



Farewell to George Hawkins

This issue looks back at DC Water's progress under his leadership

Environmental Legacy

We at DC Water often refer to our Blue Plains Advanced Wastewater Treatment Plant as a resource recovery facility, because it takes all of the sewage from homes and businesses in the region, cleans it, and extracts useful nutrients. The end result is clean water going back to the Potomac, solids that generate electricity and steam, and a nutrient-rich soil amendment that is sold for revenue to offset expenses.

ENHANCED NUTRIENT REMOVAL

Since Hawkins arrived in 2009, DC Water completed the upgrade called Enhanced Nutrient Removal. By expanding the facilities at Blue Plains, DC Water has reduced the nitrogen in the water discharged into the Potomac River to the lowest levels in the industry, thus protecting the delicate ecosystems in the Potomac River and Chesapeake Bay. Nitrogen promotes algae growth that can cause "dead spots" in water bodies that deprive marine life of the oxygen they need to survive. This project was required to meet strict limits set by the EPA.

CLEAN RIVERS PROJECT

The Clean Rivers Project was mandated in a 2005 consent decree to reduce combined sewer overflows (CSOs), the mixture of sewage and rain runoff, to the District's waterways. Since Hawkins' arrival in 2009, the plan leapt from concept to reality, as DC Water built three of the four tunnel segments to relieve CSOs to the Anacostia and has plans to place the first portion of the tunnel into operation in the spring.

Hawkins led the successful effort to modify the consent decree to include green projects for the solutions for Rock Creek and the Potomac River. DC Water has begun

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General Manager's Message

Dear Customers:

This will be my final column in this space as I enter my last weeks at the helm of DC Water. I have been proud to serve you, our customers, and I hope that you have found that I have been an effective steward of the water and sewer system, the environment and your health and safety.



I assumed the role of your CEO/General Manager after serving on DC Water's Board of Directors. The Board experience provided extensive knowledge so that I knew in what direction I wanted to take the agency. I wanted to open the lines of communication, help customers and other stakeholders understand the challenges facing DC Water, and engage everyone in the solutions that we proposed. I wanted to communicate with the public more often and in new ways.

I sought to inspire a culture of innovation throughout DC Water—a culture that produces engineering marvels, creates innovative financing strategies, and uses the latest technologies for sewer repairs that are of lower cost and less disruptive.

Since 2009, we have advanced major environmental projects like Enhanced Nutrient Removal which we completed in 2014. We began the mandated Clean Rivers Project to dramatically reduce combined sewer overflows (CSOs) to District waterways, using both civil engineering and green environmental projects to achieve 96 percent reduction in CSOs in the District.

I am pleased to reflect on some of these achievements on these pages.



George S. Hawkins



Environmental Programs *continued*

its first green projects in public space, using vegetation, permeable (allowing water to run through it) pavement, downspout disconnections, rain barrels, and other green practices to absorb rainwater before it can enter the sewer system. These green infrastructure methods provide additional benefits such as restoring natural habitats, reducing urban heat, beautifying neighborhoods and providing sustainable local jobs.

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Water and Sewer System Improvements and Innovation

During Hawkins' tenure, DC Water has performed both water and sewer assessments. The results direct the Authority's capital improvement program, which has had a robust agenda. For one, Hawkins tripled the rate of water main replacements from one-third of a percent per year to one percent per year, and created a water system replacement fee to fund the program. Pumping station improvements, the first water tower since 1945 and a new pressure zone, are just a few of the infrastructure improvements over the last eight years.

DC Water has also used newer technologies to upgrade sewer lines at reduced cost and less disruption to residents. One method recently employed by DC Water is to clean out a sewer pipe and insert a liner that travels down the pipe and is cured in place to stick to the inside of the sewer. In contrast to the traditional method of digging up the sewer line to replace it, this method takes less time and leaves the ground far less disturbed.

LEAD PROGRAM

Since Hawkins arrived at DC Water, the Authority has built comprehensive programs to address lead in drinking water that

include lead service line replacement, free water testing, voluntary sample and data gathering for the EPA, filter distribution, and consistent community engagement.

DC Water monitors drinking water quality around the clock, including lead monitoring. DC Water's highest priority is protecting the health and safety of our customers and thus offers free lead test kits for District residents. Since 2010, DC Water has distributed more than 3,500 of these free test kits.

Additionally, DC Water provides residents with an interactive map to learn if their household is connected to a lead service line, and steps residents can take to mitigate their risk of exposure.

INNOVATION PROGRAM

While considering the dilemma of rising water and sewer rates, Hawkins recognized DC Water's great potential for creative solutions. This led to the formation of Blue Drop, a DC Water spinoff to generate revenue to help offset future rate increases. Blue Drop is bringing to market both intellectual property and products. One of the first ventures is Bloom™, a soil amendment created from the wastewater treatment process. DC Water holds numerous patents on processes and technologies and Blue Drop will continue to market these in relationships that benefit our ratepayers as well as smaller utilities who can't afford their own staffs of innovators.



DIGESTERS

DC Water harnessed leading-edge technology to build the first thermal hydrolysis facility in North America. The Bailey Bioenergy Facility on Blue Plains turns the solids left over at the end of the wastewater treatment process into electricity and steam. This project now produces close to one-third of the plant's energy needs and makes a high quality soil amendment to sell in the marketplace.

Looking ahead, DC Water is planning to incorporate solar panels over some of its open processes to even further reduce energy costs and the carbon footprint.

Innovative Financing

Financing these projects presents a challenge to keeping water and sewer rates affordable, so DC Water has led the way in innovative ways to fund large capital projects.

GREEN CENTURY BOND

DC Water's \$350 million bond deal in 2014 was the first municipal century bond (100-year final maturity) issued by a water and sewer utility in the US. In addition, it was the first "green" bond in the US debt capital markets to be certified by an independent second party opinion in accordance with the Green Bond Principles. A 100-year maturity made sense in this case since the Clean Rivers Project is designed to last a minimum of 100 years and it resolves a problem dating to the 1800s.

ENVIRONMENTAL IMPACT BOND

DC Water unveiled a creative financing instrument last year when it designed an Environmental Impact Bond, the first such offering in the United States. It is based on the social impact model that pays for success. In this case, the proceeds from the bond sale will be used to construct green infrastructure in the Rock Creek sewershed. These green practices mimic natural



processes that absorb stormwater during periods of heavy rainfall to protect DC's waterways.

This financing tool allows DC Water to pay for installing the green infrastructure, but the performance risk is shared amongst DC Water and the investors. As a result, payments on the bond may vary based on the proven and measured success. If the green practices underperform, the investors pay, which helps DC Water meet the costs of additional measures. If the green practices over-perform, DC Water pays an additional amount to the investors, a win-win since DC Water wouldn't need to undertake additional measures.



Communication and Public Education

Hawkins stressed that communication with customers is a high priority. He expanded the communications team to connect with the public more often and in more ways.

External Affairs improved relationships with traditional media to better inform the public and added Facebook, Twitter, Instagram, Snapchat, YouTube and other platforms. The expanded Outreach team supports more festivals, meetings, town halls and events

than ever before. This change was kick-started by a rebranding effort to raise the visibility of personnel, vehicles and our work throughout the District. The Authority is now more visible and inviting with a more informal nickname, DC Water, and a logo that is vibrant yet clean and approachable.

Further, the Authority added a new Visitor's Center with classroom and wall-sized educational displays to the Blue Plains

facility, while also expanding its tours and educational outreach.

In addition, Hawkins' passion, leadership and charisma quickly made an impact on the water sector and beyond. He is a go-to interviewee for the media and a keynote speaker on innovation, leadership and communication. The nation has faced water issues for decades, but he has inspired a new, national conversation.

For his dedication and service to the water sector, George Hawkins has received national recognition, including:

American Academy of Environmental Engineers and Scientists – George Hawkins was named 2017 Honorary Member of the Academy.

Water Environment Federation Public Official Award – Hawkins garnered the WEF Public Officials Award, one of the Federation's most prestigious honors.

GOVERNING Magazine named George Hawkins "Public Official of the Year." He was profiled in the December 2014 issue of the magazine alongside a governor, a

mayor and other public servants whose leadership and innovation stood out on a national scale.

DC Chamber of Commerce named Hawkins "Business Leader of the Year 2014" for his outstanding contributions that make Washington, DC a great place to do business.

American Water Works Association Hawkins received the George Warren Fuller Award from the Chesapeake section for "exceptional and extraordinary" service and leadership in the water sector.

2012 National Environmental Achievement Award for Outstanding Contributions to Environmental Protection and the Clean Water Community from the National Association of Clean Water Agencies

2010 Living Legend Award from Living Classrooms of the National Capital Region

2011 Environmental Leadership Award from The Alliance for the Chesapeake Bay



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