
Greening of the District: How Improved Cooperation with the Development Community Would Speed Sustainability

Amy L. Edwards and Aaron S. Heishman

The District of Columbia has become one of the “greenest” cities in the United States by implementing an array of environmentally progressive policies, from mandatory green building requirements to a fee on disposable plastic bags. While many jurisdictions view development as being at odds with the environment, the District’s development community has adapted to and even embraced these green initiatives. In fact, the District needs the development community to continue to be an active partner in these green efforts to achieve the city’s ambitious sustainability goals.

For the development community, the District’s three most relevant environmental initiatives are green building mandates, storm water retention requirements, and carbon neutral/renewable energy goals. Although regulatory agencies and the development community can achieve environmental progress only through a symbiotic relationship, at times the District’s bureaucratic structure and conflicting environmental goals significantly impede sustainable development projects. This article explores the development community’s challenges and highlights key areas where top District of Columbia officials’ bold sustainability goals conflict with one another or are hamstrung by regulatory agency staff’s failure to adapt their underlying programs to facilitate the city’s lofty sustainability goals.

Although Washington, D.C., is best known (architecturally) for its iconic national monuments and neoclassical government buildings, the most distinct design feature of newly constructed buildings is the innovative use of green roofs. The District has led the nation for five straight years as the municipality with the most green roof installations. As of May 2016, the District boasted over 2.7 million square feet of colorful herbaceous roof space. In addition to being pleasing to the eye, these new buildings also are certified under the U.S. Green Building Council’s (USGBC) Leadership in Energy and Environmental Design (LEED) program. The District is home to 1,684 LEED-certified buildings, of which 296 have earned Gold certifications and 72 are certified Platinum. In 2016 alone, 120 new buildings with 17 million square feet of space were LEED certified in the District. To recognize these efforts, the USGBC honored the District on August 31, 2017, as the first city in the world to receive the LEED for Cities Platinum certification. Similarly, the District has more buildings certified

under the U.S. Environmental Protection Agency’s (EPA) Energy Star program (790) than any other U.S. city and more than Boston, New York City, and Philadelphia combined, a feat for which the District has held the top spot in EPA’s Energy Star Top Cities ranking since 2015.

The prevalence of green roofs and LEED and Energy Star-certified buildings in the District can be traced back to the forward-thinking Green Building Act of 2006 enacted by the District’s city council. The Green Building Act applies to newly constructed or substantially improved buildings (defined as repairs, alterations, and additions that cost more than 50 percent of the building’s preimprovement market value) but excludes most detached residential dwellings. The act requires building projects over 10,000 square feet of gross floor area that are either District-owned or at least 15 percent District-financed to achieve at least 75 points on the Energy Star Target Finder Tool, the level necessary to earn Energy Star Certification. 12-K D.C. Code Mun. Regs. § 302. Additional requirements apply to District-owned buildings depending on their function. For example, developers must construct nonresidential buildings to achieve LEED Silver, and public schools must achieve LEED Gold standards. Privately owned development projects with over 50,000 square feet of gross floor area must achieve LEED standards at the Certified Level for nonresidential projects and for the mixed-use portion of residential projects. 12-K D.C. Code Mun. Regs. § 302. The Green Building Act’s impact cannot be understated. The District had only two LEED-certified buildings in 2004; by early 2017 the number had grown to 1,684.

Through the Green Building Act and the Clean and Affordable Energy Act of 2008, the District also requires District-owned buildings over 10,000 square feet and privately owned buildings over 50,000 square feet to benchmark and report annually their energy and water usage. While these buildings make up less than 2 percent of all District buildings, they account for almost half of the total floor area. The District is still struggling to ensure benchmarking reporting compliance and data accuracy, making robust year-to-year comparisons difficult, but preliminary analysis of the few years of available data shows that individual buildings are reducing their energy usage and the District’s building stock is becoming more efficient.

Sustainability DC Plan

In 2011, the District released its Sustainability DC Plan, an ambitious proposal with 32 sustainability goals—with numerous subparts—designed “to make the District the healthiest,

Ms. Edwards is a partner with Holland & Knight LLP in its Washington, D.C., office, where her practice focuses on brownfields redevelopment, storm water management, and other sustainability issues. She may be reached at amy.edwards@hklaw.com. Mr. Heishman is an associate in the same office and may be reached at aaron.heishman@hklaw.com.

greenest, and most livable city in the nation.” See www.sustainabledc.org. By 2032, the District aims to (1) reduce citywide energy usage and greenhouse gas emissions by 50 percent compared to a 2006 baseline; (2) source 50 percent of the city’s electricity from renewable sources, including 5 percent from solar installations in the District; (3) ensure that all new construction projects meet net-zero energy use standards; (4) increase the city’s tree canopy cover to 40 percent; (5) improve transportation infrastructure so public transit ridership accounts for 50 percent of all commuter trips and biking and walking make up 25 percent of all commuter trips; (6) ensure that 75 percent of the District’s landscape captures rainwater; and (7) reduce solid waste generation by 15 percent (in part through a \$.05 fee on disposable plastic bags and requirements that disposable food service containers be compostable or recyclable).

In 2011, the District released its Sustainability DC Plan, an ambitious proposal with 32 sustainability goals—with numerous subparts—designed “to make the District the healthiest, greenest, and most livable city in the nation.”

District construction and renovation developers must focus not only on minimizing buildings’ energy consumption, but also consider the destination of storm water that falls on the buildings’ exteriors. Because the District is situated between the Potomac and Anacostia Rivers and close to the Chesapeake Bay, EPA has long scrutinized its storm water discharges. A combined sewer system handles both storm water and sanitary wastes from approximately one-third of the District. During relatively dry conditions, the system conveys sanitary wastes and storm water to the Blue Plains wastewater treatment facility. During significant precipitation events, however, Blue Plains cannot process the large volume of combined storm water and sanitary wastes, and this mixture is discharged directly into nearby rivers without treatment through 53 combined-sewer overflow (CSO) outfalls.

After the District’s Water and Sewer Authority was targeted in lawsuits brought by a coalition of environmental citizen groups in 2000 and by EPA in 2002, the District entered a comprehensive consent decree in 2005 that required constructing, at a cost of \$2.6 billion, three large tunnels to capture storm water during heavy precipitation events to significantly curtail CSO overflows by 2025. The first of these, the Blue Plains Tunnel, was completed in 2016 and is over 24,000 feet long, 23 feet in diameter, and 120 feet underground. In 2016, the District and EPA modified the 2005 consent decree to provide the District five additional years

to address CSO discharges and to allow it to install green infrastructure (such as green roofs, grassy swales, rain barrels, permeable pavement, and increased tree cover) to reduce the volume of storm water entering the combined sewer system. The District anticipates that these green infrastructure projects will permit the second storm water tunnel to be smaller and may eliminate the need for the third tunnel.

Green infrastructure also plays a significant role in the District’s plan to reduce storm water discharges from the two-thirds of the city not part of the combined sewer system that is served by a Municipal Separate Storm Sewer System (MS4) and keeps storm water separate from sanitary wastes but still discharges it without treatment to local waterways. In 2011, the District and EPA agreed to a National Pollutant Discharge Elimination System (NPDES) permit for the District’s MS4 that was among the strictest in the country. The 2011 permit not only required the District to take steps to reduce and clean its storm water discharges through steps such as planting 4,150 new trees annually and increasing the frequency of street sweeping, but also required the District to adopt local storm water regulations. Among other things, these regulations required all new development projects disturbing a minimum of 5,000 square feet of land to be designed to retain on-site the first 1.2 inches of storm water from a 24-hour storm event (assuming the previous three days were dry). Repair, renovation, and alteration projects disturbing less than 5,000 feet of land but costing at least 50 percent of the structure’s preimprovement market value had to retain all storm water on-site. Later regulations adopted by the District limited the retention requirements for these substantial improvement projects to the first 0.8 inches of storm water.

To further increase storm water retention, the District in 2013 adopted Green Area Ratio (GAR) regulations that apply to all new buildings (or existing buildings with additions that exceed the assessed value of the original building) that need a District-issued certificate of occupancy. These buildings’ lots must have a minimum amount of pervious surface (such as green roofs, grass, or permeable pavement) depending on their size and use. For example, public recreation and community centers must contain at least 30 percent pervious surfaces. Most new commercial and multifamily buildings in the District must install green roofs to comply with the District’s storm water retention and GAR requirements, a reality that makes the installation of rooftop solar panels—and the District’s goal of generating 5 percent of the city’s electricity from local solar power—much more difficult.

While the District can directly implement green infrastructure projects on city-owned property, such as constructing bio-retention swales along public sidewalks and planting trees in road medians, storm water retention on private property, which makes up most of property in the city, can only be triggered when new construction or significant renovations take place. To incentivize existing commercial buildings and private residences to increase storm water retention voluntarily, the District launched an innovative storm water retention credit (SRC) trading program. Through this program, projects that voluntarily exceed storm water retention requirements, commit to maintain those improvements, and agree to be subject to periodic inspections can generate SRCs to sell to projects that cannot meet storm water retention requirements on-site. Projects can only purchase SRCs to make up for a storm water retention shortfall if the project meets at least 50 percent of

the retention requirements or can demonstrate that achieving the 50 percent threshold is technically infeasible or environmentally inappropriate. Since 2014, 68,900 SRCs have been purchased. Currently, 213,778 SRCs are available for sale with another 120,955 credits expected to be generated by projects under development.

Climate and Renewable Energy Plan

The third environmental initiative that impacts the development community is the District's climate and renewable energy plan. As part of its Sustainability DC Plan, the District aims to reduce greenhouse gas emissions by 50 percent and obtain 50 percent of its energy from renewable sources by 2032, including 5 percent from the installation of solar photovoltaic systems throughout the District. The District is off to a solid start. Since 2006, the city has reduced its carbon footprint by 24 percent and now obtains more than 13 percent of its electricity from renewable energy sources. Following President Trump's June 2017 announcement of his intention to withdraw the United States from the Paris Climate Agreement, Mayor Muriel Bowser signed an order reaffirming the District's commitment to the agreement.

To help property owners improve energy efficiency, the District started the DC Property Assessed Clean Energy (PACE) commercial financing program, through which a building owner can finance up to 100 percent of the cost of energy-efficiency improvements by attaching special tax assessments to the property that can be paid through property taxes for up to 20 years. Although cities across the country have used similar mechanisms to fund infrastructure improvements through special assessment districts, the District was the first to use this strategy to allow property owners to undertake innovative energy saving projects that have high up-front costs. The District recently provided \$25 million in PACE financing for the 20,000-seat Audi Field (home for the D.C. United soccer club), which will incorporate several green features.

The District is also using its position as an electricity consumer to meet its climate goals. Since 2012, the District has purchased sufficient Renewable Energy Certificates (RECs) to ensure that 100 percent of the local utilities' energy supply to the District can be deemed renewable. In 2015, the District entered into a 20-year power purchase agreement with Iberdola Renewables, LLC, that will supply 35 percent of the electricity consumed by the District city government through wind power projects.

The above sustainability initiatives demonstrate the District's environmental leadership. To succeed, however, these initiatives depend on robust private development community participation. After all, the primary mechanism by which the District can increase storm water retention, improve energy efficiency, and increase the generation of renewable power is to facilitate the process by which new buildings are built or existing buildings are renovated to current sustainability standards. At this stage, the local government programs that developers must use to construct environmentally friendly buildings often hinder the District's ambitious environmental goals.

Contaminated Property Development

Like all cities in the United States that measure their history in centuries, many areas of Washington, D.C., have a legacy

of soil and groundwater pollution from past commercial and light industrial operations, including dry cleaners, gas stations, and residential heating oil tanks. To facilitate contaminated property development by entities that are not responsible for the underlying contamination, the District has a Voluntary Remediation Action Program (VRAP) to address properties impacted by releases from leaking underground storage tanks (LUSTs) and a Voluntary Cleanup Program (VCP) for properties impacted by contaminants more broadly. Theoretically, these programs aim to encourage developers to purchase and develop contaminated property without fear of incurring liability for contamination that they did not cause and to which they did not contribute. Contaminated site development is a win-win situation for the District because the underlying contamination is assessed and cleaned up to the extent it poses a risk to human health or the environment. The new development also adds to the tax base and moves the city closer to achieving its storm water retention and energy-efficiency goals. Practically, however, the District's VRAP and VCP program administration can present significant redevelopment obstacles.

To help property owners improve energy efficiency, the District started the DC Property Assessed Clean Energy (PACE) commercial financing program, through which a building owner can finance up to 100 percent of the cost of energy-efficiency improvements by attaching special tax assessments to the property that can be paid through property taxes for up to 20 years.

The District's VCP program, as currently administered, is cumbersome and slow. In the 16 years since the program was enacted, only 15 sites have completed cleanups and received closure. Of the 34 sites currently enrolled in the VCP, many have languished in the program for more than a decade. Part of a developer's reluctance to use the VCP stems from the slow pace of the program, which gives the District's Department of Energy and Environment (DOEE) 90 business days (a time frame that typically exceeds 130 calendar days, depending on the number of weekends and holidays) to accept or

The District has also failed to promulgate necessary statutory changes and financial incentives that would make the VCP more predictable and attractive to developers. When the city council established the VCP in 2001, it granted the mayor authority to award grants, loans, and property tax reductions to incentivize the cleanup and redevelopment of contaminated properties, but the city council has never provided funding for these programs.

deny the application, 90 more business days to accept or deny the cleanup action plan, and 30 business days (typically 40 to 45 calendar days) to approve the certificate of completion. Each of these agency review periods also includes a 21-day public notice-and-comment period. In the rare event that the agency receives substantive public comments, the agency often exceeds its already lengthy statutory review periods. D.C. Code § 8-633.01, *et seq.* The practical effect of the VCP time lines, and the tendency of DOEE to take the full time allotted to the agency at each stage of review, is that a VCP application submitted in July of 2017 might receive a certificate of completion under a best-case scenario in October 2018. Under a more likely scenario where the agency takes more than the time allowed to review submitted materials, requests additional information, or rejects a submission, an application submitted in July 2017 might not receive a certificate of completion until January 2019. Because it is inadvisable to begin constructing a building until DOEE certifies that no additional remediation is necessary, this delay is on top of the time required to construct the building and is unworkable for a typical development project that is susceptible to changes in market forces.

The District has also failed to promulgate necessary statutory changes and financial incentives that would make the VCP more predictable and attractive to developers. When the city council established the VCP in 2001, it granted the mayor authority to award grants, loans, and property tax reductions to incentivize the cleanup and redevelopment of contaminated properties, but the city council has never provided funding for these programs. D.C. Code § 8-637.01, *et seq.* The

city council also required DOEE to publish cleanup standards for VCP properties within 180 days of the program's effective date. Sixteen years later, the VCP still lacks published cleanup standards and instead relies on ad hoc standards for individual projects. Although DOEE convened a stakeholder group to discuss improvements to the VCP in 2013, the modest consensus reforms agreed to by the group have not yet been introduced to the DC Council for adoption, and the VCP still lacks clear cleanup standards. The absence of VCP regulations makes the entire process more uncertain and subject to regulators' whims. For example, it is not uncommon for DOEE to demand that a VCP application include a "current" Phase II report (i.e., one that is no more than six months old), even though there is no regulatory requirement for such a report and even if no activities have occurred on the site since the prior Phase II data was collected.

Even sampling in the District can turn into an expensive and protracted affair. In the fall of 2016, DOEE finalized regulations, found at 21 DCMR § 1800, *et seq.*, requiring companies to obtain well construction building permits for all soil borings, construction dewatering wells, and groundwater monitoring wells that are not closed within five days or are deeper than ten feet, adding substantial due diligence costs and delays. When DOEE first began demanding these permits, it frequently took up to a month to get a permit, which presented significant delays for companies conducting routine due diligence as part of real estate acquisitions. Developers now generally can obtain a well permit in one to two weeks, but the process is still more involved than what is required in most neighboring jurisdictions. Similarly, a developer recently submitted a work plan to DOEE seeking permission to dewater a site. A Phase I and Phase II report conducted at the site had found no known contamination. Nevertheless, DOEE required the developer to drill dozens of groundwater monitoring wells throughout the property, use expensive steel well casings, and have the well casings removed at the end of dewatering activities. These unexpected dewatering requirements added hundreds of thousands of dollars to the project's cost and forced the developer to abandon its plans to incorporate an innovative co-generation power feature into the project.

While the District's VRAP for petroleum contamination from underground storage tanks (USTs) typically has been easier to navigate than the VCP, well-intentioned developers can still face unexpected liabilities if they stumble upon an abandoned UST during site development. Unlike UST laws in most states—including the neighboring jurisdictions of Virginia and Maryland—that do not consider entities that neither owned nor operated a leaking UST to be a "responsible party" liable for cleanup, the District's Underground Storage Tank Management Act states that where the owner or operator of a leaking UST cannot be located or is insolvent, the owner of the real property is deemed to be a responsible party. D.C. Code § 8-113.01(9)(A)(v). Under this regime, a well-intentioned developer who buys a property for redevelopment after conducting "all appropriate inquiry"—i.e., routine due diligence that does not indicate the presence of any abandoned USTs or petroleum contamination—may be held responsible, upon discovering an orphan tank during development, for remediating any contamination from the UST, including pollutants that migrated onto other property. In such situations, an innocent purchaser of a property with an orphan tank

cannot count on assistance from the District, which has failed to fund its Underground Storage Tank Trust Fund (20 DCMR § 6400, *et seq.*) or Clean Land Fund (D.C. Code § 8-633.08), both of which were intended to be used to remediate contaminated properties when no financially viable responsible party could be found. If the District continues to insist that innocent purchasers of properties remediate releases from orphan USTs, prospective purchasers may need to expand their due diligence searches to include an examination of the financial solvency of former owners and operators of USTs on and near the property they intend to acquire, which will create a significant disincentive to redevelopment on properties for which no financially viable former owner or operator exists.

The risk of a developer having to clean up contamination caused by third parties on property owned by third parties is exacerbated by DOEE's current misunderstanding of the fundamental principles of risk-based corrective action (RBCA), which should require remediation only to the extent that there are complete exposure pathways that need to be closed to protect human health and the environment. RBCA acknowledges the economic wastefulness of requiring a developer to remediate a site being redeveloped for use as a commercial parking lot as if the site were destined to be used as a day care facility. In situations where petroleum contamination extends to an off-site property that is zoned residential, however, DOEE may prefer that the adjacent parcel be cleaned up to residential standards, even if the property is currently being used for commercial purposes and surrounding land-use patterns make it highly unlikely that the property will be used for residential purposes in the reasonably anticipated future.

Finally, the District development community faces the burden of disposing of groundwater during building construction or from underground building sumps that is impacted by pollutants that have migrated from nearby properties or that occur naturally in the District. The discharge of such groundwater can be permitted under EPA's 2015 Multi-Sector General Permit (MSGP) for Stormwater Discharges Associated with Industrial Activity if the contaminants do not exceed benchmark pollutant levels. For years, however, DOEE has imposed additional, burdensome requirements onto discharges into the District's MS4 pursuant to the MSGP. DOEE's additional requirements have been based at times on informal guidance documents and at other times come in the form of unwritten policies that are applied on a case-by-case basis. Generally, however, DOEE has insisted that all discharges into its MS4 meet its surface water quality standards, which in many instances are more stringent than drinking water standards and can be exceeded by naturally occurring background levels of metals, such as arsenic. The legal uncertainty surrounding the ability to dewater sites during construction and postconstruction from building sumps has caused developers to (1) incur costly construction delays, (2) overengineer their buildings so water treatment systems can be installed or upgraded as necessary, (3) use trucks to transport sump water to off-site disposal facilities at great expense, or (4) bathtub buildings at substantial cost to prevent groundwater infiltration. These added delays and expenses, which developers do not typically encounter a short distance away in Virginia or Maryland, serve as a significant

impediment to development in the District that in turn impede the ability of the District to meet its lofty sustainability goals that only can be achieved by upgrading its building stock.

The next phase of the District's Sustainability DC Plan should focus inward, in partnership with the development community, to ensure that the city is doing everything possible to guarantee that innovative buildings that retain storm water and are energy efficient (or energy producing) continue to replace older building stock as quickly and inexpensively as possible.

Persevere to Achieve Ambitious Targets

The District deserves substantial credit for setting ambitious sustainability targets and for taking strong strides toward achieving them. As is often the case in the environmental arena, early progress is relatively cheap and easy but quickly evolves into more expensive solutions that achieve diminishing returns. The local real estate market has remained strong for the past several years; despite the extra delays and costs that are often imposed by the District, most projects have ultimately been built, although perhaps in a less environmentally ambitious form. As the inscription on the National Archives Building in the District instructs, however, "*What is past is prologue.*" Between now and the Sustainable DC Plan's 2032 deadline, the time will certainly come when an extra \$200,000 in unnecessary sampling costs, or a year-and-a-half delay because of the slow-moving VCP, or the cost of a water treatment system to treat naturally occurring background metals may mean that a proposed development project gets left on the drawing room floor. For this reason, the next phase of the District's Sustainability DC Plan should focus inward, in partnership with the development community, to ensure that the city is doing everything possible to guarantee that innovative buildings that retain storm water and are energy efficient (or energy producing) continue to replace older building stock as quickly and inexpensively as possible. 🌱