



URBAN ECOSYSTEM
RESTORATIONS

UER Report: 10 Years of Growth and Impact

2024+

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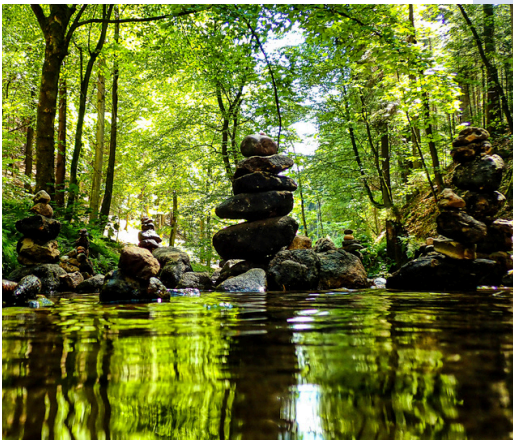
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LETTER FROM BOARD OF DIRECTORS

Dear Friends and Supporters,

UER believes that by widely creating and protecting Eco-Functioning Spaces (EFS) in urban and suburban areas, we can restore ecosystem health to urban regions and highlight the critical ecological role of cities. During its first decade, UER focused on defining EFS, creating metrics to measure ecosystem health on urban lands, establishing demonstration sites, and educating people about the importance of EFS development and long-term maintenance. UER sought to integrate these concepts into discussions among urban planners, environmental advocates, land trusts, and real estate developers. Through its work in the Washington, D.C. region, UER has made a local impact and hopes to inspire similar urban ecological restoration efforts nationwide.

Today, ecological research and urban environmental advocacy have progressed significantly since 2014, when UER was founded. A broader range of professionals and individuals now understand the wide-ranging effects of urban development on local and regional ecosystems and the important role urban lands can play in their restoration. Local governments are increasingly promoting nature-based solutions to combat the decline of ecosystem services. Universities and think tanks are actively sharing research on the significance of urban natural lands. Additionally, a growing industry of service providers is emerging to assist residential and commercial landowners in restoring their landscapes effectively.



“
Widespread adoption of EFS can heal natural ecosystems in urban regions

LETTER FROM BOARD OF DIRECTORS (CONT'D)

But there is still much work to be done before we reach a crucial tipping point where cities shift from causing ecological destruction to fostering ecological restoration. UER recognizes a pressing need to expand understanding and implementation of Eco-Functioning Spaces (EFS).

Leveraging the expertise gained over the past decade, UER is uniquely positioned to become a trusted resource for educating the public on the ecological importance of urban spaces and for teaching communities what it takes to make every square foot count for the environment and our collective future. We will collaborate with commercial and residential landowners, governments, and other nonprofits to reshape cultural perceptions of what constitutes a "good" landscape so that urban communities use their lands to strengthen the natural systems that sustain us all. UER will share best practices for creating and protecting EFS, and it will provide guidance, establish professional networks, and offer educational resources that support landscape conversions to EFS in accordance with UER's mission and vision.

Please join us in this important work.

UER Board of Directors

INTRODUCTION

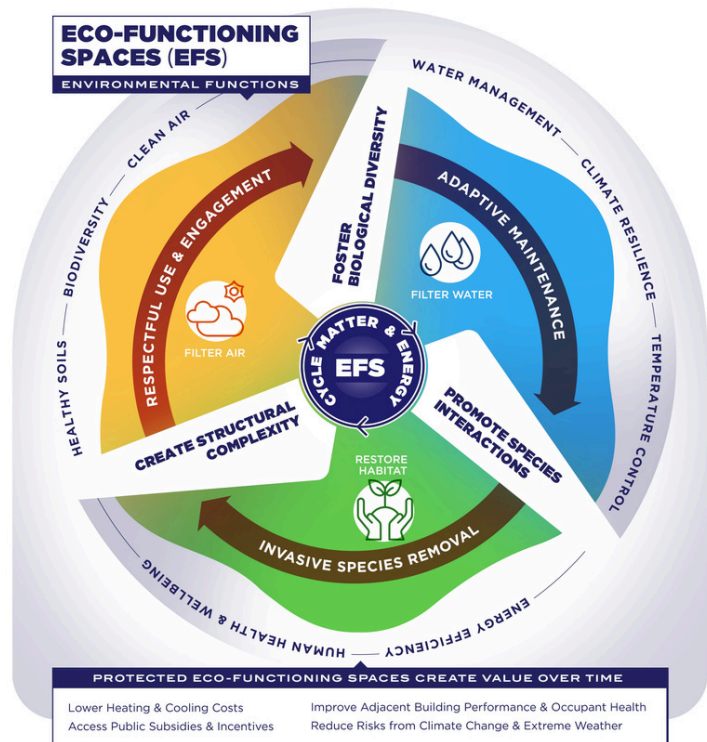
Urban Ecosystem Restorations, Inc. (UER) is a 501(c)(3) nonprofit urban land trust that works with landowners across cities and suburbs within the Chesapeake Bay watershed and beyond to build an urban movement that will collectively create, maintain, protect, and aggregate “Eco-Functioning Spaces.”

Eco-Functioning Spaces® are living systems that are specifically designed to use or replicate pre-existing ecosystems in sub/urban areas for the environmental, economic and social benefit of urban communities and to strengthen their surrounding ecosystems. Eco-Functioning Spaces, when designed and used as recommended, spin off valuable ecosystem services.

Eco-Functioning Spaces use landscape design; preservation and restoration of natural features; and other nature-based strategies to:

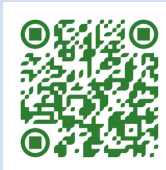
- clean the air,
- reduce heat island effects,
- provide habitat for birds and pollinators,
- retain and filter stormwater, and
- promote human health

--all at the same time.



This is how we make every square foot count.

UER developed environmental performance criteria for EFS in 2018. View them at: www.urbanecosystemrestorations.org/efs



OUR STORY SO FAR

Our Purpose

UER was formed in August 2014 to address the concern that urban lands were substantially undervalued and underutilized for the purpose of addressing regional and planetary ecosystem health (e.g., for achieving clean air, healthy waterways, biodiversity, and stabilizing ecosystems). UER believes urban lands can, and must, play a critical role in restoring health to regional and global ecosystems so that they can sustain a rich web of life that includes humans. Because so much land in most eastern U.S. cities is privately owned, UER believes that the private sector – commercial and residential landowners in particular -- must play a central role in this effort. Therefore, UER inspires, educates, and assists these owners in converting their lands to Eco-Functioning Spaces for the benefit of the owner, the local community, and the planet.



The Challenge

Traditional urban development and landscape management practices disrupt natural ecosystems by replacing them with buildings, impervious surfaces, and non-native plants. UER was created to find a new role for cities -- that of promoting ecosystem health -- and to chart a path forward for achieving this goal.

Until about a decade ago, urban planners, land use regulators, and real estate developers were a major cause of this disruption, and few environmental advocacy groups focused on the connection between these system disruptions and environmental threats. Instead, urban environmental advocates focused on protecting people from the symptoms of this disruption -- seeking legal protections from specific negative impacts and consequences of ecosystem degradation -- but not seeking to protect the ecosystem itself (except for those who fought all manner of urban expansion -- a losing strategy in most instances). Significant gaps in urban environmental research and advocacy existed. And there was almost no consumer market for site- and neighborhood-scale restoration services to help people to design, install, and maintain ecologically healthy urban landscapes.

Consequently, regional ecosystems have suffered as urban development has accelerated. As noted in the Letter from the Board of Directors, however, much has changed in the last decade. There is reason for hope. Yet much more remains to be done.

UER'S MISSION: 4 PILLARS

UER is a conservation land trust that inspires people to take restorative action for the environment with Eco-Functioning Spaces. UER's mission rests on four pillars that elevate Eco-Functioning Spaces: CREATE, PROTECT, ENGAGE, and AGGREGATE.

01

CREATE AND RESTORE EFS

UER supports the CREATION of Eco-Functioning Spaces that enhance economic and conservation values. Where possible, UER will use its experience and knowledge to support anyone who seeks to create or restore EFS on private lands, if those efforts include commitments to protect and maintain those spaces over extended periods.

02

PROTECT AND MAINTAIN EFS

UER seeks to PROTECT and MAINTAIN EFS over time. Nature-based solutions cannot have impact without thriving, and they can't thrive if they are not properly protected and maintained. This kind of maintenance is different to the way most urban landscapes are currently maintained. UER will work with landowners and landscape maintenance personnel to ensure they know how to care for EFS.

03

ENGAGE AND EDUCATE

Audiences of all kinds need to understand why nature-based solutions like EFS are so important and how to implement them successfully across geographic scales. As part of this mission, UER works to engage key stakeholders in every part of the process, including not only the ecological restoration of a space but also its maintenance and the respectful use of the space once restored.

04



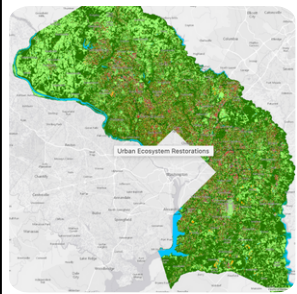
AGGREGATE AND SCALE EFS

Individual urban EFS cannot restore regional ecosystems when dispersed in small patches. When we AGGREGATE EFS into protected greenways, however, we scale up ecological and public health benefits for larger-sized ecosystems and entire urban regions. UER helps people understand opportunities to strategically co-locate and aggregate EFS with other natural lands to achieve these multiplier effects.

CREATE, PROTECT, AND AGGREGATE PROGRAMS

Many people have wondered what an Eco-Functioning Space looks like in urban and suburban settings. So UER set out to create demonstrations of different kinds of EFS, while working with landowners and land stewards to maintain a range of EFS over time.

UER Programs: Create, Protect, and Aggregate

PILLAR	Create	Protect	Aggregate
PROGRAM	Healthy Habitats	Long-Term Maintenance Assistance	Strategic GIS Mapping
PROGRAM GOAL	Create EFS Demonstration Sites	Programs to Ensure Effective Maintenance	Identify Hotspots and High Impact Areas for EFS
			

PROGRAM HIGHLIGHTS (2014-2024)

During the last decade , UER has developed programs and projects that enable urban landowners to protect and maintain the ecological, social, and economic value of their lands with Eco-Functioning Spaces:

Activity/Project	Target Goal	Data / Outcome
HEALTHY HABITATS - SHORT STREET NATURE PRESERVE AND PLAY SPACE	Demonstration Site	<ul style="list-style-type: none"> • Converted 10,000 sq. ft stormwater basin to EFS • Outreach and education efforts promoted adoption of green infrastructure on private property. • Improved ecological function and stormwater management • Introduced families to Nature Play and built connections to nature. • 10-year protection
HEALTHY HABITATS - BUTTERFLY COMMONS	Demonstration Site	<ul style="list-style-type: none"> • Converted 4,000 sq. ft of turf grass to EFS. • Planted more than 3,000 native plants • Delivered workshops, coaching sessions, hands-on planting events, and garden tours to the Lakelands community. • Improved ecological function and stormwater management • 10-year protection

PROGRAM HIGHLIGHTS (2014-2024) (CONT'D)

Project	Target Goal	Data / Outcome
<p>D.C. RIVERSMART MAINTENANCE ASSISTANCE PROGRAM (RSMAP)</p>	<p>Created Long-Term Maintenance and Stewardship Program for District of Columbia; Developed Appropriate Educational and Technical Guidance for Long-Term Care</p>	<ul style="list-style-type: none"> • A 2016 study conducted by UER, Landscape Architecture Foundation, and the University of Maryland showed that maintenance and stewardship guidance was needed for D.C. RiverSmart landscapes. • Piloted program that provided free consultations and educational materials to homeowners with D.C. RiverSmart landscapes. • Helped incorporate RSMAP into the D.C. RiverSmart Homes Program in 2021.
<p>STRATEGIC GIS MAPPING PROJECT</p>	<p>Determined Areas of Potential High Impact Using UER Metrics</p>	<ul style="list-style-type: none"> • With a grant from the Maryland Environmental Trust (MET) and collaboration with Salisbury University's Eastern Shore Regional GIS Cooperative, UER created GIS maps using strategic priorities to identify high-impact locations for Eco-Functioning Spaces in Montgomery and Prince George's Counties.

EDUCATION PROGRAMS

Education and engagement are integral components of all of UER’s activities. With every project, UER seeks to build a deep understanding of why we need natural ecosystems where we live, work, and play -- and how urban dwellers can help restore and strengthen them. Both general and project-specific education are a fundamental part of UER’s mission and purpose.

Core Scholarship and Insights	Project-Based	Examples, Profiles, & Practical Guidance
UER Blogs	Short Street Education Series	Company Spotlights
UER eNewsletters	RiverSmart Maintenance Assistance Guidance	EFS Spotlights
Curated Scholarly Articles and Perspectives from Experts in the Field	Butterfly Commons Education Series	Native Plant Resource Guide

Lessons Learned

- Urban landowners come from a broad range of backgrounds, understandings, and beliefs about what “good landscapes” look like and how they should function..
- People need to understand the basic science of ecosystems and what ecosystems need to be healthy and resilient..
- Aligning landscape performance goals with ecological system-level restoration outcomes can provide a “north star” when establishing site-scale objectives and designs.
- Understanding how different scales (site, neighborhood, city, and region) affect each other ecologically is fundamental to achieving ecosystem benefits.

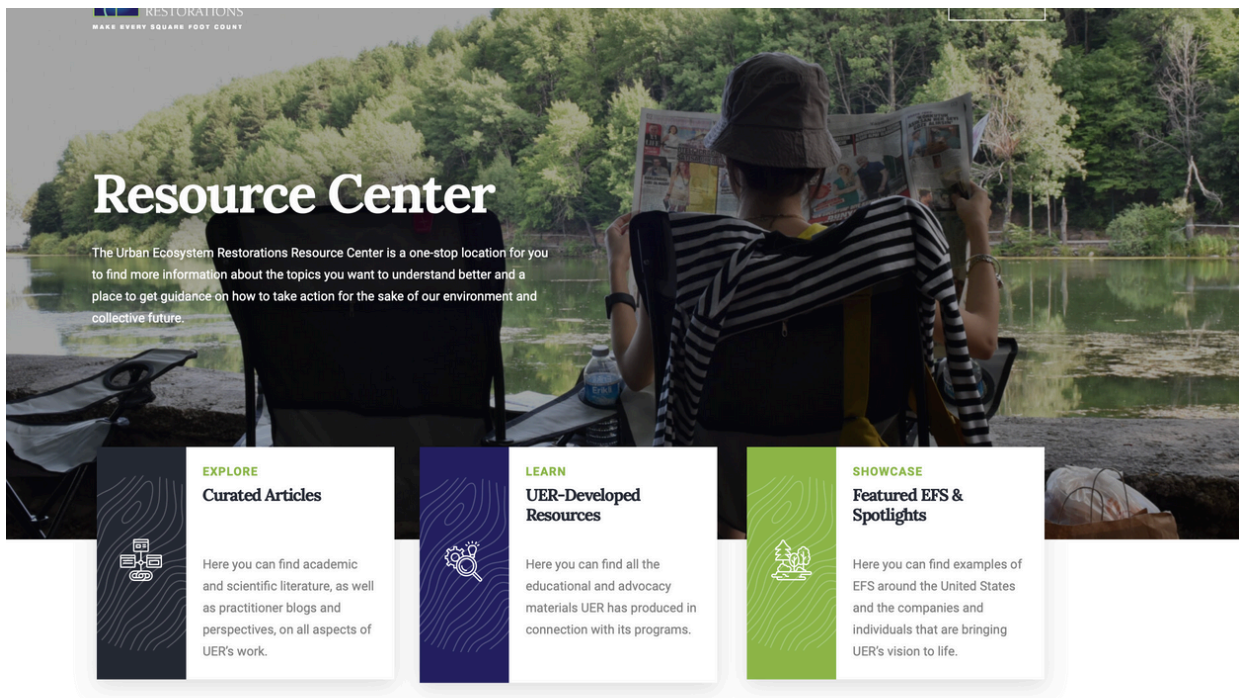
EDUCATION HIGHLIGHTS

UER's educational programming focuses on educating communities about their local ecosystems and how neighborhoods can restore ecosystem function in urban and suburban areas. We share accessible information through various platforms like YouTube, articles, eNewsletters, and blogs, providing updates on research, UER programs, and local resources for creating and caring for Eco-Functioning Spaces.

01

Resource Center

- One-stop location for people to find more information about topics of interest and for guidance on how to take action for the sake of our environment and collective future.



Scholarly Research, Project-Based Resources, and Spotlights

EDUCATION HIGHLIGHTS (CONT'D)

02

YouTube Channel

- Nature & Your Health: The Short Street Model
- Get to know the CBLP Program
- A Nature Play Model for EFS
- Getting the Most From your Time in Nature
- Urban Nature and the Fifth National Climate Assessment

03

News & Views + eNewsletters

- Thoughts before Thanksgiving & Other Updates
- UER Supports the Fight for Racial Justice
- The Power in your Hands – Transforming our Legacy
- The Legacy We Will Leave

04

Learn & Spread the Word Program Resources

- RiverSmart Maintenance Manual for Established Rain Gardens
- Adaptive Management Plans
- UER Resource on Where to Find Native Plants
- UER Resource on How to Minimize Damage from Deer and Rabbits

NEXT STEPS

UER believes that cities can grow while sustaining ecosystem health, but that requires a fundamentally new understanding of how we should develop and grow cities -- and of how we relate to the natural world and the life-giving systems it powers. In the next 3-5 years, UER will focus on delivering educational services and technical assistance to landowners, homeowner associations, and other stakeholders -- at local, regional, and national levels -- to promote the creation and long-term protection of Eco-Functioning Spaces. Our goals are to:

01

EXPAND UER'S ONLINE RESOURCE CENTER

UER will expand its online Resource Center for people with a range of backgrounds and interests to disseminate scholarly research and introduce people to best practices for creating and protecting EFS. UER will prioritize sharing educational materials with commercial developers, homeowners, regulators, urban planners, and the engineering community.

02

CONNECT OWNERS WITH EXPERTS

UER will help people know where to turn when they want to convert their landscapes to EFS. We will be helping people find contractors at different "price points" and help connect our audience members to those who can help them succeed in creating and stewarding EFS.

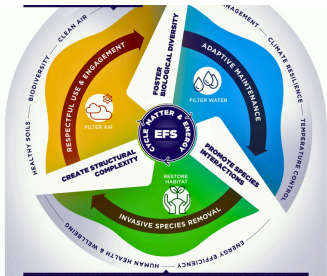
03

DEVELOP BLOG INSIGHTS AND NEWSLETTERS

UER will continue to offer unique perspectives and insights from the direct experience of our board members, stakeholders, and our network of expert advisors.

CONCLUSION

UER has created an opening for a new kind of conversation -- one that helps nature as we help ourselves. But there is so much more to do.

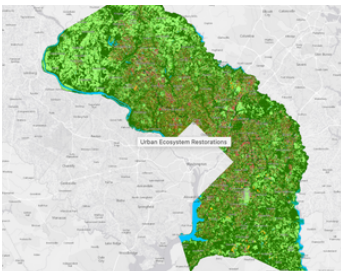


Create a Movement for EFS

- Developed EFS concept and metrics
- Next: Spread knowledge and understanding of why nature in urban space -- and creating EFS in particular -- is so important

Help People Implement Solutions

- Developed new kinds of educational materials
- Next: Show people how to install, maintain, and protect EFS for the benefit of ecosystems and people



Aggregate & Scale Ecosystem Benefits

- Developed criteria for strategically locating and scaling up EFS benefits
- Next: Support widespread adoption of EFS and show people how to aggregate EFS for regional benefits

WE HAVE STARTED THE PROCESS, BUT THIS WORK IS MORE IMPORTANT THAN EVER. JOIN US AND GROW THIS MOVEMENT.

ACKNOWLEDGEMENTS

UER thanks all of its present and past board members, volunteers, and supporters of the last ten years.

With special appreciation for all of the individuals who have dedicated their time, energy, and financial resources to the growth and development of UER through their service on UER's Board of Directors:

Current Board Members: Rachel Toker, Claudia Figueroa -Romero, David Rouse, Nate Goldman, Alex Crosby, and Chris Earley.

Past Board Members: Ellena Ochoa, Joseph Wiedorfer, Mary Wiedorfer, Joseph Berg, Scott G. Davis, Dawit Negari, Catherine Potter, Aimee Rogers, Trey Sherard, Mark Weinheimer, Kimberly Goddu-Alexander, Frederick Klein, Kayleigh Kulp, Jack Mangan, Diarra McKinney, Michael Murillo, Barbara Deutsch, Ryan Moody, Michael Nardolilli, Adrian Washington, Mark Einstein, Aaron Grade, Daniel Slone, and Adam Stein.

We thank you for your continued support of efforts to restore health to ecosystems in urban areas and around the world.

CONTACT

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