



ENVIRONMENTAL
FINANCE CENTER

2024 ANNUAL REPORT

The Environmental
Finance Center at the
University of Maryland





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01

FROM THE DIRECTOR



A LETTER FROM THE EFC DIRECTOR JENNIFER COTTING

Dear Friends and Supporters,

Reflecting on 2024, it was truly a year of unprecedented growth for the Environmental Finance Center at the University of Maryland’s School of Architecture, Planning and Preservation. We worked with communities big and small, rural and urban, red and blue throughout the Mid-Atlantic to advance locally identified environmental priorities. Formalizing our WaterTA program greatly enhanced our technical assistance offerings; our participation in the Global FEWture Alliance expanded our network of collaborators both on campus and around the world; and the addition of four new team members broadened our skill set and the services we provide. We witnessed firsthand the power of community engagement to affect long-overdue change, the ability of applied research to improve local conditions, and the promise of creating the next generation of environmental stewards – all of which you will read about in the pages that follow.

As the world around us continues to grapple with the complexities of a changing climate and the continuously evolving landscape of environmental policy, our mission to build lo-

cal capacity to develop innovative financing solutions to environmental challenges has never been more important. The Environmental Finance Center remains committed to ensuring that communities have the infrastructure and resources necessary to improve local resilience and economies.

Uncertainty can cause great fear; it can also create great hope. We believe that together, we have the knowledge, tools, and passion to make communities better. Collaboration will enable us all to harness our collective ability to support communities in taking action.

While 2025 and beyond has the potential to be unprecedented for its own set of reasons, I have faith that we will continue to witness hope in action – neighbors helping neighbors, science informing decision making, obstacles inspiring innovation, and work that sparks the curiosity of future environmental professionals.

Fearlessly Forward, the University of Maryland brand, has taken on a whole new meaning. Thank you for your continued support.

Onward!

02

MISSION & VISION

THE ENVIRONMENTAL FINANCE CENTER AT THE UNIVERSITY OF MARYLAND

The Environmental Finance Center (EFC) at the University of Maryland, housed in the School of Architecture, Planning and Preservation, is part of a network of centers across the country providing communities with the tools and information necessary to manage change for a healthy environment and an enhanced quality of life. EFC believes that environmental finance can be used to develop a shared community vision. Our focus is protecting natural resources and watersheds by strengthening the capacity of local decision-makers to analyze environmental problems, develop innovative and effective methods of financing environmental efforts, and educate communities about the role of finance and economic development in the protection of the environment.

OUR WHY: To empower communities to achieve their vision for a healthy, equitable, and sustainable future.



MORE THAN
30
YEARS
OF EXPERIENCE

ABOUT THE EFC

The Environmental Finance Center at the University of Maryland advances finance solutions to environmental challenges. We work with communities to protect natural resources by strengthening the capacity of decision makers to assess needs, develop effective financing methods, and catalyze action.

Through direct technical assistance, policy analysis, and research, the EFC equips communities with the knowledge and tools they need to create more sustainable environments, more resilient societies, and more robust economies.




**EDUCATION, TRAINING &
TECHNICAL ASSISTANCE**


**RESEARCH, POLICY
ANALYSIS & FINANCIAL
ASSESSMENT**


**COMMUNITY OUTREACH &
FACILITATION**

03

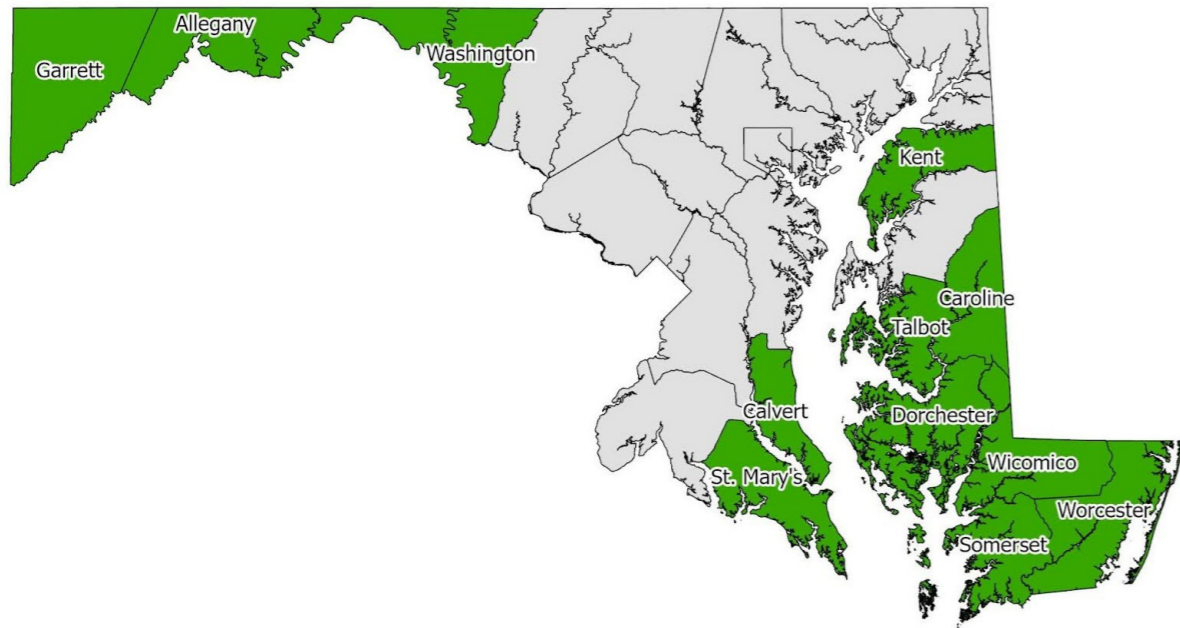
CLIMATE & ENERGY

Local Government Climate Action Support

The Maryland Local Government Climate Action Support Program, led by the Maryland Department of the Environment in partnership with the EFC, empowers local governments to advance Maryland’s goal of net-zero greenhouse gas emissions by 2045. Focused on the 12 counties outside EPA Metropolitan Statistical Areas, the program provides targeted support to identify high-priority climate projects with significant social, ecological, and economic co-

benefits. Through outreach, technical assistance, education, and grant-writing services, the program addresses capacity gaps, fosters collaboration, and connects communities with resources to plan, fund, and implement climate actions. Key deliverables include workshops, peer-learning opportunities, tailored guidance, and grant application assistance to ensure equitable and effective climate action across the state.

Counties supported by the Maryland State Local Support Program



12 Counties Supported by the Program

5 New Communities Engaged in 2024

Building Local Capacity to Implement Climate Action

With funding from the Energy Foundation, the EFC is enhancing local capacity to implement the Climate Solutions Now Act by promoting clean energy projects and investments. Through webinars, leadership trainings, and technical assistance, the EFC addresses key climate topics like building electrification, renewable energy, and electric vehicle transitions. The initiative also supports communities with grant writing, proposal reviews, partnerships, and peer-to-peer learning while showcasing success stories. Deliverables include a five-part webinar series, technical assistance for six communities, and community spotlights.



Mid-Atlantic Thriving Communities Technical Assistance Centers (TCTAC)

The EFC was a key partner of the Mid-Atlantic Environmental Justice Thriving Communities Technical Assistance Center, providing technical assistance, training and support to community-based organizations in addressing climate and energy justice challenges. The EFC offered tailored workshops, needs assessments, and capacity-building initiatives as well as grant-writing assistance and a grants database to facilitate access to and management of state, federal, and philanthropic funding.



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Learn More!

EFC engaged with 31 CBOs across Delaware, Maryland, Pennsylvania, Virginia, Washington D.C. and West Virginia.

Sustainable Maryland

2024 By the Numbers

Sustainable Maryland Certification is a prestigious designation for municipal governments in Maryland. Municipalities that achieve the certification are considered by their peers, by state government, and by experts and civic organizations in Maryland, to be among the leading municipalities. The certification is a rigorous and meaningful designation. All actions taken by municipalities to score points toward certification must be accompanied by documentary evidence and is reviewed. The certification is free and completely voluntary.



91 PARTICIPATING COMMUNITIES

51 Certified Communities

30 Bronze Certified Municipalities

21 Silver Certified Communities

59% Of Maryland Municipalities Participate

DONATE TO THE SUSTAINABLE MARYLAND PROGRAM!

WWW.SUSTAINABLEMARYLAND.COM/SUPPORT-US

\$245K

IN GRANT FUNDS DISTRIBUTED

04

SUSTAINABILITY

Sustainability is at the heart of all the EFC programming. Whether the goal is clean air, thriving watersheds, or community greening, the EFC works to empower communities to achieve their vision for a healthy, equitable, and sustainable future. The EFC's flagship Sustainable Maryland program is a primary avenue for equipping and recognizing local sustainability efforts throughout the state.



SUSTAINABLE MARYLAND 2024 AWARDS

Sustainable Maryland certified 17 Maryland municipalities at the 13th annual Sustainable Maryland Awards during the fall Maryland Municipal League Conference. The 2024 awards included the certification of three new municipalities, bringing the total number of certified communities to 51.

17 MUNICIPALITIES AWARDED



NEW SM ACTION GRANTS AND PEPSCO SUSTAINABLE COMMUNITIES GRANTS

In October 2024, Sustainable Maryland launched the new SM Action Grants, awarding \$120K to nine registered and certified municipalities for sustainability action projects.

In partnership with Pepco, Sustainable Maryland administered \$125K to nine awardees, funding environmental stewardship and community resilience initiatives.



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POLLUTION PREVENTION FOR BREWERIES

The EFC's Mid-Atlantic Sustainable Breweries Program offers free sustainability consultations to help craft brewers assess operations and implement practices related to energy, water, wastewater, air emissions, and cleaning and sanitizing – all while saving costs and improving brand recognition.

LEARN MORE

WWW.SUSTAINABLEMARYLAND.COM

WATER

Clean and healthy water is essential to life, but many waterways in the mid-Atlantic region do not currently meet state or local water quality goals. The EFC partners with communities and organizations to provide innovative and effective finance and policy strategies to improve and protect water quality. This work spans all three water sectors - drinking water, wastewater, and stormwater - with particular interest in integrating water management across sectors to achieve affordable and equitable solutions for all water users.

Recent projects have focused on assisting local governments and state agencies in developing policies and programs to meet Chesapeake Bay Total Maximum Daily Load (TMDL) targets, outlining financing strategies for pollution reduction projects as part of Municipal Separate Storm Sewer System (MS4) permits, promoting regional approaches to sustainable water management, and creating tools that help communities understand the costs and benefits of best management practices. In addition, as one of the EFC's flagship programs, the MOST Center works to provide education and training to help municipalities communicate about, build, and enhance local stormwater programs.



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WaterTA

The Region 3 Water Technical Assistance (WaterTA) program is offering direct support to municipalities, tribes, and water utilities in US EPA Region 3 to help them access federal and state funding to address water infrastructure needs. This assistance is delivered at no cost to recipients through an award from the US Environmental Protection Agency. Assistance is available on a need basis, with priority given to historically underserved and disadvantaged communities.

Available services include assistance identifying water challenges; developing plans; building technical, financial, and managerial capacity; and completing funding application materials.



Walkable Watersheds

The Port Towns Walkable Watershed (WW) project is a community-based, green infrastructure planning tool to address flooding and resilience. The EFC, Skeo, Defensores de la Cuenca, and Hirschman Water & Environment are supporting this National Fish and Wildlife Foundation grant-funded effort. The WW planning approach is unique in linking environmental and social equity goals. This integrated approach means that communities can leverage more resources, work more efficiently to find new solutions, and increase the likelihood of success by acting on multiple fronts simultaneously!

The WW project:

1. Considers connectivity, watershed health, and ecological stewardship at a community-wide scale.
2. Engages community members and partners to work together to protect the watershed while also supporting community goals, such as improved connectivity and access, safe routes, vibrant open space, and outdoor amenities.
3. Results in a cohesive plan to improve the overall health of the community that can guide future efforts to improve watershed and community health, strengthen local infrastructure, and leverage investment, resulting in improved quality of life and watershed health for years to come.

LEARN MORE

WWW.WALKABLEWATERSHED.COM

WALKABLE WATERSHEDS: THE PORT TOWNS

BLADENSBURG

Bladensburg recently achieved Bronze-level recertification in the Sustainable Maryland program, and became a Tree City USA. The town also engaged in tree planting and invasive species removal projects, and secured a \$400,000 grant for energy efficiency and green bus shelter development.

COLMAR MANOR

In 2025 Colmar Manor will build its second permeable intersection at 43rd Avenue and Newark Road. The town also received a Pepco/Sustainable Maryland Grant for landscaping and invasive species removal at the Dueling Grounds and secured \$500,000 for a new open space park.

COTTAGE CITY

Cottage City recently achieved Bronze-level recertification in the Sustainable Maryland program. The town has also taken steps towards sustainability by installing solar panels on its Town Hall, purchasing a municipal electric vehicle and installing two EV charging stations for residents.

EDMONSTON

The town of Edmonston is installing sidewalks and LED streetlights on 52nd Avenue and Crittenden Streets, with completion expected by December 2025. Additionally, LED streetlights have been installed on 47th Avenue and are awaiting activation by Pepco.

06 AGRICULTURE

Rainwater Harvesting

Urban agriculture is growing quickly across the U.S. to address food insecurity and climate change. Rainwater harvesting could provide reliable, high-quality water for urban farms, yet there is currently low adoption due to water quality concerns and uncertainty about costs and benefits. There is an immediate need to increase rainwater harvesting in urban agriculture to produce safe and nutritious foods for underserved communities and address climate change's stress on water sources. This project, spearheaded by environmental health Assistant Professor Rachel Rosenberg Goldstein, the EFC, University of Maryland Extension, and

U.S. Department of Agriculture (USDA) Agricultural Research Services, will help urban farmers harvest and filter rainwater to nourish their crops and eventually create more sustainable farms and resilient communities. Specifically, the project will: 1) field-test an integrated rainwater harvesting, ZVI sand filtration, and irrigation system and confirm water quality and produce safety; 2) evaluate environmental, social, and economic costs and benefits of rainwater harvesting for produce irrigation in underserved urban communities; and 3) develop innovative Extension programming on rainwater harvesting design, quality, and benefits.

Global FEWture Alliance

Climate change, population growth, and urbanization are crippling global food, energy, and water (FEW) systems and risking public health. Low-income communities and people of color bear the heaviest burdens. With support from the University of Maryland Grand Challenges Institutional grant, the Global FEWture Alliance will scale technology-based solutions, community-driven capacity building, and experiential education focused at the food-energy-water-climate-health nexus.

The EFC is a founding member of the Global FEWture Alliance and participates in the Maryland subgroup working to advance the food-energy-water nexus in Maryland communities by connecting with farmers, policy makers, and government representatives through interdisciplinary outreach and research.



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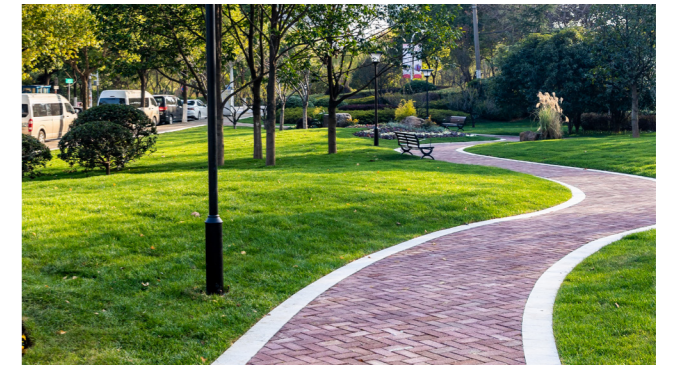
07 GREEN INFRASTRUCTURE

ASLA Economic Benefits of Nature-Based Solutions and Landscape Architecture

The American Society of Landscape Architecture (ASLA) maintains that landscape architects can maximize the benefits of nature-based solutions through design. Nature-based solutions can be woven into places where people live in the form of parks, recreation areas, streets, coastal infrastructure, and more. Through inclusive design, they can provide even greater benefits to people and support the healthy urban ecosystems people rely on.

The EFC developed a brief for ASLA on the economic benefits of green infrastructure, making a case for communities to "scale up" nature-based solutions. The summary was shared with global and U.S. policymakers at the UN Framework Convention on Climate Change COP 29 in Baku, Azerbaijan. The

brief offers an overview of nature-based economic benefits in five key areas: health and livability, expanded investment and sustainable jobs, increased biodiversity, carbon sequestration, and improved resilience. A supplementary analysis offers lessons from 175 case studies in the U.S.



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Translating Urban and Community Forestry Human Health Evidence to Integrated Urban Planning and Policy

Planners work to improve the general welfare and quality of life of residents. A wealth of research indicates the importance of nature encounters and green space on human health. Studies show that exposure to natural environments reduces stress, improves mental health, increases social cohesion, and promotes physical activity.

Understanding the specific elements of nature experiences and their health benefits is crucial for tailoring urban planning efforts to meet public health goals. Funded by the US Forest Service Urban and Community Forestry Program, the EFC, in partnership with the American Planning Association and the University of Washington, developed a guidance document to help translate the health benefits of nearby nature to planning practices. The

resulting Nature in Urban Planning for Better Human Health provides guidance to treat nearby nature as a comprehensive system, including trees, parks, and natural areas, to promote equitable nature access and to support physical, mental, and social wellbeing for all residents.

To accompany the guide and aid in building a community of practice for nature, health and planning, the EFC and project team also developed a short, online course.

ACCESS THE ONLINE COURSE

GO.UMD.EDU/NATUREPLANNING-COURSE

NEW TO THE EFC

OUR GROWING CLIMATE & SUSTAINABILITY TEAM

08

Ansley Jacobs | Climate & Sustainability Program Assistant



Ansley (she/her) began her professional journey in Florida, where she conducted research in environmental history and climate resilience, while leading initiatives in native plant landscaping and wildlife habitat restoration. She spent the last year finishing up her first book on the historical ecology of Eckerd College, after graduating from Eckerd in 2023 with a B.S. in Marine Science: Biology with honors.

Monet Paredes | Climate & Sustainability Program Assistant



Monet (she/her) has worked with communities across the Northeast to combat housing insecurity, mitigate greenhouse gas emissions, implement clean transportation and promote overall sustainable and equitable community development. Prior to joining the EFC, Monet worked as a fellow at Sustainable CT to assist municipal involvement in the certification process. Monet graduated from the University of Connecticut with a B.A. in Political Science and Environmental Studies.

Kristin Mielcarek | Climate & Sustainability Program Manager



Kristin (she/her) has more than 17 years of experience in environmental restoration, watershed planning, grants coordination and education, with a focus on mitigating the effects of climate change and increasing climate resiliency. She joined the EFC after working as Grants Manager for Frederick County, MD's Division of Energy & Environment. She received a Master of Science in Ecology from the University of Maryland, College Park, and a B.S. in Biology from Salisbury University.

Danish Kumar | Climate & Sustainability Program Manager



Danish (he/him) holds a Master's in Civil Engineering from the University of Wyoming, where his research focused on energy transition technologies, including hydrogen transportation, carbon capture and storage infrastructure, and the safety of small modular reactors. Danish has also worked with international organizations on climate adaptation and resilience initiatives, as well as infrastructure project appraisal and evaluation. His expertise spans sustainable built environments, GIS, and climate action, with a strong focus on driving solutions for a low-carbon future.



THE EFC MOVES TO THE ANACOSTIA BUILDING

In July 2024, after 17 years in Preinkert Hall, the EFC found its new home in the University of Maryland's Anacostia Building. The Anacostia Building lies in the University's Discovery District. Located southeast of the University of Maryland's main campus at College Park, the Discovery District is home to over 60 companies, organizations and four federal agencies. The EFC joins the research park as an extension of the University, and hopes to implement sustainable demonstration projects on the property.

The EFC Open House

In November 2024, the EFC team welcomed community members, partners, colleagues and friends to the Anacostia Building. This evening Open House gave our partners a glimpse into the new space as well as an opportunity to connect with others. Director Jennifer Cotting welcomed guests and was joined by the EFC Program Managers to speak about our current projects. The Anacostia Building features multiple conference spaces, which are available for our partners to rent out for events.



The EFC Anacostia Building Open House November 2024

CONNECTING WITH THE EFC

The EFC Team Members serve on the following:

- American Society of Adaptation Professionals Funding and Finance Group Leadership Team
- Maryland Commission on Climate Change Adaptation Resilience Working Group
- Sustainable States Network Steering Committee
- Sustainable States Climate Action Working Group
- Local Leadership Workgroup of the Chesapeake Bay Program
- University of Maryland Climate Themes Working Group
- University of Maryland Extension Statewide Extension Advisory Council
- Maryland Forestry Foundation Board
- Chesapeake Conservation Landscaping Council Board of Directors
- Maryland Watershed Assistance Collaborative

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\$12.2M
 In funding across 2024

Thank you to our funders for their support.





The EFC Team at the 2024 Fall Retreat

**“We must accept finite disappointment,
but never lose infinite hope.”**

Dr. Martin Luther King Jr.



SCHOOL OF
ARCHITECTURE,
PLANNING & PRESERVATION



ENVIRONMENTAL
FINANCE CENTER

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