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2022

## HEALTHY COMMUNITIES: FLOODED WITH INJUSTICE?

Grace E. Harris Leadership Institute, Virginia Commonwealth University

Mel Borja

Krystle Dorsey

*See next page for additional authors*

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## Authors

Grace E. Harris Leadership Institute, Virginia Commonwealth University; Mel Borja; Krystle Dorsey; Tiffany Garner; Edgar Greer; Denise Harrington; Paula Robinson; Jalesha Smith; Dominique Thaxton; and Jeffery Wilson PhD

## HEALTHY COMMUNITIES: FLOODED WITH INJUSTICE?

### TEAM MEMBERS

Mel Borja, The Commonwealth Institute for Fiscal Analysis  
Krystle Dorsey, Urban League of Greater Richmond Young Professionals  
Tiffany Garner, Futures Without Violence  
Edgar Greer, Virginia Commonwealth University  
Denise Harrington, League of Women Voters of Virginia  
Paula Robinson, State Council of Higher Education for Virginia  
Jalesha Smith, City of Norfolk  
Dominique Thaxton, Ninth District Council Liaison, City of Richmond Council  
Jeffery Wilson, PhD, Virginia Commonwealth University

### PROJECT DESCRIPTION

"HB1276 Comprehensive plan; Healthy Communities Strategy" authorizes defined localities to incorporate a healthy communities strategy into the next iteration of their local comprehensive plan and to engage the public in the process. In the absence of a predetermined definition, this report adopts the American Planning Association (APA) guidance as a standard, that a healthy community is a place where "all individuals have access to healthy built, social, economic, and natural environments that give them the opportunity to live their fullest potential regardless of their race, ethnicity, gender, income, age, abilities, or other socially defined circumstance."<sup>1</sup> This report will discuss how communities across Virginia face disproportionate negative environmental impacts, with a specific focus on marginalized groups, communities of color and the impact of flooding. This research and analysis will center on the intersectionality of flooding and race and the impacts of HB1276 on racial/ethnic groups. In addition, this report will examine critical components of educating and mobilizing community members toward active participation and involvement in strategic community environmental planning initiatives.

### LEGISLATIVE OVERVIEW

*HB1276. Comprehensive plan; healthy communities' strategy. Authorizes cities with populations greater than 20,000 and counties with populations greater than 100,000 to consider, at the next and all subsequent reviews of the comprehensive plan, adopting a healthy communities strategy. The bill provides that the locality's strategy shall be to identify objectives and policies to reduce the unique or compounded health risks in neighborhoods [by promoting] resilience to increased flooding and other impacts of a changing climate; to promote civic engagement by residents of such neighborhoods, and to prioritize improvements and programs that address the needs of such neighborhoods. (Bill Tracker, 2022)*

### **Legislation Background**

HB1276 was introduced during the 2022 Legislative Session by Delegate Shelly A. Simonds, as a second attempt to introduce a strategy to expand comprehensive planning to include flood resilience and related environmental concerns. In 2021, Delegate Simonds introduced an omnibus bill (HB2074) intended to engage communities around environmental justice, incorporating environmental principles into planning and creating regulations around development. Due to unfamiliarity and unwillingness to prioritize environmental justice concerns,

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<sup>1</sup><https://www.naccho.org/blog/articles/apa-healthy-communities-policy-guide#:~:text=APA%20believes%20%E2%80%9Chealthy%20communities%E2%80%9D%20are,or%20o ther%20socially%20defined%20circumstance.>

HB2074 received pushback from the business, government, and community leaders because comprehensive planning was already underway, which were required in planning codes.

Delegate Simonds realized that the terminology “environmental justice” was misunderstood and unaccepted by state and local leaders, therefore, the omnibus bill did not pass in 2021. In hopes of more widespread acceptance, the creation of HB1276 expanded the range of environmental concerns to include a myriad of other environmental challenges, including increased flooding, and introduced neutral terminologies such as healthy communities to appeal to leadership. A new version of HB1276 was introduced, with collaboration from environmental justice partners, with the same intent that more planning guidelines would be instituted to regulate increasing environmental hazards to communities across the Commonwealth. Following the introduction, HB1276 moved to the Committee on Counties, Cities, and Towns and subsequently did not pass out of the subcommittee. The vote fell along partisan lines (5-R Nay, 4-D Yea).

While HB 1276 directly involves local governments, the stakeholders explicitly supporting this legislation largely consist of Virginia’s environmental advocates. Interest groups that have expressed direct support for HB1276 included Appalachian Voices,<sup>2</sup> Resilient Virginia,<sup>3</sup> Sierra Club,<sup>4</sup> and the Virginia Conservation Network.<sup>5</sup> These environmental advocacy groups articulated support for this bill in their legislative agenda, citing that “a healthy communities strategy can help localities determine where environmental impacts such as flooding are heaviest, and how they can be alleviated to promote community well-being.”<sup>6</sup>

Although this report will analyze the link between racial equity and environmental advocacy, none of the racial justice organizations publicly supported the bill. In fact, there is no reporting of public actions taken for or widespread public awareness of this legislation. It is worth noting that even though the Virginia chapter of the National Association for the Advancement of Colored People (NAACP) had the bill on their radar, it was not listed in their public-facing legislative priorities. Public awareness of HB1276 was lacking. Several aforementioned environmental groups did in fact track the legislation and encouraged their members to act while the bill was still in the subcommittee of Cities, Towns, and Counties. While these groups intentionally garnered support and action for the legislation from their membership, there was not a widespread public awareness campaign to the general public. Thus, due to the absence of a civic engagement strategy for advocacy at the sub-committee level, many stakeholders did not have an opportunity to publicly support the bill, because the bill did not advance out of the sub-committee and there was no equivalent bill in the Senate.

Opponents to the legislation included the Virginia Association of Realtors and Virginia Farm Bureaus, both of whom cited concerns over land use, permitting, and labeling areas as “at risk.” The Chamber of Commerce and manufacturing stakeholders were also against the bill, as well

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<sup>2</sup> “Virginia General Assembly 2022: Priorities for Environment and Energy.” (2022, Jan 28). *Appalachian Voices*. Retrieved from <https://appvoices.org/va-legislature-2022/>

<sup>3</sup> Garland, Tracy. “The State of Climate and Resiliency Policy in Virginia.” (2022). *Resilient Virginia*. [https://resilientvirginia.org/news/the-state-of-climate-and-resiliency-policy-in-virginia?utm\\_source=rss&utm\\_medium=rss&utm\\_campaign=the-state-of-climate-and-resiliency-policy-in-virginia](https://resilientvirginia.org/news/the-state-of-climate-and-resiliency-policy-in-virginia?utm_source=rss&utm_medium=rss&utm_campaign=the-state-of-climate-and-resiliency-policy-in-virginia)

<sup>4</sup> “Climate, Environmental Justice, and Democracy.” (2022). *Sierra Club: Virginia Chapter*. Retrieved from <https://www.sierraclub.org/virginia/york-river/blog/2022/03/climate-environmental-justice-and-democracy>.

<sup>5</sup> “Bill Tracker.” (2022) *Virginia Conservation Network*. Retrieved from <https://vcnva.org/bill-tracker/>

<sup>6</sup> “Virginia General Assembly 2022: Priorities for Environment and Energy.” (2022) *Appalachian Voices*. Retrieved from <https://appvoices.org/va-legislature-2022/>

as legislators who cited major concerns on environmental justice and the appearance of an unfunded mandate for localities. (S. Simonds, personal communication, September 27, 2022)

### **Goals and Implementation**

HB1276 attempts to close a significant planning gap by encouraging eligible localities to adopt a healthy communities strategy. Additional goals of HB1276 include promoting civic engagement within intended communities, prioritizing improvements and programs that will address the specific environmental and community health needs, as well as identifying objectives and policies that promote flood resilience. By incorporating input from community members and connecting all planning efforts across a community, the proposed legislation can positively impact racial equity through integrated planning. Integrated planning is a holistic approach to community development and redevelopment. It is a collaborative effort between local government and community members to evaluate the socio-economic needs of the community and how to balance those needs with the natural systems on which the community depends. This planning approach creates opportunity for public officials and community members to mutually devise a healthy communities strategic plan that will best meet the needs of the community and the surrounding environment.

While the terminology “healthy communities” is not clearly defined in the legislation, this report adopts the American Planning Association (APA) guidance on healthy communities. The suggested APA metrics to assess healthy communities are active living, healthy food system, environmental exposures, emergency preparedness, and social cohesion (See Figure 1). The legislation does not provide guidance with regard to implementation at the local or state level.

### **Racial Equity Indicators Contained in the Legislation**

HB1276 does not have an explicit approach for addressing racial equity. However, this portion of HB1276 stating “*the bill provides that the locality's strategy shall be to identify objectives and policies to reduce the unique or compounded health risks in neighborhoods [by promoting] resilience to increased flooding and other impacts of a changing climate...*,” has a significant potential impact on racial equity. Since the 1980s, research indicates that race is the primary predictor of the co-location of housing and flood-prone areas in the United States — Americans living in formerly redlined neighborhoods—many of whom are people of color—are more likely than those living in non-redlined neighborhoods to see their homes jeopardized by flooding and water damage.<sup>7</sup> HB1276 indirectly targets marginalized communities and communities of color for the benefits associated with improved integrated community planning, including flood mitigation. Though the elements that make up environmental well-being for community members are many, this report largely focuses on the impact of flooding on these targeted groups.

### **Relevant Federal & Regional Initiatives**

In addition to state and local planning efforts, federal law requires every local jurisdiction to have a hazard mitigation plan in order to be eligible for non-emergency Federal Emergency Management Agency (FEMA) grants. As of March 31st, 2022, most localities in Virginia have either FEMA-approved hazard mitigation plans or plans that are expected to be approved pending adoption.<sup>8</sup> According to Anna Weber, policy analyst with the Healthy People & Thriving Communities Program at the National Resources Defense Council (NRDC), FEMA-approved hazard mitigation plans are supposed to effectively adjust for each locality's specific characteristics, risks, and needs - including flood risks. However, in practice, comprehensive

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<sup>7</sup>Katz, L. (2021, June 23). *A racist past, a flooded future: Formerly redlined areas have \$107 billion worth of homes facing high flood risk-25% more than non-redlined areas*. Redfin Real Estate News. Retrieved October 20, 2022, from <https://www.redfin.com/news/redlining-flood-risk/>

<sup>8</sup>Federal Emergency Management Agency (FEMA). (2022). *Hazard Mitigation Plan Status*. FEMA.gov. Retrieved October 20, 2022, from <https://www.fema.gov/emergency-managers/risk-management/hazard-mitigation-planning/status>

plans are often totally siloed from disaster mitigation plans. Without an integrated planning strategy, the goals of one locality's environmental plan may contradict the goals of their disaster mitigation plan. This issue demonstrates the need for local-level strategic plans that are integrated, coordinated and comprehensive to ensure the health and well-being of all communities involved.

The Bipartisan Infrastructure Investment and Jobs Act Law, signed into law in 2021, was authorized to provide funding and support to states and localities impacted by climate change, including flooding. According to a White House press release from 2021, “while communities of color are more likely to live in areas most vulnerable to flooding and other climate change-related weather events, this legislation provides an investment of over \$50 billion to states and localities to protect against droughts, heat, floods and wildfires.<sup>9</sup> This legislation is the largest investment in the resilience of physical and natural systems in American history.”

RGGI (Regional Greenhouse Gas Initiative) is a regional cap and trade program designed to reduce carbon dioxide emissions from the power sector.<sup>10</sup> With nine participating states, including Virginia, the proceeds from this energy market exchange funds the state’s “community flood preparedness fund” - a pool of money that provides flood assistance to communities and local governments within the state. Currently, \$203 million is allocated to go toward flood resiliency projects to support communities living within flood prone zones.<sup>11</sup>

SB756/HB1309, introduced during the 2022 Virginia General Assembly Session and later signed into law (Code-10.1-603.29) effective July 1, 2022, created the Resilient Virginia Revolving Fund.<sup>12</sup> The Resilient Virginia Revolving Fund acts as a fiscal safety value for localities in need of infrastructure remediation or development in efforts to enhance their ability to withstand the increased instances of natural disasters, specifically flood events by extending opportunities for applying localities to receive loans, grants, or refinancing options.<sup>13</sup> This will make resources available to assist Virginia localities develop preventative measures for flood mitigation as well as bringing aid to those who struggle in the aftermath of floods.

## **RACIAL IMPACT ANALYSIS**

### ***Does diversity of county/city predict risk of flooding in Virginia?***

While HB1276 attempts to address flooding as a statewide issue, it does not intentionally target communities of color. There is no targeted approach, even though national data shows that communities of color are disproportionately impacted by climate change factors, such as increased flooding.<sup>14</sup> This imbalance is partially due to historic racist practices including Jim Crow laws, discriminatory redlining, and urban redevelopment. These documented laws and efforts across the nation and in Virginia confine housing and renting options for Blacks. Throughout the United States’ history, racism and white supremacy have limited access to equitable, affordable housing for racial and ethnic minorities.<sup>15</sup> More recently, additional disparities are furthered by the

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<sup>9</sup> The United States Government. (2021, December 2). *President Biden's Bipartisan Infrastructure Law*. The White House. Retrieved October 20, 2022, from <https://www.whitehouse.gov/bipartisan-infrastructure-law/>

<sup>10</sup> *Regional Greenhouse Gas Initiative*. Virginia Energy Efficiency Council. (2022, October 27). Retrieved October 20, 2022, from <https://vaeec.org/rggi/>

<sup>11</sup> Paullin, C. (2022, September 30). *Flood Fund Future Uncertain as Youngkin Pushes for Carbon Market Withdrawal*. Virginia Mercury. Retrieved November 6, 2022, from <https://www.virginiamercury.com/2022/09/30/flood-fund-future-uncertain-as-youngkin-pushes-for-carbon-market-withdrawal/>

<sup>12</sup> *SB 756 Resilient Virginia Revolving Loan Fund; created*. Virginia's Legislative Information System. (2022). Retrieved November 6, 2022, from <https://lis.virginia.gov/cgi-bin/legp604.exe?221%2Bsum%2BSB756>

<sup>13</sup> Virginia Law Library. (2022). § 10.1-603.29. Resilient Virginia Revolving Fund. Retrieved October 20, 2022, from <https://law.lis.virginia.gov/vacode/title10.1/chapter6/section10.1-603.29/>

<sup>14</sup> Marlow, T., Elliott, J.R., & Frickel, S. (2022) Future flooding increases unequal exposure risks to relic industrial pollution, *Environmental Research Letters*, 17, 1-10.

<sup>15</sup> (Purifoy, 2021)

limited engagement of community members and diverse professionals in the study of and response to flooding and other impacts of climate change. Therefore, it was anticipated that Virginia's data would predict a positive correlation between the risk of flooding and the diversity of residents in localities, which has been documented nationwide.<sup>16</sup>

Analysis began with identifying flood risk in Virginia and specifically the top ten municipalities in the Commonwealth with the greatest number of properties at-risk of flooding (See Appendix Figures 2 and Table 1). The data about the top ten municipalities was derived from a First Street Foundation report that assesses flood risk, based upon data compiled from the National Flood Insurance Program (NFIP) claims made by homeowners and property owners to the Federal Emergency Management Agency (FEMA). We found that half of the municipalities on the list of most "at-risk for flooding" are home to some of Virginia's largest percentages (> 40%) of Black/African American residents (See Appendix Table 1). This includes the cities of Hampton, Newport News, Norfolk, Portsmouth and Richmond. At 20% of the population, African Americans make up the largest marginalized ethnic population in the Commonwealth (U.S. Census Bureau, n.d.). In addition, when factoring in all non-White populations, eight out of the ten municipalities with the highest number of properties at-risk of flooding are at least 40% diverse. Diverse populations include American Indian/Alaskan Native, Asian, Black/African American, Hispanic/Latino, Native Hawaiian/Pacific Islander, and Two or More Races, as categorized and counted by the U.S. 2020 Census. The two exceptions are the Island of Chincoteague and Poquoson County, where total diversity is 4% and 9%, but the percentages of properties at flood-risk are among the highest in the state at 80% and 73% respectively. In spite of the exceptions, the information about the top ten municipalities indicates that most of the areas with high risk of flooding are the home to racially and ethnically diverse populations.

While the analysis above revealed that a large proportion of the Commonwealth's diverse communities will be impacted by flooding, in the correlation analysis, a predictive positive relationship between the percentage of diverse population and the proportion of properties at risk of flooding was not found among the localities in Virginia according to the data about Virginia locality flood factors, poverty and diversity (see Figure 4). According to the First Street Foundation Risk Factor and U.S. 2020 Census data, the twenty most diverse localities in the Commonwealth, the cities/counties with more than 50% diverse population, range in property risk of flooding between 3-51%, with an average of 14%. More than two-thirds (fourteen) of these most diverse localities have 10% or less of their properties being at-risk of flooding (Risk Factors, n.d.; U.S. Census Bureau, 2022). Comparably, over twenty localities in the Commonwealth are 90% majority white and have a property flood-risk average of 27%, almost double the average of the most diverse communities, those with over 50% diverse population. This disaggregated data did not show that Black residents were at more risk of living in areas with potential to flood than their white counterparts. Similar findings were found for Hispanic, Natives and those identifying as mixed race. These findings are inconsistent with the analysis of the top ten municipalities and prior research (Katz, 2021; Marlow et al., 2022). Additional study of covariates is needed to further explore the correlation between communities of color and areas at-risk of flooding in Virginia.

### ***Contributing Factors to Correlation Analysis Findings***

There are a number of factors that could contribute to current findings that are conflicted with existing studies. These factors include data risk assessment based on homeownership, limited participation in the U.S. Census, and cultural appropriateness and engagement.

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<sup>16</sup> Marlow et al. (2022)

There are concerns with the research data used to calculate flood risk in the Commonwealth of Virginia. The First Street Foundation risk assessment data used to identify the top ten localities across the Commonwealth with the greatest number of properties at-risk for flooding, was based on FEMA insurance claims that are representative of homeowners and property owners exclusively (Appendix Figures 2 and 3). Focusing on home and property owners presents a major gap in representation of minorities since only 48.2% of Black residents in Virginia are homeowners compared to the 74.2% of White Virginians who own homes (Urban Institute, 2022). Only using data from homeowners, undercounts the Black and other minority group representation when discussing those who experience adverse impacts of flooding in Virginia and accurately determining flood risk. For example, the Hampton Roads area is home to one of the world's largest populations of military personnel, with approximately 83,000 active duty military personnel (Hampton Roads Chamber of Commerce, 2022). The racial and ethnic profile of active duty service members shows that while the majority of the military is non-Hispanic white, black and Hispanic adults represent sizable and growing shares of the armed forces (Barroso, 2019). The area also has two Historically Black Colleges, Hampton University and Norfolk State University, and one Minority Serving Institute, Old Dominion University. These institutions and armed forces create a transient community which may rent more than own. This is a sizable number of potential students and military personnel of color whose residence may not be counted in the flood risk assessment calculation. People of color are found to be overrepresented in renting, inclusive of subsidized housing, underrepresented in homeownership and underrepresented in the decennial Census response and consequently lacking in representation for the Commonwealth's flood impact data (U.S. Census Bureau, 2022).

The reliance on the U.S. Census for the largest publicly available demographic data in the county creates additional concerns. The U.S. Census Bureau data shows that the Black population has a 3.3% undercount in the 2020 U.S. Census count compared to the 1.64% overcount of White populations (U.S. Census Bureau, 2022). All of these factors highlighted a much larger issue of the underrepresentation of minority communities in various matters in the Commonwealth. Firstly, there are severe gaps in both national and local data collection methods that tend to exclude the experiences of people of color. This includes lower rates of homeownership in Black and other minority communities as well as a severe discounting of flooding across the Commonwealth as experienced by people of color. Such skewed data could present little racial impacts related to flooding in Virginia. Furthermore, these limitations in data highlight opportunities for increasing minority representation involving matters of climate change mitigation and including people of color in data collection both locally and nationally.

Another important racial equity factor that must be considered is who should be involved in the process of climate change mitigation. There is a lack of representation of communities of color in these key areas: mitigation and planning professionals, policymakers, environmental justice and advocacy organizations, and attendees at public meetings for mitigation planning (Purifoy, 2021; Van Zandt et al., 2012; Hardya et.al, 2017). This produces "colorblind adaptation planning" which perpetuates the absence of the lived experiences and knowledge of minority communities. The lack of cultural inclusion in this dynamic means that social vulnerabilities are not considered as long-standing patterns of environmental injustice toward racial and ethnic minorities continue. HB1276 specifically notes that residents of vulnerable neighborhoods should be heavily involved in the "public decision-making process." Such targeted civic engagement maximizes the potential for the locality to include the identified communities' unique needs in the strategic plan.

### ***Limitations of the legislation and its impacts on racial/ethnic groups***

The limitations of the legislation (HB1276) itself and other state policies could limit its impacts on racial or ethnic groups. First, the lack of a mandate or funding authorization weakens any latent impact that the legislation may have on racial groups and impoverished regions across the



Commonwealth. Interviewed leaders and advocates for environmental justice Anna Weber, Policy Analyst, National Resources Defense Council (NRDC); Matthew Simons, Coastal Resiliency Manager, City of Norfolk; and Elizabeth Andrews, Director of the Virginia Coastal Policy Center at the College of William, each referenced this flaw in the legislation's integrated plan. HB1276 driven mitigation and planning efforts may range based upon a community's revenue versus its commitment to environmental justice and assessed flood risk. As a result, significant impact on racial groups may be accidental and disparate across the state. This legislation would benefit from more clarity on the targeted population(s), including racial demographics, geography and population size, engagement efforts, measurable goals, incentives for participating localities and resources to build resilient infrastructure and awareness.

Additionally, geographically, flood risk spans the Commonwealth with heavier concentrations in the coastal areas, but growing intensity in the Valley and more instances of riverine flooding (See Appendix, Figure 2). HB1276 provides authority to communities in these areas to focus on mitigation in their comprehensive planning but limits such planning to localities with populations greater than 20,000. Some of the Commonwealth's areas that have experienced grave flooding incidents would be excluded. For instance, Buchanan County, Virginia with a 2020 population of 19,816 experienced a tragic flood in early 2022 that swept away nearly 22 homes, falling just shy of a healthy community strategic planning requirement outlined in HB1276 (Elamroussi et al., 2022).

Disparities already exist in the development of comprehensive plans especially as it relates to flood resilience in Virginia, and HB1276 would serve to ensure an increase in the number of localities that incorporate flood mitigation plans within their respective strategic planning processes. Virginia Code requires each locality's Planning Commission to develop a Comprehensive Plan (Article 3. The Comprehensive Plan. § 15.2-2223).<sup>17</sup> However, code § 15.2-2223.2 and § 15.2-2223.3 specify that the Planning Commissions of the more flood prone coastal localities situated in Tidewater and Hampton Roads regions are to address coastal resource management guidance and strategies to combat projected sea-level rise and recurrent flooding. This is not a requirement of other Planning Commissions. Research suggests that flooding is far from solely a coastal Virginia concern and holds that while the possibility of extreme risk of flooding is heavily concentrated in the southeastern corner of Virginia, small clusters also exist in the north and southwestern regions, with scattered distribution, ranging from severe to minor, across the entire Commonwealth (See Appendix, Figure 2). Strategic planning to mitigate flooding should be addressed by all localities to better ensure a standard level of preparedness and awareness statewide.

## **RECOMMENDATIONS**

While some of the findings show that race may not be an indicator of likelihood of residing in an area at-risk of flooding, it is clear that localities with the greatest number of African Americans and diverse population face the greatest risk of flooding across the Commonwealth. Further analysis is needed on the topic as well as community and funding investment. The following recommendations address actions that would serve to strengthen HB1276 and its ability to foster more customized and equitable outcomes for flood mitigation across all Virginia localities.

### ***Recommendation 1: Prioritize updating outdated infrastructure in localities by applying for federal and state funding opportunities***

Outdated infrastructure contributed to the flooding experienced in Buchanan County in summer 2022, located in the southwestern part of the state. Recent federal and state funding streams can

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<sup>17</sup> <https://law.lis.virginia.gov/vacodefull/title15.2/chapter22/article3/>

be used to prevent repeats of the Buchanan County flood by developing infrastructure to manage natural disasters and flooding. In 2021, Congress passed the H.R.3684 Infrastructure Bill that provides an investment of over \$50 billion specifically to protect against droughts, heat, floods and wildfires, in addition to a major investment in weatherization. This federal funding is passed through the states and affords localities the opportunity to tap into this resource to develop initiatives to prevent flooding and other environmentally hazardous conditions. The Regional Greenhouse Gas Initiative (RGGI) provides a state-supported funding opportunity for localities. States that participate in the RGGI cooperative receive the proceeds from selling RGGI energy allowances. Each state has discretion over how to best use and distribute their proceeds. Funds can be reinvested by the state into local communities to support bill assistance, flood preparedness and energy efficiency programs. Any efforts by the Commonwealth to withdraw from RGGI would hinder funding to adequately address flooding. Virginia also allocates funding through the Community Flood Preparedness Fund, aimed at flood prevention in communities identified as having faced socioeconomic inequities. These funds provide a critical revenue stream for projects in low-income communities.

***Recommendation 2: Adopt American Planning Association’s guidance and metrics for healthy communities***

The American Planning Association (APA) believes healthy communities are “places where all individuals have access to healthy built, social, economic, and natural environments that give them the opportunity to live their fullest potential regardless of their race, ethnicity, gender, income, age, abilities, or other socially defined circumstance.”<sup>18</sup> A healthy communities strategy is one that promotes public health using a diverse set of metrics. The APA metrics are active living, healthy food system, environmental exposures, emergency preparedness, and social cohesion (See Figure 1).<sup>19</sup>

***Recommendation 3: Engage planning and regulatory commissions throughout legislative and implementation phases***

In order to create and implement a required healthy communities’ strategy, planning and regulatory commissions should be engaged early on during the drafting of legislation to provide input. Since they will be responsible for accurate implementation of the legislation and enforcement of the planning components, a feedback loop should be generated to ensure that communication is shared regularly regarding processes and community impact.

***Recommendation 4: Utilize an integrated planning approach and prioritize civic engagement***

Integrated planning is defined as “...a holistic approach to community development and redevelopment. [Integrated planning] is a collaborative effort between local government and community members to evaluate the socio-economic needs of the community and how to balance those needs with the natural systems on which the community depends...”<sup>20</sup> For example, an integrated planning effort that engages communities of color while mitigating environmental issues, is found in Norfolk, Virginia. The flood-prone, predominantly black, St. Paul area in Norfolk is currently being redeveloped with an emphasis on alleviating flooding. Once completed, new housing units will no longer exist in the floodplain, which was formerly Newton Creek. The floodplain will be converted into a community park that is adaptable to flooding. (City of Norfolk. *People First - St. Paul's Transformation Project*, 2022).

There are many venues to achieve civic engagement such as social media campaigns, town halls, roundtables and other forms of marketing. Civic engagement efforts should also be extended to

<sup>18</sup> <https://planning.org/publications/document/9141726/>

<sup>19</sup> <https://planning-org-uploaded-media.s3.amazonaws.com/document/Metrics-Planning-Healthy-Communities.pdf>

<sup>20</sup> “Green Streets, Green Jobs, Green Towers (G3) Integrated Planning.” (2022). United States Environmental Protection Agency (EPA). <https://www.epa.gov/G3/green-streets-green-jobs-green-towns-g3-integrated-planning>

racial justice groups who have established trusted relationships and influence within communities of color. For example, in Richmond, Virginia the Department of Public Utilities (DPU) applied a water management approach that protects and restores the natural water cycle in Shockoe Bottom, a historically black neighborhood near downtown on the banks of the James River. The low-lying area drains roughly a third of the city. Throughout the project, community stakeholders were engaged and supported this green infrastructure as a solution. As a result, DPU will add green streets and parks in other historically black neighborhoods and will pay community members to participate in environmental justice roundtables to identify more solutions. This ongoing initiative will allow residents to continue to be civically engaged and make improvements to their neighborhood.<sup>21</sup>

## CONCLUSION

HB1276 poses many potential positive impacts at a critical time in Virginia's history. While climate change and environmental injustice have been shown nationally to have disproportionately impacted communities of color, the data in Virginia does not consistently show disproportionate impacts of flooding on communities of color. We hold that the limitations of the data on Virginia contribute to an under representation of people of color who are in flood prone areas. This includes the data solely using homeowner and property owner insurance claims and not incorporating renters into the data population, in addition to growing lack of confidence in the U.S. Census data due to undercounting of minority populations. If made stronger and more explicitly inclusive of at-risk communities stakeholders, HB 1726 can equip localities to prepare and respond to flood events more proactively and inclusively across the Commonwealth.

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<sup>21</sup> <https://efc.sog.unc.edu/using-the-integrated-planning-framework-for-advancing-environmental-justice>

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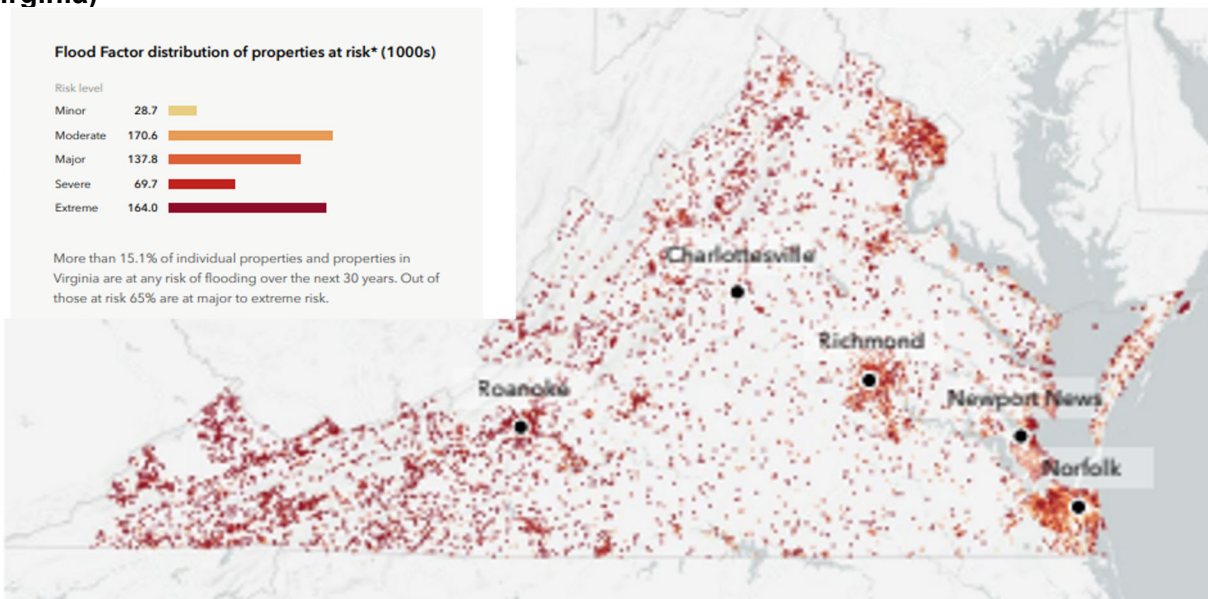
## APPENDIX

Figure 1. APA Metrics to Measure Healthy Communities



Source: Metrics for Planning Healthy Communities, American Planning Association, May 2017

Figure 2. The First National Flood Risk Assessment: Defining America's Growing Risk (Virginia)



First Street Foundation's First National Flood Risk Assessment: Defining America's Growing Risk | First Street Foundation®, Inc 2020. Environmental risk data is provided by Risk Factor™, a product of First Street Foundation®. The Risk Factor models are designed to approximate risk and not intended to include all possible scenarios.

Source: First National Flood Risk Assessment: Defining America's Growing Risk, pg. 148  
[https://assets.firststreet.org/uploads/2020/06/first\\_street\\_foundation\\_first\\_national\\_flood\\_risk\\_assessment.pdf](https://assets.firststreet.org/uploads/2020/06/first_street_foundation_first_national_flood_risk_assessment.pdf),

**Table 1. Greatest Number of Properties At-Risk of Flooding in Virginia (Top Ten)**

Municipality	Properties At-Risk of Flooding Number (%)	Diverse* Population (%)	Black/ African Americans (%)	American Indian and Alaska Native (%)	Hispanic/ Latino (%)	White (%)	Persons in Poverty (%)
Virginia Beach	28,943/20%	40%	19%	0.3%	8%	62%	7.6%
Norfolk	18,042/27%	58%	41.6%	0.4%	7.9%	43.5%	19.7%
Hampton	16,820/33%	63%	50.2%	0.5%	5.6%	38.6%	15.8%
Chesapeake	16,543/19%	43%	29.9%	0.2%	5.9%	57.9%	9%
Portsmouth	8,543/ 24%	63%	52.7%	0.5%	4.3%	38%	17.2%
Newport News	7,285/ 14%	59%	40.9%	0.2%	8.8%	43.4%	15.5%
Roanoke	6,444/ 15%	42%	28.7%	0.2%	6.1%	59%	20.5%
Richmond	5,067/ 7%	60%	47.8%	0.4%	6.7%	40.4%	24.5%
Chincoteague	4,515/ 80%	4%	0.4%	0%	2.8%	95.5%	0%
Poquoson	3,907/ 73%	9%	1.2%	0.2%	2.6%	91.9%	4.5%

\*Diverse includes American Indian/Alaskan Native, Asian, Black/African American, Hispanic/Latino, Native Hawaiian/Pacific Islander, and Two or More Races. Categories as defined by the Census Bureau.

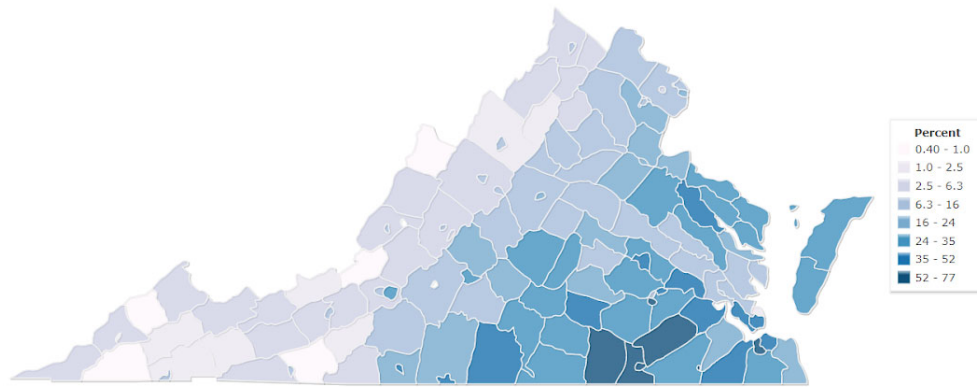
First Street Foundation's First National Flood Risk Assessment: Defining America's Growing Risk | First Street Foundation®, Inc 2020 Environmental risk data is provided by Risk Factor, a product of First Street Foundation. The Risk Factor™ models are designed to approximate risk and not intended to include all possible scenarios.

**Source:**

- [https://assets.firststreet.org/uploads/2020/06/first\\_street\\_foundation\\_first\\_national\\_flood\\_risk\\_assessment.pdf](https://assets.firststreet.org/uploads/2020/06/first_street_foundation_first_national_flood_risk_assessment.pdf)
- <https://www.indexmundi.com/facts/united-states/quick-facts/virginia/black-population-percentage#chart>
- <https://www.indexmundi.com/facts/united-states/quick-facts/virginia/hispanic-or-latino-population-percentage#chart>
- <https://www.indexmundi.com/facts/united-states/quick-facts/virginia/american-indian-and-alaskan-native-population-percentage#chart>
- <https://www.indexmundi.com/facts/united-states/quick-facts/virginia/white-not-hispanic-population-percentage#table>
- <https://data.census.gov/cedsci/table?q=populations%20in%20Chincoteague%20town,%20Virginia&tid=ACSDP5Y2020.DP05>
- <https://www.indexmundi.com/facts/united-states/quick-facts/virginia/percent-of-people-of-all-ages-in-poverty#table>



**Figure 3. Virginia Black Population Percentage, by County**



**Sources:** U.S. Census Bureau, Population Estimates Program (PEP). Updated annually. [Population and Housing Unit Estimates](#), U.S. Census Bureau, American Community Survey (ACS). Updated annually. [American Community Survey Data item: Black or African American alone, percent](#) <https://www.indexmundi.com/facts/united-states/quick-facts/virginia/black-population-percentage#map=>

**Figure 4. Group Statistics of Virginia Locality Flood Factors, Poverty and Diversity\***

Group Statistics					
	Rural (R) or Non-Rural				
	Locality	N	Mean	Std. Deviation	Std. Error Mean
Risk of Flooding (Percent)	Non-Rural	79	.13203	.139710	.015719
	Rural	50	.16640	.110965	.015693
Persons in poverty, percent - (Percent)	Non-Rural	80	.12704	.068598	.007668
	Rural	52	.16673	.051974	.007208

Independent Samples Test											
		Levene's Test for Equality of Variances			t-test for Equality of Means						
		F	Sig.	t	df	Significance One-Sided p	Significance Two-Sided p	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
										Lower	Upper
Risk of Flooding (Percent)	Equal variances assumed	.108	.743	-1.470	127	.072	.144	-.034375	.023381	-.080641	.011892
	Equal variances not assumed			-1.548	120.468	.062	.124	-.034375	.022211	-.078350	.009600
Persons in poverty, percent - (Percent)	Equal variances assumed	3.494	.064	-3.560	130	<.001	<.001	-.039693	.011151	-.061754	-.017633
	Equal variances not assumed			-3.772	126.868	<.001	<.001	-.039693	.010524	-.060518	-.018868

Correlations				
		Diverse	Poverty	Risk of Flooding (Percent)
Diverse	Pearson Correlation	1	.311**	-.285**
	Sig. (2-tailed)		<.001	.001
	N	132	132	129
Poverty	Pearson Correlation	.311**	1	.002
	Sig. (2-tailed)	<.001		.985
	N	132	132	129
Risk of Flooding (Percent)	Pearson Correlation	-.285**	.002	1
	Sig. (2-tailed)	.001	.985	
	N	129	129	129

\*\* . Correlation is significant at the 0.01 level (2-tailed).

**Source:** Dunn, C. (2022, November 1). Group Statistics of Environmental Factors. Richmond, Virginia.  
**\*\*Data Summary of Findings** statistics run and provided by Chelsie Dunn, MPH Senior Research Associate, Research Institute for Social Equity, L. Douglas Wilder School of Government and Public Affairs, Virginia Commonwealth University

**Figure 5. Cities/Counties with Greater than 50%Diversity\*, in Virginia**

<b>Cities/Counties with 50% or Greater Diversity*, in Virginia</b>		
<b>City/County</b>	<b>Percentage Diverse* (non-white)</b>	<b>Percent of Properties At-Risk of Flooding</b>
Petersburg	85	10%
Emporia	80	7%
Manassas Park	69	3%
Greensville	64	9%
Franklin	63	14%
Portsmouth	63	35%
Hampton	62	51%
Sussex	62	10%
Prince William	62	4%
Manassas	61	5%
Richmond City	60	7%
Brunswick	60	8%
Newport News	58	13%
Norfolk	58	49%
Charles City	58	11%
Danville	58	8%
Martinsville	56	7%
Hopewell	54	7%
Fairfax	52	6%
Suffolk	52	7%

\*Diverse includes American Indian/Alaskan Native, Asian, Black/African American, Hispanic/Latino, Native Hawaiian/Pacific Islander, and Two or More Races. Categories as defined by the Census Bureau.

- Twenty-one cities/counties in Virginia have a population with 50% or greater diversity.

Highlighted text identifies localities that have 50% or greater diverse populations and have the greatest number of properties at-risk of flooding in Virginia (Figure 3).

**Source:** Dunn, C. (2022, November 10). Group Statistics of Environmental Factors of Virginia Populations of 50% or Greater Race/Ethnic Minority and Flooding. Virginia; Richmond.

\*\*Data Summary of Findings statistics run and provided by Chelsie Dunn, MPH Senior Research Associate, Research Institute for Social Equity, L. Douglas Wilder School of Government and Public Affairs, Virginia Commonwealth University