



Danita Delimont/Getty Images [A]

Washington D.C. **UNITED STATES**

2020 Exploring Urban Resilience Pathways



International Master
City Resilience
Design and Management

UIC
barcelona

About the report and the collection

Exploring Urban Resilience Pathways

This report is part of a collection wishing to provide a global overview about different cities' experience in resilience, and how this is evolving. The series is titled "Exploring Urban Resilience Pathways" and each report is prepared by one student of the Int. Msc. City Resilience Design and Management (URNet-UIC Barcelona) during the first semester, as a learning outcome of the acquired analytical skills - to find, understand, organize and communicate different perspectives, approaches and models of urban resilience implementation in a determined city.

The aim of each report is thus offering an easy-to-read overview, about how adaptive capacities have been evolving in a selected city, as set of mechanisms to respond through governance, plans, projects or communities-led initiatives to overlapping shocks and stresses within its recent history. Nowadays current City Resilience Strategies – launched and supported by the Rockefeller 100RC program – are included within these analyses, representing the ultimate trend of understanding, and implementing city resilience.

What is interesting to learn from this series of reports, is that each of them critically discusses how cities managed adaptive responses to different treats in the past, and how the concept of resilience entered city agenda, discourses and plans, making explicit what (and if) resilience brought to city policies and practices. Thus, the relationship between past and present adaptive capacities, between resilience and sustainability, and between city resilience and community resilience are critically discussed.

Although the scope of these reports is ambitious, and the analysis leading to each report results complex, the presentation has been designed to be easy to read and accessible to the general public. Each report of this collection maintains a standard structure, facilitating the reading and the reports and cities comparison.

Hope this initiative contributes to spread the understanding about how resilience is framed and implemented in many cities across the globe.

Lorenzo Chelleri, Ph.D., Director of the International Master Degree City Resilience Design and Management

Washington D.C. U.S.A

2020 Exploring Urban Resilience Pathways

SUMMARY

This report presents an analysis of Washington D.C.'s resilience strategy by taking a look back to previous federal and local policies which have had an impact on how the capitol city has responded to past climate, flooding, and social related shocks and stresses.

While many of the flood prevention policies and strategies put in place have alleviated some flooding stresses, other policies e.g. neighborhood and city-wide improvement plans, redlining and infrastructure investments have had a hand in creating a social disaster which has had impact on the African American majority living in D.C. These policies continue to leave a legacy of heightened vulnerability today for the African American population in Washington D.C. in a time of already enhanced climate, social, economic, and terrorism related shocks and stresses.

Similarly, sustainability plans, Sustainable D.C. 1.0 and 2.0, the first comprehensive plan of plans, claimed to address climate, economic, and social justice issues. While money poured into the strengthening of the local infrastructure to withstand climate and economic related stresses the plans would continue to opt to displace the African American residents pushing them to fringes of the city as new "green" and "sustainable" building projects would be constructed where historically African American neighborhoods once stood. City policies, or a lack thereof, would drive the cost of living in Washington D.C. to unobtainable levels for most low to medium income earning residents, once again opting to displace rather than invest in its own citizens.

The Rockefeller 100 Resilient Cities Plan (RCP), launched March of 2019, is the most recent proposal. Similar to the Sustainable D.C. plans the 100 RCP is a comprehensive plan of plans designed to address vulnerabilities to shocks and stresses. However, unlike the Sustainable D.C. plan which focuses on resilience of the city to withstand climate related shocks and stresses the 100 RCP marks a noticeable shift in the focus of the city to improve the capacity of Washington D.C. residents, businesses and systems to survive, respond and thrive to any acute shock or stress.

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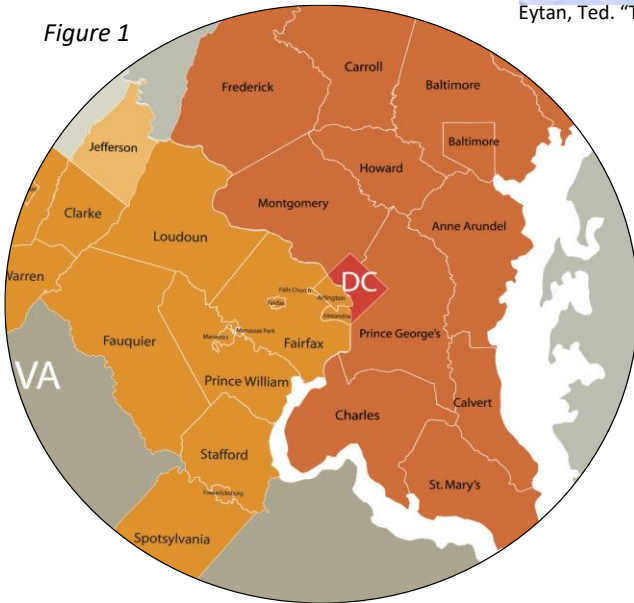


THE CITY: Washington D.C.



Eytan, Ted. "The Rainbow Architecture of Adams Morgan." [D]

Figure 1



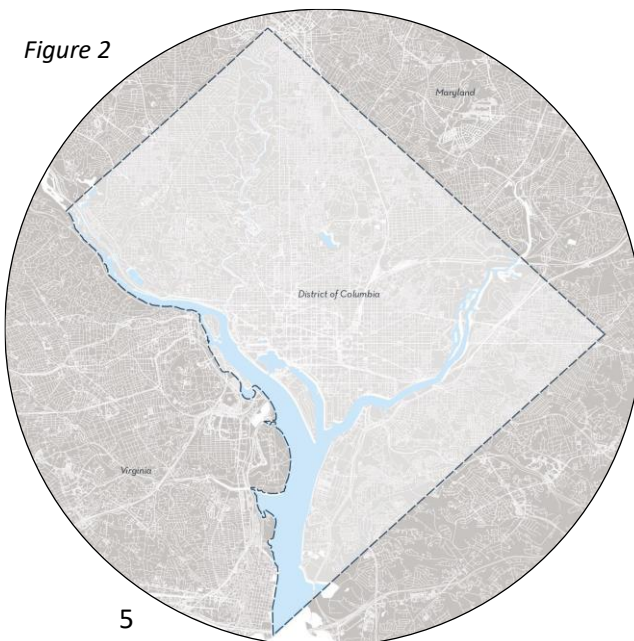
Washington D.C. is the federal capital city of the United States of America. Geographically it is located at the confluence of the Potomac and Anacostia rivers feeding directly into the Chesapeake Bay. The capital sits in-between the Borders of Maryland to the North and East, (orange) and Virginia to the South and West (yellow) on the East Coast of the United States, *fig 1*.

FOUNDING HISTORY:

The capital district was founded in the year 1790 just seven years after the American Revolution for independence from Great Britain had ended. The location of the federal district was agreed upon to sit in-between the large cities and free economies of the Northern States, Philadelphia, Boston, and New York City and the slave holding interests and economy of the plantations in the Southern States. [1]

The 1800's were a tumultuous time for the District. British troops during the war of 1812 razed the newly founded capital which later had to be rebuilt. The District would find itself torn in two during the Civil war, 1861-1865. Sitting just South of the Mason-Dixon line, a geopolitical

Figure 2



boundary separating the Northern “freed” states from the Southern slave-holding States during the Civil war, the district found itself not only ideologically separated but also geographically separated from the Northern States it represented.

In 1862, then president, Abraham Lincoln ordered the emancipation of African-American slaves within the district. This order resulted in the migration of thousands of slaves from neighboring Southern states who were now free to settle in Washington D.C. as “freedmen.” This migration would change the demographics of Washington D.C. from that as a minority “black” city in 1800 representing 25% of the population [2] to a majority “black” city by 1970 as African Americans would make up 71% of the total population. In 2015 that percentage fell to 48% African American, still the majority although in decline due to redevelopment efforts and gentrification. [3]

ECONOMY:

The Washington D.C. metro area is the 6th largest city economy in the United States and is ranked as a top ten global financial center [4]. Its top three sectors are professional and business related services, the federal government and education and healthcare, *figure 3* [5]. In addition to playing host to the federal government Washington D.C. is also considered an international city, hosting 180 foreign embassies and 400 international associations and organizations, for example the International Monetary Fund, The World Bank, and the D.C. China center [4].

The District also belongs to the Northeast Megaregion, what is considered to be the most populous and economically productive in the world, and is one of five major metropolises that comprise this region: Boston, New York City, Philadelphia, Baltimore and Washington D.C. [6]

GOVERNANCE:

It is important to understand the governance of Washington D.C. Not only does it function as a city but the district government functions similarly as a county and state government. Until 1973 D.C. was governed by the President of the United States and Congress. The District of Columbia Home Rule Act of 1973 was passed by D.C. Citizens. The bill dissolved some of the congressional powers and reissued them to the local government. The Mayor of Washington D.C. does not have the full authority as other city mayors do and Congress still retains certain critical authorities. [7, pg. 12]

Figure 3

Washington area employment (number in thousands)	Feb. 2020	Change from Feb. 2019 to Feb. 2020	
		Number	Percent
Total nonfarm	3,361.3	55.6	1.7
Mining, logging, and construction	163.0	3.6	2.3
Manufacturing	58.7	2.8	5.0
Trade, transportation, and utilities	404.2	4.0	1.0
Information	78.2	2.3	3.0
Financial activities	162.5	3.6	2.3
Professional and business services	785.4	20.0	2.6
Education and health services	451.7	0.5	0.1
Leisure and hospitality	330.3	7.6	2.4
Other services	210.9	2.6	1.2
Government	716.4	8.6	1.2

Source: U.S. BLS, Current Employment Statistics.



Naval Historical Center Photograph. "The Washington Navy Yard during the 1936 Potomac River Flood." [E]

Washington D.C. Shocks and Stresses

"Shocks are sudden, acute disasters, like storms, floods, heatwaves, or cyberattacks. These also include economic crises, like a government shutdown or relocation of a major employer. Stresses, on the other hand, are the slow-burning disasters that weaken our city every day, and also magnify the impact of shocks. These include the everyday impacts of poverty, trauma, and stressed transportation systems. [7, p.6]"



Samenow, Jason. "Remembering 2010's Snowmageddon in 10 Images and Scenes." [F]



Rudisill, Cedric H. "U.S. Department of Defense." [G]



Underwood Archives. "The Washington Post." [H]

Timeline of Major Shocks



Washington D.C.

Adapting to the Rivers

Sitting at the confluence of the Potomac and Anacostia Rivers the geographic location of Washington D.C. leaves it prone to both pluvial and fluvial flooding. The city plan that was laid out by L'Enfant in the late 1700's filled in a large portion of the National Mall that was naturally underwater *fig 4*

Overtime three waterways and their streams that originally drained the city would be filled in and paved over [8, 9, pg. 33]. As with any city, the impermeable surface area increased as rapidly as development which has increased the city's

susceptibility to flooding. Adding to the problems, the city has a mixed sewer system of both combined, shared drainage and sewer, and separated drainage and sewer lines [10, pg. 6-8] which, up to the completion of the Blue Plains Tunnel Project, a 13 mile long underground network of tunnels at the cost of 2.6 billion dollars, to be finished by 2030 leaves the city unable to effectively manage heavy rainfall events [10, pg. 6-10].

Figure 4

LAND AREA IN 1818 AND LAND AREA TODAYTM

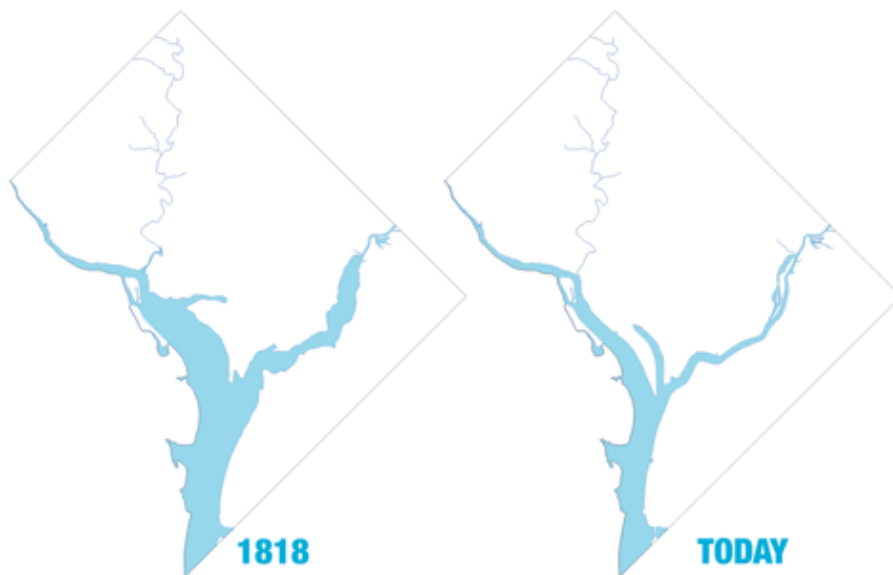
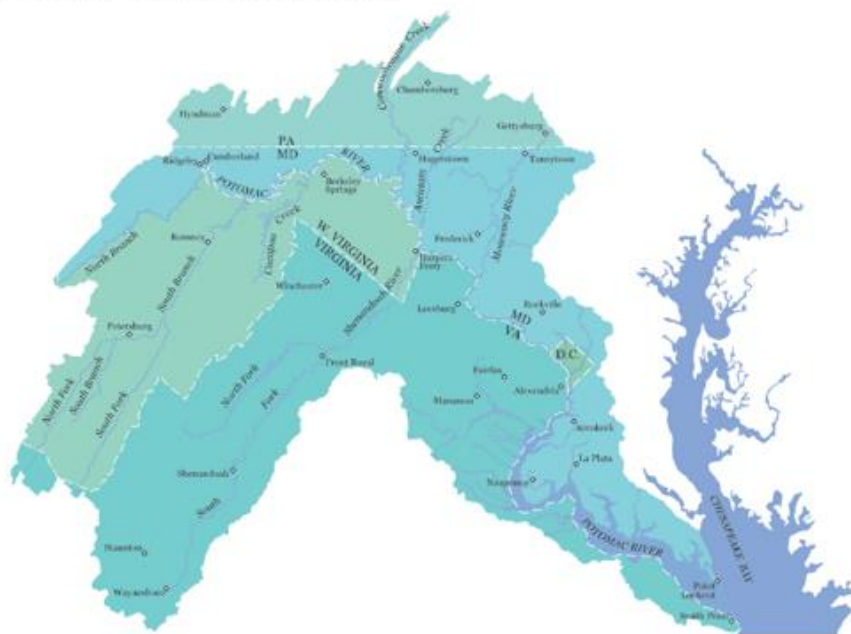


Figure 5

Potomac River Watershed



The Potomac River Watershed, *figure 5* is the main source for a majority of Washington D.C. floods. It covers a large area west of the capital city that extends up into the Appalachian and Blue Ridge Mountain Ranges and often rises during the spring as the snow begins to melt. The Great Potomac Flood of 1936 was one such flood



1936 Flood Control Act

1972 EPA Clean Water Act

"Establishes the basic structure for regulating discharges of pollutants into the waters of the United States and Regulating quality standards for surface waters [13].

2005 Clean Rivers Project

The DC Water Authorities ongoing program to reduce combined sewer overflows (CSO's) into the District's waterways [10]

2006 Federal Triangle Stormwater Drainage Study

Examined "how the existing sewer system performed during the 2006 Flood and identify and evaluate potential improvements to the sewer system to reduce the risk of flooding" [9].

2011 Sustainable D.C. v.1.0

The first Climate Change "mitigation and adaptation" plan in the district. Which sought to make the city one of the "greenest" in North America ultimately to attract new businesses, residents, and investors [15].

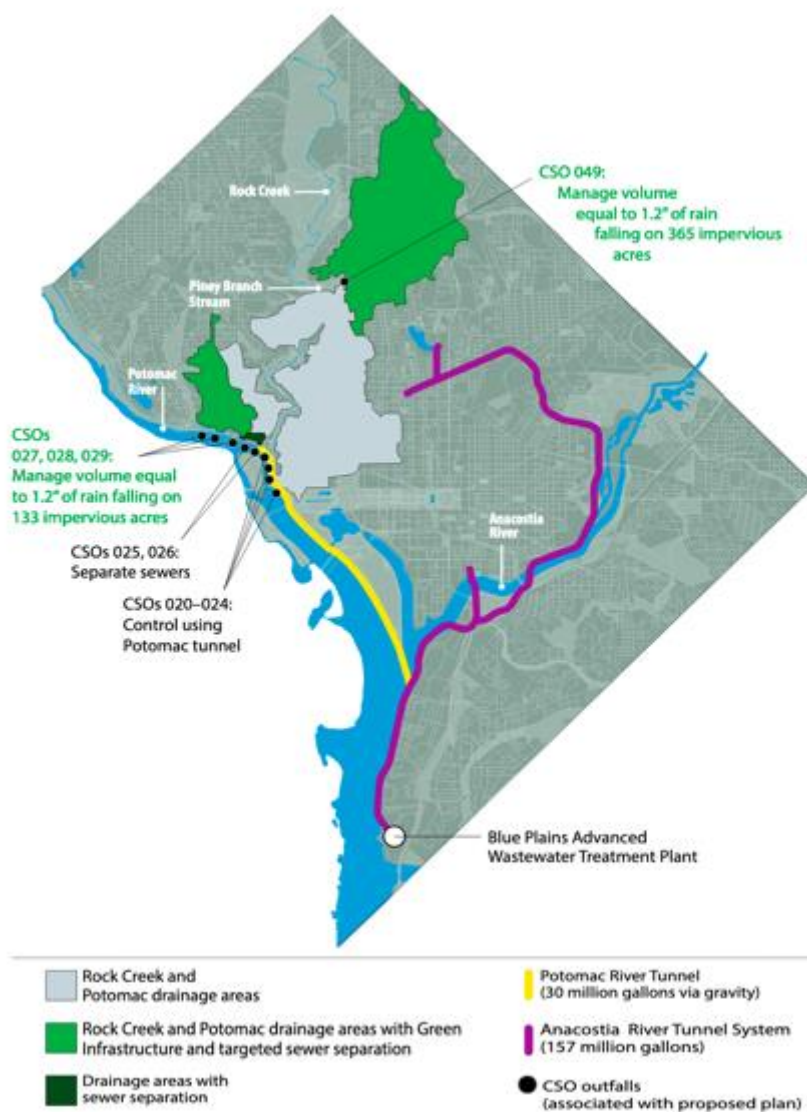
2016 Climate Ready D.C.

The strategy, developed with the department of energy, behind the Sustainable D.C. plan that ensures the city continues to grow while addressing resilience challenges [14]

The first efforts to control flooding occurred after the flood of 1936 in which a heavy rainfall event to the west of the city, within the Potomac River watershed, melted the winter snowpack and contributed to the second largest flood in the city's written history. The event triggered the passage of the 1936 Flood Control Act wherein congress approved the funding of dams, levees, and reservoirs to prevent flooding in vulnerable areas nationwide. Their funding paved the way for the construction of a levee in Washington D.C. to prevent flooding in the capital. [11]

After a series of floods and hurricanes hit the nation in the 1960's a number of bills and an executive order; The National Flood Insurance Act of 1968 [12, pg.12], National Environmental Policy Act of 1969 [12, pg.14] and The Flood Disaster Protection act of 1973 [12, pg.18-19] and the Floodplain management executive order of 1977 [12, pg.25], would begin to lay the foundation for flood defense in the country and in Washington D.C. The bills provided insurance for homeowners, businesses and the federal government for buildings already constructed in vulnerable floodplains, required environmental risk assessments to be conducted for all federal buildings and properties and forbade the new construction on and improvement to of any federal property if it was in a flood plain.

In 2005, nearly 30 years after the launching of the EPA Clean water act, the City launched its Clean Rivers Project. The specific aim of the project is to reduce the number of combined sewer overflows into the Potomac and Anacostia river systems due to high rainfall events fig 6. The Federal Triangle flood of 2006 would further highlight the need of a flood mitigation solution as the resulting report discovered the synergy between the inability to properly store rainwater runoff and wastewater and the increased flooding risk [9]. The Clean Rivers Project is a hybrid attempt to reduce the inflow rate of rainwater runoff into the system while simultaneously increasing the rainwater treatment capacity of the city by utilizing both soft and hard infrastructure solutions. Some of the soft solutions include rainwater barrel rebates offered to residents living in areas with a combined sewer system. Residents with rain barrels are allowed to use the collected water to flush toilets and water lawns. Locations along pedestrian rights of way were identified for the creation of water retention ponds. Rebates of \$10-\$15 per sq./ft. were also issued to D.C. homeowners who wished to install a green roof in targeted neighborhoods. The hard infrastructure improvement is the



ongoing construction of a 21km (2005-2025) long tunnel network capturing and delivering combined rainwater runoff and sewage from the district to the Blue Plains Advanced Wastewater Treatment Plant (BPAWTP). Up to 2005 it was common for the district to discharge the combined sewer overflow into the Anacostia and Potomac River. The BPAWTP treatment plant capable of processing 1 billion gallons of water a day during peak flow rates fig.6 [10].

In 2011 the city drafted its first sustainability plan, Sustainable D.C. 1.0. The plan provides a continuation of the Clean Rivers Act and lays out its intentions to protect and enhance natural barriers to avoid the expensive cost of constructing additional levees. The plan highlights the overarching need to help the Anacostia River to become safe enough to swim in. Targeted actions include increasing and restoring the acreage of wetlands along the Anacostia river by 50% from 280 to 420 acres in the year 2032 and with it to aid in the return of native

fish and bird populations. Updated building code requirements would ensure developers along the Anacostia Riverfront would require builders to include green infrastructure systems and the use of native plant species as part of an environmental stormwater management plan [15, pg. 72-78]. The plan would further highlight the need to increase green roof coverage in the district by 2 million square feet in the year 2032 to assist rainwater retention measures and for the first time look for a decentralized measure to capture rainwater [15, pg. 96-103]



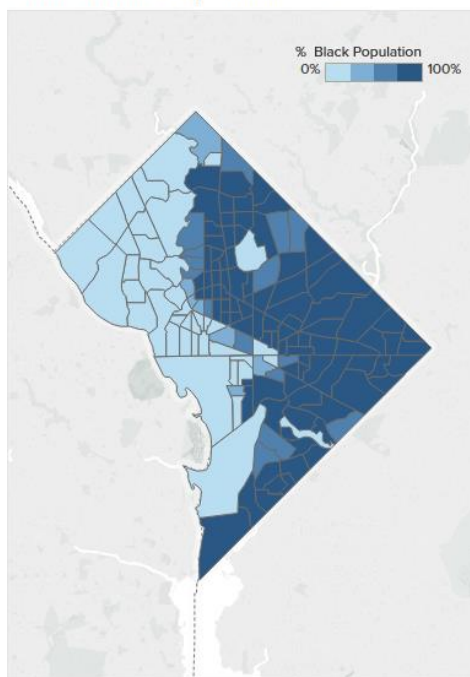
Washington D.C. Persistant Racial Inequality

Washington D.C. is known to be one of the most progressive cities in the United States when it comes to creating pathways for racial equality. Before its status as a free city D.C. was one of the largest slave trading cities on the East coast of the U.S. Then President Abraham Lincoln ended the practice of slavery in 1862 within D.C., months before he did the same for the United States at the end of the Civil War. The D.C. Compensated Emancipation Act (CEA) granted African Americans their freedom and compensating them and their “masters.” The passing of the CEA lead to a rise in the African American Population and within just a few years Washington D.C. had the largest percentage of African Americans than any other U.S. city. Many were attracted the opportunities the city provided from education to employment. The journey towards equality from the passing of the act in 1862 to today is far from over in the city as some of the most impoverished wards in Washington D.C. are those that are predominately African American [16].

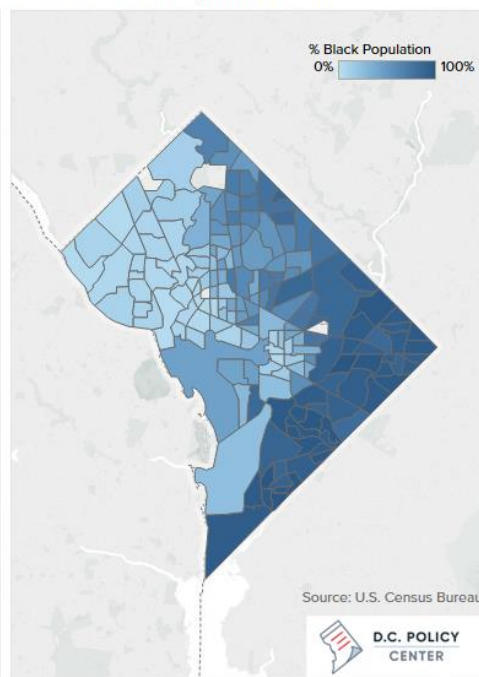
Rampant racism, legalized segregation, Jim Crow Laws and urban renewal policies dating as far back as the 1920’s would contribute to the forced relocation of 99% of African American families from neighborhoods in the Southeast, Northeast, and Northwest portions of the city to undeveloped and underinvested areas in the southwest along the polluted Anacostia River fig. 7[3].

Figure 7

Percent Black Population 1970



Percent Black Population 2015



Source: U.S. Census Bureau

1862
D.C.
Compensated
Emancipation Act

President Abraham Lincoln signs the D.C. Compensated Emancipation Act formally ending slavery in Washington D.C. [16]

1950
D.C.
Redevelopment
act

Urban Renewal act for the purpose of redeveloping dilapidated property into improved city districts [17].

2003
Ten Strategies for
a Stronger
Washington.

[19].

2011
Sustainable D.C.
1.0

D.C.’s first sustainable policy which seeks to make district wide green investments while failing to providing safeguards secure housing within the most impoverished communities [15].

2012
One City Action
plan

[20].

2015
D.C. Housing
preservation strike
force

Project initiated to create and preserve affordable housing for Washington D.C.’s most vulnerable residents. [18]



Aerial view of Southwest D.C. from 1949 [1].



Aerial view of Southwest D.C. from 1963 the neighborhood eradicated under the redevelopment act for a highway [1].



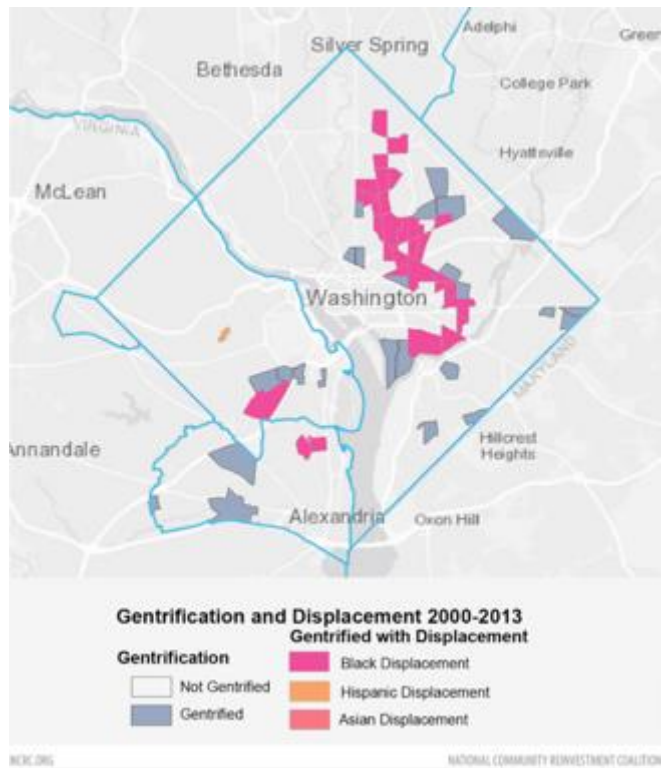
Aerial view of Southwest D.C. from 1973 at the completion of the "Towers in the Park" redevelopment project [1].

The District of Columbia Redevelopment Act would further contribute to the Displacement of African American families, [17] up to 2016 when the current mayor, Muriel Bowser, would cancel the last two urban renewal plans drafted early in the 1960's. In 2003 The "Ten Strategies for a Stronger Washington Plan" continued the trend of displacement. Eight majority African American neighborhoods would yet again be targeted for "coordinated commercial, housing and capital investments" as years of disinvestment [19] by the government and private sector would leave these areas in a dilapidated state and ripe for investments that the long-term residents wouldn't be able to enjoy.

Similarly, sustainability plans like the Clean Rivers Act of 2005 and the Sustainable D.C. 1.0 plan would disproportionately and negatively impact African Americans living along these once polluted and undesirable rivers. Both plans advocated for the clean-up of and investments made to infrastructure along the rivers but failed to provide safeguard measures to protect the vulnerable communities living there. The cleaning and greening of Washington D.C. would attract lucrative economic investments that would drive the cheap purchases of homes and plots of land owned by African American families to then be converted into mixed income transit-oriented development style projects mostly unaffordable to the areas long-time and low-income residents [22, 23].

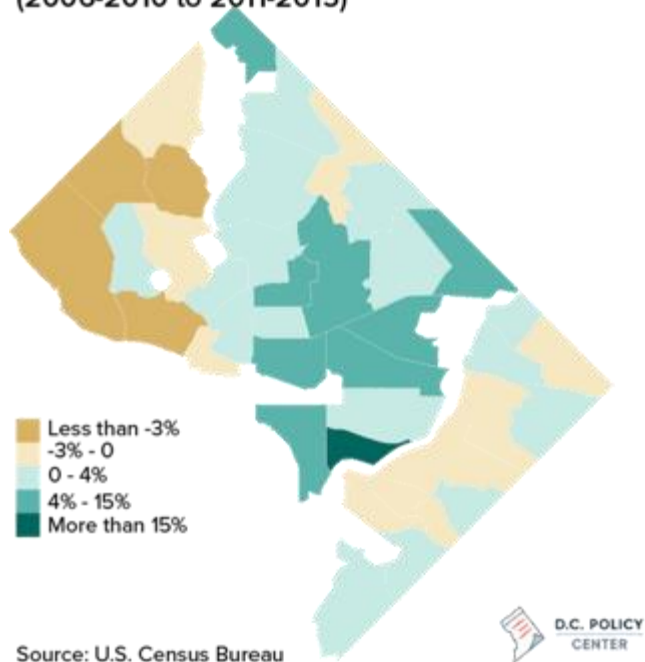
The city's first sustainability plan, launched in 2011, acknowledges the disparity in wealth, health and education funding, access to grocery stores and access to public transportation of the majority African communities living in Wards 5, 7 and 8 and supports the ongoing plans to make improvements to these wards; Anacostia Waterfront Initiative [24], Anacostia Transit-Area [25] The Yards [26], a brand new mix use planned community to offer 3400 housing units, only 54 of which were to be made available to low income families. However, the sustainability plan and likewise, the urban redevelopment plans continue to lack any attempt to assist African Americans living in those wards to protect their rents, homes, and communities from being turned into something they cannot afford and instead exacerbated the conditions for African Americans living in D.C.

Figure 8



The effect of redevelopment policies in Washington D.C. had the impact of displacing over 20,000 majority African Americans during the years 2000-2013 alone.

Figure 9
Change in Proportion of White Residents
(2006-2010 to 2011-2015)



Source: U.S. Census Bureau



After the release of the Sustainable D.C. 1.0 plan Mayor Vince Grey released The one city action plan (OCAP) which was developed to modernize the current economic market by driving investments to lure in technology sector jobs, improve the wi-fi network, and develop neighborhood urbanization projects that incorporate mix use planning to create more retail space for local business owners [20]. The Fiver Year Economic Development Strategy (FYEDS) was a \$17 billion investment towards creating developments to generate an additional \$1 billion in new yearly tax revenue [21 pg. 3]. In line with the OCAP the FYEDS had several visions to improve the economy in D.C. geared largely towards the technology, retail and development sectors and creates pathways to be “the largest technology center on the East Coast” [21 pg. 14]. Other goals include becoming the top destination for businesses in the nation and to “become the top North American destination for international business.”

It wouldn’t be until 2015 that now current Mayor, Muriel Bowser, would take the first steps in an attempt to quell the looming housing and displacement disaster with the launch of the D.C. Housing Preservation Strike Force. The plan would be the first of a few taking the first steps to reverse policies that had adversely affected the African American population, in an attempt to preserve low income housing from being purchased by developers, and set aside funding for the refurbishment and creation of new low-income housing units.

Washington D.C.

Defining Resilience

The Rockefeller 100 Resilient Cities Plan (RCP) was officially launched in Washington D.C. on April 29, 2019. Similar to the sustainability plans that preceded it the 100 RCP is a comprehensive plan of 11 total District plans. The 100 RCP is divided into two overarching categories titled “Resilient Rivers” and “Equity in Governance,” and lists four main goals the city is to focus on; Inclusive Growth, Climate action, Smarter D.C. and Safe and Healthy Washingtonians. For the first time since resilience was mentioned in 2011, with the Sustainable D.C. 1.0 plan, resilience was clearly defined...

“Urban resilience is the capacity of individuals, communities, institutions, businesses, and systems within a city to survive, adapt, and thrive no matter what kinds of chronic stresses and acute shocks they experience.” [7, pg.8]

The definition marks a notable shift in how the city has perceived resilience in the past especially when asking the question for whom and by whom. Earlier plans focused on the sustainability and the capability of the city to withstand climactic shocks and stresses. This focus of the city on the city meant that Washington D.C. would be making improvements, in the name of sustainability, to increase its tax revenues, attractiveness to both domestic and foreign property developers and investors, and to lure the domestic technology sector to make Washington D.C. its cyber security hub. It used the Sustainability 1.0 plan, among others to improve the desirability of dilapidated neighborhoods along a dirty and polluted Anacostia River ignoring the needs of its inhabitants.

As it was expressed by Malini Ranganathan and Eve Bratman in their article titled *From Urban Resilience to Abolitionist Climate Justice in Washington, D.C.*,

“Resilience” is proposed by experts as a solution to climate change vulnerability. But this prescription tends to focus on adaptation to future external threats, subtly validating embedded processes of racial capitalism that have historically dehumanized and endangered residents and their environments in the first place” [27].

In May of 2018 the District hosted an event open to all stakeholders living along the Anacostia River; The Anacostia Waterfront Trust, Resilient D.C., the Urban Waters Federal Partnership, local residents and business owners. Keynote speakers delivered speeches that argued the best way to prevent the gentrification of Washington D.C.’s at risk neighborhoods was to keep the money and development local, meaning developers from the neighborhood working for the neighborhood in the best interest in the neighborhood. One Speaker, Majora Carter, argued that the even the creation of more affordable housing units, “perpetuates a transient, landless class.” She goes on further arguing that the district should, “prepare people for wealth creation and retain talent in our neighborhoods.”

[28, pg.21] Arguing that cities have typically fallen short by deliberately not creating jobs and, in turn, wealth on par to their other investments in building resilience.

In line with the Equity, Resilience, and the Anacostia River Corridor Conference The 100 RCP for the first time shifts the focus from primarily defending and strengthening the infrastructure of the city to a two stepped approach which simultaneously increases the capacities of individuals, communities, institutions, businesses and systems to respond collectively and successfully to the threats of climate change.

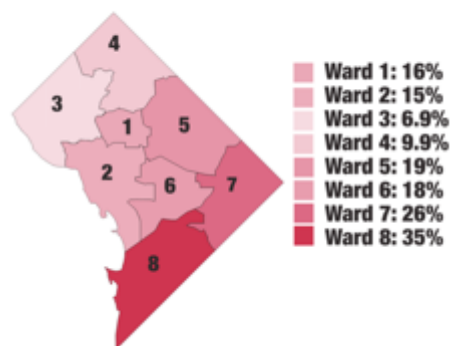
Addressing Systemic Stresses

Ensuring Inclusive Growth

The two focuses of the plan; “Equity in Governance” and “Resilient Rivers” address the two main initiatives of the city and set the overall tone for the direction Washington D.C. is going to attempt to take as it moves forward in achieving its resilient targets.

Figure 10

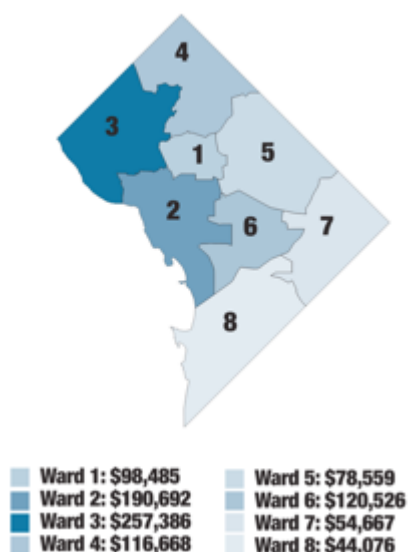
POVERTY PREVALENCE BY WARD (2005-2009)¹⁰



“Equity in Governance” begins first by acknowledging the past failures of the district in its inability to provide equal opportunities for all of its residents to thrive. Policies like redlining, and the zoning of industrial districts in predominately black neighborhoods are cited in the plan for their detrimental effects on the African American community, notable missing are the urban redevelopment plans. The plan calls these past planning policies and strategies stresses that “can be as damaging as acute shocks [7, pg.38]. Equity in Governance is buttressed by several plans, policies and strategies that were implemented at the start of term of current Mayor Muriel Bowser. Specifically, the “Workforce Innovation and Opportunity act,” 2016, the “Housing Strategy Strikeforce,” 2015 and the updated “D.C. Economic Strategy,” 2017. These plans would layout pathways to address the systemic issues of racial inequity and poverty in the Districts most impoverished wards, specifically wards 7 and 8 as seen in fig 8.

The 100 RCP lays out first the necessity to retrain district government employees to recognize the ongoing racial biases with the purpose to identify and eradicate institutional racism and the unintentional bias that can be found within district policy, programming and engagement initiatives. The District also aims to develop a set of indicators for this task to identify those sectors exhibiting some of the worst racism in the district as a way to measure future improvement or perhaps failure. In addition to the retraining of district employees Washington D.C. is also looking outward to engage the local communities through dialogue with local organizations and academic institutions to learn from past decisions which have adversely affected the African American Community [7, pg. 39]

AVERAGE HOUSEHOLD INCOME BY WARD*

Affordable Housing

The typical District wide blanket approach to the implementation of education and housing policies of the earlier Sustainability Plan 1.0 of 2011 and the D.C. Economic Development Strategy 2013 would develop into targeted strategies under Mayor Muriel Bowser. These plans would shift their focus primarily to the African American residents living in wards 7 and 8. The D.C. Housing Preservation Strategy Strikeforce (HPSS) was created in 2015 in response to earlier housing preservation plans that in effect had seen the loss of 1000 subsidized affordable housing units in between the years 2006 and 2014 and the loss of 33,000 affordable housing units in-between the years 2002 and 2013 [29, pg.4]. As indicated in *figure 10* the rate of rent rose

disproportionately to income placing an estimated 65% of dc residents at risk of losing their housing as they were paying 35-50% of their income on housing alone. Washington D.C. wasn't suddenly losing affordable housing. What was happening was a marked shift in the production towards high cost luxury rentals. During the same time period, from 2002 to 2013 the district had seen an increase in the development of luxury rental units from 28,000 to 73,000 units [29 pg. 6].

Amidst the loss of affordable housing units protections and plans enacted under the Sustainability D.C. 1.0 plan are set to expire in 2020 potentially leaving 13,700 impoverished families dependent on these protections unable to afford their rent, leading to further displacement. In 2015 HPSS received an additional \$15 million-dollar investment to continue its operations and seek to locate another 12,000 units by the year 2023 [7 pg. 68-70], recommendations by the D.C. Fiscal Policy Institute suggest, however, an investment of \$100 million is needed to successfully secure affordable housing in the district[29]. The plan to increase access to affordable housing extends further beyond the preservation measures of HPSS. The D.C. resilience plan adds the short term plan to increase the supply of market rate affordable housing units by 25% in 2030, [7, pg. 147].

Figure 12

Rents Grew Faster than Incomes for All Renters, but Low- and Middle-Income Renters Saw the Most Disparity

Percent Changes in Income and Rent for District Renters

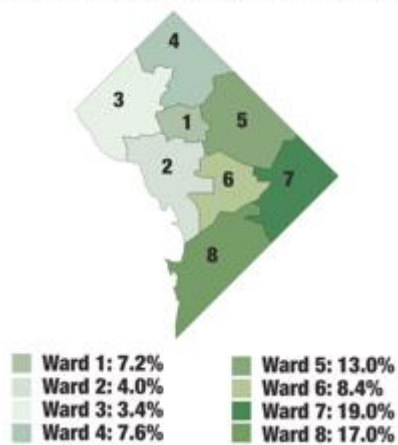


Source: DCFPI Analysis of 2002-13 American Community Survey, US Census Bureau

DC FISCAL POLICY INSTITUTE

Education and Unemployment:

Figure 13
UNEMPLOYMENT BY WARD (2005-2009)



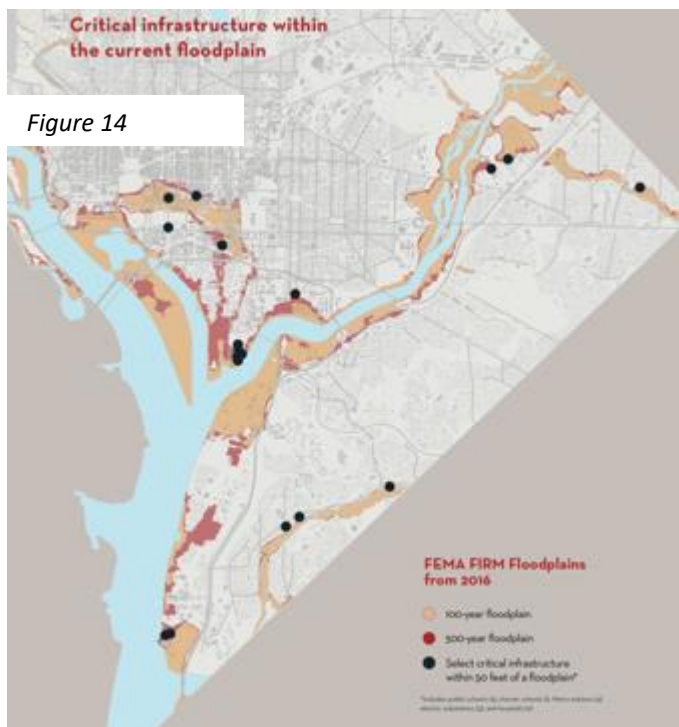
Less detailed in the 100 RCP are further initiatives that seek to improve unemployment within the District, specifically wards 7 and 8 which show an unemployment rate of 19% and 17% respectively. A majority of the initiatives are indicated only to provide an increase of short-term funding. Early childcare and education centers would receive a \$12.5 million-dollar boost. Schools in Washington D.C. would receive an increase of funding by \$94 million, and the creation of an “Infrastructure Academy” would be proposed in Ward 8 as a way to increases access, specifically by African Americans, to high paying jobs. It is left unclear in the plan whether or not the funding increase would be sustained into the future or if the funding is only a temporary measure. The plan further, but vaguely, illustrates the necessity

to increase the number of students attending college who are from the District from a self-defined low of 56% [7, pg. 51].

The district also has a focus on the creation of local businesses within wards 7 and 8 and promises to provide tax credits, microloan programs, grants and training programs to those business owners providing specific services or meeting specific needs; Fresh food grocery stores and affordable housing by the year 2023 [7, pg. 49]. The district also proposes creating a partnership with a foundation or university to research the repealing of regulations that impose burdens on opening and operating a small business [7, pg. 56].

Resilient Rivers Strategy

The second focus of the D.C. resilient strategy is the creation of the Resilient Rivers plan. The Clean Rivers act of 2006 and the Sustainable D.C. plan invested billions of dollars into the rehabilitation of Both the Anacostia and Potomac Rivers. The plans spurred the development of multiple waterfront neighborhood improvement plans like The Capitol Riverfront, The Wharf, and The Navy Yards. Simultaneously over \$2.6 billion will be invested in increasing the capacity of the Blue plains treatment plant to process over 1 billion gallons of sewage and rainwater runoff during peak rain events to reduce flooding and pollution threats. That same money also went into developing green infrastructure projects to increase the permeability of the city; the conversion of government roofs to green roofs to



further absorb excess rain water, funding provided to private homeowners to likewise install green roofs and rainwater collection barrels, and the installation of bio-swales along pedestrian right of ways [10]

The 100 RCP looks to continue the trend of increasing funding specifically towards the improvement of infrastructure projects to withstand flooding and heavy rain shocks. The funding currently stands at \$8.2 billion falling short of the estimated \$11.5 billion needed to further make improvements to local infrastructure [7 pg. 85] The 100 RCP calls for all infrastructure related departments of the D.C. government to conduct flooding assessment surveys for at risk buildings, highways, roads, energy infrastructure, water infrastructure and

communication networks and bring their improvement plans inline with the 100 RCP. Some of the proposed projects are aimed at the retrofitting and relocation of critical infrastructure (six schools, 4 subterranean metro stations, and 3 electric substations) fig. 12 [7, pg. 99] sitting in what are projected to be Washington D.C.'s expanding flood plain by the year 2050. In addition, the District has short-term plans to pilot a microgrid with the District energy provider PEPCO, by the year 2023, to better serve communities during power outages [7, pg. 104], depending on its success it plans to roll out the pilot across the district.

Aside from the general investments in creating a robust infrastructure network the district, similar to its housing recognizes the toll urban revitalization projects have had for D.C. African American residents living along the Anacostia River and seeks to include local residents in the information gathering and decision-making processes. The 100 RCP recognizes the value in increasing the social

resilience of the district. It lays out the necessity of educating district citizens on the risks associated with climate change and highlights a series of plans aimed to make sure all residents are prepared for the next “shock.” One such plan is to improve coverage and access for all residents to obtaining flood insurance by the year 2023 noting that for many it may be unaffordable and would need to offer supplementary flood insurance for those residents who are at risk [7 pg. 99]. Other plans are geared specifically towards education and empowerment. The Resilience hubs and Resilience Corps programs seek to team up with Homeland Security and Emergency Management Agency and provide Community Emergency Response Team training courses for citizens. The Resilience Hubs program is an initiative which looks to develop and deploy paid neighborhood captains who are responsible for building social cohesion in neighborhoods by reinforcing existing programs that lower risk for vulnerable populations, and recruit volunteers for times of disaster [7 pg. 102-103].

WRAP UP

In her post titled, “Is Gentrification in Washington D.C. Anacostia Whitewashing Black Culture” Isabelle Anguelovski writes that,

“East of the Anacostia River, it is a profound racialized inequality that makes greening and sustainability a double-edge sword for Black residents. Despite promises of equity, this outsider-driven, top-down greening approach is underpinned by an unbearable whiteness—whether intentional or not—that aims to activate former no-go zones through a conveniently packaged but obscured version of Black culture [30].”

It’s difficult to give credit to the early plans of sustainability and resilience once it is understood how much of a negative impact they had on the African American population in Washington D.C. The sustainability plans and plans they were made up of did help to steer district policy and direct funding towards the cleaning up of the rivers, modernizing the district to become a global tech competitor, and improving building codes as a way to mitigate the effects of climate change. In addition, they brought bikes and bike lanes to the district and improved metro accessibility and service. These policies were all needed to revive the economy of Washington D.C. post 2008 housing crisis and helped jumpstart its survival into the era of Climate Change. What was missing from those policies however were protections for the people. Protections for those people most vulnerable to climate change, most vulnerable to losing their housing, most vulnerable to dropping out of school, and most vulnerable for going hungry. While the plans brought major investment into the D.C. area they did so at the cost of the African American population living in the Northeast and Southeast neighborhoods of Washington D.C. Years of negligence and divestment by the district left many neighborhoods dilapidated in disrepair and prime for an “urban upgrade.” These plans explicitly indicated the housing needs of African Americans living specifically in Wards 7 and 8. What was seen in return was the loss of 1000 subsidized affordable housing units and the loss of 33,000 affordable housing units only to gain 45,000 unaffordable luxury rental units, and as stated in the Five Year Economic Development Strategy for the purpose of increasing the tax revenues of the District [21 pg. 3].

The introduction of the Rockefeller 100 Resilient Cities Strategy marks a notable shift from what the city is being protected from and what is meant exactly by “city.” Early sustainability plans make it clear that the city is the entity to be protected from shocks and stresses, that maintaining the functioning of the city and its systems is critical to its survival and its ability to provide services to the federal government, and residents. The new resilience policy makes it clear that the city is an entity comprised of multiple and complex interests and in order for the city to function and thrive it is imperative that all interests, in this case citizens, neighborhoods and wards, have the necessary funding, investment and responsive capacity to thrive and survive future shocks and stresses.



March on Washington protesters gather at the Lincoln Memorial, August 28, 2020. (Drew Angerer/Getty Images) [1]

It is difficult to say whether or not the Washington D.C. Resilience strategy is going to be able to provide the protections to African American residents it vows to put into place. The first disaster of the 100 resilient cities policy, the Covid-19 Pandemic, has illustrated once again the vulnerabilities many of the African American residents face as the pandemic has disproportionately affected their businesses, hospital access, income, and access to essential goods and services. However, more than any other plan before it, it brings to attention the historic failure of the city to provide protections for its African American Community. The Nationwide and Citywide George Floyd protests and the resulting March on Washington in August of 2020 demonstrated, once again, the destruction continued racial, social and economic inequity has on the African American community and as a direct result the cities they call home. The plan calls for reconciliation as it promises future protections in the form of increased education investments, increased access to affordable housing, increased protections for the local business community, and lays out pathways to home ownership. The short-term nature of the proposals indicates that these items are actionable by the year 2023, but nothing is mentioned about the continuation of the plans past 2023. As much excitement as there is around the unveiling of the D.C. Resilient Strategy many D.C. African Americans are skeptical. Many plans and policies from the past century which have tried to address climate, equity, economic, and social issues have traditionally negatively impacted the African American community. As a result, many believe that the resilience strategy, like the renaming of 16th street by Mayor Muriel Bowser to “Black Lives Matter Plaza” will only be a Band-Aid fix to solving the systemic challenges brought on by centuries of imbedded racism.

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