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Future Water Utility:

Wastewater is Not Waste

By Robert C. Brears*

DC Water has created Blue Drop, a nonprofit organization, to market products and services as well as provide ratepayer relief from tariff increases due to rising operating expenses, capital investments, and declining water consumption.

A key program of Blue Drop is Bloom, which is DC Water's brand name for its EPA certified Exceptional Quality biosolids product. After water is used in homes and businesses in the District of Columbia, and portions of adjacent counties in Virginia and Maryland, it is sent to DC Water's Blue Plains Advanced Wastewater Treatment Plant: A resource recovery facility. On average, Blue Plains treats nearly 300 million gallons of wastewater and can treat over 1 billion gallons a day at peak flow.

Rather than viewing wastewater as just waste, solid materials are separated from liquid and sent to DC Water's new state-of-the-art thermal hydrolysis process and anaerobic digesters. This equipment adds heat, pressure, and helpful bacteria to the solids to remove harmful pathogens and reduce odor. The output is Bloom, a biosolid product that can be used in any area, from large farms to backyard gardens and lawns. Currently, Fresh Bloom is on sale for \$3.50 per cubic meter. The product has been dewatered and contains around 30% solids and can be used to increase crop growth or even used on sporting fields.

The benefit of Bloom is that it helps capture carbon and prevents it from being released into the atmosphere. Biosolid applications also recycle nutrients like phosphorous and nitrogen back into the soil instead of releasing them into the Potomac River and Chesapeake Bay. The use of biosolids helps reduce carbon emissions and energy consumption in the production of chemical fertilizers, which most of the time use petroleum-based energy. Finally, to offset the costs to rate payers in providing water-related services, Bloom provides an additional revenue stream enabling DC Water to mitigate the impacts of rising tariffs on its customers.

The take-out

Water utilities can offer a variety of products including biosolids to provide rate relief.

*Robert C. Brears is the author of *Urban Water Security* (Wiley), *The Green Economy and the Water-Energy-Food Nexus* (Palgrave Macmillan), and of the forthcoming title *Blue and Green Cities* (Palgrave Macmillan). He is Founder of Mitidaption, which consults on climate change risks to business, governance, and society.

Other Articles

Tailor-Made Industrial Water

Water is a key component of local and national economies with the resource often a key input in a variety of industrial value chains. As industrial demand for water increases the sector needs to increase its water productivity. A failure to do so could lead to the loss or disappearance of jobs. To read more click: 

NYC's Water-Energy Carbon Nexus

The Paris Climate Agreement commits nations to limit global temperature rise to well below 2 degrees Celsius and to aspire to limit global temperature rise to 1.5 degrees Celsius. Read how New York City's Mayor has committed the city to limiting global temperature rise to 1.5 degrees Celsius: 

Book

Urban Water Security

In the 21st Century, the world will see an unprecedented migration of people moving from rural to urban areas. With global demand for water projected to outstrip supply in the coming decades, cities will likely face water insecurity as a result of climate change and the various impacts of urbanisation.

Traditionally, urban water managers have relied on large-scale, supply-side infrastructural projects to meet increased demands for water; however, these projects are environmentally, economically and politically costly.

Urban Water Security argues that cities need to transition from supply-side to demand-side management to achieve urban water security. This book provides readers with a series of in-depth case studies of leading developed cities, of differing climates, incomes and lifestyles from around the world, that have used demand management tools to modify the attitudes and behaviour of water users in an attempt to achieve urban water security.

