterways. Upon completion in 2030, CSO volume will be reduced, system wide, by

96% in an average year of rain compared with 1996 levels. The program, when completed, will include 18 miles of tunnel through the Anacostia and Potomac Rivers and Rock Creek systems as well as green infrastructure elements within the District.

In 2023, the 5.5 mile-long, 23-foot wide Northeast Boundary Tunnel (NEBT) came into operation providing CSO control and flood mitigation. This tunnel adds approximately 90m gallons of storage to the 100m gallons provided by the Anacostia River and Blue Plains Tunnels, already in operation. The NEBT is also designed to mitigate flooding from a 15-year, 24-hour storm at specific chronic flood areas along Rhode Island Avenue and at Mt Olivet/West Virginia Avenue NE. With the commissioning of the Northeast Boundary Tunnel, all the Anacostia CSO controls are now in operation. Between March 2018 and September 2023, the system captured over 15.5b gallons of combined sewage and 9,961 tons of trash, debris, and other solids. The system provided a 91% capture rate, 11% above the predicted 80% at this stage of implementation. The resulting visual and water quality

improvements to the Anacostia River have been dramatic.

DC Water's Rock Creek Green Infrastructure Project B is nearing completion with three permeable pavement alleys currently under construction and 36 completed. Additionally, all 19 planter bioretention sites planned have passed their functional tests and are providing performance benefits. Green infrastructure such as permeable pavements and bioretention sites provide benefits by reducing runoff while providing public health and community benefits through the creation of green spaces and enhancing the appearance of neighborhoods. Our bioretention sites also provide biodiversity benefits by incorporating native plants and habitat creation for birds and pollinators.

In an effort to address the construction disruption caused to our local communities, a major aspect of the Clean Rivers program is public outreach. In 2023, we held multiple community outreach events to update the surrounding community about the work being completed and what additional work is necessary. Some of our engagement included:

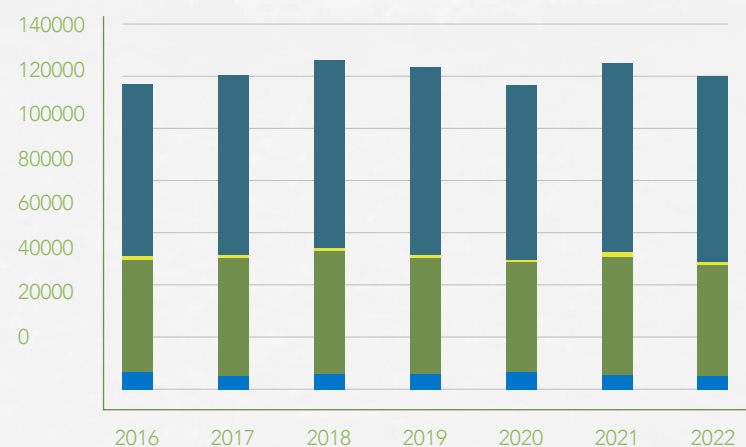
**Green infrastructure is an approach to managing stormwater runoff that takes advantage of natural processes such as infiltration and evapotranspiration, to slow down, clean and in some cases reuse stormwater to keep it from overwhelming sewer systems and polluting waterways. The goal of green infrastructure is to mimic the natural environment through the use of plants, trees and other measures.**

Types include:

- **Roof Top Collection Practices:** rain barrels, cisterns, green roofs, blue roofs.
- **Permeable Pavements:** porous asphalt, pervious concrete, permeable pavers.
- **Bioretention:** tree boxes, rain gardens, vegetated filter strips, bioswales.

- Community coordination through efforts such as distributing Potomac River Tunnel pre-construction surveys
- Partnerships with Main Streets organizations to address the impacts on business near the NEBT construction sites

DC Water Scope 1 + 2 Emissions 2016-2022 (tCO2)



Breakdown of solar generation and pipeline of solar projects at DC Water

MW Solar in Operation	MW Solar in Construction	MW Solar in CIP
3.5	1	55

Environmental metrics for infrastructure and resources

Category	FY23 actual	FY23 target	FY24 target	FY28 target
Spending with certified firms for GI projects (%)	76	50	50	50
Consecutive months achieving class A biosolids	96	96	108	156
Biosolids sold compared to generated (%)	42	37	46	53
Bloom volume sold (tons)	64,721	58,000	65,000	70,000
Biosolids Disposal savings from Bloom program (\$m)	2.4	2.0	2.5	2.7
Number of HQO events	66	50	70	75





Tree planting diagram from the project delivered at our Brentwood Reservoir site in FY23, delivered in partnership with Casey Trees.



A jar of honey produced from the bee hives located at our advanced wastewater treatment facility, Blue Plains.

- Walkthroughs with District residents to answer restoration questions and address safety concerns

In 2023, we also completed construction of a sewer separation project in the historic Georgetown neighborhood and achieved substantial completion of an advanced utility construction project ahead of the upcoming Potomac River Tunnel that will control CSOs along the Potomac River waterfront.

### Biodiversity

We have continued our efforts to reduce our operational impacts on our local ecosystems while enhancing biodiversity. Through the Clean Rivers program [described in the 'Infrastructure' section], habitat creation, and restoration of the District's tree canopy, as well as improved water quality, achieved by our award-winning operations at the Blue Plains Advanced Wastewater Treatment Plant, we contribute every day to an overall healthier local ecosystem.

In FY23, we completed our first tree planting exercise at Brentwood Reservoir. The permitting requirements for the Brentwood solar program included a provision for tree planting. Through a partnership

with Casey Trees, a local non-profit, DC Water exceeded those tree planting requirements. Casey Trees undertook landscape design for the entire campus around the reservoir, purchased native trees with an Urban Forestry grant, and will nurture the trees for the first three years.

In our first round of tree planting with Casey Trees, we planted 47 trees along the north edge of the reservoir and in FY24 we plan to undertake additional tree planting, including cherry trees, during the National Cherry Blossom Festival. By the end of this project there will be over 100 native cherry trees at Brentwood. These plantings will provide a critical area of urban tree canopy.

Tree planting efforts such as these will contribute to the District's tree canopy goals, improve air quality, offset carbon emissions, and reduce stormwater runoff and urban heat island effects. From our experience at Brentwood and with Casey trees, we have learned about the process for tree planting projects, the positive impact of increasing the urban tree canopy, and how they can complement solar energy projects.

In FY23, we continued our efforts to build habitats that support local wildlife and increase biodiversity. We built two fox dens, one at our

Fort Reno facility and one at our Bryant Street pump station. Foxes use these as shelter, to raise pups, and to store food in urban areas. In urban areas, natural den sites can be scarce due to high levels of development, so these artificial dens provide habitat enhancements for local foxes.

In addition, we do our best to ensure our property does not adversely impact our surrounding ecosystems. At Blue Plains, we have sighted geese, osprey, fox, birds, fish, and reptiles along the waterfront. Such a broad selection of wildlife sometimes results in our staff being directly exposed to a range of animals. To ensure the safety of both our staff and our animal neighbors, we are developing a wildlife safety program to educate our staff on local wildlife found on our property.

Furthermore, in partnership with the D.C. Beekeeper Alliance, we doubled the number of beehives at Blue Plains from 7 to 14. This effort adds pollinators to the community and provides a home to city bees adapting to the ever-changing landscape of the city. With our hives, we are proud to serve as a bee orphanage for the D.C. Beekeeper Alliance and continue to seek opportunities and sites on our property for additional beehives. A small amount of honey is generated each year from the beehives on our property.

Further action on biodiversity can be found in our Infrastructure and Environment sections.

### Waste and Resources

We process over 300m gallons of wastewater each day and strive to turn that "waste" into a resource and recapture as much of the byproducts value as possible.

We convert the biosolids at Blue Plains to Class A, exceptional quality biosolids, which we sell as

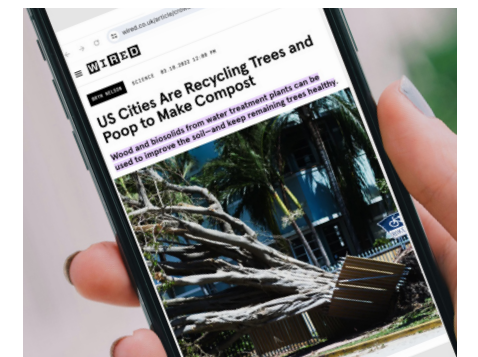
Bloom, an affordable fertilizer and soil treatment for agricultural and landscaping uses. Application of Bloom can help increase crop yields, improve drought resistance, and restore urban soil health. In FY23, we achieved record sales of Bloom and exceeded goals for sales and revenue through Blue Drop, our nonprofit LLC. While our goal was to sell 58,000 tons of Bloom, we sold over 64,000 tons, generating \$387,312 in revenue.

### 95.7% of all water used at Blue Plains was re-used effluent

Of the 155,000 tons of Bloom produced, we sold over 40% (64,721 tons). Remaining Bloom products were applied to agricultural land to improve the health of the watershed. We have active plans in place to increase the volume of Bloom sales. This includes selling our product to new markets in new locations and diversifying our customers and sales strategy to align with seasonal demand. Also, DC Water is proud that FY23 was the third consecutive year with no odor complaints from Bloom. Bloom was even featured in the October 2022 issue of WIRED magazine in an article featuring how cities, like DC, are greening their urban environment.

A more recent example of resource recovery and reuse emerged in FY23 through the use of Blue Plains effluent as a coolant in our combined heat and power plant. Using effluent instead of drinking water helps decrease stress on drinking water resources. Doing so also reduces energy needs by avoiding the use of highly processed drinking water. This practice is registered in DC and Maryland as a renewable energy source.

Regarding our office space, we see our headquarters, HQO, as a valuable resource for the Authority. It enables us to host delegations and meetings with important DC Water stakeholders. As an example, DC Water hosted a high-profile, regional summit with the Metropolitan Washington Council of Governments to discuss PFAS, the emerging science, and what proposed regulations might be applied. With Blue Drop, we have been able to continue leveraging HQO as an event space to generate non-ratepayer revenue. Interest in HQO events continues to exceed expectations and in FY23 we held 66 events, surpassing our goal of 50 events and generating \$442,676 in revenue. For FY24, we have set a goal of 70 events.

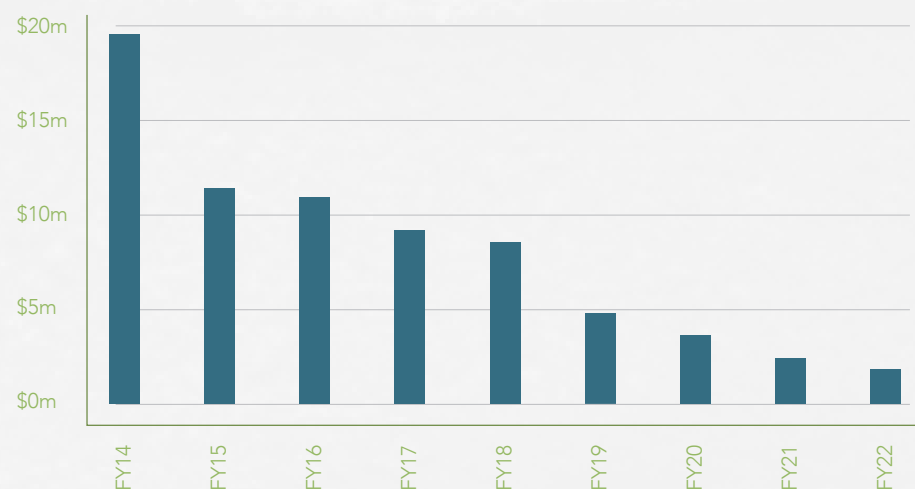


DC Water's Bloom biosolids product featured in a WIRED article.



This celebration was one of 66 events held at HQO in FY23.

Net Cost of Bloom Program



### 25% REDUCTION of DC Water's Scope 1 and 2 Emissions since 2007

From carbon model:

2007 Scope 1 and 2 CO2 emissions (metric tons): 160,612

2022 Scope 1 and 2 CO2 emissions (metric tons): 119,736





DC Water celebrates Capital Pride in June 2023.

## SOCIAL

DC Water regards its engagement in the community as not only a responsibility, but as a rewarding opportunity to shape its future. As one of the largest constructors of the built environment in the District, we have the ability to create jobs and economic opportunities that intentionally build equity into the fabric of our communities. We take a long-term approach to workforce development programs that help lift our communities by equipping local residents and businesses with skills to help them thrive. We do this through programs that promote professional skills development among high school students, apprenticeships that cultivate skilled workers, and educational public events that help local business owners navigate contract complexity. We are proud of DC Water's workforce that reflects the diversity of the District, and we strive to serve and improve our communities through our hiring and labor contracting practices. Our commitment to the health, safety, and wellbeing of our employees, customers, and our wider stakeholders is not just a promise for the future—it is the standard for how we operate and engage with one another in the present. Our social disclosure is organized under the following categories to showcase the social factors we believe to be the most material to DC Water and the broader water and wastewater industry.

### Affordability and Customer Service

As the provider of essential services to our communities, we strive to remove barriers for customers to access water and wastewater services.

### Social Impact and Equity

We are committed to incorporating equity into our resource allocation process to make sure our projects improve all the communities we serve.

### Diversity, Equity, and Inclusion

We continue to build on efforts to strengthen our workforce that reflects the diverse communities we serve.

### Health and Safety

We are uncompromising in our commitment to the health and safety of our employees and require employees to adhere to our strict safety standards.

### Workforce

Our workforce is central to everything that we do. Ensuring that we have a healthy and happy workforce and strong talent pipeline is critical to continued success.





**Waterpalooza, one of many events held to inform customers in FY23.**



**Attendees at a Women of Water event hosted by DC Water in March 2023.**

## Affordability and Customer Service

DC Water is leading the water sector in assisting households and customers in need.

In FY23, the Authority had 5,131 total enrollments across three tiers of Customer Assistance Programs (CAP): CAP I, CAP II, and CAP III.

The Multifamily Assistance Program (MAP) assisted 3,038 eligible units, providing \$2.1m in assistance. The Residential Assistance Program (RAP) helped 2,816 eligible customers by providing up to \$2,000 in assistance towards their outstanding balances. When the FY23 programs ended, the remaining \$956k funding from MAP and RAP was rolled over to the FY24 RAP budget to continue serving customers. Additionally, over 60% more customers were helped by the DC Water Cares Residential program compared with FY22. In FY23, we also launched the federally funded Homeowners Assistance Fund, which has provided \$256,835 in assistance to 293 enrolled homeowners. To increase participation in our affordability programs, we launched a one-time

Customer Catch-up Program as an equitable incentive for customers to pay their bills by adjusting late fees, penalties, and outstanding balances. Over 9,000 customers participated in the program, allowing DC Water to capture \$8m in revenue which customers were able to pay on a more manageable basis.

DC Water also helps customers decrease their water bills by sharing water conservation methods through informative brochures and the DC Water website. Given DC Water's non-linear rate structure, customers further reduce their bills by lowering their consumption. This contributed to a decrease in average water consumption from 5.42 ccfs\* in 2019 to 4.85 ccfs in 2023.

We also rolled out customer service improvement programs. This included the creation of an online bill dispute form, simplifying our customers' process to dispute a bill and increased self-service opportunities, where customers are empowered to address their needs independently, without assistance from DC Water employees. To improve response times during water and sewer emergencies, we partnered with 311 to take overflow

one ccf is one hundred cubic feet

### Workforce metrics

Category	FY23 Actual	FY23 target	FY24 target	FY28 target
New Jobs Filled by Local Residents in Underserved Communities (%)	85	75	75	> 75
Apprenticeships Created by DC Water and Contractors Filled by DC Residents (%)	100	75	75	75

**In FY23, we provided \$2.5m in assistance for our CAPs to over 5,000 accounts enrolled**

**85% of new jobs were filled by local residents in FY23**

calls when call volume increased beyond normal capacity, helping improve response and resolution times.

To continue offering what our customers need, we launched a Customer Assistance Survey to help identify customer experience gaps, preferred communication channels, and key opportunities to adjust our action plans for each of DC Water's initiatives. It also served to increase customer awareness and encourage enrollment in our Customer Assistance opportunities and programs.

## Social Impact and Equity

To provide reliable water and wastewater services to over two million customers we continually make significant investments in our infrastructure.

Our 10-year Capital Improvement Plan (CIP) allows us to plan for the needs of our drinking water and wastewater infrastructure, so that DC Water can continue to support our communities with safe, clean, affordable, and reliable drinking water and wastewater services. This year we focused on Collaborative Project Delivery (CPD) as the preferred method to deliver our

capital improvement projects, to improve our project delivery with more collaborative approach that fosters innovation, reduces risk, and better manages cost and schedule. For this transition, we have developed guides and training for project managers and stakeholders to learn about the project management approaches, communication dynamics, and stakeholder roles that are part of a CPD model.

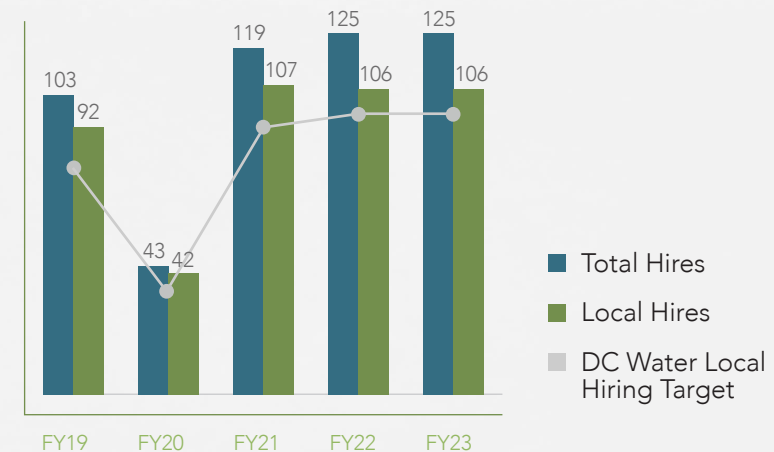
In FY23, we continued to develop our Equity Dashboard, currently in its final phase. This dashboard aims to further integrate equity into operations and decision-making by identifying how community needs relate to our infrastructure investments. The dashboard helps stakeholders visualize how equity is addressed across projects using environmental justice mapping data.

In FY23, we established the Lead Free DC Community Activator Program to engage directly with our local community. The program connects District residents with training and employment opportunities related to Lead Free DC. We currently have seventeen Activators, of whom 100% are minorities and 44% are women. They have helped us obtain over



**Our Water Works Program was established to empower local residents to find meaningful employment with DC Water construction and service projects. The program includes community outreach, job readiness, and skills training programs. In FY23, we filled 125 positions, including 19 technical positions, 18 administrative/management positions, 69 laborer positions, and 19 service positions. We also placed 13 individuals on DC Water projects or training programs through strategic partner referrals from government agencies, community-based organizations, union-affiliated groups, and private contractors.**

### Hires and local talent



**100% of certified firm spending goals met for FY23. At DC Water we consider certified firms as being important, these include Disadvantage Business Enterprises (DBE), Women Business Enterprises (WBE), Certified Business Enterprises (CBE) and a DC designation for Green Infrastructure projects), and Local and Small Business Enterprises (LSBE).**



1,650 signed agreements for lead pipe replacements in private homes since the program's inception. Florencetine Preston, an 86-year-old Activator, helps educate her community about Lead Free DC and described how the program opens the door for people of all ages to explore new career paths and give back to their communities. Our LFDC Activators have also been able to shadow DC Water employees in other parts of the program, such as observing inspections being conducted, thus diversifying the ways they can support and contribute to DC Water based on their interests. This provides skill building opportunities for Activators beyond the original scope of the program. Initiatives including the Lead Free DC Community Activators program led to the Authority being honored as an "Outstanding Corporate Partner" by the DC Infrastructure Academy (DCIA) in FY23 for our success in providing career opportunities to underserved members of our community. One of our Activators was also recognized by DCIA as an "Outstanding Scholar" and was referred to the DC Water Works program.

## Diversity, Equity, and Inclusion

At DC Water, we greatly value the diversity of our workforce and the communities that we serve. We strive to foster inclusion and equity across all of the work we do, including in our business strategy. In FY23, we launched several programs and hosted activities to advance diversity, equity, and inclusion (DEI) efforts across our organization.

Our employees engage in DEI activities through our Employee Resources Groups (ERG) which host panels, events, and discussions throughout the year. In FY23, we held 17 DEI events, 12 hosted by our customer care DEI team and five hosted by our Women of Water (WoW) ERG. Our WoW ERG celebrated Women's History Month in March and held training events related to public speaking. Further events celebrated included Asian American and Pacific Islander Heritage Month and Pride Month (including participation in pride events in the capital). Both celebrations fell under the banner of "We are DC Water" campaigns.

To support capacity building in Certified firms\*, DC Water launched the Pathway to Business Equity program. In FY23, seventeen Certified firms obtained their first contract with DC Water and seven contracts were awarded to Certified firms as prime contractors. Maritha Gay, the Chief Integration Officer of Lanier Electronics Group, a small certified firm, described how DC Water "provided exceptional customer service, leadership, and expertise" as a part of the procurement process for their first IT contract with DC Water. Gay noted she looks forward to a continued partnership with DC Water. Additionally, four mentor protégé relationships between non-Certified prime contractors and Certified firms were established. This will reduce participation barriers, moving DC Water closer to achieving utilization goals for Certified firms.

We strive to foster a diverse talent pipeline and empower local communities through programs such as our apprenticeship and internship programs described in the Workforce section.

## After 5 years the Safety Day Fair returned to DC Water.

### Health and Safety

To maintain a healthy, safe, and well working environment, we held several trainings and events, in addition to our core Health and Safety (H&S) programs. In FY23, we carried out 80 trainings related to water department safety, sewer safety, mechanical and electrical safety, and Occupational Safety and Health Administration trainings. We are proud that our Department of Occupational Safety and Health was recognized by the Board of Certified Safety Professionals as a Sapphire Certification Champion with fourteen employees holding at least one certification.

After a 5-year hiatus, the Safety Day Fair returned to DC Water in June 2023. This event covered topics such as emergency preparedness; hazard recognition; heat related illness; trench safety; and slips, trips, and falls. The Safety Day Fair was

part of the National Safety Month initiative which aims to increase awareness of leading safety and health risks and coincided with Trench Safety Stand Down Week. This year's Stand Down focused on reinforcing the importance of trench protective systems and protecting workers from trench and excavation hazards. Events like this promote a culture of safety and aim to decrease the number of injuries at work. We have also made investments to improve employee safety such as the redesign of the belt filters in our wastewater treatment plant. Our safety office was also involved in developing the new Centers for Disease Control & Prevention / National Institute for Occupational Safety and Health draft guidance related to keeping our workforce and contractors safe around lead, with a focus on hygiene and protecting workers during lead service line replacements.

Nearly four years since the onset of the COVID-19 pandemic, we have taken significant steps to ensure the safety of our employees and our community. As a response to the impact of COVID-19 on the industry, the Water Environment Federation featured DC Water as a utility case study in their May



Interns presented findings from their time at DC Water at the 'Intern Expo.'



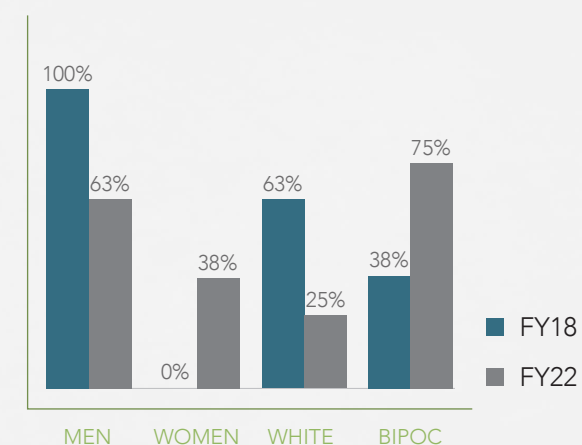
Attendees celebrate diversity at DEI week held in October 2022.

\*Certified firms are defined on Page 23

### Safety and DEI metrics

Category	FY23 Actual	FY23 target	FY24 target	FY28 target
Total recordable Incident rate	3	4.9	<4.9	n/a
Lost time recordable incident rate	2.2	1.7	<1.7	n/a
Female representation across leadership (Grade A and above) (%)	33.8	33	34	36
BIPOC representation across Leadership (Grade A and above) (%)	64.8	60	60+	60+
BIPOC representation across the Authority (%)	81.4	80	80+	80+
Female representation across the Authority (%)	22	24	22.5	24

### Gender and BIPOC Representative in Senior Executive Team



### Certified firms metrics

Category	FY23 Actual	FY23 target	FY24 target	FY28 target
% of Certified firms working as prime contractors	12%	25%	n/a	n/a
% of Certified firms working on DC Water projects	70%	30%	n/a	n/a



2023 publication, "The Water Professional's Guide to Infectious Disease Outbreaks". Our case study contained our business continuity experience and how we kept our workforce and critical services operating during the COVID-19 outbreak. The publication features our financial assistance programs, cybersecurity considerations, and how we leveraged the Incident Management Team to keep morale up and manage risks. Participating in this feature allowed us to share our knowledge and experience so that other utilities can glean best practices and lessons learned. In FY23, we held multiple activities to foster employee wellness at DC Water including webinars surrounding important health matters like mental health and healthy aging and events such as a flu shot clinic, workout classes, and a self-care day. We also held a Wellness Fair at HQO in October 2023 with over 200 attendees for employees to learn about our benefit programs.

### Workforce

In FY23, DC Water launched new programs and continued expanding existing programs that build and upskill a much-needed workforce. In

doing so it creates new employment pipelines for the local community and disadvantaged residents of the District and the region.

We had our second cohort of apprentices completing their first year of the DC Water Works, a paid apprenticeship training program. This second cohort was comprised of ten apprentices, of which 100% are minorities and District residents and 40% women, surpassing the goal of 12.5% female participation. Upon graduating from the apprenticeship program, each apprentice was offered a position as a journeyman at DC Water. Adam Ragins, one of four apprentices who received a Certificate of Completion for his Wastewater Apprenticeship in 2023, described how the program helps "open the door for people like myself to better our lives and enrich the lives of our families." China Jackson, a Sewer Services apprentice, describes how the program helps those experiencing traditional employment barriers find careers with upward mobility opportunities and has empowered her to become a leader and role model to her community.

As a part of the Water Works programs we had a skills training

## DC Water continues to work with the community to provide opportunities for careers in the water sector through its apprenticeship and internship programs.

program, Summer on the Job, to help prepare and upskill local residents for future jobs forecasted. Additionally, thirty-nine interns successfully completed our Summer Internship Program.

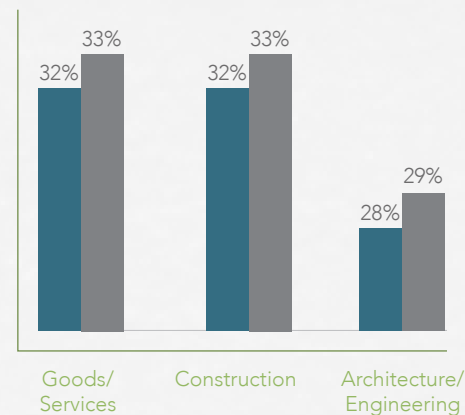
We have also been working with the Department of Employment Services and The District of Columbia Public Schools to develop a youth internship program for high school seniors interested in utilities. The program will provide students with professional skills building and career exploration, with a pilot beginning in 2024.



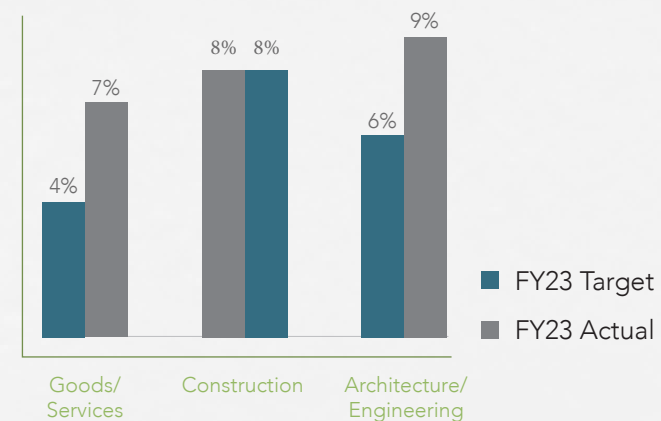
Tunnel boring machine in-situ.

### Certified firms metrics

#### % DBE Spend



#### % WBE Spend



### Distribution of work delivered by certified firms

Certified Firm	Goods / Services		Construction		Architecture / Engineering		Green Infrastructure MOU Projects	
	FY23 Actual	FY23 target	FY23 Actual	FY23 target	FY23 Actual	FY23 target	FY23 Actual	FY23 target
DBE	33%	35%	32%	32%	28%	28%	n/a	n/a
WBE	6%	11%	8%	8%	6%	8%	n/a	n/a
CBE	n/a	n/a	n/a	n/a	n/a	n/a	50%	50%
LSBE	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a





DC Water Leadership Retreat.

# GOVERNANCE

Our governance structures are important tools to keep us accountable. We do not operate in a vacuum and our governance efforts ensure that we continue to meet the high expectations of our customers and broader stakeholders. We undertake many checks and balances every year through our internal audit team whose findings ensure we are following our policies and procedures and whose support continuously improves our governance structure and process. Most recently, we have invested in a new enterprise system to manage and track DC Water's policies and critical documents. We have also initiated new governance structures for our ESG disclosure efforts.

Our governance disclosure is organized under the following categories to showcase the governance factors we believe to be the most material to DC Water and the broader water and wastewater industry.

## ESG Governance

To support progress against the different areas of ESG, DC Water has formalized roles and responsibilities, institutionalizing the reporting framework at the authority.

## Policies and Transparency

Implementing critical policies is important to maintain a functioning, resilient, and accountable organization.

## Cybersecurity and Privacy

As an organization dependent on technology, preparing for cyberthreats is critical to continued operations.

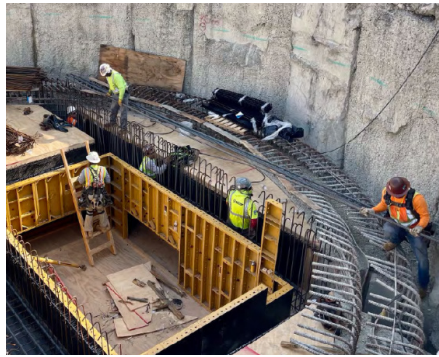
## Strategy and Innovation

As unexpected threats emerge, there is ample opportunity for innovation to improve operations and strategic outcomes.

## Risk Management

Identifying ongoing and emerging risks is critical to preparing prevention and mitigation strategies.





**Contractors who benefit from ROCIP at work on site.**



**DC Water employees with drone used at St Elizabeth Water Tower following successful advanced technology research.**

## ESG Governance

We continue to advance DC Water’s ESG organizational maturity with each year of development. In FY23, we first built on ESG governance foundations established in FY22 through the formalization of our ESG Working Group membership, comprised of a diverse set of individuals from across the enterprise from Operations, People & Talent, Government & Legal Affairs, Office of Emergency Management (OEM), Finance, Enterprise Performance Management Office, Communications, and Sustainability. This Working Group serves as the conduit for ESG information and awareness to and from the enterprise. Our ESG Steering Committee, consisting of the Senior Executive Team, provides oversight of the ESG programs and reporting and engaged our Board of Directors in ESG activities via the Board’s Finance Committee.

DC Water also seeks and shares ESG approaches, trends, and initiatives with external stakeholders throughout the year. We engage regularly with credit rating agencies and seek feedback from the financial community. As both a leader and pioneer in ESG reporting

for, the water sector, we have also had multiple opportunities to share DC Water’s ESG journey with peer utilities, governments, and professional associations via multiple conferences, workgroups, and webinars.

## Policies and Transparency

We strive to implement policies to help manage risk and increase transparency across our organization. In FY23, we continued our Rolling Owner Controlled Insurance Program (ROCIP). This is an alternative insurance program maintained by DC Water to protect builders, contractors, and subcontractors working on projects.

Since ROCIP began in 2004, there have been five programs rolled out, covering 233 separate projects and \$5.19b in construction. This program has led to avoided costs of \$33m to DC Water. With 2,758 contractors enrolled, ROCIP has allowed for increased limits and broader coverage for all contractors. Other benefits of this program include enhanced site safety and claim processing with only one insurance carrier responding to claims and a focus on mitigation versus confrontation. From a DEI perspective, ROCIP helps increase

minority contractor participation from 25 to 30%. Our program allows qualified contractors to bid on DC Water projects that would otherwise be unavailable due to coverage requirements. In FY23, our fourth ROCIP program, ROCIP 4, closed and helped achieve large projects such as the Northeast Boundary Tunnel Project and the new headquarters building. We also put significant efforts into developing our next insurance coverage program, ROCIP 6, which will kick off in 2024. ROCIP 6 will help achieve the DC Clean Rivers Potomac River Tunnel project described in the Infrastructure section of this report.

We strive for transparency with customers and stakeholders by providing required and voluntary information through our website, customer newsletters, and several published reports. Our published reports include our Annual Drinking Water Quality Report, Green Bond Report, ESG+R Report, and Annual Report. As outlined in the Water section of this report, in FY23 we began sharing voluntary PFAS monitoring data on our website. The Washington Aqueduct, our water wholesaler, also began monitoring PFAS per our request. In the spirit of transparency, we also share

this information from Washington Aqueduct on our website. In April, DC Water hosted a Regional PFAS Summit with the Metropolitan Washington Council of Governments to assemble nationally recognized researchers, utility leaders, and government officials to explore the current state of knowledge, policymaking, and potential impacts of PFAS.

In FY23, our Enterprise Program Management Office continued working on our Policy Program which is foundational to ensuring our policies are current and accessible for the entire business. A centralized, streamlined system is providing a more organized and controlled approach to policy management. We completed an inventory of DC Water’s policies and a corresponding schedule to review and update as well as to identify any potential gaps in coverage. Through this process, we are initially addressing policies deemed risky and that potentially pose a higher potential for negative consequences. Prioritizing a review of risky policies will help to effectively manage risks, ensure compliance, and allocate resources effectively to address critical areas of concern.

## Cybersecurity and Privacy

DC Water is keenly aware of the threat that cybercrime poses to critical infrastructure and has therefore dedicated significant resources to protect technology systems and train staff on rigorous cybersecurity practices. We undertook several initiatives to improve our response to cybersecurity events.

In November of 2022, the OEM and EPA Region 3 sponsored four Cybersecurity Awareness Trainings over two days in coordination with Information Technology and other departments to increase the use of best practices amongst staff who work closely with critical infrastructure technology. The training was held for operators of the Operational Technology (OT) networks, the Supervisory Control and Data Acquisition (SCADA) System, and the Process Control System (PCS). The sessions included an overview of cybersecurity and DC Water policies and discussed examples of cybersecurity incidents that have impacted critical infrastructure, with a focus on water and wastewater facilities.

Metrics for enterprise risk management and alternative revenue.

Category	FY23 Actual	FY23 target	FY24 target	FY28 target
ERM (Maturity Scale 1-5)	3	2	3	4
Cell Tower Revenue (\$)	228,000	282,000	282,000	300,000
Intellectual Property Sales (\$)	278,000	565,000	200,000	300,000
Total Revenue Generated from Alternative Sources (\$m)	7.5	5.3	9.3	11

**\$7.5m in revenue produced through Blue Drop programs including RECs, cell tower leases, intellectual property, and Bloom sales**

**\$11m in retained earnings accumulated by Blue Drop**



In December 2022, the Office of Emergency Management and EPA Region 3 sponsored, in coordination with Information Technology and other departments, a scenario-based roundtable discussion that provided an opportunity for participants to discuss and identify steps for response and mitigation actions to an escalating cybersecurity incident involving OT and business networks. The discussion included how different departments would coordinate and share information with each other during a cybersecurity incident.

The fourth quarter of 2023 saw the 10th year of the annual Cyber Awareness training event. Completion is a requirement for all DC Water staff and contractors who access DC Water's IT systems. The training identifies how a member can identify the signs of cyber-attack (Phishing, Ransomware), how they can protect themselves (cyber hygiene) and how to respond to the threat (Call the Help Desk). In addition to the training, DC Water also conducts internal Phishing exercises to reinforce the Cyber Training.

To address the complex and ever-evolving landscape of cybersecurity threats, the Cybersecurity team

annually partners with our Internal Auditor to evaluate the effectiveness of IT physical and application-level security controls that protect DC Water data and systems. This is a deliberate collaboration that ensures the Authority's information systems and data are adequately protected while also enhances the overall governance and control environment.

In 2023, the Office of Emergency Management worked closely with Information Technology, Wastewater Operations, Maintenance Services, Pumping and Sewer, SCADA, and PCS Operations to develop the Cyber Incident Response Playbook. The Playbook does not replace or supersede existing cybersecurity policies or procedures. Rather, it is intended to provide guidance to non-IT DC Water staff on their immediate response actions during an incident, and to guide leadership on implementing an effective response posture to mitigate the impacts of a cyber incident.

### Strategy and Innovation

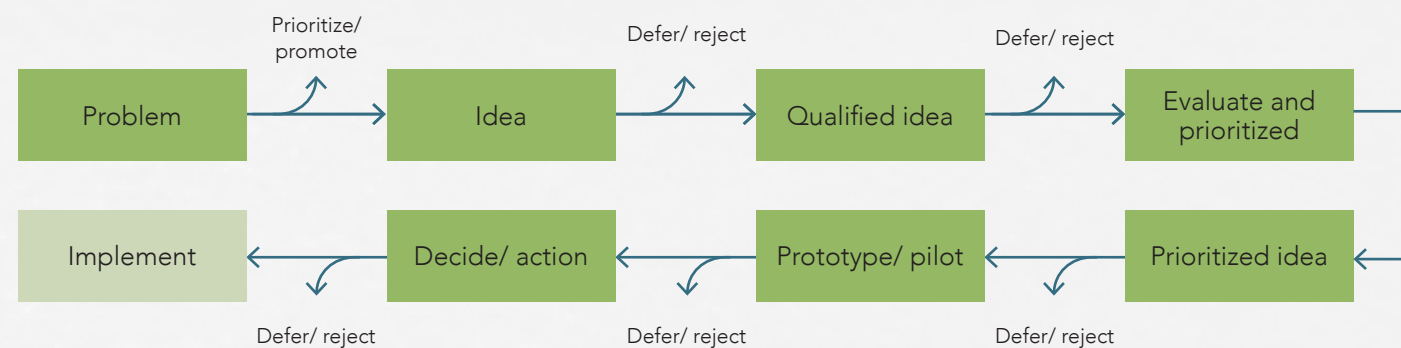
DC Water understands the importance of innovation and takes proactive steps to stay at the leading edge of the sector while learning from other sectors. We consistently

keep abreast of emerging, high-potential technologies to address challenges and opportunities across business units. This type of investment underscores DC Water's commitment to smart change and advances the organization in alignment with our strategic plan.

Our innovation program researched over 20 advanced technologies as potential solutions to specific challenges affecting DC Water. These technological solutions addressed challenges such as pipe leaks, inspections, water meter transmissions, greenhouse gas emissions, and asset management needs. Some of these technologies are now being further investigated within the innovation pipeline.

As shown below, DC Water follows a deliberate, repeatable process that moves from problem to solution. In summary, where problems get prioritized, creative ideas get generated, the best ideas get evaluated, and pilots get performed to test and validate the outcome before being transferred to Operations for implementation when the results prove positive. Innovation is viewed as an enabler to achieve the strategic objectives and goals in Blueprint 2.0.

DC Water Innovation Process



Over the past 12 years, DC Water has undertaken an extensive engineering and applied research program to identify and develop cutting-edge technologies with the goal of implementing truly sustainable and affordable advanced nutrient removal in wastewater treatment plants. Our research originally focused on partial nitrification-annamox but took a detour to 'short-cut' the nitrogen removal cycle ultimately resulting in a better process that we refer to as PdNA or DETOUR.

Early fundamental research was performed by DC Water with constant input and guidance from the global team. Once the fundamentals were established, Hampton Roads Sanitation District, (HRSD), a nearby utility, and DC Water in collaboration with the Water Research Foundation focused on development of integrated process controls and technology pilots. Successful pilot testing has led to two full-scale implementations at HRSD in partnership with World Water Works, ARAconsult, and NEWhub. For DC Water, this technology can increase our nutrient removal capacity without increasing our existing infrastructure footprint and can reduce costs related to chemical activities, energy demands, and emissions. In FY23, we focused on developing a business case and designed a full-scale demonstration plant to implement this technology at Blue Plains which will go into construction in FY24. We believe that this approach to will make mainstream annamox, and the associated benefits more accessible to other utilities enabling world-wide adoption of the PdNA technology.

At the CS Week Expanding Excellence Awards, DC Water was recognized with the Innovation in Field Automation award. This recognition was for a new mobile

app DC Water developed to help increase productivity and reduce administration effort by delivering work directly to field crews' devices. Supervisors and field crews can use the app to perform several vital functions such as gathering real time data, efficiently assigning and completing work orders, and capturing photos and maps of worksites and assets.

To promote industry leadership and collaboration in the water sector, we hosted the Northeast Region Technology Advisory Group (remove quotes. (TAG) conference. This proved to be a valuable network opportunity among DC Water staff and the 20 utilities that attended the event which served as a knowledge sharing opportunity on new and emerging technologies.

In FY23, we continued our program to lease cell towers that collected \$228k in revenue.

Furthermore, in FY23, we held three crowdsourcing challenges to foster and encourage idea generation through employee engagement. Approximately 100 employees volunteered to submit and comment on 75 ideas to promote a culture of innovation across DC Water. One crowdsourcing challenge focused on DC Water's smart water meters and improving accuracy. In response, several creative solutions were submitted, evaluated, prioritized, and delivered to IT and Customer Care operational staff for implementation.

In May, we held a training session on the implementation of generative artificial intelligence, attended by nearly 200 employees. This training has evolved into a community of practice, consisting of 45 enthused and empowered individuals who aim to promote generative AI capability across DC Water. This type of AI-enabled technology represents a powerful tool that will potentially

allow employees to save time, reduce costs, and improve decision making throughout various job activities.



A risk 'deep dive', part of Phase 2 of our ERM Program.



Delegates from TAG conference held at HQO in FY23.



## Risk Management

In 2023, we implemented Phase 2 of our ERM program, deliberately focusing on operationalizing the framework, governance structure, and process developed in Phase 1.

A key outcome of Phase 1 was the identification and prioritization of our enterprise risks. In Phase 2, we took a deeper dive into and gained a better understanding of our most critical risks, made investments in a technology solution for ERM, and continued fostering a risk-aware culture.

The deep dives undertaken in Phase 2 included developing DC Water's understanding of the risk posed in two categories: by New & Changing Regulations and Revenue Erosion & Expenditure Increase. The deep dive process fostered and facilitated conversations with the management team to allow for better understanding, awareness, and communication around the risks and supported risk responses. Through the deep dive process, we developed a comprehensive understanding of the root causes and the six main drivers of the risks. The insights gathered from the risk deep dive exercises provided focus and direction for our risk mitigation planning efforts.

In the coming year, we intend to develop detailed responses for two of the drivers identified: Non-revenue Water Loss and Stakeholder Relationships. Addressing non-revenue water is a critical opportunity to improve our financial sustainability, conserve water resources, and enhance the overall efficiency of our water infrastructure. A DC Water Task Force was initiated and a comprehensive plan is being developed to conduct a top-down assessment of the current water loss rate and total costs. This effort is refining DC Water's current state and identifying priority areas as well as next steps for remediation.

To mature our stakeholder relationships, we are keen to engage in a stakeholder mapping exercise which will, in part, document DC Water's current relationships across various domains. In this process, we will capture information about our stakeholders, including their respective influence and impact, and develop a strategy to engage and enhance our relationships with the identified critical stakeholders.

We recognize that a risk-aware culture is fundamental to building a resilient, adaptable, and forward-thinking organization. Employees who are attuned to risk management can play a key role in providing early warnings, which then engenders prompt action. Proactive and empowered employees are more likely to identify signs of emerging risks and elevate them to management, enabling proactive and timely intervention and mitigation. For these reasons, this past year, the ERM program thoroughly engaged staff from every department of the Authority. This facilitated a risk-aware culture that supports employees in becoming active risk managers. We engaged staff and the Board of Directors through the following four trainings:

- In July, we advanced ERM 101 foundational training to all employees to provide the building blocks for risk management. This was an organization-wide training embedded into the annual mandatory compliance training suite. 99% of staff completed this training.
- In August, we delivered an interactive and engaging ERM 201 training to approximately 154 leaders across the Authority.
- In September, we facilitated ERM 202 training to build on these risk concepts for 126 leaders.

- In October, we extended ERM training to all Board members. The intent was to present the ERM process and highlight the Board's role in risk management oversight at DC Water.

Investing in an IT solution was critical to enhance the efficiency and effectiveness of our risk management efforts. This past year, we configured the Origami software solution and integrated it into the DC Water's enterprise risk management framework and processes. This solution provides a centralized platform for automating risk assessments, streamlining the data collection process, and providing real-time insights through dashboard functionalities.

We intend to regularly assess the effectiveness of our ERM program and look for opportunities for improvement. Additionally, we monitor industry best practices to see where we can adapt and enhance ERM's value proposition. In the coming months, we are looking to develop the bottom-up risk approach to gain a more granular understanding of DC Water's operational level risks. Promoting a bottom-up approach will help embed a risk perspective into daily operations and ongoing day-to-day decision-making.

ERM's success has been a testament to the direct involvement of numerous stakeholders. Ongoing stakeholder engagement will be key to advancing DC Water's ERM maturity. The bottom-up risk approach will be a significant opportunity to gather feedback from our internal stakeholders. We also plan to engage system users, gathering their recommendations as we expand on the functional uses of the Origami platform. Leveraging this technology for our risk data and reporting will enhance the efficiency and effectiveness of the overall ERM program.



Workers install permeable paving - another important mitigation in reducing CSOs.





Inside of NEBT during construction.

# RESILIENCE

We know the future is uncertain, and communities will perpetually be exposed to the unexpected; extreme weather events, cyber threats, economic variability, etc. This year we faced a new challenge – dangerous air quality caused by Canadian wildfire smoke. Our resiliency efforts ensure we are proactively preparing for such events and that we can manage and respond to them efficiently and effectively when they occur. We take our approach to resilience seriously - it is a strategic imperative for our organization as evidenced in our strategic plan, Blueprint 2.0. This means it gets focused, regular attention through our monitoring, management, and budget planning activities.

## Climate

Impact related to climate change threatens water and wastewater utilities through extreme weather events, drought, fires, and other physical hazards that can be prepared for and mitigated.

## Financial

Providing affordable services is paramount to what we do. Innovation helps us identify a diverse source of non-ratepayer revenue.

## Operational

Maintaining agile operations allows us to quickly adapt to unexpected threats and change such as pandemics and power outages.





North East Boundary Tunnel boring machine in situ.

## Climate

The impacts of climate change pose challenges to water and wastewater utilities across the globe. At DC Water, we are advancing efforts and developing initiatives to improve the financial and operational resilience of our assets in the face of a changing climate. We continue protecting our watersheds and providing high quality water and wastewater services in an environmentally friendly manner.

The frequency and intensity of major flood events is increasing, potentially exposing us to greater risk from this hazard. We continue to pursue the completion of a floodwall at Blue Plains to reduce the risk of service disruptions from floods. This flood wall, designed to withstand a 500-year storm event, will help ensure the availability of critical assets during extreme flood events and minimize the risk of untreated or partially treated effluent from entering the Potomac River.

In FY23, we also performed several resiliency studies to identify risks and mitigation strategies to actively ensure the resilience of our asset base. We carried out an authority wide revision to the Risk and Resilience Assessment (RRA),

as required every five years by America’s Water Infrastructure Act (AWIA). We assessed 57 assets and evaluated 37 threats and hazards including natural hazards, man-made threats, dependency hazards, and proximity hazards. Additionally, we formed a Hazard Mitigation Task Force to identify hazards and risks material to DC Water and propose mitigation projects and strategies. Recommendations from our RRA will be incorporated into our Hazard Mitigation Plan (HMP). We are working on a facility master plan and a water and sewer facilities plan to upgrade our facilities based on identified climate risks.

In an effort to further improve our water supply resilience and ensure water security, we are working to evaluate secondary water sources and regional collaboration opportunities. A water supply study assessed the feasibility of adding short-term water storage capacity within the District in case of a water emergency. To model and monitor long-term climate changes and impacts, we partnered with the Interstate Council on the Potomac River Basin (ICPRB). They carry out interagency coordination and drought monitoring in the Potomac River to better prepare for droughts.

The ICPRB monitoring program provides notifications to DC Water, including action levels, informing us if and when operational measures need to be put in place to limit consumption.

## Financial

Thoughtful financial planning and innovation are critical to financing a multi-billion-dollar utility. The Board of Directors continues to assess and optimize key financial policies for financing and rate-setting, as well as cash and investment management that inform the 10-year financial plan, CIP, and operating budgets. Our collaborative approach to the CIP delivery method has helped us implement a project for the Potomac Interceptor in which a certified contractor produced a solution that avoided extensive pumping and produced significant schedule savings.

Following the financial policy change made last year, we increased our number of days of cash on hand to 250 days, allowing us to align with industry standards for a major public utility. Supported by our AAA rating from Standard and Poor’s, Aa1 rating from Moody’s, and AA+ rating from Fitch, we continue to benefit from low-interest financing

that improves our financial resiliency. The EPA approved DC Water’s proposed use of federal funding to study emerging contaminants in the District’s source water supply. We also began incorporating information about our enterprise vulnerability, resilience, and sustainability into our capital investments, facility planning, and project prioritization. This was driven by a strategic goal related to climate prioritization criteria and the effort to promote a more risk-aware culture.

Additionally, we had several noteworthy media appearances highlighting our progressive approach to finance and capital planning. In December of 2022, our CEO spoke at the annual Sustainable Water Infrastructure Management Conference. He shared how DC Water is transforming into a smarter utility using its long-term strategic plan to guide decision making at every level of the organization. In April of 2023, DC Water was featured on an American Water Works Association (AWWA) panel entitled “Green Financing and ESG in the Water Space: The DC Water Experience.” Our expanding presence not only in the water sector, but also in the

green finance space, allows us to connect with potential investors and other industry stakeholders while influencing decisions that promote better cooperation at the local, national, and global level.

## Operational

Succession planning and strategic recruiting have been key focus areas for DC Water’s growth and organizational resilience. To improve succession plans for critical positions, we enhanced succession planning data and improved our succession planning process. We identified 76 critical positions in our organization based on a criticality matrix. This resulted in 102 successors being identified for 61 of these positions based on selection criteria and department specific success profiles for each critical position. We reviewed talent across the authority to identify successors. Once successors are confirmed, Individual Development Plans are created to improve employee readiness and to ensure meaningful opportunities for growth. We leverage our Oracle Enterprise Resource Planning tools to track progress and growth of our succession program and incorporate feedback to improve the program annually. These efforts have resulted

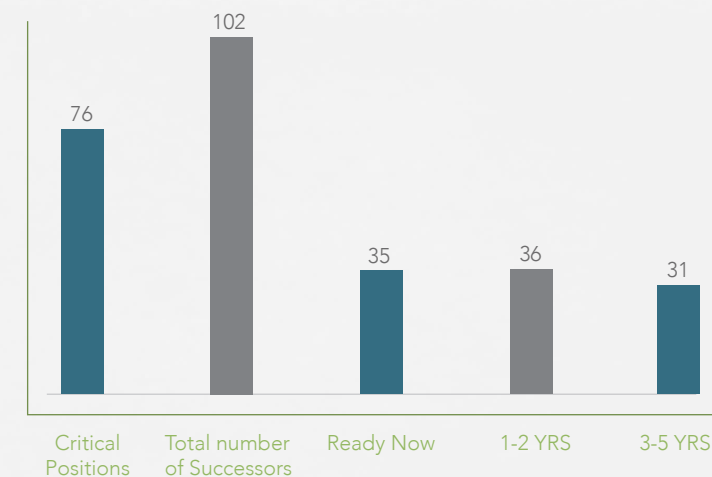
### Financial resilience metrics

Category	FY23 Actual	FY23 target	FY24 target	FY28 target
Combined Coverage Test (Revenue/Debt Service)	2.07	1.96	2.13	1.86
Debt Service as a % of Operating Revenue (%)	26.7	<= 33	25.2	31.1
Days Cash on Hand	300	250	297	291
Water Services O&M Monthly Costs (\$/MG)	33.08	34.05	36.16	39.73

### Operational resilience metrics

Category	FY23 Actual	FY23 target	FY24 target	FY28 target
Employee Turnover Rate (%)	9.7	7	7	7

### FY23 Successors by Readiness





in a diverse succession pipeline with 38% female succession participants and 32% Black, Hispanic, or Latino succession participants.

Reliability and resilience is a key component of our asset management and operational resilience activities. In FY23, the Department of Homeland Security including Cybersecurity and Infrastructure Security Agency and FEMA staff visited DC Water six times to highlight our critical infrastructure emergency management practices, learn about our hazard mitigation methodologies, review our hazard mitigation grant projects, and tour the Blue Plains Advanced Wastewater Treatment Plant, including the partially built floodwall which will protect the plant that serves five regional jurisdictions.

Our innovation program has also helped us leverage new technologies to improve our asset reliability and resilience. In FY23, our innovation team successfully completed two demonstration projects for watermain pipe leak detection and sewer overflow prevention. The first project validated how AI-enabled technology can be used to identify the size and exact location of underground watermain leaks. This will reduce non-revenue water loss once discovered leaks are addressed. The second project demonstrated how ultrasonic sensors can monitor volume levels within sewer pipes, including the ability to communicate alerts to Sewer Operations for timely intervention in preventing sewer overflows and backups. Both projects address key challenges in reducing operating costs, public disruptions, and environmental contamination.

Ensuring the availability of critical assets requires us to have resilient power supplies. We are improving the resilience of supply in two ways. We are actively scoping a microgrid project to manage and distribute power generated at the Blue Plains site. In addition, we are increasing the resilience of our grid supply including new grid feeds to Blue Plains.

We also hosted a two-day, Interdepartmental Infrastructure Asset Management training in April. The goal of this training was to reinforce asset management policy, strategy, and plan development; share standardized approaches (including the ISO 55000 Asset Management Standard); and connect asset management to enterprise strategy.



**NEBT ribbon cutting event celebrating the completion of another major milestone in DC Water's Clean Rivers Program.**



**A clean NEBT before it became operational.**



**Blue Plains Advanced Wastewater Treatment Plant.**



# TCFD INDEX

Water systems are naturally vulnerable to shocks and stresses, such as climate-related weather events. Owing to the criticality of our high-profile supply, we are actively working to ensure long-term resilience of our existing and future water sources. The Task Force on Climate Related Financial Disclosures (TCFD) has produced a widely adopted set of disclosure recommendations on how organizations can provide information about what they are doing to mitigate risks of climate change.

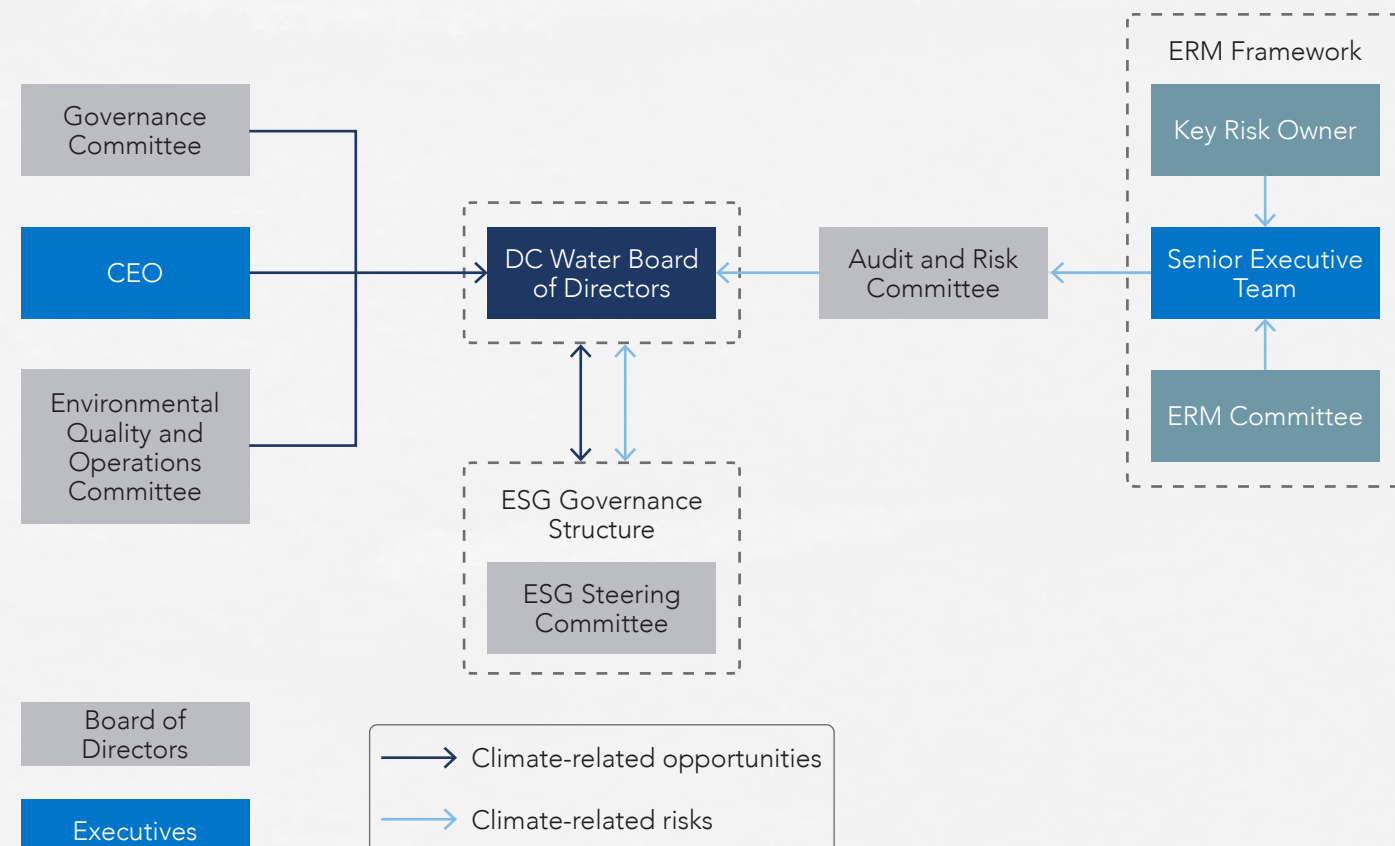
## Governance

### Describe the board's oversight of climate-related risks and opportunities.

DC Water's Board of Directors engages with and provides oversight for climate risks and opportunities through Board meetings and committee updates. The Board's Audit and Risk Committee oversees risk management from which climate-related risks emerge, and reports quarterly to the full Board of Directors. Blueprint 2.0, DC Water's Strategic Plan through FY27 creates the formal structure that supports the Board's oversight.

The ERM framework defines key risk owners who inform the Senior Executive Team (SET) in collaboration with the organization's ERM Committee. The SET then can effectively communicate risks to the Board's Audit and Risk Committee. Opportunities related to climate

Information flow pathways enabling Board oversight



change mitigation and adaptation are relayed to the Board primarily through the monthly CEO Reports to the Board of Directors in addition to the monthly meeting of the Environmental Quality and Operations Committee and the bi-monthly Governance Committee.

DC Water strengthened its governance related to ESG in FY23 with the formal creation of an ESG Steering Committee comprised of the SET. The ESG Steering Committee holds responsibility for overseeing ESG initiatives, performance, goals, and milestones for the Authority. The Board will be engaged via briefings through the Board's Finance Committee.

The nature of DC Water's business requires Board members with qualifications and backgrounds focused on climate-related topics. Members of DC Water's Board include the District's Department of Energy and Environment leadership, a climate scientist, a climate action campaign manager, and others responsible for climate-related risks and opportunities for regional government agencies.

### Describe management's role in assessing and managing climate-related risks and opportunities.

Members of DC Water's SET are responsible for assessing and managing climate-related risks and opportunities, determining which risks and opportunities will be addressed, and the approaches to do so. The SET are regularly updated through executive reports on risk assessments, capital projects, and emergency management through the ERM framework and the OEM. The SET is comprised of the Chief Executive Officer, Chief Operating Officer, Chief Financial Officer, Chief Administrative Officer, Chief Communications and Stakeholder Engagement Officer, Chief People and Inclusion Officer, Chief Legal Office, and the Chief of Staff. The newly formalized ESG Steering Committee manages the Authority's overall ESG program.

DC Water's ERM team is responsible for facilitating the transfer of climate-related risk information from individual risk owners to the SET, and ultimately to the Board, fostering a strong culture of risk awareness.

Separately, DC Water's Hazard Mitigation Task Force, comprised of executive leadership and representatives across all relevant departments, prepares and reviews projects that address climate-related risks as part of their broader responsibilities of implementing the Authority's HMP.

## Strategy

### Describe the climate-related risks and opportunities the organization has identified over the short, medium, and long term.

DC Water's ERM framework helps identify and prioritize the greatest risks across the organization. The ERM process evaluated the vulnerability to, and impact of, each top risk identified, and grouped each risk into two tiers. Six risks were classified as Tier 1 (highest risk) and seven risks as Tier 2 (second-highest degree of risk). The impacts of climate change are embedded into all thirteen Tier 1 and 2 risks but are most directly accounted for in the following categorizations: Reliability, Changing Regulations, and Catastrophic Events.

Outside of its ERM framework, DC Water has also identified priority climate-related opportunities. Solar and microgrid projects continue to provide opportunities to transition to self-generated renewable energy sources while also improving stability of energy costs. Three solar PV projects were initiated or completed in FY23: the Brentwood Reservoir solar project, addition of rooftop solar to Ames Place, and the completion of an additional solar project request for proposals. In 2023, DC Water also strengthened its resilience through the completion of the NEBT, improving CSO control and flood mitigation. The authority completed a sewer separation project in Georgetown, furthering benefiting CSO control. DC Water also applied for a BRIC grant to fund remaining segments of the Blue Plains floodwall under development, taking advantage of climate-related financing opportunities to further improve the authority's flood resilience.

### Describe the impact of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning.

DC Water's Strategic Plan, Blueprint 2.0, is built on five Strategic Imperatives. Three of those five imperatives – Resilient, Sustainable, and Reliable – are directly impacted by climate-driven risks and opportunities.

To advance Blueprint 2.0's Strategic Imperatives, DC Water has worked to align every workstream, project, and outcome to the achievement of a Strategic Imperative and an accompanying Strategic Theme. As a result, everything from inter-departmental workflows to the CIP have the opportunity to help advance resiliency, sustainability, and reliability at DC Water.

DC Water surveyed its senior executives this year on priority strategic issues. This exercise fed into the future budget planning process and resulted in five top organisational priorities, three of which have significant



links to climate-related impacts: resilience of water supply, energy management and generation, and non-revenue water (i.e., water losses and water not billed for). Incorporating these issues into the budget development process created a tangible link between climate-related risks and opportunities and budget priorities.

Lastly, DC Water collaborates with a wide range of District-specific climate initiatives, from its commitment to the Clean Energy DC plan to its contributions to the DC Climate Resilience Inter-agency workshops.

**Describe the resilience of the organization's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario.**

DC Water aspires to incorporate climate scenario analysis as shown in Blueprint 2.0's strategic management maturity model and resilience strategy, as the Authority's strategy matures. The maturity model highlights actions to be conducted in three prioritization timeframes during the Blueprint 2.0 2022-2027 timeline. These timeframes are: Year 1, Years 2 & 3, and Years 4 & 5. Blueprint 2.0 also incorporates longer-term actions

outside of this timeframe. The incorporation of scenario testing will provide us with a better understanding of the resilience of the DC Water strategy to climate scenarios and use that understanding to inform our long-term strategy and planning.

DC Water participates in regional planning work with the ICPRB that examines the demand and resource availability forecast of water in the DC metro area through 2050. This planning work includes modelling and projection work done every five years that leverages a wide range of Representative Concentration Pathways (RCPs). RCPs 2.6, 4.5, 6.0, and 8.5, were all included in the ICPRB assessment, capturing a range of possible future climates from successful policy implementation (RCP 2.6) to business-as-usual emissions (RCP 8.5).

**Risk Identification and Management**

**Describe the organization's processes for identifying and assessing climate-related risks.**

DC Water identifies and assesses risks through four mechanisms: its ERM framework, Asset Management Program, OEM, and Hazard Mitigation Task Force.

DC Water's ERM risk assessment started in FY22 and was completed in FY23. This included a comprehensive, top-down risk assessment and used a combination of surveys, interviews, and internal and external research to identify the top risks to the Authority. Following the assessment, a risk prioritization workshop was held in which leadership came to a consensus on the Authority's top risks. The ERM committee reviewed the 39 risks captured on DC Water's risk register stemming from the initial enterprise risk assessment and aligned with the SET on the most critical risks that could impact DC Water's strategic objectives. 13 strategic risks were prioritized and organized into tier-one and tier-two categories, ensuring that resources are allocated effectively to address the most urgent and significant risks first. This structured approach enables a strategic

understanding of climate risks within the broader context of enterprise risk management.

DC Water's asset management program follows the scope set out by the Institute of Asset Management and utilizes the Maximo Enterprise Asset Management software to organize the day-to-day evaluation of the Authority's assets. The approach to asset management decision-making is guided by business case evaluation, risk analysis, aging assets and shutdown strategies, and lifecycle cost and value optimization.

DC Water's OEM employs a HMP which illustrates identified hazards and risks to be managed or reduced for resilience. The HMP documents hazards, defines the mitigation strategies and measures, and outlines the process for monitoring implementation. The HMP undergoes regular reviews, both quarterly and annually. The OEM also oversees DC Water's compliance with AWWA J100 Risk and Resilience Assessments required under the AWIA of 2018. The first J100 assessment was conducted in FY16 to FY17 and the most recent assessment was conducted in FY23. Findings from the J100 assessment, emerging threats, and various other risk assessments are transferred into the Authority's

Risk management coordination and collaboration with external organizations



Risk identification & assessment mechanisms





planned mitigation efforts and managed by the Hazard Mitigation Task Force. Through the J100 process, DC Water assesses its climate-related risks due to floods and flash floods, winter storms, hurricanes, tornadoes, drought/heat, and earthquakes.

**Describe the organization's processes for managing climate-related risks.**

DC Water's asset management plan is integrated with its asset operations, enabling more proactive oversight to support effective asset management. This integration includes emergency management protocols and capital improvement plans.

DC Water's OEM prepares for emergencies by maintaining and developing emergency management plans, like continuity of operations and public notification plans, scheduling and creating training and exercises, providing technology and support vehicles, and developing and maintaining relationships with other agencies and the critical response community. In 2019, DC Water became the first utility in the country to become accredited by the Emergency Management Accreditation Program, in recognition of their excellence

across 62 standards in emergency management.

The J100 methodology supports DC Water's risk assessment, prioritizing the 10 most critical threat-asset pairs based on their vulnerability, likelihood, and impact, out of a pool of 150 pairs. Each of the top 10 risks is assigned a staff member point of contact and corresponding priority level. The HMP Task Force reviews mitigation efforts and top risks quarterly.

We also build infrastructure upgrades into DC Water's capital improvement plans to address climate-related risk. These projects are established through the annual risk identification process and cross referenced in relation to projects identified in the HMP. The Planning Team and Hazard Mitigation Task Force manage findings from the J100 assessment by ensuring that projects are prioritized appropriately and effectively informing decision makers about opportunities to mainstream mitigation during annual reviews of the Capital Improvement Program and Annual Operating Budget.

When selecting mitigations to nature related hazards identified in the HMP, DC Water has multiple considerations.

Mitigations should minimize service disruptions as a priority and avoid non-compliance issues from hazard-induced outages. At the same time, DC Water must maintain effective communication with customers about hazard mitigation and reduce any damage caused to authority assets by natural hazards

**Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organization's overall risk management.**

DC Water's ERM framework was enacted to better integrate risks across all work clusters, including climate-related risks, into one system and appropriately prioritize them. The framework ranks risk by considering several factors on impact and vulnerability to determine risk.

Our capital improvement projects are integrated with our asset management process. For all gaps identified via DC Water's risk and resilience assessment processes, a business case evaluation is conducted to determine

the most effective response measures. The Authority is shifting to using life-cycle cost approaches to better conduct value-driven asset management, which better embeds climate risk in that prioritization framework.

Risk prioritization process



Seven-step J100 process



Risk management coordination and collaboration with external organizations

Agencies/ authorities	Role/ Objective
DC Homeland Security and Emergency Management Agency	DC emergency planning, training, intelligence monitoring, and response agency coordination
DC Emergency Operations Center	Participation in managing large-scale event responses for a coordinated response
Joint Information Center	Working with OMAC to support in managing large-scale event responses for a coordinated response
Inter-agency Flood Task Force	DC Water's CEO co-chairs the Inter-agency Flood Task Force, which strives to improve the District's flood readiness



## Metrics and Targets

**Disclose the metrics used by the organization to assess climate-related risks and opportunities in line with its strategy and risk management process.**

DC Water monitors key performance indicators as part of the Blueprint 2.0 management process. Several of these indicators are related to risks and opportunities associated with climate change and are monitored monthly or annually, depending on their use. Active management and evaluation of relevant metrics can help facilitate awareness, support data-driven decision-making, and track progress around climate-related risks and opportunities.

DC Water also evaluates climate-related metrics as part of its J100 risk and resilience assessment. These indicators reflect the likelihood of and vulnerability to certain climate change-related impacts (e.g., anticipated working days lost due to high temperature). These metrics can help illustrate how the likelihood or severity of certain risks are being reduced resulting from changes implemented by DC Water.

Some of DC Water's current climate-related metrics are outlined on the next page, and we are considering tracking and evaluating more metrics in the future.

**Describe the targets used by the organization to manage climate-related risks and opportunities and performance against targets.**

DC Water has set near-term targets around metrics relating to physical and transition risks and opportunities associated with climate change that are aligned with its wider strategy and risk management processes. Some of the goals outlined in Blueprint 2.0 focus on mitigation of and adaptation to the impacts of climate change. These include making a facility electrically self-sufficient, reducing the vulnerability of certain facilities to a 500-year storm event, and increasing the proportion of staff that have completed mandatory severe weather and hurricane training.

DC Water strives to support the District's "Clean Energy DC Plan" goals of 60% reduction in GHG emissions by 2030 and carbon neutrality by 2045. Supportive of its decarbonization aspirations, DC Water is pursuing efficient building design and operations, modernized and renewable energy supplies, and electrification and fuel switching opportunities.

**Disclose Scope 1, Scope 2 and, if appropriate, Scope 3 greenhouse gas (GHG) emissions, and the related risks.**

DC Water's total raw 2022 Scope 1, 2, and 3 GHG emissions are 186,870 metric tons CO<sub>2</sub>e – a 4% reduction from the previous year. These reductions are primarily associated with decrease in emissions from electricity consumption and process emissions. DC Water's greenhouse gas (GHG) emissions figures were developed in alignment with best practices outlined by the Greenhouse Gas Protocol. DC Water receives carbon offsetting credits for its Bloom soil conditioner product that is made from biosolids from its wastewater treatment process. 29,688 metric tons of CO<sub>2</sub> offsets were generated from these products in 2022, which reduced DC Water's 2022 carbon footprint to 157,181 metric tons when considered. DC Water tracks emissions on a calendar year basis as to align with industry GHG accounting best practices, including select Scope 3 sources that reflect the Authority's indirect emissions from biosolids hauling, biosolids land application, and chemical sourcing.

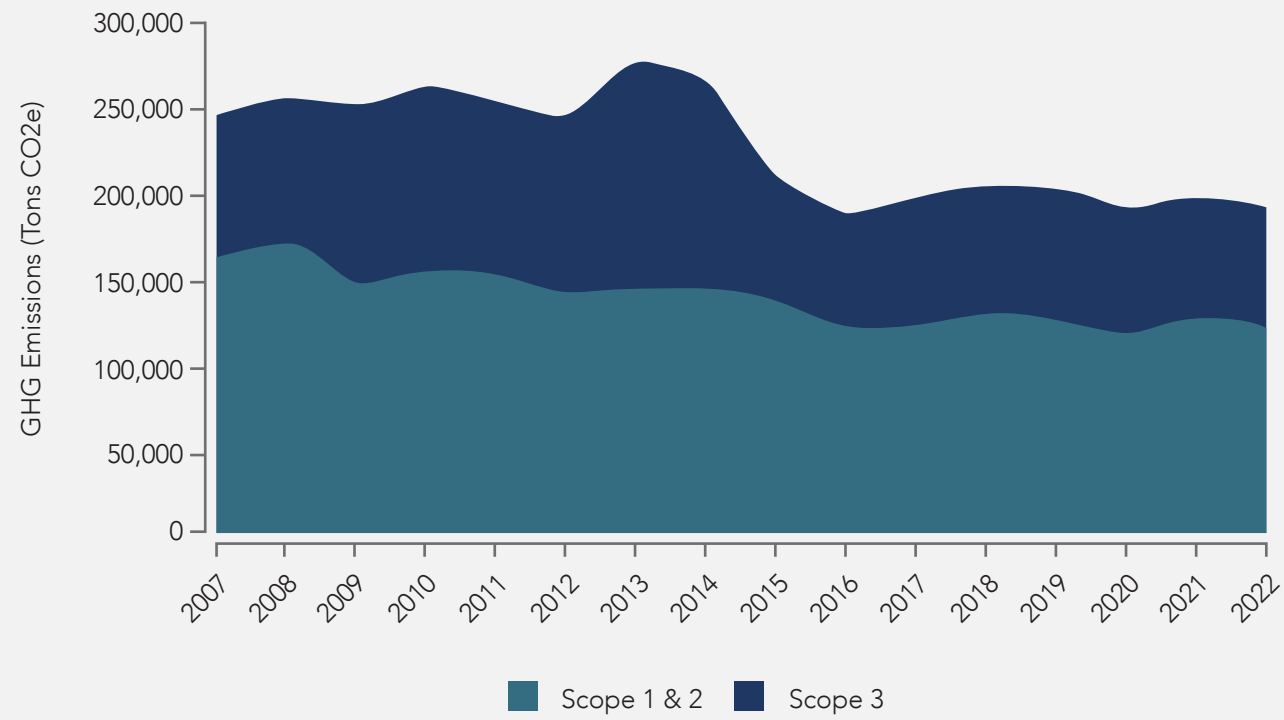
Since 2007, DC Water has reduced its Scope 1 and 2 emissions by 25% and its Scope 1, 2 and 3 emissions by 21%. DC Water has significantly advanced and refined its GHG accounting practices since 2007-2011, particularly regarding Scope 3 emissions, so the authority's real emissions reductions may be larger than these figures reflect.

Metrics and targets related to climate risk.

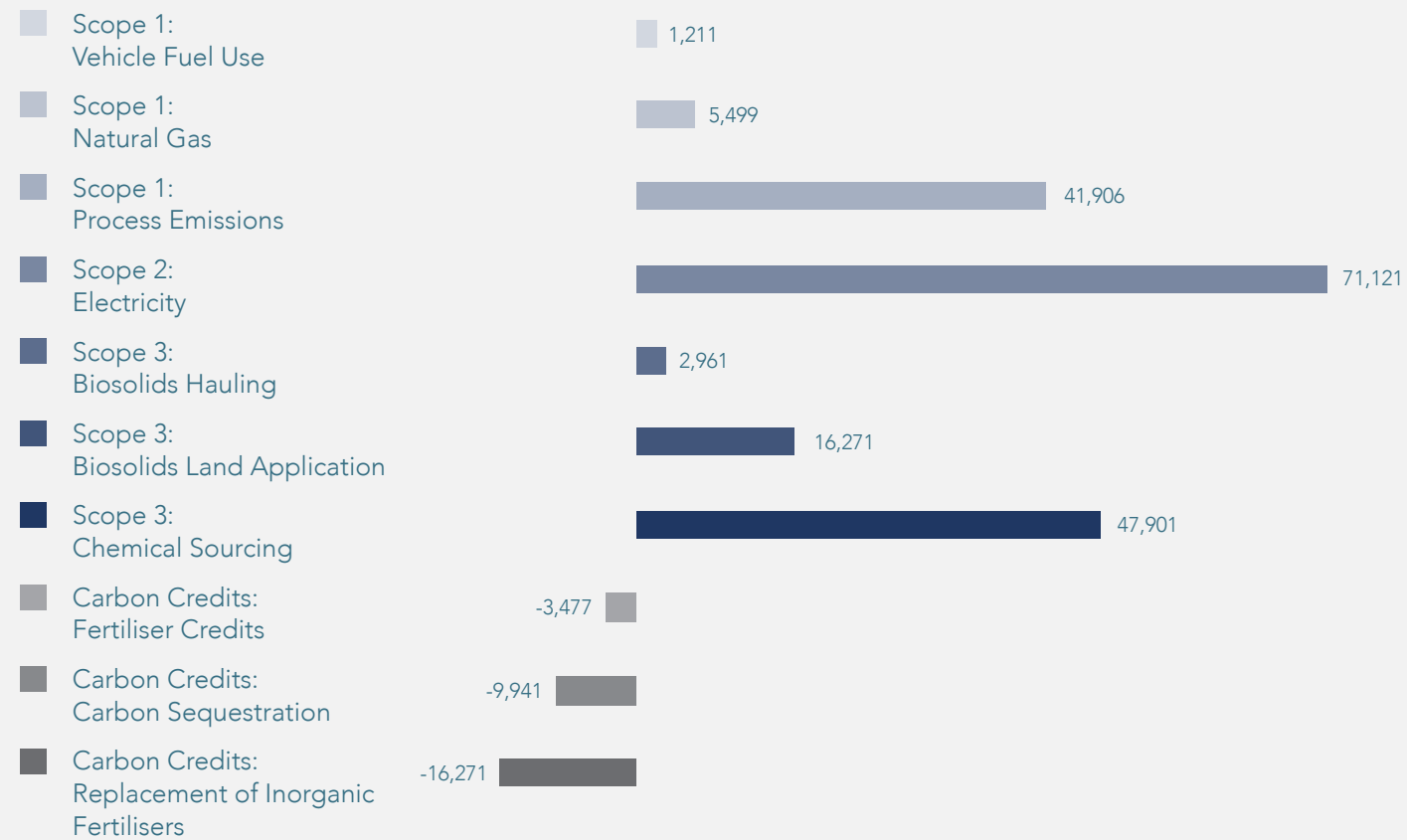
	Metric description	Past		FY23		Notes
		FY21	FY22	Target	Actual	
Physical risks	Wastewater treatment capacity located in 100-year flood zones (m <sup>3</sup> )	2.5m	2.5m	n/a	2.5m	
	Number of sanitary sewer overflows	54	37	n/a	44	
	Volume of sanitary sewer overflows (m <sup>3</sup> )	804	219	n/a	299	
	Percentage of volume recovered (%)	66	91	n/a	53	
Transition risks	Total energy consumed (GJ)	1,300,000*	1,550,008	n/a	1,335,045	*for Blue Plains only
	% grid electricity (%)	47*	50*	n/a	57	*for Blue Plains only
	Total water sourced from regions with High or Extremely High Baseline Water Stress (m <sup>3</sup> )	0	0	n/a	8,194,400	The World Resources Institute updated the model indicating areas of high and extremely high regions of baseline water stress in August 2023.
	Percentage of water purchased from a third party	100%	100%	n/a	100%	
	Volume of recycled water delivered to customers (m <sup>3</sup> )	0	0	n/a	0	
	ERM maturity (maturity scale 1-5)	1	1	2	3	
	Water services operations and maintenance monthly costs (\$/MG)	2,029	2,053	2,319	2,163	FY24 target of \$2,488/MG
Climate-related opportunities	Renewable energy generated by DC Water as a percentage of DC Water consumption (%)	n/a	43	43	48	"FY24 target of 49% Note: Renewable energy credits are sold for the renewable energy generated by the Authority."
	Energy produced onsite (MWh)	n/a	185,500	185,500	197,000	FY24 target of 195,000MWh
	Renewable Energy Credits (RECs) sold (\$)	n/a	3.3m	3.7m	5.3m	FY24 target of \$3.2m
	Clean Rivers Tunnel volume in service (MG)	114	114	105	190	
	Consecutive months achieving class A biosolids	72	84	96	96	FY24 target of 108 months
	% biosolids sold compared to generated (%)	n/a	36	37	42	FY24 target of 46%
	Bloom volume sold (tons)	47,500	56,675	58,000	64,721	FY24 target of 65,000 tons
	Biosolids disposal savings from Bloom program (\$)	n/a	1.8m	2m	2.4m	FY24 target of \$2.5m



GHG emissions over time



2022 Emissions Breakdown (Tons CO2e)



Dragon boat crew on the Anacostia River.



# SASB INDEX

The Sustainability Accounting Standards Board (SASB) Standard provides organizations with an industry comparable disclosure to present on ESG topics. We present our FY23 SASB disclosure in-line with the Water Utilities (WU) SASB Standard to provide our stakeholders with transparency related to the risks and opportunities facing our organization through metrics designed specifically for water utilities.

SASB Code	Accounting Metric	FY21	FY22	FY23
<b>Energy Management</b>				
IF-WU-130a.1	1) Total energy consumed	1,300,000 GJ at Blue Plains	1,550,000 GJ for all DC Water	1,335,047 GJ for all DC Water
	(2) Percentage grid electricity	47% non-renewable use at Blue Plains	50% for all DC Water	57% for all DC Water
	(3) Percentage renewable	53% renewable use at Blue Plains	43% for all DC Water	0% for all DC Water (48% renewable energy produced by DC Water as a % total of total energy consumed)
<b>Distribution Network Efficiency</b>				
IF-WU-140a.1	Water main replacement rate	0.64%	0.65%	0.71%
IF-WU-140a.2	Volume of non-revenue real water losses	45,000,000 m <sup>3</sup>	40,000,000 m <sup>3</sup>	37,285,545 m <sup>3</sup>
<b>Effluent Quality Management</b>				
IF-WU-140b.1	Number of incidents of non-compliance associated with water effluent quality permits, standards, and regulations	0 incidents	0 incidents	0 incidents
IF-WU-140b.2	Discussion of strategies to manage effluents of emerging concern	Please see our statement on effluents of emerging concern <a href="https://www.dwater.com/UCMR4">https://www.dwater.com/UCMR4</a>	Please see our statement on PFAS and water at <a href="https://www.dwater.com/pfas-anddrinking-water">https://www.dwater.com/pfas-anddrinking-water</a>	Please see our statement on PFAS and water at <a href="https://www.dwater.com/pfas-anddrinking-water">https://www.dwater.com/pfas-anddrinking-water</a>
<b>Water Affordability and Access</b>				
IF-WU-240a.1	(1) Residential	i. Residential: 0-4 Ccf: \$3.49	i. Residential: 0-4 Ccf: \$3.49	i. Residential: 0-4 Ccf: \$4.28
		ii. Residential: > 4 Ccf: \$4.50	ii. Residential: > 4 Ccf: \$4.50	ii. Residential: > 4 Ccf: \$5.58
		iii. Multi-Family: \$3.96	iii. Multi-Family: \$3.96	iii. Multi-Family: \$4.90

SASB Code	Accounting Metric	FY21	FY22	FY23
	(2) Commercial	Non-Residential: \$4.65	Non-Residential: \$4.65	Non-Residential: \$5.78
	(3) Industrial customers			
IF-WU-240a.2	Typical monthly water bill for residential customers for 10 Ccf of water delivered per month	\$179.41	\$191.98	\$205.86
IF-WU-240a.3	Number of residential customer water disconnections for non-payment	We did not disconnect any customers in FY21 for non-payment	614 residential customers	2,766 residential customers
	Percentage reconnected within 30 days	n/a. Please see above	Not currently tracked	87%
IF-WU-240a.4	Discussion of impact of external factors on customer affordability of water, including the economic conditions of the service territory	Please see the Customer section of the FY21 ESG Report	Please see the Affordability and Customer Service section of the FY22 ESG+R report	Please see the Affordability and Customer Service section of the FY23 ESG+R report
<b>Drinking Water Quality</b>				
IF-WU-250a.1	(1) Acute health-based violations	0	0	0
	(2) Non-acute health-based violations	0	0	0
	(3) Non-health-based drinking water violations	0	0	1
IF-WU-250a.2	Discussion of strategies to manage drinking water contaminants of emerging concern	Please see our statement on effluents of emerging concern <a href="https://www.dwater.com/UCMR4">https://www.dwater.com/UCMR4</a>	Please see our statement on PFAS and drinking water at <a href="https://www.dwater.com/pfas-anddrinking-water">https://www.dwater.com/pfas-anddrinking-water</a>	Please see our statement on effluents of emerging concern <a href="https://www.dwater.com/UCMR4">https://www.dwater.com/UCMR4</a>
<b>End-Use Efficiency</b>				
IF-WU-420a.1	Percentage of water utility revenues from rate structures that are designed to promote conservation and revenue resilience	71.6% of revenue comes from volumetric revenue	71.5% of revenue comes from volumetric revenue	73.9% of revenue comes from volumetric revenue
<b>Water Supply Resilience</b>				
IF-WU-440a.1	Total water sourced from regions with High or Extremely High Baseline Water Stress, percentage purchased from a third party	0 m <sup>3</sup>	0 m <sup>3</sup>	0.09% or 8,194,400 m <sup>3</sup>



SASB Code	Accounting Metric	FY21	FY22	FY23
IF-WU-440a.2	Volume of recycled water delivered to customers	0 m <sup>3</sup>	0 m <sup>3</sup>	0 m <sup>3</sup>
IF-WU-440a.3	Discussion of strategies to manage risks associated with the quality and availability of water resources	Please see the Water and Resource Management section of the FY21 ESG Report	Please see the Water and Climate Resilience sections of the FY22 ESG+R Report	Please see the Water and Climate Resilience sections of the FY23 ESG+R Report

**Network Resiliency and Impacts of Climate Change**

IF-WU-450a.1	Wastewater treatment capacity located in 100-year flood zones	2.5 million m <sup>3</sup> per day	2.5 million m <sup>3</sup> per day	2.5 million m <sup>3</sup> per day
IF-WU-450a.2	(1) Number of sanitary sewer overflows	54	37	44
	(2) Volume of sanitary sewer overflows	804 m <sup>3</sup>	219 m <sup>3</sup>	299 m <sup>3</sup>
	(3) Percentage of volume recovered	66% volume recovered	91% volume recovered	53% volume recovered
IF-WU-450a.3	(1) Number of unplanned service disruptions	Not reported	Not Reported*	1,469
	(2) Customer affected, each by duration category	Not reported	Not Reported*	73 (0 to 4 hours) 1,249 (4 to 12 hours) 147 (>12 hours)
IF-WU-450a.4	Description of efforts to identify and manage risks and opportunities related to the impact of climate change on distribution and wastewater infrastructure	Please see the Risk Management section of the FY21 ESG Report	Please see the Risk Management section of the FY22 ESG+R Report	Please see the Risk Management section of the FY23 ESG+R Report

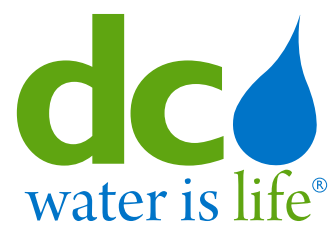
**Activity Metric**

IF-WU-000.A	Number of			
	(1) Residential customers			
	for water	107,800 customers	107,100 customers	107,231 customers
	for wastewater	109,000 customers	109,200 customers	109,368 customers
	(2) Commercial customers			
	for water	9,100 customers	9,100 customers	9,051 customers
	for wastewater	11,300 customers	11,200 customers	11,054 customers
	(3) Industrial customers			
	for water	Not reported	Not reported	Not reported
	for wastewater	30 customers	30 customers	28 customers
	(4) Other customers			

SASB Code	Accounting Metric	FY21	FY22	FY23
	for water	10,500 customers	10,700 customers	10,743 customers
	for wastewater	12,200 customers	12,300 customers	12,330 customers
IF-WU-000.B	Total water sourced, percentage by source type	131,425,000 m <sup>3</sup> purchased from Washington Aqueduct	131,592,000 m <sup>3</sup> purchased from Washington Aqueduct	130,400,546 m <sup>3</sup> purchased from Washington Aqueduct
	Percentage from purchased water	100%	100%	100%
IF-WU-000.C	Total water delivered to:			
	(1) Residential	18,800,000 m <sup>3</sup>	17,900,000 m <sup>3</sup>	17,408,232 m <sup>3</sup> or 6,148,086 Ccf
	(2) Commercial	25,800,000 m <sup>3</sup>	29,900,000 m <sup>3</sup>	30,199,357 m <sup>3</sup> or 10,665,543 Ccf
	(3) Industrial	n/a	n/a	n/a
	(4) All other customers	46,400,000 m <sup>3</sup>	44,100,000 m <sup>3</sup>	45,507,412 m <sup>3</sup> or 16,071,907 Ccf
IF-WU-000.D	Average volume of wastewater treated per day, by			
	(1) Sanitary sewer	1,068,000 m <sup>3</sup>	1,001,000 m <sup>3</sup>	973,825 m <sup>3</sup>
	(2) Stormwater	79,500 m <sup>3</sup>	79,500 m <sup>3</sup>	79,500 m <sup>3</sup>
	(3) Combined sewer	1,147,000 m <sup>3</sup>	1,080,000 m <sup>3</sup>	1,053,325 m <sup>3</sup>
IF-WU-000.E	Length of			
	(1) Water mains	2,100 km	2,100 km	2,100 km
	(2) Sewer pipe	3,200 km	3,200 km	3,200 km

\*Restatement: FY22 SASB Disclosure incorrectly stated 0. The value shown in the FY23 SASB Disclosure represents the correct value.





DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY  
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