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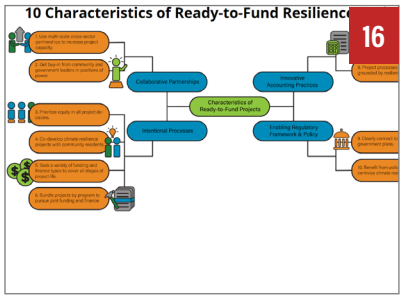

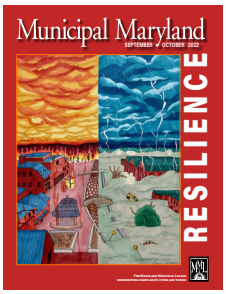

ON THE COVER

Flood and Heat Original Artwork by Liam Thompson, a graphic designer and artist from rural Appalachian Ohio. His artistic interests include colored pencil, marker and paint. Specialties include cartoons, animated characters and portraits. He draws inspiration from the world around him, pop culture and media, using bold colors and symbolism.

Vol. 53 | No. 2 | SEPT/OCT 2022

Municipal Maryland

THE OFFICIAL PUBLICATION of MARYLAND MUNICIPAL LEAGUE

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Justin Fiore Contributing Editor Bill Jorch Contributing Editor Thomas C. Reynolds Contributing Editor

Sharon P. Easton Circulation

Municipal Maryland (USPS 331-980), a publication for and about Maryland's cities and towns, is published six times a year (bi-monthly January/February, March/April, May/June, July/August, September/October, November/December issues) by the Maryland Municipal League, 1212 West Street, Annapolis, Maryland 21401.

The Maryland Municipal League is a non-profit, non-partisan association of Maryland's cities and towns. Information in Municipal Maryland does not necessarily reflect the views or policies of the Maryland Municipal League.

Postmaster: Send address changes to Municipal Maryland, 1212 West Street, Annapolis, Maryland 21401
Second-class postage paid at Annapolis, Maryland 21401

For advertising rates contact: Joanna Yu, Maryland Municipal League, 1212 West Street, Annapolis MD 21401
Telephone: 301-835-1516 ext. 407, Email to: jyu@Fovndry.com • Subscription rate: $40/year

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PART 1: LEADING ON CLIMATE RESILIENCE

Local Governments Leading on Climate: Using the ESG Approach to Advance Comprehensive Community Resilience

By Gary G Allen, President, Maryland Forestry Foundation

For the past three years, *Municipal Maryland* featured a special Environmental Trilogy in each September/October issue. These included the first - *Brace*, which highlighted preparation, impact, and adaptation. Next was *Breathe*, focusing on how your community can help foster health. This is the final installment in the series – *Resilience*, a how-to guide for local governments in *leading the climate response*. From setting equitable resilience as a community priority to embedding climate data into local planning efforts and establishing climate criteria for the way we frame and finance these objectives, local governments can and should be serving as leaders in addressing the climate crisis.

Emerging Perspective: the Environmental, Social and Governance Approach

As concern about climate change has surged and current economic, public health, and social justice crises intensified, institutions turn to emerging environmental, social and governance frameworks to guide their role in addressing these challenges. Environmental, social and governance (ESG) is one such approach. ESG can be used to evaluate the extent an institution works on behalf of social goals beyond economic gain. At its core, ESG it is a framework for thinking about how investments in socially desirable goals can be evaluated along with the institutions financing the goals, whether governments or businesses. ESG provides criteria to measure non-financial impacts like water quality, carbon sequestration, Green House Gas (GHG) reduction and health impacts as returns on investments. ESG creates expectations, opportunities, value and commitments often overlooked in traditional budgeting and reporting processes. While ESG traditionally focuses on corporations, its principles and practices can help support any decision-making practice – including those of local governments.

We expand opportunities for local government with ESG in future issues, but in this special issue of *Municipal Maryland*, we will focus on its usefulness related to local government climate resilience. The three ESG categories are increasingly integrated into climate related investment analysis, processes and public decision-making in that:

- "E" captures energy efficiencies, carbon footprints, greenhouse gas emissions, deforestation, biodiversity, climate change, pollution mitigation, waste management, and water usage.
- "S" covers labor standards, wages and benefits, workplace and corporate diversity, racial justice, pay equity, human rights, talent management, community relations, privacy and data protection, health and safety, supply-chain management, and other human capital and social justice issues.
- "G" includes the governing aspects of the "E" and "S" categories such as the institution's composition and structure, strategic sustainability oversight and compliance, compensation, political contributions, and communication, transparency and accountability.

Local Governments and ESG Initiatives

State and local governments are adopting ESG policies at a steady pace. Leaders of cities, counties and even school districts recognize the ethical importance of such policies as residents and taxpayers are calling on their governments to pay attention.

There are three primary ways that local governments can promote ESG in their jurisdictions. Governments can advance the public interest by applying ESG goals to their: (1)

Operations and services; (2) Policies and regulations; and (3) Decisions on government assets, liabilities, programs and projects.

While an accessible database on ESG policies in local governments does not exist, some trends are apparent. The National League of Cities (2022) reports an increasing trend in "sustainability and resilience" programs and policies adopted in cities, including a wide range of city actions, from electric vehicle charging stations to waste management to climate resilience. The Alliance for a Sustainable Future, a joint effort between the U.S. Conference of Mayors and the Center for Climate and Energy Solutions, promotes the value of environmental and social factors in governing processes. The Center also facilitates cities working with the private sector to accelerate carbon reduction programs and sustainable

development, as well as to strengthen partnerships toward mutual sustainability and climate goals.

A growing number of local governments are promoting ESG in their portfolios and operations – including advancing sustainable investment practices through public pension funds. In Maryland, municipalities have opportunity to foster ESG in areas such as:

- Environmental - green buildings, smart growth, climate change, clean technology, pollution/toxins, sustainable natural resources and water use and conservation.

- Social - human rights, avoidance of tobacco/harmful products, community development, diversity, workplace safety and labor relations.

- Governance - board independence, anti-corruption, committee diversity, compensation and political business contributions.

In this issue, we will share best practices for your municipality to consider when promoting specific outcomes in your policies and programs. These practices can maintain or improve financial performance while promoting social and environmental goals to benefit your city or town. The ESG model is an effective paradigm for building comprehensive community resilience.

Declaring a Climate Emergency: Spotlight on Takoma Park

By Gina Mathias, Sustainability Manager, City of Takoma Park

In 2019, the City of Takoma Park declared a climate emergency. In 2018, Takoma Park and the entire Washington, DC region experienced the wettest year on record, with unparalleled rainfall, flooding and resulting stormwater issues. Anticipated trends for the region indicated more frequent and severe weather events with continued increases in annual rainfall and more frequent and prolonged stretches of extreme heat. This led city leaders to conclude that these changes could potentially inflict substantial, even catastrophic, damage to our physical, social, and economic well-being, the impacts of which could most strongly affect the most vulnerable among us.

Declaring a climate emergency mobilizes action and builds public awareness that we are in an emergency state with devastating consequences for inaction. It also serves as a public statement that the City will pursue necessary local steps to address this global challenge as soon as possible.

"In Takoma Park, we have taken seriously the impact and threat of climate change and have treated climate change as an urgent issue. Now, we have taken the step to declare an emergency. This means dedicating ourselves to aggressive actions regarding climate adaptation and resiliency," said Mayor Kate Stewart.

The City has long been proactive in environmental issues, from pioneering curbside recycling to having the country's first gas station fully convert to an EV charging station. In 2020, the City Council followed the Climate Emergency Declaration with the Climate Emergency Response Framework, outlining key program and policy areas to drive the City to reach its net-zero by 2035 goal. Key areas of focus include existing buildings, transportation, protecting the City's natural resources and improving resiliency, as well as elimination of fossil fuels.

In 2021, the City's Sustainability Manager and article author, Gina Mathias, launched new Electrification and Energy Efficiency Grants, enabling dozens of buildings decarbonization projects. The grant program included a new limitation for the budget – no funds could be used for fossil-fuel-based equipment, a change from previous energy efficiency grant programs.

"Electrifying buildings will do more than help the City achieve its net zero by 2035 goal. It will improve indoor air quality and safety," said Mathias.

New programs in the coming year will include a city-wide benchmarking project to help building owners identify opportunities to reduce their energy use and decarbonize.

Advancing Climate Equity in Maryland Communities

By Sacoby Wilson, Director, University of Maryland Center for Community Engagement, Environmental Justice, and Health (CEEJH); Anushi Garg and Arielle Wharton, Faculty Assistants, CEEJH; Julie Jimenez, Graduate Student, California State University & CEEJH Volunteer and Elizabeth Meza, MPH Candidate, George Washington University

ENVIRONMENTAL AND CLIMATE (IN)JUSTICE

In the early 1980s, the environmental justice (EJ) movement gained national attention because of the fight against the siting of a PCB landfill in Warren County, North Carolina, a poor rural community of color.[i] As EJ advocates rallied together to fight such environmental injustices, they agreed upon principles and a set of values at the First National People of Color Summit in 1991[ii] that centered on fairness, equity, justice and systemic change fueled by a grassroots-oriented, bottom-up focused approach on building community capacity and active engagement. Dr. Robert Bullard, referred to by many as the father of the environmental justice movement, defines environmental racism as "environmental policy, practice or directive that differently affects or disadvantages (whether intended or unintended) individuals, groups or communities based on race or color."[iii] Such injustices include the disproportionate burden of environmental hazards and locally unwanted land uses (LULUs, e.g., incinerators, power plants, landfills, brownfields, Superfund sites, heavily trafficked roadways) as well as the denial of basic human rights such as clean air, water, medical care, access to healthy foods, green spaces, etc.

Dr. Sacoby Wilson, Director, Community Engagement, Environmental Justice and Heath (CEEJH) at the University of Maryland, believes that "in this country, too many communities of color experience violence, oppression and toxic trauma due to environmental racism and slavery. CEEJH uses anti-racist, pro-liberation science to *INpower* communities who are seeking environmental justice." This addresses how social justice issues intersect in the context of structural racism and discriminatory policies that remain relevant within our current *syndemic* of racial injustice, COVID-19, economic turmoil and climate crisis.

WHAT IS CLIMATE EQUITY?

Climate equity refers to the embedding of equity into the focus of climate programs, policies and initiatives to prioritize and support the most vulnerable populations in coping with climate threats to ensure return to a better status quo. Measures of climate equity describe communities' experiences in responding to, preparing for and recovering from climate change-induced disasters. As climate change increases the frequency and severity of natural disasters, frontline populations will experience far greater losses than whiter, more affluent communities. [iv] These populations are left with limited accessibility and higher costs for accessing basic services such as housing, energy and transportation, in addition to being subject to pollution and various environmental burdens. These factors deny low-income

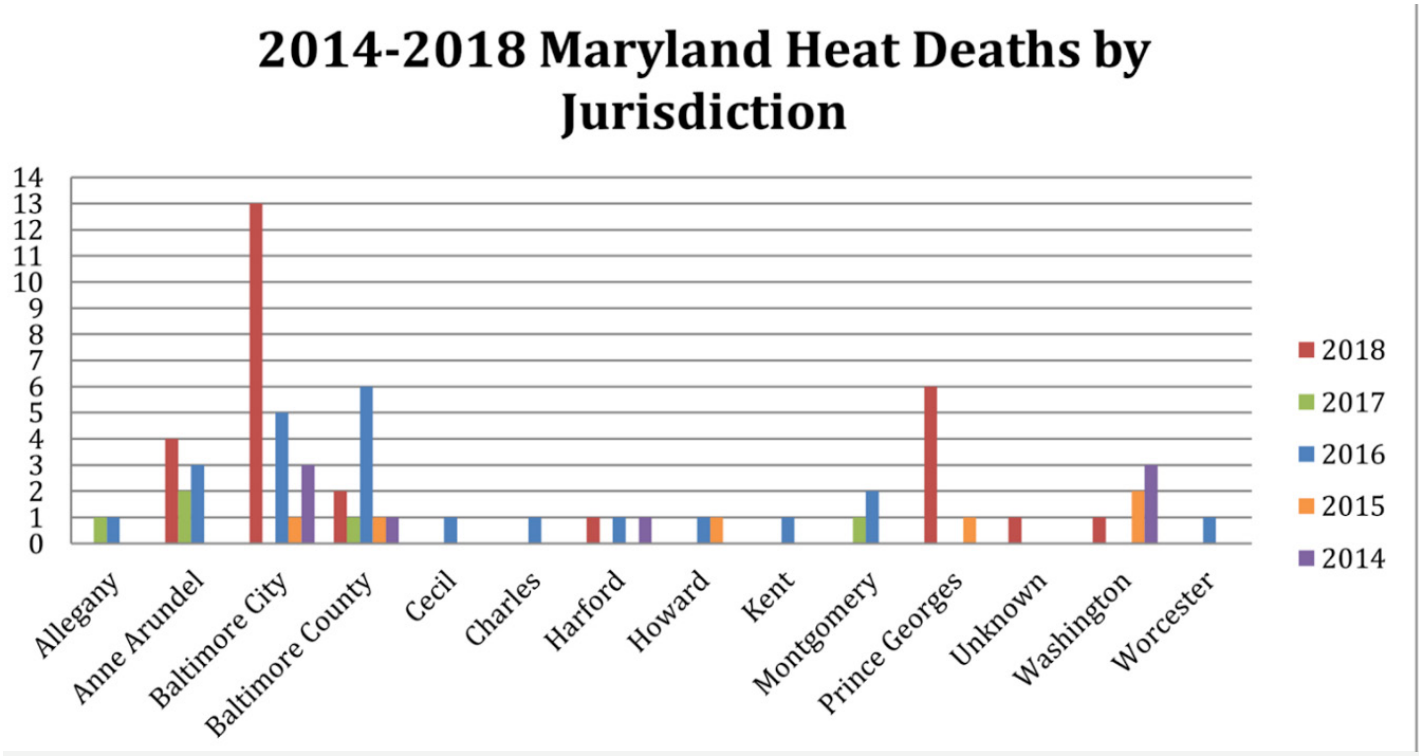


Figure 1: The chart above quantifies heat-resulting deaths throughout various Maryland counties annually from 2014 to 2018. As can be seen, 2018 heat deaths in Baltimore and Prince George's County are far higher than those in other Maryland counties. Source: 2018 Heat-related Illness Surveillance Report by the Maryland Department of Health.

Figure 2: An image showing the catastrophic flooding in Ellicott City, Maryland, in 2018. Extreme weather events like this one are predicted to become increasingly common. Source: The Washington Post

communities and people of color the ability to prepare for, respond to and recover from extreme weather events. This relationship between climate change and vulnerable populations is not coincidental. Continuous exposure to pollutants can negatively impact health in the long-term and vulnerable populations are unable to secure healthier alternatives due to cost.[v] Low-income communities that typically need low-cost housing also tend to be more of the labor force directly exposed to pollutants, further increasing the effect of climate change and pollution on this population. [vi]

CLIMATE INJUSTICE IN MARYLAND

The state of Maryland is adversely impacted by climate change, evidenced by excessive rainfall, flooding, hurricanes, wildfires, storms and increasing heat. Extreme heat is the deadliest weather disaster, killing as many as 1,200 people annually in the U.S. Maryland is no exception[vii] The city of Baltimore is predicted to become one of the top ten cities with excess heat by 2050.[viii] The most vulnerable communities are the frontline and *fenceline* communities and are populated predominantly by people of color. Baltimore, with its population of 62% African-Americans, is a prime example.[ix] Studies have shown that communities of color face higher numbers of deaths due to extreme weather events such as heat waves and fluctuations in outdoor air pollution.[x,xi] Between 2014 and 2018, 28% of Maryland's heat-related deaths occurred in Baltimore,[xii,xiii] demonstrating energy injustice impact on communities of color (Figure 2). To combat higher temperatures, more air conditioners or electrical cooling devices are needed increasing energy consumption and electrical usage. Increased energy demand generates more environmental pollution, both ambient and household, causing more deaths..[xiv,xv] Inner-city residents are more likely to experience problems due to pollution from increased energy use to stay cool, demonstrating that climate change will continue to exacerbate these environmental conditions, impact health and create problems in these underserved communities with greater greenhouse gas emissions.

HOW TO ADDRESS CLIMATE (IN)JUSTICE? RECOMMENDATIONS FOR MARYLAND STATE GOVERNMENT

Researchers refer to the widening divide created by climate change as the "climate gap," meaning that frontline communities will suffer with rising threats. To address the disparity, grassroots involvement in guiding local and regional climate resilience planning, policy development and implementation is needed to better reflect the priorities of their low-income populations. Environmental Justice Screening and Mapping (EJSM) tools – which geographically portray health, environmental, climate, sociodemographic and economic data – are an important resource in helping to discern inequitable distribution of environmental and climate burdens across communities. EJSM tools also demonstrate a community's ability to withstand and respond to the threats of climate change (see page ten for information on Maryland-specific EJSM tools). Communities and policymakers can use EJSM tools to calculate cumulative impacts of environmental injustice to use in their environmental policy and decision-making.

Figure 3: Climate Justice advocates in frontline communities. Source: Casa (wearecasa.org)

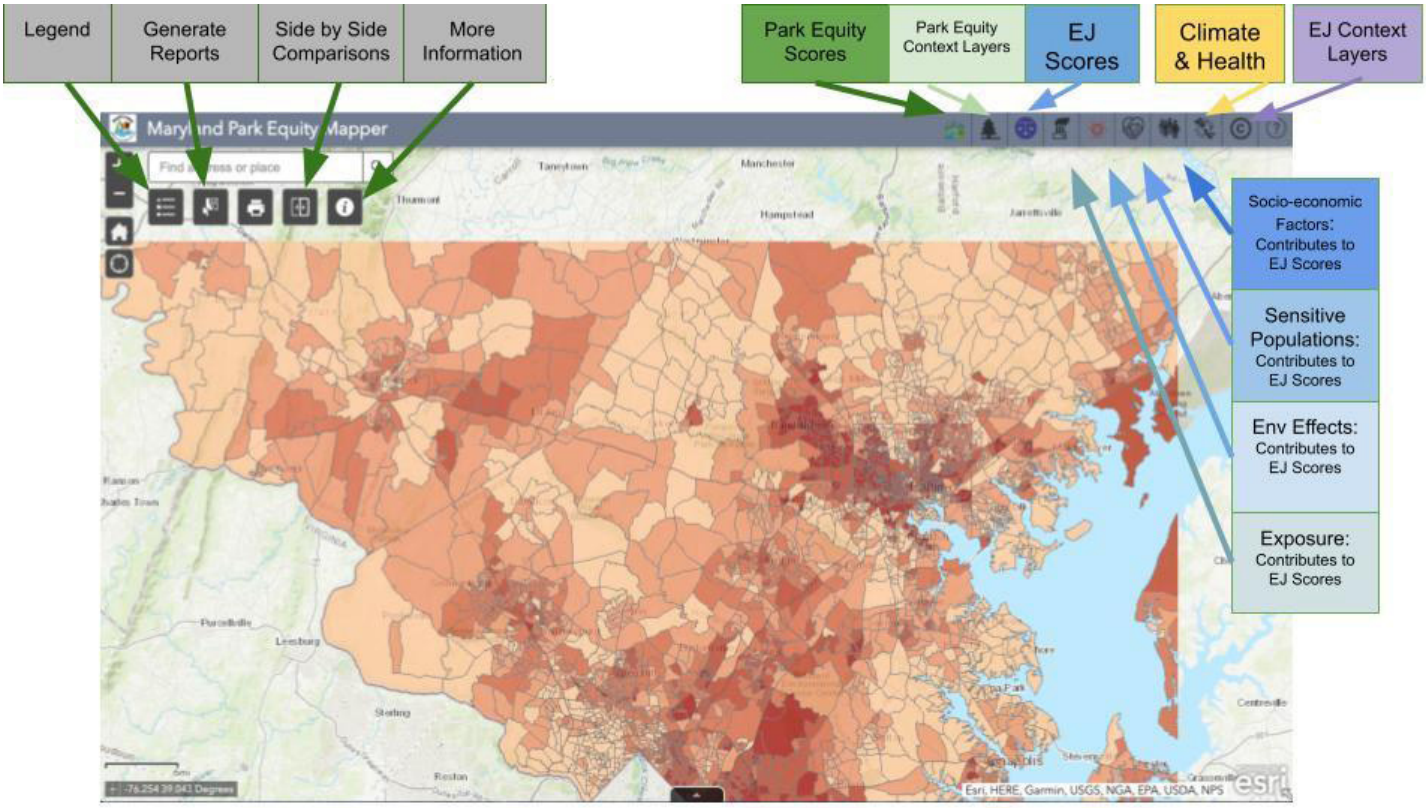


Figure 4: A screenshot of the MD EJSCREEN including access to the Park Equity Mapper, Climate and Health Mapper, EJ Scores and the different components of the tool.

The *Justice40* initiative introduced in President Biden's 2021 Executive Order on Climate Change allocates 40% of benefits from federal climate change investments to disadvantaged communities. To provide the federal government with recommendations on implementing this goal, environmental justice advocates, including the Center for American Progress and the Equitable and Just National Climate Forum,[xvi] developed a list of values and needed investment benefits in four categories: 1) healthy communities and pollution reduction, 2) climate justice and resilience, 3) just transition, and 4) allowing communities to speak for themselves.

The state of Maryland should adopt these recommendations to advance environmental and climate justice and equity. Efforts of states like New York and California rank highly in pursuing climate agendas and initiatives, can be models for Maryland to exceed legislative benchmarks and lead equitable climate reform. *Justice40* recommendations, crafted for local communities, would promote healthy and positive environments in Maryland through benefits, not direct investments, for environmental justice communities. However, the vague language could prevent needed services and resources from reaching the intended recipients. *Justice40* policies adopted by Maryland need microtargeted language and funding mechanisms that ensure inputs into communities of concern will build long-term climate equity and generate community wealth that will be locally retained. This may be achieved by the following recommendations:

1. **Codify the use of environmental justice mapping tools into legislation at all levels of governance, planning, and development** to increase application and impact for translation into policy development. EJSM applications and microtargeting of communities are being discussed at the federal level.

2. **Develop a way to define target communities by ranking them based on the vulnerabilities and risks specific to regions**. It will be important to make sure that indicators specific to Maryland, such as rural-specific indicators, including rural-specific health disparity data, are captured while identifying target communities within screening processes. It is also necessary to prioritize by EJ percentile rankings to *microtarget* communities as a subgroup of EJ communities that warrant immediate attention and resources. Consultation with impacted residents can ensure that Maryland-specific EJ tools reflect our communities accordingly.

3. **Use an encompassing EJ score to *microtarget* areas in greatest need of intervention**. Develop an environmental justice score that includes indicators on economic progress, climate resilience and climate equity. This score could be used for effective allocation of grant funding and siting of health-promoting infrastructure in high priority

communities of concern in Maryland. This could also be used to define disadvantaged communities with critical service gaps for funding to close economic disparities and the climate gap.

ENVIRONMENTAL JUSTICE MAPPING TOOLS AVAILABLE TO ADDRESS CLIMATE JUSTICE IN MARYLAND

Municipal Maryland's 2020 and 2021 September/October issues introduced municipal leaders to the new Environmental Justice Screening and Mapping (EJSM) tools. The CEEJH team has or is developing three tools that can be helpful to you in addressing environmental and climate injustice. These tools include:

- Maryland Environmental Justice Screen (MD EJSCREEN)
- Maryland Park Equity Mapper
- Maryland Climate and Health Equity Mapper (Beta Site – In development)

These tools can be used by city planners and public health officials to identify communities in need of climate-resilient infrastructure and revitalization.

ABOUT CEEJH'S WORK TO ADDRESS ENVIRONMENTAL AND CLIMATE (IN)JUSTICE

CEEJH supports Maryland communities in addressing environmental and climate injustice by using community-based participatory research framework, citizen science, collaborative problem-solving model principles, and partnerships with grassroots community-based organizations to *INpower* underserved and overburdened populations through education, outreach, capacity-building, research, and technological solutions. CEEJH also serves as a link between frontline and *fenceline* communities, community-based organizations, environmental advocacy groups, health professionals, researchers, educators, students, policymakers, and government agencies in identifying and addressing environmental and climate injustice and health disparities across the Mid-Atlantic region. CEEJH also develops and maintains mapping tools to help communities visualize the inequitable distribution of environmental and climate burdens across communities. For more information, visit the website.

References:

[i] Bullard, R. D. (1993). Anatomy of environmental racism and the environmental justice movement. Confronting environmental racism: Voices from the grassroots, 15, 15-39.

[ii] Alston, D. (2010). The summit: Transforming a movement. Race, Poverty and the Environment, 2(3/4), 14-17.

[iii] Bullard, R. D. (1999). Dismantling environmental racism in the USA. Local Environment, 4(1), 5-19.

[iv] Shonkoff, S. B., Morello-Frosch, R., Pastor, M., & Sadd, J. (2011). The climate gap: environmental health and equity implications of climate change and mitigation policies in California—a review of the literature. Climatic Change, 109(1), 485-503.

[v] USEPA, 2021

[vi] Jesdale, B. M., Morello-Frosch, R., & Cushing, L. (2013). The racial/ethnic distribution of heat risk-related land cover in relation to residential segregation. Environmental health perspectives, 121(7), 811–817. https://doi.org/10.1289/ehp.1205919

[vii] McDonald, R. M. (2019, May 8). Trees in the US annually prevent 1,200 deaths during heat waves. Cool Green Science. https://blog.nature.org/science/2019/05/08/trees-in-the-us-annually-prevent-1200-deaths-during-heat-waves/

[viii] Major cities with the biggest projected temperature changes by 2050. (2021, July 1). Chicago Tribune. https://www.chicagotribune.com/weather/weather-news/sns-stacker-major-cities-temperature-change-20210701-q3vhom6e6fd6bpppwfsecyqanm-photogallery.htm

[ix] Baltimore, Maryland population 2021 (demographics, maps, graphs). (2021). World Population Review. https://worldpopulationreview.com/us-cities/baltimore-md-population

[x] Kc, B., Shepherd, J. M., & Gaither, C. J. (2015). Climate change vulnerability assessment in Georgia. Applied Geography, 62, 62–74. https://doi.org/10.1016/j.apgeog.2015.04.007

[xi] Shonkoff, S. B., Morello-Frosch, R., Pastor, M., & Sadd, J. (2011). The climate gap: environmental health and equity implications of climate change and mitigation policies in California—a review of the literature. Climatic Change, 109(1), 485-503.

[xii] Maryland, C. N. S. (2019, August 15). Red alert neighborhood heat inequality. CNS Maryland – Capital News Service. Retrieved April 20, 2022, from https://cnsmaryland.org/interactives/summer-2019/code-red/neighborhood-heat-inequality.html

[xiii] Baltimore Neighborhood Indicators Alliance. (2018). About BNIA-JFI. Baltimore Neighborhood Indicators Alliance. Retrieved November 14, 2021, from https://bniajfi.org/about_bnia/.

[xiv] Landrigan, P. J., Fuller, R., Acosta, N. J., Adeyi, O., Arnold, R., Baldé, A. B., ... & Zhong, M. (2018). The Lancet Commission on pollution and health. The lancet, 391(10119), 462-512.

[xv] Cohen, A. J., Brauer, M., Burnett, R., Anderson, H. R., Frostad, J., Estep, K., ... & Forouzanfar, M. H. (2017). Estimates and 25-year trends of the global burden of disease attributable to ambient air pollution: an analysis of data from the Global Burden of Diseases Study 2015. The Lancet, 389(10082), 1907-1918.

[xvi] Center for American Progress. (2021). Justice40 Recommendations. Center for American Progress. https://cdn.americanprogress.org/content/uploads/2021/03/16083513/Justice40-Recommendations.pdf.

Equity As A Fundamental Value: Spotlight on the City of Frederick

By Alderman Derek Shackelford, city of frederick

There have been many conversations over the course of several years regarding Diversity and Inclusion. As our communities become increasingly more diverse, it is imperative that our local governments and elected leaders understand the importance of how policies encourage participation, facilitate progress, and provide the resources for an inclusive future. Diversity and Inclusion must be more than checking a box or filling a slot. And it is relevant as we consider all community decisions, even our response to climate change.

True diversity and inclusion efforts are intentional about access to the same opportunities, acknowledging that history has not been inclusive and creating communities where all can thrive with opportunities that are real and transparent. In recent years, the City of Frederick has made great strides in being committed to authenticity, openness and truth telling.

The Resolution: *Racism as a Public Health Crisis* passed unanimously by the Board of Aldermen on July 16th, 2020. This Resolution included four objectives:

1. Establish a racial equity and social justice action plan or equity office to incorporate and embed racial equity and social justice principles and strategies into operations, programs, service policies, and community engagement - for the City and for each department.

2. Encourage the Mayor to consider racial equity initiatives and social justice impact programs in the strategic planning and budget processes.

3. Establish a Racial Equity and Social Justice Advisory Committee and set forth the composition and duties of the Committee; and

4. Recommend the Planning Commission and the Board of Aldermen incorporate racial equity and social justice impact when preparing and adopting the Comprehensive Plan.

The Resolution: *Equity As A Fundamental Value* passed unanimously on August 6th, 2020. This Resolution consists of:

1. Committing to the evaluation of City documents to account for equity impacts and to remedy any deficiencies.

2. Broadening public outreach to be more inclusive of diverse languages and communication needs in our community.

3. A commitment to considering all future policies, practices, actions, and decisions through the lens of equity.

In the City of Frederick, we believe working on the issues of equity and inclusion helps prepare our community for continued growth, while addressing our historical societal and economic inequities. This includes recent initiatives to incorporate an equity impact discovery process for new legislation and policies enacted at all levels of the City. This helps apply an equity lens to the work we currently do as a City today and builds our resiliency for the future by ensuring that new policies will not create unintended inequitable outcomes.

The City of Frederick is also promoting the growth and capacity building of our small, minority, and women owned businesses through new purchasing programs that help prepare the City to be economically and financially resilient in the changing marketplace. Our recent launch of our minority and women-owned business enterprise (MWBE) program recognizes historic underuse of these businesses and works to increase inclusion of MWBEs in City purchasing.

Internally, the City of Frederick has also focused on building staff resilience including hiring of an Equity Program Administrator and establishing an Equity and Inclusion Department. This office has initiated training centered around equity focused on managing change in the evolving workplace. Additionally, a staff working group was established to help advance equity through program and training initiatives. The Department has also launched monthly equity-focused staff trainings to gain needed skills and use an equity lens in daily work.

Future efforts include conducting departmental equity assessments, creating an equity performance measurement system, incorporating equity further into the budget process and building an equity-focused onboarding program for new staff. The programs are moving our community forward in managing the changing environment and its challenges.

These initiatives are intentional strategies of the City's commitment to Diversity and Inclusion and important steps towards a brighter future. We recognize that these are the beginning stages in creating a community where all people feel invited, valued and welcomed.

Integrating Climate Change Adaptation into Local Planning: New Water Resources Element Guidance

By Jason Dubow CC-P, Manager, Resource Conservation and Management and Matthew Rowe, Assistant Director, Water and Science Administration, Maryland Department of Planning

To protect private property, public health, government infrastructure and local environmental resources, municipalities should take steps to study the expected impacts of climate change for your city or town. Those steps should include identifying vulnerable areas, populations and assets to develop strategies to avoid or lessen those impacts.

As discussed in the most recent annual report of the Maryland Commission on Climate Change, extreme weather events, such as droughts and severe storms, have been increasing in frequency and cost in Maryland since the 1980s and are attributed to a changing climate. The report notes that the effects of accelerated sea-level rise in Maryland are already apparent, including shoreline erosion, deterioration of tidal wetlands and salinization of low-lying farm fields. Nuisance flooding (also referred to as high tide flooding) that occurred just a very few days per year in Annapolis in the 1950s now occurs forty or more days per year. Storm surges from tropical storms and Nor'easters also spread farther and higher, adding to the higher sea level.

Given that many climate change impacts are water related, **one place to begin is for municipalities to incorporate climate change adaptation into the Water Resources Element (WRE) of their local comprehensive plan.** The WRE is designed to ensure that local plans for growth and development can be supported, given the limitations of local water resources, as well as the constraints of local water, sewer and stormwater infrastructure.

In 2020, the Maryland Department of the Environment (MDE), the Maryland Department of Natural Resources (DNR) and the Maryland Department of Planning (Planning) convened a team to update the state's 2007 WRE Guidelines to incorporate climate change adaptation.

After identifying needed changes and developing a preliminary draft of the updated guidelines in fall 2021, several county and municipal planning agencies were asked to review and provide feedback on the draft changes. Their comments recommended more clarity regarding state expectations and the extent and availability of state assistance. The agencies revised the draft update to reflect that input.

MDE and Planning then jointly published a new web-based guide, the 2022 Proposed WRE Guidance Update, in December 2021. This guide provides local planners with information about best practices for conducting analyses and approaches for ensuring Maryland's waters are protected as the local land use plan is developed and implemented, reflecting changes to MDE water resources programs over the past decade, and for integrating climate change considerations, particularly flooding risks, into the drinking water, wastewater, and stormwater assessments of the WRE.

In addition to integrating climate change considerations throughout the WRE development process, the 2022 Proposed WRE Guidance Update includes changes to replace the nonpoint source loading analysis of the stormwater assessment portion of the 2007 guidelines. The detailed drinking water assessment and wastewater assessment portions of the 2007 WRE guidelines will remain intact and should still be followed.

In 2022, MDE and Planning staff are hosting monthly webinars and promoting other agency webinar series, including those available from the U.S. Environmental Protection Agency Creating Water Resilient Utilities (CRWU) initiative. These webinars will train local governments on incorporating climate change into local planning and to identify, discuss and implement improvements to the draft 2022 Proposed WRE Guidance Update, with the goal of finalizing the update by the end of 2022.

Whether municipalities choose to focus on water resources first or focus on other community assets, there are several general steps to get started. First, convene staff from the emergency management, public works, planning and environmental departments to discuss flooding and other current climate-related hazards. This can result in an inventory of issues, organized by geography, population, and assets. Next, the municipality can identify and analyze available projections of different climate change impacts expected for the region and, where available, specific to the municipality. Where information gaps exist, the municipality should identify those as well. Using the inventory and available projections, the municipality can identify specific properties, populations, environmental resources and infrastructure which may be vulnerable to climate change impacts. As local plans, zoning and capital projects are developed, local governments can incorporate knowledge of climate change impacts by creating strategies to avoid or lessen impacts such as raising the elevation of critical infrastructure in flood-prone areas.

For more information about the WRE Guidance, please contact Jason Dubow, Manager, Resource Conservation and Management, at jason.dubow@maryland.gov or (410) 767-3370, or Matthew Rowe, Assistant Director, Water and Science Administration, at matthew.rowe@maryland.gov or (410) 537-3578. For more information on climate change adaptation, go to the following link, and for more information on the Maryland Commission on Climate Change, click here.

Incorporating Climate Change into Comprehensive Plan: Spotlight on Anne Arundel County

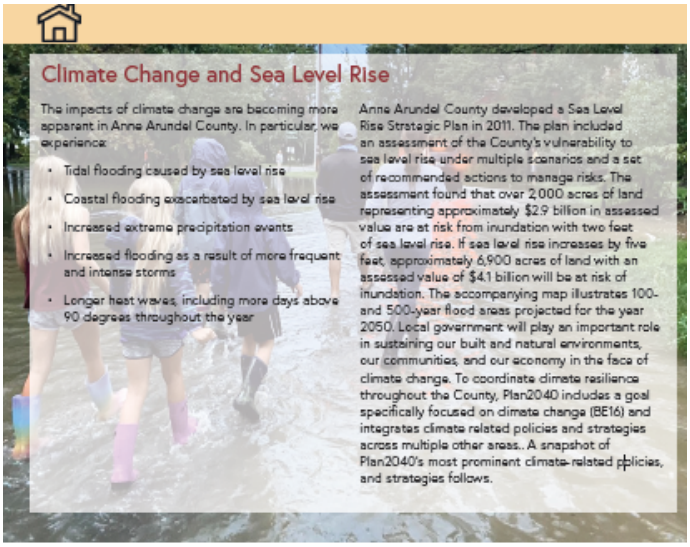
By Michael Stringer, AICP, Senior Planner, Anne Arundel County Office of Planning and Zoning

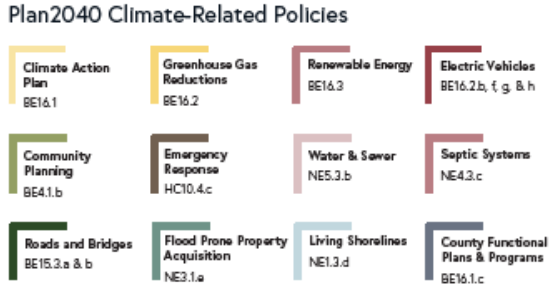
With over 500 miles of shoreline, Anne Arundel County is vulnerable to impacts from sea level rise. A 2011 study found that over 2,000 acres valued at approximately $2.9 billion are at risk from inundation with two feet of sea level rise. The relative lack of tree cover and effects of urban heat islands disproportionately affect the lowest income and most ethnically diverse communities in the County.

The comprehensive plan presented an opportunity to develop a cohesive policy framework to address climate change and equity in the context of future development. The County Council adopted Plan2040, its latest update, in May 2021. Through the planning process, three key themes emerged to make development of the smarter, greener and more equitable.

Strategies related to climate change and equity were woven throughout the four themed chapters of Plan2040. The Natural Environmental chapter synthesizes years of studies and work at the local, state and regional level of potential impact and adaptation measures. The plan includes strategies to update stormwater management design standards to account for changes in precipitation patterns, promote living shorelines to reduce coastal flood risk and conserve flood prone properties. The Built Environment chapter includes strategies to reduce greenhouse gas emissions by promoting compact development near transit stations and improving biking and walking infrastructure. The Healthy Communities chapter highlights the need to increase access to cooling centers to provide relief during heat waves and improve community disaster response and recovery, especially during flood events. The Healthy Economy chapter promotes redevelopment and revitalization to support community development while reducing the impacts of sprawl.

Terrapin Park in Stevensville, Maryland





Each chapter of the plan includes equity concerns that have been exacerbated by past public policy decisions. Strategies throughout Plan2040 repeat the theme to engage with and invest in underserved communities.

The County's approach to integrating climate and equity in the comprehensive plan was informed by guidance documents from the American Planning Association and other organizations. The goals, policies and strategies respond to the concerns raised by community members over three years of public outreach. The goals, policies and strategies were refined and amplified by recommendations from the County's Planning Advisory Board and amendments made by the County Council.

The County recently published its first annual progress report on implementation of Plan2040. This report and the annual budget approval process provide accountability measures to ensure that County policies, programs and projects address climate change and equity as standard practice.

From Resilience Planning to Implementation: Funding and Finance for Municipal Resilience

By American Society of Adaptation Professionals Executive Director Beth Gibbons and T. Jonathan Lee, Climate Resilience Consulting Deputy Director of Resilience Services

Think about a tree on a street or lawn outside. Since the first sprouts out of the ground to its mature state with a sturdy trunk and multitudes of leaves, many factors have contributed to its growth. The most robust trees require nutritious soil in addition to a healthy amount of water, as well as a variety of caretaking methods over time from watering to mulching and pruning, all of which contribute to lush and vibrant tree-cover. In a similar way, municipal climate resilience projects need a life cycle of care, especially when it comes to the funding and financing needed to make sure projects can get off the ground and make a lasting impact.

These funding and financing considerations need to start from the "sprouting", or project scoping phase of resilience projects. With trees, it is not enough to just water newly planted sprouts or seedlings; if the soil is full of weeds or maybe even polluted in spots, the tree will not grow well. Municipal resilience projects must similarly employ a wide lens and work with partners to consider the range of community needs to properly account for initial project budgets. For instance, does the project and its budget account for historic contamination? And does the project address the needs of those most disproportionately affected by climate impacts?

Just as you might need more careful watering at the beginning of a tree's life, followed by more careful mulching and pruning later in its growth, planners need to make sure all phases of a resilience project from construction to operations and maintenance are covered by various sources of funding and financing best suited to the situation. For resilience, this often compounds with community needs as many funders, such as US federal agencies, now look for established community engagement and equity in their funding criteria for local projects.

Once-in-a-generation federal funds are set to flow from the Infrastructure Investment Jobs Act (IIJA), otherwise known as the Bipartisan Infrastructure Law. Passed in November 2021, it dedicates $1.2 trillion over ten years, with fiscal years 2022 through 2026 containing $550 billion in new federal spending and $973 billion total. About half of new spending enabled by IIJA is on transportation. The second-largest funding area is climate, energy, and environment-related projects (approximately $209 billion with $47 billion specifically earmarked for "resiliency,"); and the third-largest funding area is broadband ($64 billion).

With this influx of opportunity, Maryland can build greater resilience into its infrastructure in the next five-to-ten years. Under IIJA, Maryland will receive approximately $4.1 billion for highway aid and $409 million for bridge replacement and repairs. Over the next five years, Maryland will get an estimated $1.7 billion to improve public transit systems across the state, as well as $158

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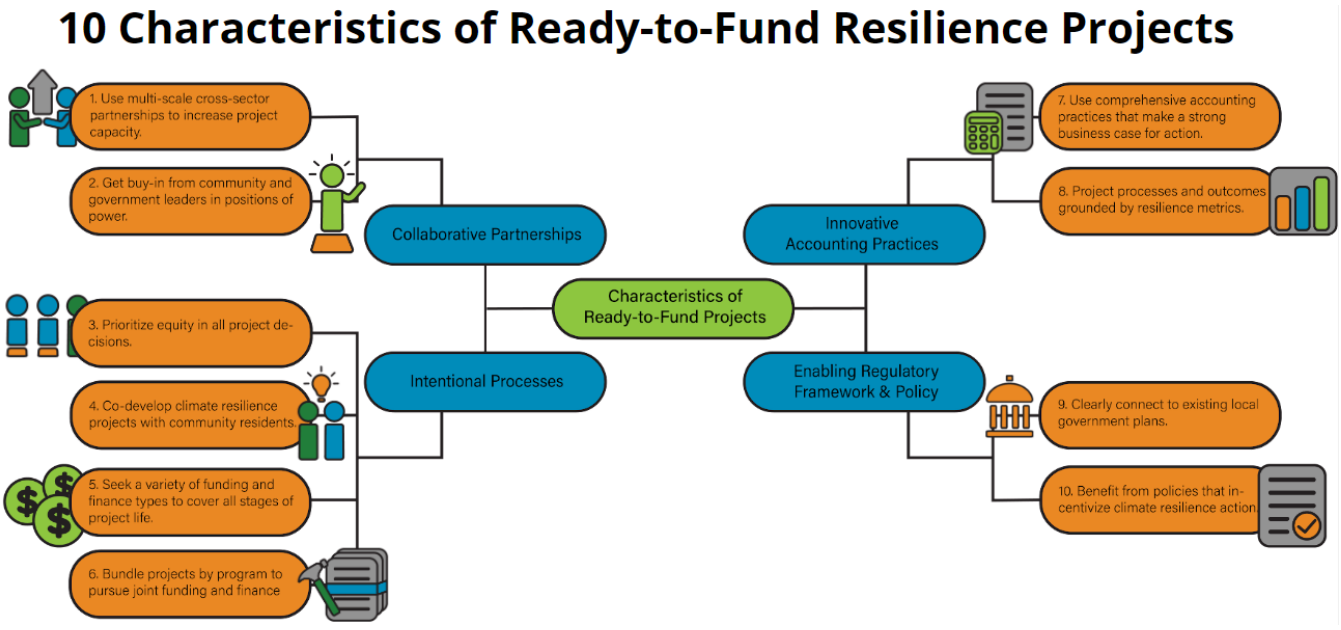


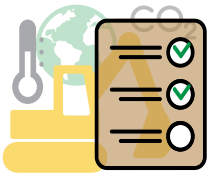
LEADING ON CLIMATE RESILIENCE

Municipal governments have an important role to play in the global climate response – not only in implementing projects on the ground but also in leading the charge to adopt ambitious resilience goals. The path forward is both profound and mundane: local governments can lead by making climate part of the day-to-day business of running municipal operations. By integrating climate risk and resilience priorities into ongoing decision making, policies and programs, municipalities have the opportunity to build communities that are nothing short of carbon-free, safe, healthy, prosperous, and equitable.

Core functions of local government into which resilience can and should be integrated include:

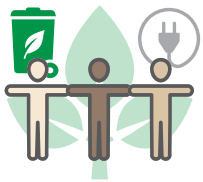
Hazard, Risk, And Vulnerability Assessment
Learn where and how future climate hazards will affect the community's physical, social, and economic landscapes to mitigate risks, ensure continuity of operations and services in the face of uncertainty, and protect the government against liability.

Infrastructure and Asset Management
Take a proactive approach to maintaining, repairing, and replacing physical infrastructure, integrating natural capital, and supporting community assets so they can withstand climate change impacts and foster a thriving and vibrant community.



Planning
Consider how current plans may be disrupted and how future planning processes should be informed by climate science data to ensure long-term community sustainability, allocate public services equitably, encourage a strong local economy, and protect the population and natural resources.

Policy and Regulations
Evaluate all codes, ordinances, policies and regulations for how they may exacerbate climate impacts and establish and enforce those that help build community resilience to protect public safety, conserve the natural environment, and encourage a sustainable economy.



Outreach and Engagement
Align climate efforts with community priorities and adopt community-driven inclusive processes that foster community ownership of resilience initiatives so that everyone has access to the benefits of programs and investments.

Finance and Budgeting
Incorporate climate impacts in all investment decisions, especially projects with long lifespans to ensure that current and future investments in infrastructure and services are going towards smart, resilient, and long-term community solutions.

OPPORTUNITIES FOR CLIMATE

To build climate resilience, local governments can implement new projects and programs, adjust existing procedures, plans, and standards, or adopt a combination of both approaches. Use the following checklists to identify opportunities to embed climate change resilience into existing government operations.

Hazard, Risk, And Vulnerability Assessment

- ☐ Identify projected impacts of regional climate hazards.
- ☐ Assess the risks and vulnerability of the community's physical, natural, and economic assets, as well as on vulnerable populations.

Climate Hazards

• Precipitation • Storms • Drought • Heat • Fires • Sea level rise

Hazard Impacts

• Property Damage • Storm surge • Road Closures • Low water table
• Saltwater intrusion • Heat-related disease • Natural resource loss
• Loss of biodiversity • Agricultural shifts • Population change • Flooding
• Erosion • Business Interruption

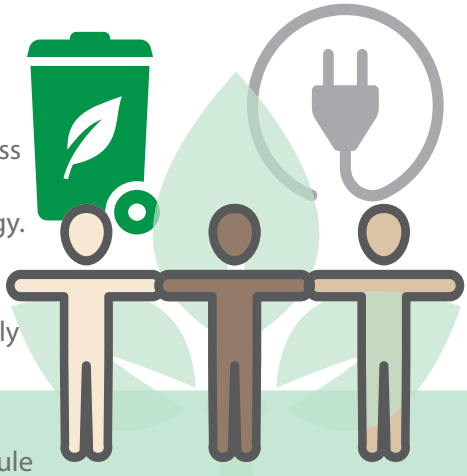
Planning

- ☐ Establish climate change and resilience as community priorities.
- ☐ Conduct a planning document crosswalk to identify any climate-related goals, areas of project and program alignment, and opportunities for climate resilience enhancements.
- ☐ Develop a set of resilience strategies that addresses the environmental, social, and economic impacts of climate change.
- ☐ Identify funding and financing sources connected to proposed projects and programs.

Approaches For Integrating Resilience Into Community Planning

• Adopt a stand-alone climate adaptation/resilience plan
• Add a resilience element to the comprehensive plan
• Weave in resilience strategiies and projects to community plans

Outreach and Engagement



- ☐ Conduct community outreach on the risks and impacts of climate change, steps to improve resiliency, and available resources.
- ☐ Develop messaging tailored to different population groups to address various interests and communication needs.
- ☐ Establish an equitable and inclusive community engagement strategy.
- ☐ Provide robust opportunities for meaningful participation in decision-making processes.
- ☐ Monitor and track the community's climate action efforts and publicly report outcomes.

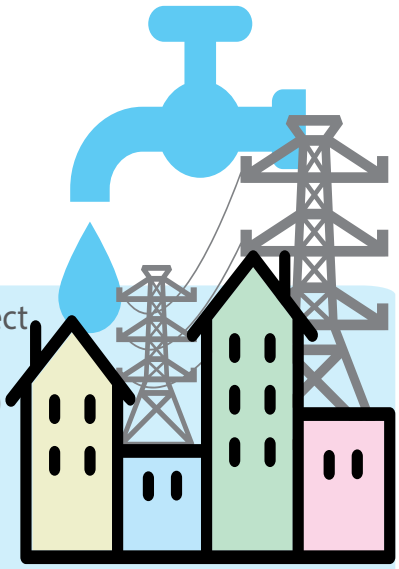
Key Considerations For Creating Inclusive Events

• Trusted partners • Clear goals and expectations • Convenient schedule
• Incentives for participation • ADA Accessibility • Accessible location
• Translated materials and language interpretation

ACTION IN LOCAL GOVERNMENT

Infrastructure and Asset Management

- ☐ Maintain a detailed inventory of community assets, including built, natural, economic, and cultural.
- ☐ Prioritize investments in assets that can offer multiple benefits (e.g., shoreline protection, cooling shade, improved air quality, etc.)
- ☐ Identify strategies to reduce assets' vulnerabilities to climate change.
- ☐ Adjust O&M processes and schedules to account for climate change (e.g., conduct upgrades to reduce future flood damage when making repairs, identify particularly vulnerable infrastructure that may requireelevation, relocation, or decommissioning, etc.)



Community Assets And Vulnerable Populations To Inventory And Protect

- Cultural resources (libraries, museums, archeological sites)
- Natural capital (open space, wildlife habitat, water resources, critical areas)
- Critical facilities (hospitals, fire stations, shelters, cooling centers)
- Built Infrastructure (buildings, roads, utilities, housing)
- Equipment (generators, HVAC systems, vehicles, tools, electronics)
- Economic Assets (business districts, tourism, industry, employers)
- Vulnerable Populations (Black people, Indigenous people, people of color, immigrant communities, disabled people, elderly and children, low-income, non-English speakers)
- Government financials (property tax revenue, sales tax revenue, tourism revenue, bond ratings, funds)

Policy and Regulations

- ☐ Update policies, codes, and ordinances to account for climate change.
- ☐ Review permits for potential climate impacts and vulnerabilities.
- ☐ Streamline permitting processes for climate-friendly projects.
- ☐ Develop and adopt new floodplain maps that reflect projected flood risks.
- ☐ Establish a policy or approach for addressing repetitive loss properties.

Policies And Regulations That Could Be Amended To Advance Resilience

- Streets and Parking Maximums • Affordable Housing Policies
- Community Engagement Policies • Health and Equity • Building Codes
- Tree Canopy and Forestry Preservation • Floodplain Management
- Health and Equity • Onsite Stormwater Retention Requirements
- Setback and Buffers • Critical Areas Requirements

Finance and Budgeting

- ☐ Incorporate climate change impacts when assessing the community's future financial stability.
- ☐ Create a portfolio of resilience projects including their costs and potential funding sources.
- ☐ Explore establishing a dedicated revenue source for climate resiliency efforts.
- ☐ Actively pursue grants and other funding opportunities for climate resilience projects.
- ☐ Establish climate-related decision-making criteria for investments and procurement.

Criteria To Guide Decisions About Investments And Procurement

- Aligns with community plans • Explicitly addresses climate change
- Prioritizes multiple co-benefits • Adopts a "dig once" approach to implementation

RESOURCES FOR CLIMATE RESILIENCE

General Climate Resilience

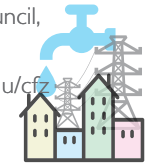
- Sustainable Maryland. EFC, University of Maryland. https://go.umd.edu/SM
- Maryland Resiliency Partnership https://go.umd.edu/cfV
    - US Infrastructure Investment and Jobs Act Funding for MD. https://go.umd.edu/cYW
- U.S. Climate Resilience Toolkit. NOAA's Climate Program Office
    - The Climate Explorer. https://go.umd.edu/cG7
    - Steps to Resilience. https://go.umd.edu/cGX
    - Funding Opportunities https://go.umd.edu/cfU

Hazard, Risk, and Vulnerability Assessment

- Adapting Stormwater Management for Coastal Floods. NOAA. https://go.umd.edu/cG6
- Neighborhoods at Risk. Headwaters Economics, 2022. https://go.umd.edu/cGu
- Coastal Risk Screening Tool: Affordable housing at risk of flooding in 2050. Climate Central. https://go.umd.edu/cfH
- Maryland EJScreen Mapper. CEEJH Lab, University of Maryland. https://go.umd.edu/cxE
- The Office of Climate Change and Health Equity. https://go.umd.edu/cYm
- Projected Intensity-Duration-Frequency Curve Data Tool for the Chesapeake Bay Watershed and Virginia. MARISA. https://go.umd.edu/cGb

Infrastructure and Asset Management

- Planning, Designing, Operating, and Maintaining Local Infrastructure in a Changing Climate. Baltimore Metropolitan Council, 2021. https://go.umd.edu/cfN
- Asset Management for Sustainable Service Delivery: A BC Framework. Asset Management BC, 2019. https://go.umd.edu/cfZ
- Integrating Natural Assets into Asset Management. Asset Management BC, 2019. https://go.umd.edu/cGa
- The Community Mapping Toolkit: A guide to community asset mapping for community groups and local organizations. Preston City Council, 2018. https://go.umd.edu/cGR



Planning

- Nuisance Flood Plan Development Guidance. Maryland DNR, 2019. https://go.umd.edu/cG2
- Plan Integration for Resilience Scorecard GUIDEBOOK: Spatially evaluating networks of plans to reduce hazard vulnerability. Institute for Sustainable Communities, Texas A&M, 2021. https://go.umd.edu/cxH
- Building Community Resilience with Nature-based Solutions: A Guide for Local Communities. FEMA, 2021. https://go.umd.edu/cfS
- Guide to Equitable, Community-Driven Climate Preparedness Planning. Urban Sustainability Directors Network, 2017. https://go.umd.edu/cxD

Policy and Regulations

- Higher Standards: Opportunities for Enhancing Flood Resilience. Georgetown Climate Center, 2019. https://go.umd.edu/cfu
- Managed Retreat Toolkit. Georgetown Climate Center. https://go.umd.edu/cxV
- Smart Growth Fixes for Climate Adaptation and Resilience: Changing Land Use and Building Codes and Policies to Prepare for Climate Change. EPA, 2017. https://go.umd.edu/cfb

Outreach and Engagement

- Cool Block. Empowerment Institute. https://go.umd.edu/cxR
- Tools for Equitable Climate Resilience. River Network, 2021. https://go.umd.edu/cfk
- Community-driven Climate Resilience Planning: A Framework National Association of Climate Resilience Planners, 2017. https://go.umd.edu/cfZ
- Let's Talk Communities & Climate: Communication Guidance for City and Community Leaders. ecoAmerica, 2017. https://go.umd.edu/cfJ

Finance and Budgeting

- Ready-to-Fund Resilience. American Society for Adaptation Professionals, 2022. https://go.umd.edu/cGB
- Flood Funding Finder. American Flood Coalition. https://go.umd.edu/cfX
- Financing Climate Resilience, Funding and Financing Models for Building Green and Resilient Infrastructure in Florida. Harvard Kennedy School, 2019. https://go.umd.edu/cxF
- How to Pay for Green Infrastructure: Funding and Financing, Green Infrastructure Toolkit. Georgetown Climate Center. https://go.umd.edu/cxC
- Financing the Resilient City: A demand driven approach to development, disaster risk reduction, and climate adaptation. ICLEI, 2011. https://go.umd.edu/cfT

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million for airports and $63 million for electric vehicle charging stations.

Looking at internet infrastructure, IIJA includes at least $200 million for Maryland to expand access to high-speed broadband in underserved areas. The legislation also provides Maryland at least $15.9 million to prevent cyberattacks and extends the Emergency Broadband Benefit program, which discounts monthly broadband bills for low-income households.

Of course, no infrastructure resilience is complete without considering our Bay: Maryland will receive $238 million for the health and restoration of the Chesapeake Bay. IIJA also invests $844 million over five years to improve water infrastructure across the state to ensure clean, safe drinking water.

Municipal governments in Maryland will be able to gain some of this money by applying for competitive grants under IIJA, as well as working with the Governor's Infrastructure Subcabinet to receive state-allocated funds for local projects. As municipalities gear up to apply for the grants and allocation funds, leaders need to make sure they are ready to contribute to winning bids and to insert priorities into long-term plans.

Created through a partnership between the American Society of Adaptation Professionals and Climate Resilience Consulting, the Ready-to-Fund Resilience Toolkit aims to help local governments to:

- More effectively operate within the resilience funding and finance system.
- Better prepare themselves to receive funding and finance for climate resilience-building.
- Create equity through resilience funding and finance.

It includes explanations, examples, and suggested actions to ensure climate resilience processes and projects are designed in a way that readies them to receive funding and finance. Successful Ready-to-Fund Resilience projects have ten common characteristics that allow them to leverage new and existing funding and finance mechanisms while centering equity. These characteristics can be categorized into four themes of practical advice local governments can apply to secure money for resilience: **collaborative partnerships, intentional processes, comprehensive accounting practices, and enabling regulatory and policy frameworks**.

1. Collaborative partnerships build capacity.

Resilience often means using **collaborative, multi-scale, and cross-sector partnerships** (business, nonprofits, community organizations) to increase project capacity. These partnerships help to obtain funding, as well as to design, carry out, and provide feedback on resilience projects, reducing strain on municipal officials while ensuring community needs and perspectives are considered throughout the project.

2. Intentional processes center social equity.

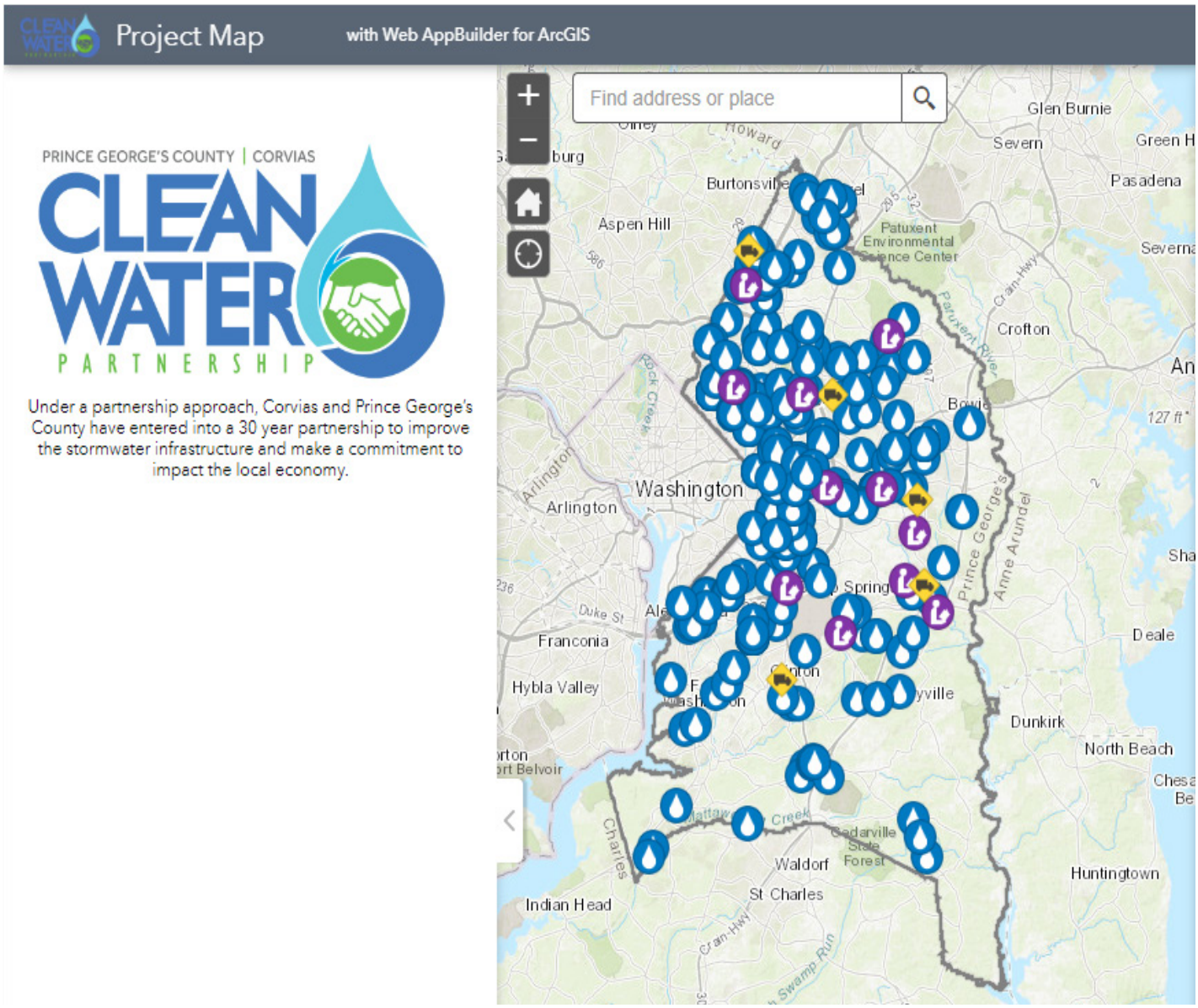
Intentionally structuring processes so that **equity is embedded in all project decisions** by co-developing projects with community residents is one way to overcome limited capacity or limited perspectives. Additionally, such intentionality could extend to **thinking about the entire lifespan of a project**, from inception to operation and maintenance, as local governments seek funding and finance. Longer timelines are more conducive to more equitable outcomes, which usually take more time to achieve. Longer timelines invite the **usage of a variety of funding and finance types** across public and private sources (blended or braided finance), to more safely cover all stages of a project life. Green Banks, like the vanguard Montgomery County Green Bank, can help with this blending.

3. Comprehensive accounting practices attract funds.

In many climate resilience projects, benefits - including direct revenue, economic activity, and environmental and social improvements - accrue years after project completion. Project benefits may also include things such as improvements to the environment and quality of life, which may be poorly understood and difficult to quantify. Traditional cost-benefit assessments privilege benefits to high-dollar value assets, meaning projects in lower-resourced communities may have a lower cost-benefit ratio and be less "attractive" than those in well-resourced communities. Instead, projects that **internalize project co-benefits to conduct a triple bottom line** (social, environmental, and financial) **cost-benefit analysis, ground project outcomes in** Resilience Metrics**,** and **look towards innovative accounting practices are more likely to attract diverse finance and funds.**

4. Connecting to regulatory and policy frameworks overcomes barriers to action.

There is only so much local governments can do to address barriers from state or federal government. However, one area where they do have control is making sure that projects are **grounded within existing community plans**



that **articulate a long-term pipeline of projects**. Utilizing language in long-term comprehensive plans (or indirect taxation or development policies that could be used to incentivize climate resilience action) can help ensure projects address long-term climate impacts, form pathways to break down silos across government departments and sectors for more integrated planning and connect political planning with long-term vision to get buy-in from those in power.

Resilience might not look the same in every project, but the above principles can support the work planners are doing broadly. In 2014, Prince George's County structured a new initiative to *build resilience while addressing regulatory barriers in* meeting the requirements of both EPA Clean Water regulations and the Chesapeake Bay Watershed Implementation Plan. Meeting these requirements meant green infrastructure retrofits for 30% of untreated developed areas to be completed by 2017. To meet this challenge, the County *built its capacity* by entering into a Community-Based Public-Private Partnership with Corvias, an infrastructure and facilities management company.

This newly created Clean Water Partnership (CWP) considered *blended financing* and supplemented public stormwater fees with private financing options and investment *throughout the* project development and implementation phases. Crucially, the CWP agreement also *intentionally included triple-line, equitable* co-benefits for local residents, as 50% of construction had to be subcontracted to local certified small, minority, and women-owned businesses. At least 51% of man-hours also had to be filled by county residents.

Realizing a need for more local participation to meet construction and maintenance goals, CWP leaders instituted a variety of educational and supportive services programs to expand the capacity of local, small, and minority firms in stormwater management and green infrastructure projects. By 2017, CWP completed and certified over 2,100 acres, using more than 85% of small, minority, and women-owned businesses in the county, and saved more than 40% compared to traditional budgets.

With a growing number of billion-dollar disasters and the advent of new funding opportunities, Maryland must start preparing for resilience now. The long-term safety of Maryland's communities will depend on the strength of resilience projects planted in the next five-to-ten years. It is up to planners and municipal staff to plant the seeds of resilient and equitable projects by building and reinforcing collaborative partnerships, intentional processes, comprehensive accounting practices, and regulatory and policy frameworks. With stewardship and care, funding and finance opportunities will help grow a thriving and vibrant forest of resilience projects across the state.

About the Authors: Climate Resilience Consulting *Deputy Director of Resilience Services* T. Jonathan Lee *has experience working with clients in the public, private, nonprofit, and academic sectors at the local, regional, and national scales. His expertise in writing and analysis, workshop facilitation, and grant and project management has focused on climate resilience topics, including municipal planning, project finance, public health, and social equity.*

American Society of Adaptation Professionals *Executive Director* Beth Gibbons *is a leading climate adaptation and resilience expert, co-author of the Midwest Chapter of the 5th National Climate Assessment, and a Public Voices Fellow with* The Oped Project *in partnership with the Yale Program on Climate Change Communication.*

Combining Multiple Funding Sources for Resilience Projects: Community Spotlight Town of Port Deposit

By Vicky Rinkerman, Town Administrator, Town of Port Deposit

The historic nineteenth century Town of Port Deposit is located in Cecil County on the east bank of the Susquehanna River, a distinct geographic location. The Town has a population of 653, approximately 60 percent of whom are low to moderate income. Its unique setting includes a 250-foot granite cliff on the east side of the Town, the river on the west side and Norfolk Southern Railroad tracks that run between Main Street and the river. When it rains, natural springs and streams carry stormwater runoff from the cliff through Town into the Susquehanna River. The Conowingo Dam and Hydroelectric Power Plant located five miles north on the river adds another flood threat. This happens when spill gates open to relieve pressure behind the Dam caused by severe storm events or significant rainfall in New York and Pennsylvania.

In recent years, the Town has been impacted by more frequent and severe storm events. Three storms in the past two years where four or more inches of rain occurred in a short period of time caused erosion and flooding of properties and dwellings, as well as untreated runoff flowing into the streams. Additional concerns include whether planned development on open fields and farmland above the cliff (slated to have over 500 homes and up to ten warehouse buildings) could contribute to increased stormwater volumes flowing into the Town.

The Town has been working over the years to address these problems. In 2015, the United States Army Corp of Engineers (USACE) completed a Flood Risk Management Plan for the Town. The Town has been working to implement the recommendations from the Plan that includes replacing terracotta underground pipes and outfalls on Main Street (MD Route 222) to improve stormwater drainage and temporary flood gates for the railroad underpasses to reduce flood damage to historic properties from major storm events. The Maryland State Highway Administration is finalizing the new storm drain system plans and will be seeking approximately $3 million in funding for the project. The plan includes incorporating a streetscape approach into this effort to reduce vehicular traffic and make this road pedestrian and bicycle friendly. The Town submitted a grant to the Federal Emergency Management Agency (FEMA) for a $2.5 million grant to design and install flood control structures at two railroad underpasses that would be used to reduce the flooding and damage to Main Street from the Susquehanna River during a major flood event. If the FEMA grant is approved, the Town would apply for a $285,190 match from Maryland's Community Development Block Grant Program (CDBG) which administers federal funds provided by the U.S. Department of Housing and Urban Development (HUD).

In 2022, the Town was able to secure $100,000 from the USACE to carry out a watershed study to address the planned development above the cliff. USACE usually requires local matching funds to perform these types of studies but in this case, due to the Town's size, matching funds were not required. The watershed study will provide data to assist the Town in ensuring that adequate stormwater management practices are required and installed to reduce the flood impact to all downstream properties.

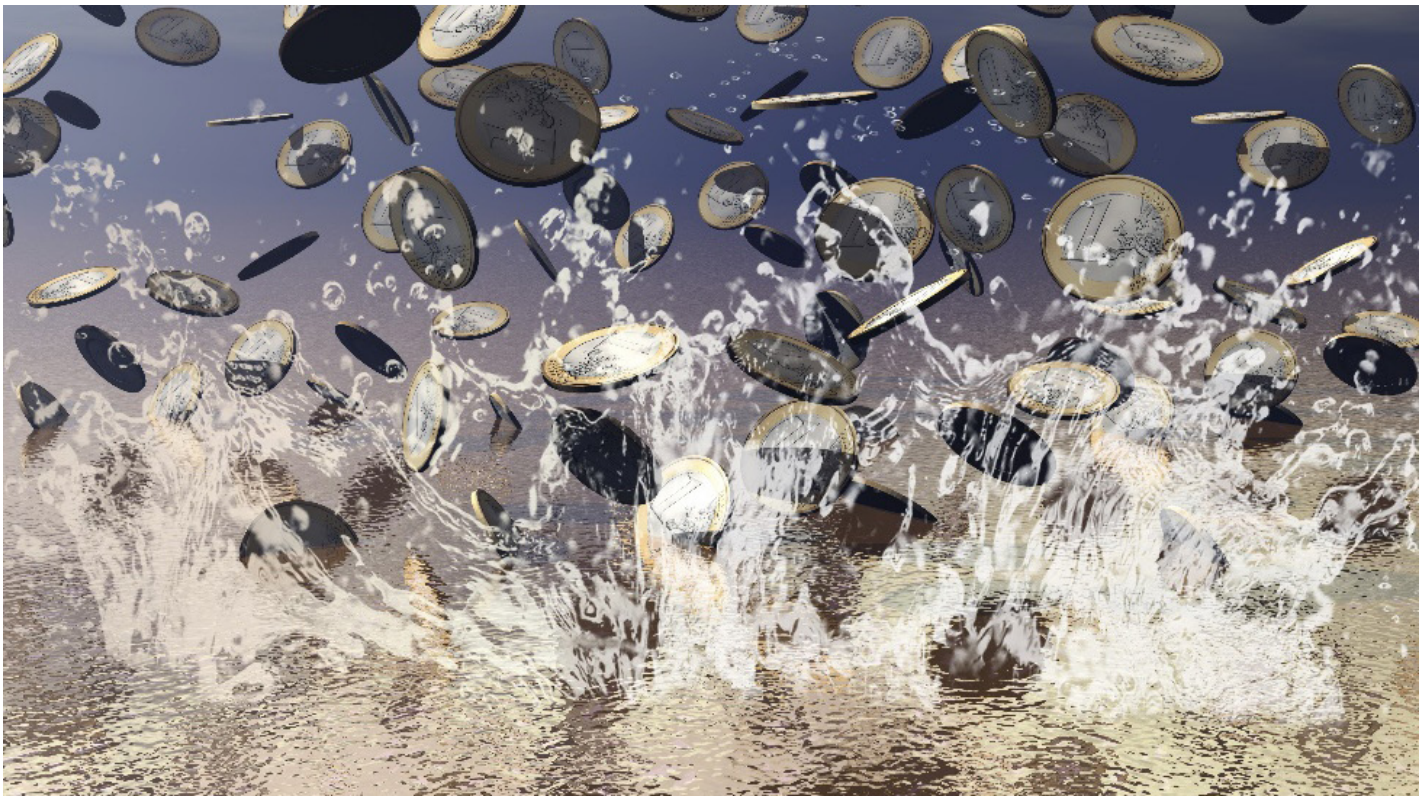
In 2021, the Town hired a private engineering firm to study and develop a plan to address stormwater runoff and flooding on Granite Avenue and Race Street. The plan includes installing a new storm drain system with culverts and a filtration system at a cost of over $1.6 million. This new drainage system will control erosion, stormwater runoff and flooding along Granite Avenue and Race Street. Due to the topography of Granite Avenue and Race Street, stormwater flow has been eroding properties, flooding dwellings and dumping contaminants and nutrients directly into a tributary of the Susquehanna River for many years. The new underground storm drains will merge into a Filterra Bioretention with a sediment chamber system that will capture contaminants and nutrients before these flow into the tributary. The Town was able to secure initial funding from the US Department of Agriculture (USDA) Rural Development program in 2020 which included a $245,000 loan and a $572,000 grant. In 2021, the Town was able to match these funds with an $800,000 grant from Maryland's CDBG Program which administers federal funds provided by HUD for the project. Rummel, Klepper & Kahl, LLP (RK&K) of Baltimore was awarded the contract for the project. The Town anticipates the project will be completed by the end of 2022.

Staff were able to coordinate these projects and grants thanks to the professional guidance and assistance provided by officials from each Federal and State agency. For additional information, you can contact:

Vicky Rinkerman, M.S.
Town Administrator
Town of Port Deposit
410.378.2121 Office
vrinkerman@portdeposit.org

Maryland Conservation Finance Act

By Timothy Male, Executive Director, Environmental Policy Innovation Center



Although green and nature-based infrastructure are in vogue, actual investment in such natural capital is barely trending. In a ten-year review of America's biggest water infrastructure loan programs, we found that only 3% of financing went to green projects.

A new law in Maryland, passed with almost unanimous political support, may be a model to change that while encouraging private capital to expand its role in environmental conservation. Maryland's Conservation Finance Act was signed into law in April and is the first state legislation centered around policy changes intended to attract more than $100 million in annual private finance to environmental programs.

One of the centerpieces of the law is a new category of state contract or procurement that any agency can use, called '*pay for success*.' Although many states have authorized similar contracts for social programs and Anne Arundel County has used it in a water quality program, this is the first broad state authorization to use it for climate and environmental work. As with other state contracts, county and local government have standing authority to 'piggy bank' and use existing state contracts and pricing.

Pay for success contracts depend upon private finance because contracts are structured in such a way that 60% or more of the ultimate public reimbursement cannot be awarded until clear environmental outcomes are documented or modelled. In many cases, like stream restoration or the creation of oyster reefs, this could mean waiting three to five years for a success outcome – and public reimbursement – to be triggered.

Equity investments or private borrowing become crucial to the environmental businesses that carry out these projects, with investors and public agency goals closely aligned toward the successful delivery of water quality, carbon, climate resilience and other outcomes. Fronting public environmental spending with private investment is not a trivial enterprise. Just in Maryland, the state and local governments have funded more than $7 billion for water quality over six years. Private investment-backed efforts could play an expansive role in delivery of these programs in the future.

While global and regional efforts to better measure carbon, resilience, biodiversity and water benefits are necessary for corporate disclosure purposes, quantification is also critical to government programs to monetize those benefits. Thus, the Maryland law also creates a new definition for 'environmental outcome' in its procurement code which will in the future allow any agency to buy any of these environmental results.

Why does this matter?

Many states, including Maryland, have adopted aggressive net zero goals, but few have authorized simple ways for state agencies to offset their emissions or provide offsets for others. Maryland's creation of procurement authority for environmental outcomes now provides a path to do so. It also incentivizes businesses already supporting the expansion of credit supplies for voluntary carbon and biodiversity markets and regulatory

water markets to expand investment because the floor on demand just went up.

In addition to defining outcomes, the new law also creates the first definition for blue, ocean-based infrastructure in the country and expands the definition of green infrastructure to include climate resilience. Coupled with policy language that directs agencies to put such nature-based infrastructure on equal or preferential footing to gray infrastructure, the state should see an influx of new bond-backed capital investment in nature on top of the hundreds of millions the state is expecting in public financing from the federal infrastructure law. The state is launching its first program to buy environmental outcomes – nitrogen pollution reductions – this summer with $20 million in state funding.

The 'Clean Water Commerce' program will set the groundwork for repeated annual purchases with projects expected to come from changes in farming practices, stream restoration, and tree planting priced to the outcomes they produce. Because the law allows any improvement after 2021 to count under future procurements, the state could choose to incentivize more expansive investment in pollution reductions today by committing to purchase future reductions from already-successful projects in future years.

One of the biggest barriers to the deployment of private capital to build natural capital is time. As any local government official knows, environmental reviews can take two to ten years, and even minor projects can be delayed more than a year by permitting. This is a perverse result of regulatory processes that were typically designed to reduce or avoid damage to the environment and communities from development. When applied to ecological restoration work, this can end up delaying projects even more than development. Without more action to fix permitting barriers for nature-positive projects, private capital will flow to activities not obstructed by government review.

The law launches a modest effort to reduce permitting barriers – the legislature created a new state commission to make recommendations on policy changes that would speed up authorization processes for environmental projects. Unless this commission's recommendations are quickly adopted, permitting will hobble private investment activity attracted by other changes in the law.

State legislation in the U.S. rarely gets much attention on a global scale, but Maryland's Finance Act is the first private finance-focused environmental law in the country. Thus, there are dozens of opportunities to replicate these new policies in both bigger and smaller jurisdictions. Because of Maryland's proximity to Washington DC, the new policies may inform new national efforts to attract private capital to nature-based infrastructure and outcomes.

The list of ecological investors, businesses, and non-profits that supported the legislation suggests we might see replication happen sooner rather than later.

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Leveraging Federal Funding to Keep Maryland's Climate Vulnerability at Bay

By Matthew Popkin, RMI

Introduction

Climate resilience is increasingly top of mind in Maryland communities. From managing severe flooding in Ellicott City to heat waves in Baltimore, the new climate reality in the Mid-Atlantic will challenge governments, businesses, and households and requires enhanced planning and infrastructure investment. Fortunately, the federal government has made infrastructure investment a priority, and there are over 180 federal programs that can support an equitable transition to a resilient, clean energy economy.

But as any savvy municipality knows, effective resilience planning takes time to do right and seeking funding cannot just be a continuously reactive, mad dash. Here are four strategies Maryland municipalities can embrace to more strategically fund and invest in resilient communities.

1. Understand the Universe of Federal Funding

Municipal staff should start this process by understanding what funding opportunities exist, though even that can be overwhelming. While some cities and counties do employ grant specialists or hire consultants, they are not often fully connected with or assigned to the sustainability and resilience offices. As a result, simply knowing the current and upcoming opportunities — and their respective purposes and deadlines — is challenging for staff preparing proposals with limited bandwidth, all while keeping the lights on. To make this less overwhelming, RMI (formerly Rocky Mountain Institute) and the World Resources Institute (WRI) developed a new tool, Federal Funding Opportunities for Local Decarbonization (FFOLD), to make it easier for communities to explore and prioritize the federal funding available for energy system-related decarbonization and resilience. Once municipalities understand and prioritize which funding programs need to be on their radars, navigating this increase and range of funding becomes far more manageable.

2. Look Beyond the Usual Agencies

To build resilient, sustainable economies, communities should also consider federal programs and opportunities offered by agencies not explicitly known for their climate and environmental or resilience focus. This means looking beyond the Environmental Protection Agency (EPA), Department of Energy (DOE), Department of Transportation, and the Federal Emergency Management Agency (FEMA). For instance, Housing and Urban Development invests in safe, healthy homes — often a precursor to weatherization and efficiency upgrades. And the Department of Commerce's Economic Development Administration (EDA) offers a plethora of funding for workforce development and economic resilience to train workers in solar and battery storage installation, EV manufacturing and maintenance, electrification technologies, and weatherization upgrades.

With the historic funding opportunities from the 2021 Infrastructure Investment and Jobs Act, it's also easy to forget about the flexible Community Project Funding (CPF) already available to help communities accelerate the transition to a clean energy economy. CPF, a reincarnation of "earmark" funding, is discretionary spending available to senators and representatives for local projects and is worth approximately $15 billion. It retains the flexibility that made earmarks so popular while improving accountability, disclosure, and transparency requirements and is particularly valuable for cross-sector, innovative projects from planning and deploying resilience hubs to increasing the safety and efficiency of homes through weatherization.

Fortunately, municipalities can use the FFOLD tool to more easily explore funding opportunities across the federal agencies and Congress.

3. Build Cross-Departmental and Community-Focused Project Teams

Climate resilience can no longer be confined to emergency management or disaster response departments. While this is undoubtedly *part of* who is necessary, project teams supporting program design or grant funding will be stronger (and more likely to be competitive) if they include breadth and depth of facility operations, public works, sustainability, community-based organizations, and other local stakeholders. Recruiting and managing a broader team does take more effort, but building such a team early is ultimately a longer-term investment in project success, efficacy, and equity.

This is even more important as federal funding programs are actively being redesigned to prioritize environmental justice and equitable impact in communities. In fact, the Biden Administration is explicitly embedding climate change mitigation, environmental justice, and racial equity into funding programs across federal agencies through the Justice40 initiative, which intends to deliver 40% of the overall benefits of relevant federal investments to disadvantaged communities. This initiative more deeply integrates equity into existing

federal grants like FEMA's Building Resilient Infrastructure and Communities Program and new opportunities like DOE's Renewables Advancing Community Energy Resilience program and EDA's Build Back Better Regional Challenge. Having project teams set up to be able to respond to multi-faceted climate, resilience, and equity challenges will increase competitiveness for funding and create a stronger project overall.

4. Invest in Projects that Cost-Effectively Complement Community Resilience

- ***Weatherization and Energy Efficiency Are Essential Resilience Measures*:** Maryland is no stranger to extreme weather — from devastating ice storms to perpetually humid summers and hurricanes. One of the most cost-effective (and often underrated) resilience measures is energy efficiency. Efficient, weatherized buildings reduce the amount of heat needed during cold spells and air conditioning needed during heat waves — ultimately increasing the comfort, health, and "hours of safety" for people and animals inside. In fact, when Winter Storm Uri hit Texas in February 2021, too many reports focused on the supply-side of the equation — ignoring the spiking electricity demand due to the prolonged cold temperatures and the inefficient heating in the state's older housing stock. These types of improvements save money and reduce energy burdens year-round, reduce strain on the grid, and build more resilient communities. Plus, more efficient buildings reduce dependence on outside fuel sources and backup generators. Maryland communities and utilities may be more prepared to handle the range of storms, but the more insulated and efficient Maryland structures are, the more prepared Maryland households and businesses will be for increasingly extreme conditions and the more affordable energy bills will be along the way. In other words, efficient buildings are resilient buildings.

- ***Electric Transit Fleets Can Enhance Resilience and Reduce Emissions:*** There is unprecedented funding for transportation in the Infrastructure Investment and Jobs Act of 2021. This funding could go to building new highways that will increase emissions and reduce local air quality or it could be invested in transit and mobility solutions that are convenient, safe, and clean. Electrified buses are a perfect example of cost-effective, clean mass transit that moves people more efficiently, reduces emissions, and can provide comfortable, convenient transit experiences for commuters and residents alike. Montgomery County's Ride-On transit system is already adopting this at-scale with its solar-powered microgrid bus charging depot in Silver Spring. And other municipalities are making this investment in electric buses to support resilience by putting the buses to use as mobile cooling (or warming) shelters. This is not a new concept, as cities such as Chicago, New Orleans, and Philadelphia have been doing it for years, but the recent push for electric bus fleets offers an opportunity for Maryland cities, especially those with dense transit corridors, from the DC suburbs of Rockville, Takoma Park, and College Park over to the Greater Baltimore region, to invest in buses and bus stations that can support vulnerable residents during extreme temperatures.

- ***Transform Heat Islands into Shaded Shelters:*** It is no secret that asphalt and other paved parking lots absorb heat and create "heat islands," especially in urban and dense suburban areas. Covered parking facilities are highly valued in areas prone to intense heat because they offer a cooler, more comfortable experience. Even a few degrees can make the difference between a hot day and a heat emergency. This increases both the comfort of drivers, passengers, and pedestrians and also reduces the fuel or electricity needed to cool vehicles. While it can be difficult to eliminate existing parking, purposeful deployment of solar parking canopies can enable parking lots to support community resilience and an equitable, clean energy transition through solutions like Community Solar+, as urban heat islands have stark roots in decades-old racist housing and land-use policies. Ideal parking facilities for solar canopies are high-trafficked locations intended to support vehicle parking far into the future, including parking garages, transit hubs, park and rides, grocery stores and other retail centers, community

centers, and major event centers. In fact, Maryland municipalities do not have to look far for examples, as WMATA is already leading the way at four of its transit stations.

- ***Resilience Hubs Offer Physical and Social Resilience:*** Resilience hubs are community-serving facilities designed to support residents, coordinate communication, distribute resources, and provide clean, reliable electricity while enhancing quality of life. These hubs can support everyday operations but are also outfitted specifically to be able to bolster disaster response and recovery efforts. Accordingly, investments are necessary to enable resilient structures, accessibility, power, operations, and services. The City of Baltimore is one of the national leaders in its planning and deployment of resilience hubs to support lower-income, under-resourced, and vulnerable neighborhoods and residents. But Baltimore did not build this overnight: this involved a cross-departmental collaboration with the City's sustainability, planning, emergency management, and health departments; extensive partnerships with the community; and strategic use of funding and grants to invest in key infrastructure needs.

- ***Resilient Local Generators Do Not Need Fossil Fuels and Can Improve Air Quality*:** Generators running on gas or diesel fuel undoubtedly offer benefits as a backup power source, but they are not nearly as resilient for prolonged outages as people think. Simply put, what happens if you run out of fuel and cannot access more due to snow or downed trees or wires? Diesel generators, in particular, are also major concerns for local air quality and human health. A more resilient and far cleaner solution for critical community and government facilities as well as homes and businesses is solar and battery storage, which can be deployed at varying scales depending on need and can recharge over time regardless of fuel supply. Plus, this directly supports financial resilience. Costs for solar and storage continue to decline as gas and diesel fuel costs hit record highs.

Prepare Now for the Critical Choices Ahead

Plenty of other strategies can help prepare Maryland communities to beat the increasingly hotter and more humid summers and mitigate flooding risks. And with inflation top of mind today for residents, businesses, and elected officials alike, there is no time like the present to invest in renewable, resilient, efficient, and electric energy and fleet strategies that allow local governments to hedge against volatile fuel prices and increase the resilience of municipal budgets. But no strategy becomes reality without the funding and financing to implement it. Maryland municipalities face a stark choice: the boost in federal funding can either increase system resilience or further increase vulnerability to more extreme weather; reduce emissions or further exacerbate climate change; and improve equity or further divide communities. In other words, with great funding comes great responsibility.

RMI is an independent nonprofit founded in 1982 that transforms global energy systems through market-driven solutions to align with a 1.5°C future and secure a clean, prosperous, zero-carbon future for all. Matthew Popkin is a manager on RMI's Urban Transformation team. He was born, raised, and educated in Maryland and is a proud graduate of the University of Maryland, College Park and Maryland School of Public Policy.

Financing the Future: Climate Change Funding Options for Municipalities

By Rachel Lamb, Ph.D., Agency Lead, Natural Carbon Sequestration Designated Administrative Manager, Maryland Department of the Environment

In 2022, Maryland adopted the most ambitious climate mitigation goals of any state. In pursuit of reducing greenhouse gas emissions 60% by 2031 from 2006 levels, Maryland is leading the charge to decarbonize Maryland's economy and build more equitable and resilient communities. The State's Greenhouse Gas Reduction Act Plan (GGRA) highlights the importance of partnerships that leverage both private and public resources in the same direction across multiple scales, including municipalities.

Innovative financing has long been a part of the State's commitment to enabling multi-sector partnerships. Since its establishment, the Maryland's Clean Water State Revolving Fund (CWSRF) has provided over $4 billion in low-interest loans and loan forgiveness to support clean water projects. Changes in federal law have opened the CWSRF to new types of financing, including watershed financing partnerships. Similarly, the State's Drinking Water State Revolving Fund (DWSRF) provided over $750 million in low-interest loans and loan forgiveness to support a wide range of drinking water projects. DWSRF funding eligibility requirements include support for organizations that protect drinking water supplies and protect source watersheds across the State.

For the past 18 years, the Maryland Bay Restoration Fund (BRF) has helped the State meet nutrient reduction targets established by the Chesapeake Bay Program and total maximum daily load (TMDL) by providing grants to upgrade communities' wastewater treatment plants (WWTP) to enhanced nutrient removal (ENR). The State originally focused on upgrading the 67 largest WWTPs, but now is funding ENR upgrades for smaller WWTPs. The BRF can also fund projects to connect failing septic systems to public sewer and projects that reduce sewer overflows, as well as green infrastructure and other stormwater practices that reduce the volume of stormwater runoff and improve water quality. Most recently, the Clean Water Commerce Act created an avenue for private sector investments to scale impact by allocating $20M a year in BRF funds for purchase of quantified and verified nutrient reduction outcomes from wastewater and watershed projects.

In the context of climate action, these same financing tools have become even more powerful for both the State and local governments. Signed into law in April 2022, the Conservation Finance Act (CFA) elevates the pay-for-success model of financing with an emphasis on the quantification, verification and registration of environmental outcomes, including carbon sequestration. The CFA also makes Maryland the first state to define "blue" infrastructure, considers blue and green infrastructure as public capital assets, and makes the maintenance and restoration of source watersheds eligible for the same forms of finance assistance as other built infrastructure options.

By enabling procurement or trade of environmental outcomes, these financing tools can be used to scale natural climate solutions that both advance the State's climate mitigation goals and support overall climate change adaptation and resilience in municipalities. With its leadership in utilizing best available science and technologies for climate planning and monitoring, Maryland can quantify and track fine scale changes to our natural carbon sinks from a range of drivers including new financial investment. Instituting high standards for outcome quantification, verification and registration can also reduce investment risk and promote confidence that outcomes are real.

Municipalities can maximize use of the following financial tools to support climate change mitigation and adaptation in their jurisdictions:

CWSRF Programmatic Financing Program promotes loans for projects to control nonpoint sources of pollution, including forest conservation or restoration by fee or easement.

CWSRF Sponsorship Program allows a local government to serve as the primary borrower to receive a loan for a publicly owned treatment project if loan includes financing for a sponsored nonpoint source project managed by an organization eligible under federal law.

CWSRF Long-term or Permanent Green or Blue Infrastructure Projects finances projects which provide a water quality benefit to Maryland's portion of the Chesapeake Bay, prioritizing green and blue infrastructure, with particular focus on natural areas or features; can be a tool to further achieve the State's five million trees goal.

CWSRF Enhanced Opportunities under the Federal Bipartisan Infrastructure Law provides additional loan forgiveness to disadvantaged communities or those disproportionately burdened by environmental harms or risks.

DWSRF Pay-For-Success Contracts prioritizes support for local governments, community water systems and other eligible partners by serving as a guarantee for long-term pay-for-success contracts to purchase of environmental outcomes that provide water quality benefits.

DWSRF Watershed Protection provides supporting loans and guarantees to protect source water areas or Chesapeake and Coastal Bays' watersheds through property acquisitions or easements to control nonpoint source pollution.

The Maryland Department of the Environment (MDE) works with many private and public partners to create more avenues for transformative financing. For example, MDE is chairing a new Green and Blue Infrastructure Policy Advisory Commission and Task Force on State and Local Government Accounting for Natural Capital. Building upon the work of Maryland's Carbon Markets and Sustainable Tree Plantings Commission, these independent bodies will consider other ways to facilitate and accelerate implementing green and blue infrastructure projects and assist state and local governments in using the Government Accounting Standards Board to unlock required financing. This will lead to a net reduction of public funding for improvements in community health and resilience.

Maryland is committed to working with local governments and other partners to achieve environmental, climate and justice goals. Due to recent changes in State law, including the Conservation Finance and Climate Solutions Now Acts, Maryland is positioned to capitalize on new federal and private funding opportunities. With these new funding mechanisms, municipalities can be key players in realizing shared goals that benefit all Marylanders.

PART II: RESILIENCE PLANNING & FINANCING

Combining Funding Options to Build Climate Resilience

By Pia Cristina Iolster, Environmental Finance Center, University of Maryland

Maryland communities will face various climate impacts that will be determined by their geographic location and exposure to natural events. These may include more frequent severe storms that can lead to flooding and wind damage, heat waves, drought and increased coastal flooding from sea level rise. Addressing these risks and advancing climate resilience requires a multipronged approach as each community decides on a set of actions that meet their unique local needs and priorities. These actions may include switching municipal operations to clean energy to mitigate greenhouse gas emissions, restoring wetlands or coastal areas to mitigate the impact of storms, elevating or relocating buildings threatened by flooding, installing new storm-drain systems or floodgates to reduce flooding and providing centers for vulnerable populations during heat events, severe storms or power loss.

The cost of resilience projects adds an extra funding burden to communities already struggling to pay for multiple existing programs and maximize community benefits. Funding community resilience will require municipalities to prioritize project implementation based on the most urgent threats, determine project costs and identify funding sources. Just like resilience solutions, successful resilience funding and finance requires considering multiple options and developing hybrid approaches.

Fortunately, there is an increasing array of available funding and financing options for local community resilience. While no one option is likely to provide sufficient funds, communities can combine multiple funding sources and financing mechanisms for project implementation. It is increasingly important for local officials to have skills to navigate options, identify those most relevant and find ways to combine them to implement resilience projects.

Identifying potential funding sources and developing hybrid funding/financing mechanisms requires time, effort and creativity. To address flooding problems, for example, a community may decide to implement a suite of actions such as restoring a floodplain or stream channel, reducing impervious surfaces, modifying streets' drainage and relocating homes that experience repeated flooding. Each step may be funded through different means. For example, a Maryland's Department of Natural Resources (DNR)'s Chesapeake and Coastal Grants Gateway could fund floodplain restoration; a Chesapeake Bay Green Streets, Green Jobs, Green Towns (G3) grant could fund the green street project; and a Federal Emergency Management Agency (FEMA) grant could pay for the relocations of homes that have suffered repeated flooding.

In addition to supplying direct funding for such projects, Maryland state agencies such as DNR and the Maryland Department of Housing and Community Development (DHCD) may be able to provide matching funds for projects secured through other federal programs. Federal funding programs can be provided directly by a federal agency or channeled through state governments. For example, the U.S Department of Housing and Urban Development's (HUD) Community Development Block Grant Program is administered partly by HUD and partly by state governments. For potential state and federal funding sources, local officials should contact program representatives in DNR, DHCD, Maryland Water Quality Financing Administration and other agencies early in

the process. These resources can help determine eligibility, understand the application process, and identify any funding limitations.

In addition to grants from state and federal sources, Maryland municipalities may consider using taxes or fees (i.e. utility, stormwater or resiliency fees) to provide a dedicated revenue source to fund resiliency efforts. These can be used to fund projects directly, as matching funds for other sources or to provide a dedicated revenue source that will allow a municipality to take on debt to finance resiliency efforts.

Low-interest loans for some projects are increasingly available through Maryland's Clean Water and Drinking Water State Revolving Funds (SRFs). The 2021 Bipartisan Infrastructure Law (BIL) has allocated $43 billion in funding to SRF programs throughout the U.S. In Maryland, these funds will be available to jurisdictions via Maryland's Water Quality Financing Administration.

Larger municipalities may also be able to tap into private financing via resilience, social or environmental impact bonds. These provide upfront capital from private investors and are repaid over time at a set interest rate. Additionally, municipalities can encourage collaboration across agencies to facilitate co-funding of projects that provide multiple resiliency benefits. A new park, for example, can provide multiple community services, including recreation space, a cooling area during summer heat waves and stormwater capture. Given these co-benefits, such a project may be eligible for funding via the local parks, health and water department budgets.

In 2020, Maryland adopted legislation that allows local governments to establish a Resilience Authority (RA), a new structure that works as a non-profit and allows local governments to finance and implement contracts for climate change related projects through public and private sectors. Resilience Authorities can bond against local government revenue and receive funding from multiple agencies to advance resilience infrastructure projects. Anne Arundel (see *Spotlight* article) and Charles Counties have been the first local governments to implement a RA.

Municipalities will have to spend extra efforts to identify potential funding or financing sources and understand that combining and applying for multiple grants, combining them with debt finance, may provide the best path forward to make progress to become a climate resilient community.

A good starting point for identifying potential funding or financing sources are state databases such as Maryland's Chesapeake and Coastal Grants Gateway, the Maryland Resiliency Partnership's searchable database, Maryland's Water Quality Financing Administration, the Environmental Finance Center Network's state water and wastewater finance database, and Maryland's Department of Emergency Management (MDEM) hazard mitigation webpage. At the federal level, EPA's Water Finance Clearinghouse has searchable databases for air, water, and land funding and for federal climate mitigation funds. The Federal Funding Opportunities for Local Decarbonization, FFOLD database, is also a good option for identifying federal climate mitigation funds.

Funding and/or financing local climate resilience requires commitment and effort by local officials. Maryland communities, such as Oxford and Port Deposit, (see *Spotlight* articles) are already committed to addressing the impacts of more frequent and severe climate events and have made significant progress towards funding resilience efforts. However challenging the future may seem, the cost of inaction will most likely lead to higher costs later and smaller incremental steps funded through multi-year approaches may be the best approach in building climate resilient communities.

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meetings

MEETINGS

September 2022

6	Legislative Committee *Hybrid* Meeting, Annapolis
15	Montgomery Chapter *Virtual* Meeting
15	Prince George's Chapter *Hybrid* Meeting
15	Municipal Clerks Department, Westminster
17	Conference Planning Committee *Hybrid* Meeting, Annapolis
20	Hometown Emergency Preparedness Ad Hoc Committee *Hybrid* Meeting, Annapolis
21	Eastern Shore Chapter, Salisbury
22	Carroll Chapter, New Windsor
22	Frederick Chapter, Middletown
24	Board of Directors *Virtual* Meeting
26	Washington Chapter, Keedysville
28	Engagement and Outreach Committee Hybrid Meeting, Annapolis

October 2022

9	Board of Directors Meeting, Annapolis
12	Municipal Parks and Recreation Department, Laurel
20	Montgomery Chapter *Virtual* Meeting
20	Prince George's Chapter *Hybrid* Meeting
26	Engagement and Outreach Committee *Hybrid* Meeting, Annapolis

November 2022

5	Conference Planning Committee *Hybrid* Meeting, Annapolis
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