Nomination: 582

DC Water

Started at: 3/30/2022 01:52 PM - Finalized at: 4/8/2022 10:07 PM

Page: EIM Nomination Form

APPLICATION DEADLINE: April 8, 2022, 11:59 pm EST

All fields indicated by a red **asterisk (*) must be completed**

Category
EIM Platinum Level

SUBMITTING AGENCY'S INFORMATION

Submitting Agency's Name
DC Water

Name and Title of Application Submitter
Nicole Kaiser, Owner, SLC Advisors (DC Water Contractor)

Email of Individual Submitting Application
condonnb@gmail.com

Signature of Individual Submitting Application (pdf/jpg)

City
Washington

State (Abbreviation ONLY)
DC

Service Area Population
1.6M

Agency Logo - Hi-Res Picture (.jpg or .png)

NOMINATION SUBMITTAL

Please Indicate One

Platinum (9 Attributes)

All Attribute descriptions should be single-spaced, using the 12-point font (Times Roman or equivalent), with no less than 1-inch margins on 8.5 x 11-inch paper. A header must be included on each page with the following information:

NACWA Excellence in Management Recognition Program
Agency Name
***Attribute* (being described)** add "resubmitted Gold/Silver from 2021" for re-submittals

Note that every applicant is required to include Product Quality and Financial Viability *as part of their minimum demonstrated Attributes.*

Please review the APPLICATION BASICS (https://eim.secure-platform.com/a/page/Guidelines/AppBasics) and/or SAMPLE APPLICATIONS (https://eim.secure-platform.com/a/page/Guidelines/SampleApps)to ensure correct formatting and content

Please check the appropriate boxes (at least 5 that includes Product Quality and Financial Viability)

Select Submitted Attributes

Product Quality (Required Attribute for all Applicants), Financial Viability (Required Attribute for all Applicants), Customer Satisfaction (Metrics Required), Stakeholder Understanding & Support, Operational Optimization (Metrics Required)

Select Submitted Attribtutes

Enterprise Resiliency (Inclusive of all enterprise resiliency initiatives, not solely emergency management) , Infrastructure Strategy & Performance (Metrics Desired), Community Sustainability, Water Resource Sustainability

Attributes Narrative (pdf)

Download File (https://vo-general.s3.amazonaws.com/1791819d-f6fc-46c3-b1b7-a1d38a2bd4d4/c0b79138-388f-48d1-a25f-13280ebfc7ea?AWSAccessKeyId=AKIAJ4PRWO26HAX3IOCA&Expires=1737567480&response-content-disposition=inline%3B%20filename%3D%22DC%20Water%202022%20EIM%20Application.pdf%22&response-content-type=application%2Fpdf&Signature=uL23u%2FNWxi7%2BuUIdLVE5fTp%2BRfM%3D)

REFERENCE MATERIALS

Strategic Plan Hyperlink (URL)

http://dcwater.com/sites/default/files/documents/Blueprint%202.0.pdf (http://dcwater.com/sites/default/files/documents/Blueprint%202.0.pdf)

Relevant Page References

pages 5 - 11

Financial Plan Hyperlink (URL)

https://www.dcwater.com/sites/default/files/finance/budgets/Approved%20FY%202021%20Budget%20Book.pdf (https://www.dcwater.com/sites/default/files/finance/budgets/Approved%20FY%202021%20Budget%20Book.pdf)

Relevant Page References

pages 50 - 54

Strategic Metrics (URL)**

Relevant Page Number References

APPLICATION AUTHORIZATION

Please contact **btrombino@nacwa.org (mailto:btrombino@nacwa.org?subject=Who%20is%20Our%20NACWA%20Primary%20Contact%20for%20the%20EIM%20Application%3F)** if you do not know the name of your NACWA Representative (SUBJECT: Who is Our NACWA Primary Contact for the EIM application?)

Name of Submitting Agency's NACWA Representative

Kishia Powell

Title of Submitting Agency's NACWA Representative

Chief Operating Officer and Executive Vice President

FedEx Delivery Address for NACWA Representative

1385 Canal Street
Washington District of Columbia 20003 US

Email of Submitting Agency's NACWA Representative

Kishia.Powell@dcwater.com

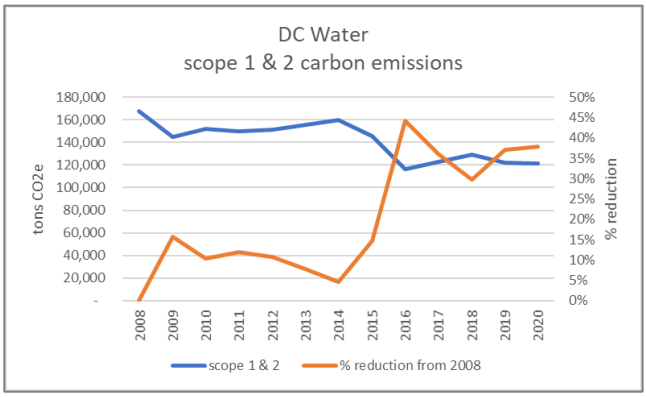
Signature of Submitting Agency's NACWA Representative (pdf/jpg)

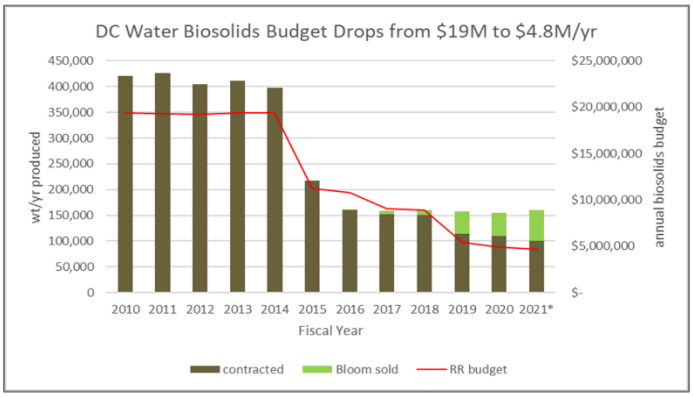
Please review your application prior to finalizing it. All fields with a red **asterisk (*) must be completed. If you have any questions in regard to submitting your application, please contact Brédy Trombino (mailto:btrombino@nacwa.org?subject=EIM%20Application%20Questions%20-%20PreCompletion) at 202.533.1820.**

Product Quality

Management Approach: In 2021, DC Water's Blue Plains advanced treatment plant received NACWA's Platinum9 Peak Performance Award for nine consecutive years of 100% permit compliance. Parallel to an excellent treatment performance record, the biosolids reuse program has a long history of success. The addition of a state-of-the-art thermal hydrolysis system followed by digesters and gas turbines is taking resource recovery to a new level. The equipment adds heat, pressure and helpful bacteria, resulting in nutrient-rich, EPA-certified Exceptional Class A solids that DC Water sells as a sustainable, multi-purpose soil amendment called Bloom®. This slow-release fertilizer has been extensively tested by research institutions and a growing number of landscapers, farmers, restoration specialists and homeowners are praising the product's performance. DC Water is significantly reducing carbon footprint, realizing operational savings, and generating revenue.

Performance Measures: In the 5 years since digestion start-up, DC Water has sold $800,000 of Bloom®, generated 363,000 megawatt hours (MWhs) of green power, $4.4M of renewable energy credits (RECs), and $80M in operational savings. The project has reduced DC Water's carbon footprint by nearly 50,000 MT CO_2e annually through reduced trucking, carbon sequestration, and avoidance of fossil fuel-intensive chemical fertilizers. In 5 years, the Authority has accumulated more than $5M in value through operational savings, Renewable Energy Certificates (REC) and Bloom® sales. In 2021 alone, REC sales went up by 91% due to increased value of the REC market, and REC prices are expected to continue rising. The $470M project cost is on schedule for payback in under 17 years, making it fiscally and environmentally beneficial for rate payers.





Keys to Management Success: The DC Water Board and executive team showed enormous leadership in approving this discretionary project. Instead of taking the traditional route of upgrading existing equipment to improve biosolids quality to comply with stricter regulations, they invested heavily in a program that approaches solids as a resource instead of a liability. Every piece of equipment was chosen with product quality in mind and investments early on have demonstrated the value of designing the system to maximize and optimize the product. DC Water established a non-profit affiliate, BlueDrop, which handles regulatory compliance, marketing and sales of the Bloom® product. By treating Bloom® as a strategic business endeavor, the organization tracks performance and evaluates future opportunities to increase benefits to DC Water stakeholders by expanding and optimizing its resource recovery program.

Financial Viability

Management Approach: DC Water's Board of Directors adopts financial policies for financing, rate-setting, and cash/investment management which guide the development and implementation of long-term financial plans, the Capital Improvement Program, and operating budgets. These policies also align with the five organizational imperatives established in DC Water's Strategic Plan, Blueprint 2.0 (Healthy, Safe and Well; Reliable; Resilient; Sustainable; and Equitable).

Key components of each policy are highlighted below:

- **Capital Financing and Reserves Policy**: The policy establishes combined debt service coverage at 160%; Cash reserves at a level equivalent to 250 days operating expenses; reduces the need for long-term debt by financing portions of the capital program on a pay-go basis; and secures least cost financing for capital projects based on evaluation of financial position and operating needs.
- **Rate-setting and Budgetary Policy:** To the extent annual revenues exceed costs, the Board's policy will continue to utilize all available options to mitigate future customer impacts and annual increases, including transferring some or all of such excess funds to a Rate Stabilization Fund. The policy requires rates which are legally defensible, rate structures that customers can understand, and rate increases that are implemented transparently and predictably.
- **Cash Management and Investment Policy:** The policies govern the types of investments that the Authority can make with goals of safety, liquidity, diversity and return on investment.
- **Debt Policy:** This policy provides a comprehensive guide to DC Water's issuance and use of debt to fund capital projects or to refund/refinance/restructure outstanding debt.

Performance Measures: DC Water's Annual Comprehensive Financial Report is shared with the public and stakeholders. FY 2021 marked the 24th consecutive year that DC water received the Certification of Achievement for Excellence in Financial Reporting from the Government Finance Officers Association. Key metrics demonstrating the Authority's performance defined by the financial policies and strategies are listed below.

Performance Metric	Target	FY 2021	FY 2020	FY 2019
Days of Cash on Hand	250	309	335	287
Combined Debt Service Coverage	160%	186%	190%	181%
Maintenance of Bond Rating	AAA	AAA	AAA	AAA

Keys to Management Success: DC Water leadership took proactive steps to minimize pandemic impacts on operations and stakeholders by strengthening financial policies. Actions included increasing cash reserves, delaying capital projects and re-prioritizing contractual services. In addition to realigning budget priorities and minimizing planned rate increases, DC Water leaders maintained a forward-looking approach by evaluating opportunities to strengthen diversified revenue streams and optimize the budget process for years to come. In 2021, DC Water adopted a new Budget and Planning System (BAPS). With this new tool, the Finance Team can quickly analyze impacts from changing variables and synthesize stakeholder input to better align the budget with strategic objectives, such as expanding resource recovery initiatives.

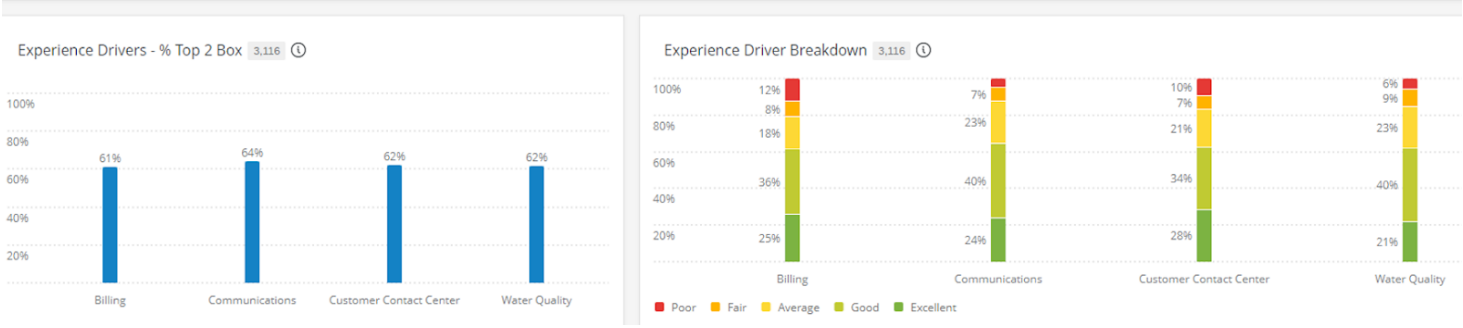
Customer Satisfaction

Management Approach: DC Water has implemented many initiatives to improve customer wellbeing, engagement and trust. Examples include financial assistance programs, the Lead Free DC initiative, high water usage notification system, and virtual town halls to proactively engage customers about planned projects and rate changes. Transparent communication with customers is a DC Water priority, and the Authority recognizes how quickly public trust can erode in a poorly managed emergency. In the current digital, on-demand economy, customers expect quick and accurate communication and timely resolution when it comes to service disruptions. DC Water's new Emergency Management System (EMS) delivers improvements in both areas.

Performance Measures: Prior to the 2021 EMS implementation, incident response was based on manual processes and intra-departmental coordination via voice or radio communication. Prior capabilities lacked automated alerting, escalation capability, and real-time access to critical operating data. The new integrated event management platform enables DC Water to respond to emergency events faster and make response decisions based on comprehensive event data. The EMS has significantly improved expediency of updates to other agencies and the public. During an event, the tool is used to identify impact area on a real-time, interactive map which can be made available to stakeholders. The EMS is fully integrated with Everbridge, an emergency notification platform used to send alerts to response staff via text, phone, and email. If public notification is necessary, Everbridge is also used to notify customers in the impact area.

In January 2021, DC Water launched its first Voice of the Customer (VOC) Program to measure customer experiences. DC Water acquired the Qualtrics platform to routinely capture high quality feedback data and create dynamic, real-time reporting. The first survey included 3,7444 active customers across various bill classes (residential, commercial, multi-family). DC Water gained a holistic understanding by combining experience with operational data to measure customer satisfaction and key perception and experience drivers. Examples are included below.

Experience Drivers



Keys to Management Success: The wealth of information available in the EMS system helps staff better analyze past responses, refine methods, and pinpoint opportunities for continuous improvement. The system is now being used for regular operations and emergency management. Leadership specified the system design should leverage existing and new technologies that will continue to enhance EMS capabilities and adapt to changing business needs. Future plans include expanding the predictive capabilities and extending the monitoring and alerting to include water quality events. The VOC data will be disseminated across the organization to support process improvement and strategic investment in becoming a more customer centric organization.

Stakeholder Understanding and Support

Management Approach: Prior to 2020, DC Water was already taking measures to improve affordability and customer assistance programs while carefully structuring rates to reflect vital investments in critical infrastructure. The pandemic created financial hardship for many District residents, underscoring the need to further expand financial support. Two new emergency programs launched to supplement existing support offered by DC Water and the District Department of the Environment. Existing programs included the Residential Assistance Program, Customer Assistance Program, STAY DC, CRIAC Relief for Nonprofits, and SPLASH, a one-time emergency assistance program paid for by DC Water employees, customers and other donation-based contributions.

Performance Measures: In early 2021, the DC Water Board of Directors approved a program to supplement assistance for residential customers who fell behind on bills during the pandemic. It provides up to $2,000 to help income-eligible customers eliminate their past due balances. To date, thousands of customers have benefited from this program. DC Water also launched an innovative program to assist residents in apartments and condos whose utilities are included in their rent or HOA fees. Tenants in low-income housing units are automatically enrolled, and the majority of the credit (90 percent) is passed on to the occupant as a rental or association credit. The Multi-family Assistance Program (MAP) provided more than $2.5 million in assistance to 5,978 tenants. In total, DC Water and the District provided more than $9.4 million through the customer assistance programs. When the program was initiated, DC Water was the only utility in the region to provide indirect assistance by crediting a property's utility account, and it was one of the first US utilities provide relief to customers who don't directly pay a water bill.

To simplify the many different programs and application pathways, DC Water branded all of the programs under the DC Water Cares logo, phone number, email and webpage. In the midst of a pandemic, DC Water modified external communication efforts to meet customers where they were—grocery stores, pharmacies bus stops and online —to raise awareness of the relief programs. DC Water presented to dozens of community groups virtually and advertised using social media, Nextdoor, and bill inserts. Partnerships with a diverse range of organizations were leveraged, including local food banks which put DC Water Cares fliers into food bags and boxes.

Aligned with the Healthy, Safety and Well imperative prioritized in the Strategic Plan, DC Water's Lead Free DC program has set an ambitious goal to remove all lead service lines in DC by 2030. To date, DC Water has removed more than 1,000 lead service lines from DC homes, saving customers approximately $1M in replacement costs. The new plan combines the existing removal and outreach programs into one coordinated effort that prioritizes lead service replacements for children and pregnant women, as well as historically under-served communities that experience disproportionately poorer health outcomes compared to other parts of the city.

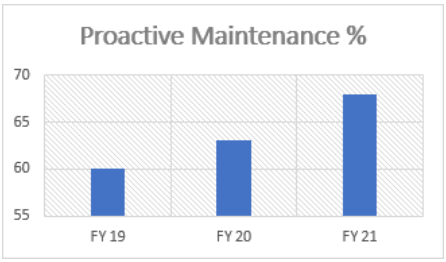
Keys to Management Success: The Authority was among the first water utilities nationwide to announce a moratorium on service disconnections and restore service to suspended accounts to support public health needs. Given pandemics impacts on the community, DC Water leadership doubled down on stakeholder engagement. In 2021, virtual town halls engaged more than 4,000 customers, and the Authority is evaluating opportunities to promote even more meaningful participation in future design of projects and initiatives.

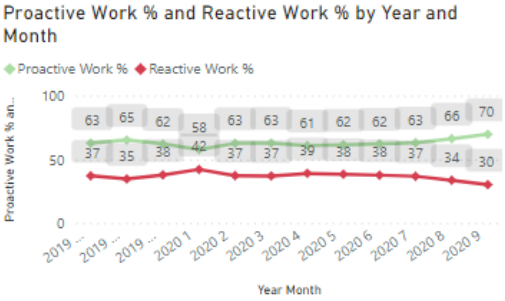
Operational Optimization

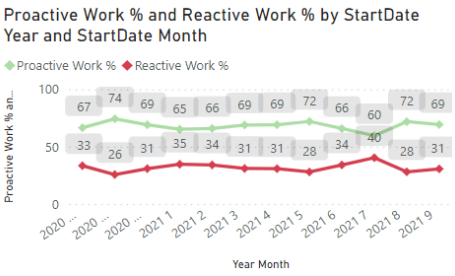
Management Approach: One of the five imperatives defined in DC Water's Strategic Plan (Blueprint 2.0) is Reliable. With a strong focus on operational optimization, this includes collecting real-time data across enterprise assets to empower teams to improve and optimize operations. Exclusively operating in the cloud with the exception of SCADA, the Authority is leveraging new software tools to harness the power of data modeling and artificial intelligence.

Performance Measures: In August 2020, DC Water launched Microsoft PowerBI Apps for water quality monitoring, main break analysis, water consumption and billing and collections. These apps empower staff spread out across telework, field sites and facility locations to conduct analysis of robust datasets and receive alerts about deviations from acceptable ranges. For example, the Water Quality Monitor App applies a time series based forecast model to monitor water quality thresholds at three pumping stations, enabling improved investigative activities and proactive response measures to prevent downstream water quality issues.

Power BI is also being used by various departments to track key performance indicators that relate to the reliability imperative. For the Department of Wastewater Treatment, the proactive maintenance percentage is a critical KPI for preventing failures, catching defects early, and improving efficiencies.







Condition assessment informs asset life forecasting, costing, and optimization opportunities. In 2019, DC Water patented its own sewer condition assessment tool, Pipe Sleuth, which uses artificial intelligence to automatically scan sewer video footage for defects. Based on initial usage, the following benefits will continue to be validated through performance monitoring:

- 75% reduction in assessment cost
- Improved accuracy due to elimination of human error
- Reduced occurrences of SSO due to more frequent and more targeted inspections
- Extended asset life by applying lower cost repairs earlier in the life cycle of an asset

Keys to Management Success: In 2021, DC Water advanced the Enterprise Performance Plan which establishes a process for data collection, analysis and reporting. The plan will continue to support an integrated enterprise management system that promotes cross-collaboration and knowledge sharing between departments to improve operational efficiencies and reduce silos.

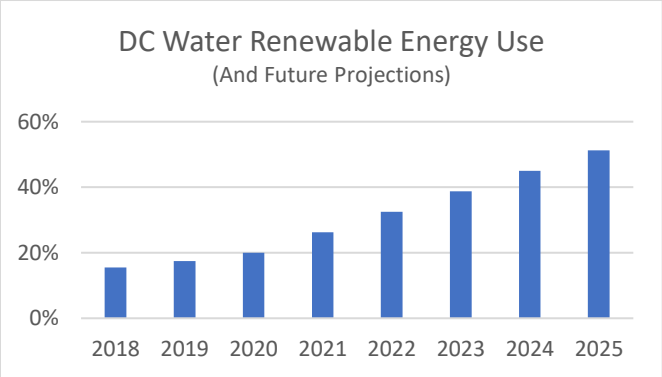
Enterprise Resiliency

Management Approach: Identified as one of the five imperatives in DC Water's Strategic Plan, resilience is characterized by 6 overarching themes, including water supply resilience; asset security; protection against cyber security risks; emergency response preparation and learnings; climate change adaptation; and mitigation of future climate change impacts. Each theme has goals measured by key performance indicators (KPIs) and reported by department champions.

Performance Measures: Example KPIs for water supply security include percentage remaining available water supply, percentage of single points of failures with response plans, and total volume of non-revenue water. Asset security is targeted through DC Water's data and value-driven maintenance program. Percentage of inventory variance, percentage of assets integrated in the asset management system, and percent of employees trained in the asset management program are examples of related KPIs. For cybersecurity, vulnerability scores and incident resolution times are used to track performance.

DC Water's Office of Emergency Management prepares for emergencies by creating response and public notification plans, organizing training exercises, and learning from past incidents to identify resilience gaps. KPIs include employee training hours, Hazard Mitigation Task Force participation, and Emergency Management Plan updates. In 2019, DC Water became the first utility in the world to achieve accreditation from the Emergency Management Accreditation Program, recognizing its strong record of local, regional and national partnership.

Following a severe flooding event in September 2020, DC Water is playing a leading role in the DC Flood Task Force. Made up of 13 agencies and consulting firms, the task force aims to increase flood readiness while equitably protecting District residents and economic interests from flood damage. Within 12 months of its first April 2022 meeting, the task force will produce an action plan to address priority initiatives. Example initiatives include flood proofing homes and facilities; flood damage repairs in low-income areas; sewer line backwater valve installations and flood mitigation infrastructure. Percentage of facilities vulnerable to flooding or within floodplains is a KPI used to monitor climate change adaptation performance. Construction of a floodwall at the Blue Plains treatment plant is one way the Authority is driving performance against this metric. Expected to be completed in 2026, the wall will prevent critical assets from being inundated in a 500-year flood.



DC Water's climate change mitigation efforts are multi-faceted. Decarbonizing critical infrastructure and increasing the usage of renewable energy are two strategies being supported by the resource recovery program and a growing investment in renewable energy production, including the 2020 installation of 12,000 solar panels at Blue Plains. Completed in 2018, the award-winning LEED Platinum headquarters building incorporates nearly every state-of-the-art sustainability feature used in modern construction, including a green roof, grey water recycling system, and a sewer heat recovery system to regulate building temperature.

Keys to Management Success: KPIs are reported to the Board on a quarterly basis and annual reviews will evaluate opportunities for continual improvement.

Infrastructure Strategy and Performance

Management Approach: DC Water's Strategic Plan sets a course for how the Authority manages long-term infrastructure and performance through its Capital Improvement Program (CIP) and financial plans. The Facility Master Plans are reviewed annually and updated every 5 years to provide comprehensive, long-term planning for all facilities. These master plans provide a history of all facilities, updated capacity projections, condition assessment, new technologies, anticipated regulations, and capital needs to be executed over the next 20 years. The Operations and Maintenance groups use Reliability Centered Maintenance (RCM) to create effective maintenance programs which include predictive technologies and defect elimination to optimize value and operation of the assets.

Performance Measures: To continuously monitor department performance, DC Water's Chief Operating Officer and her team track 50 metrics reported monthly by the Wastewater, Sewer, Water & Water Quality, Pumping and Engineering departments, and a subset of these are reported to the Board each month. Metrics include:

- Reactive Maintenance with a target of <20%
- Critical Asset Availability with a target of >95%
- Catch Basin MS4 Area Cleaning with a target of 100%
- Sewer Inspection and Cleaning with a target of >12
- Safe Drinking Water Requirements with a target of 100%

Year	Catch basins Cleaned
2019	25507
2020	23767
2021	24795

OPERATIONS	TARGET/GOAL	COMPLIANCE PERCENTAGE							
WASTEWATER		Green	Yellow	Red	OCT	NOV	DEC	JAN	FEB
REGULATORY COMPLIANCE									
· Wastewater Compliance, Percent # of Days %	100%	100%		< 100%	100	100	100	100	100
• Air Permit Compliance, Percent # of Days %	100%	100%		< 100%	100	100	100	100	100
• Class A EQ Biosolids Compliance, Percent # of Days %	100%	100%		< 100%	100	100	100	100	100
· TDPS - Percent of events tunnel dewatered within 59 hours of end of rainfall - %	100%	100%		< 100%	100	100	100	100	100
ENERGY									
• CHP+Solar as percentage of Total Power	> 20%	>20	15-20	<15	25.4	27	27	26	25
STANDARD OPERATION & MAINTENANCE									
· Reactive Maintenance Percent of Total Hours, %	<20%	<20%		>20%	35	35	37	35	32
· Critical Asset Availability %	>95%	>95%	90-95%	<90%	97	97	98	97	96
• Anacostia Tunnel CSO Capture, pecent of Total Volume Captured - Cumulative for CALENDAR YEAR	80% - Average Hydrologic Year	> 80%		< 80%	97	97	97	100	100
COLLECTION SYSTEM									
REGULATORY COMPLIANCE									
· CSS Structure Inspection (Regulators, Tide Gates, dams) %	100% each month	100%		<100%	100	100	100	100	100
· Catch basin MS4 Area Cleaning/Inspection- % of Monthly	100% annually	100%		<100%	65	78	127	72	67
· 1X/Yr Catch basin CSS Area to Anacostia Clean/Inspect- Cumulative % of Total	1X - 100% annually	100%		<100%	100	100	100	2	30

Condition and performance of all assets are monitored on a regular basis through dashboards like the one above to visualize asset cost, work order analysis, proactive maintenance, risk and to identify unreliable assets.

Keys to Management Success: The strategic plan is centered around adherence to five imperatives that form the Authority's North Star. These are (1) Equitable, (2) Sustainable, (3) Resilient, (4) Reliable, and (5) Healthy, Safe, and Well. Implementing an Enterprise Asset Management Plan focused on value-driven, life-cycle management of assets and proactive maintenance is a cornerstone of the Resilient imperative. The reliability imperative will be addressed in part by real-time asset monitoring to identify weak points and opportunities to optimize maintenance and upgrade regimes which are critical for continual improvement.

Community Sustainability

Management Approach: Amended in 2016, DC Water's consent decree stipulates combined sewer overflow (CSO) and stormwater runoff reductions to improve health in DC's waterways and the Chesapeake Bay. By implementing the Clean Rivers Project, DC Water is achieving these goals and benefitting DC communities and the surrounding watershed by cleaning up the region's rivers, alleviating chronic flooding in the District, and reducing Chesapeake Bay nutrient pollution. Relying heavily on underground tunnels, the program cost is estimated at $2.6B, representing the nation's highest per capita cost for a consent decree project. This creates a major cost burden on ratepayers, and the 25-year project will cause community disruptions, reallocate public parkland and recreational areas, and pose operation and maintenance challenges. DC Water set out to evaluate options to reduce these negative community impacts.

In 2016, DC Water adopted an innovative Green Infrastructure (GI) Plan to evaluate the potential for natural stormwater management practices to offset grey infrastructure requirements, reduce consent decree costs, create green jobs, and yield environmental and social benefits. Recognizing the rate payer cost burden to conduct a robust evaluation of green infrastructure alternatives, DC Water made history by issuing the nation's first Environmental Impact Bond (EIB) to fund the project. This model allowed financial risk to be shared, and it established a replicable, scalable approach to financing green infrastructure in countless other communities across the country.

Performance Measures: Local workforce development and sustainable job creation was critical to the GI program, including training and certification opportunities for DC residents. DC Water and the Water Environment Federation created the National Green Infrastructure Certification Program (NGICP), setting the standard for training and certification in green infrastructure construction and inspection. For the pilot project, more than 100 candidates were trained, and the NGICP now operates in 14 states and DC, bringing benefits of GI jobs to other communities.

Outlined in the Potomac Practicability Report required by the EPA, rigorous pre and post-construction monitoring at the first two green infrastructure sites have changed the course of DC Water's Clean Rivers Project and contributed to a growing body of knowledge. Invaluable lessons learned were documented, providing a template for subsequent projects, design improvements and cost reduction opportunities. The table shows the modeled result and the pilot result corresponding exactly, which is the basis for DC Water's continuation of GI projects and EPA's approval of DC Water's hybrid approach to controlling CSOs in Rock Creek Park.

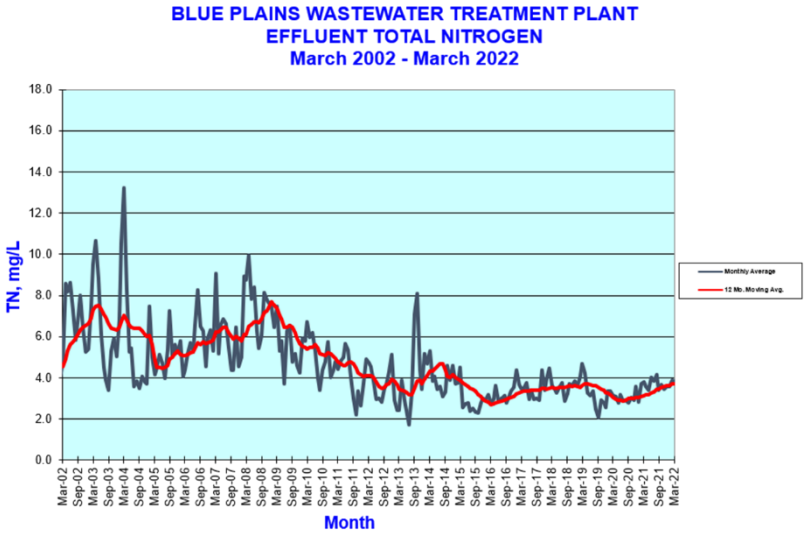
	Imp. Acres Treated by GI (% of Total)	**WWF Volume (MG)**		**Volume Reduction Normalized per Imp Acre Treated (%)**	
		Pre-Construction	**Post-Construction**	**Actual**	**Predicted**
Pilot Site A	9.1	77.73	72.56	6.65	6.65

Keys to Management Success: DC Water has revised the GI Plan to incorporate a hybrid blend of grey and green technologies with at least 92 impervious acres managed with GI. While this is lower than the total originally proposed in the plan, this hybrid approach reflects sound science, ratepayer transparency, financial responsibility and DC Water's commitment to deliver triple bottom line benefits to the community, such as green space enhancements, habitat creation, and local green jobs. DC Water Leadership has shown tremendous willingness to learn, evaluate and educate the public about the potential impacts of green infrastructure.

Water Resource Sustainability

Management Approach: Supplied by the furthest downstream Potomac River drinking water intake and contributing to the Chesapeake Bay as the largest single point source discharger, DC Water has adopted a watershed management approach that engages upstream and downstream stakeholders. This includes initiatives like the Clean Rivers Project, nutrient removal upgrades, and innovative partnerships and research to evaluate novel water quality improvement strategies.

Performance Measures: For nearly a decade, DC Water has been a member of the Drinking Water Source Protection Partnership (DWSPP) which represents two dozen water suppliers and government agencies in the Potomac River Basin. In 2020, the group initiated a project to rank land parcels in the Potomac basin above DC metro drinking water supply intakes. Designed to evaluate where conservation will yield the greatest water quality improvements, the Land Prioritization Mapping for Protecting Drinking Water Quality analysis identified 3,737 acres of high-priority land. To date, sixteen entities have received the data and are using it to inform land protection, management, and funding priorities.



Closer to home, the DC Water Clean Rivers Project continues to improve water quality in regional waterways and the Chesapeake Bay. Once completed in 2030, the 18-miles of tunnels and complimentary green infrastructure will annually divert 1 million pounds of nitrogen from the Chesapeake Bay. The tunnel system has already captured more than 12 billion gallons of combined sewage and 7,700 tons of trash to date. Nutrient pollution reduction is also achieved with the completion of the Enhanced Nitrogen Removal Facilities (ENRF) project. Commissioned in 2014, the ENRF added more than 40 million gallons of nitrogen removal capacity, and new aeration, pumping and chemical facilities. Blue Plains now produces effluent with some of the lowest levels of nitrogen in the country.

In 2019, DC Water began partnering with the Anacostia Watershed Society to study the potential for freshwater shellfish to contribute to water quality. By testing deployment methods and measuring nutrients removed by multiple species of mussels native to the Potomac, DC Water is contributing to a new body of knowledge about mussel survival and potentially, novel approaches to urban water restoration.

Keys to Management Success: Demonstrating a renewed focus on watershed health, the Chief of Water Quality and Watershed Management position was created in 2017. Since then, DC Water leadership continues to take a more comprehensive watershed management approach, including a greater focus on data collection and analytics. The strategic plan further reinforces these priorities with its Resilience and Sustainable imperatives, around which the Authority is structuring enterprise goals and supportive programming.