

## AGENDA

BES 25th Annual Meeting  
October 12-13, 2023  
<https://baltimoreecosystemstudy.org/>

**Location:**  
**1st Floor, Auditorium**  
**Merrick School of Business**  
**11 West Mount Royal Avenue, Baltimore, MD, 21201**

The BES Annual meeting brings together researchers, practitioners, and students from the Baltimore community and beyond who are interested in Baltimore as a social-ecological system and its sustainability, equity, and resilience.

### Day 1 Thursday, October 12th

#### Plenary: Celebrating Our 25th Anniversary!

9:10 - 9:20 Welcome and Opening Remarks, Chris Swan, UMBC

9:20 - 9:50 Steward Pickett, Cary Institute of Ecosystem Studies

9:50 - 10:10 Dan Childers, Arizona State University, CAP-LTER

10:10 - 10:45 Conversation

**10:45 - 11:00 Break**

#### **11:00 - 12:15 Session 1 (Morgan Grove, moderator)**

11:00 **Quantifying the thermal regime of Dead Run: An update.** Claire Welty, Mary McWilliams, Nick Simeone, John J. Lagrosa IV, and Andrew J. Miller

11:15 **How do fish meet the challenge of living in urban streams? An analysis of urban fish communities using underwater video surveys in Dead Run.** Stanley Kemp and Mary Kemp

11:30 **How do urban park trees affect soil underneath them?** Ian Yesilonis, Kotze D. J., Ghosh S., Hui N., Jumpponen A., Lee B., Lu C., Lum S., Pouyat R., Szlavecz K., Wardle D., Zheng B.

- 12:00 **How safe are urban vacant lots for greening?** Katalin Szlavecz, Keelin Reilly, Tamas Budavari, Jihoon Kang, Ian Yesilonis
- 12:15 **Adaptation to the Urban Heat Island in Weedy Plant Species Across US Cities.** Eric Yee and Meghan L. Avolio
- 12:15 - 1:00 Lunch**
- 1:00 - 2:00 Posters**
- Urbanization Influences Exurban Ecosystem Greenness through Livelihood, Lifestyle, and Connectivity of Rural Households.** Zhaxi Dawa, Weiqi Zhou, Steward T.A. Pickett, Daniel L. Childers
- BES goes high frequency.** Mary McWilliams, Claire Welty, Jon Duncan, Peter Groffman, and John Lagrosa
- Visualizing thermal fluctuations of the Dead Run stream network.** Nick Simeone, John J. Lagrosa IV, Claire Welty, Mary McWilliams, and Andrew J. Miller
- Dissolved Organic Matter as a Socioecological Tool.** Alexandra Acevedo, Rebecca Hale
- Quantifying the N Footprint of Baltimore City.** Ayal Alkhateeb
- Selection in the City: How Artificial Selection Affects the Genetic Diversity of Urban Trees.** Beatriz Shobe, Meghan Avolio
- Adaptation of Common Dandelion and Prickly Lettuce to Different Urban Climates**  
Max Carroll, Meghan Avolio, Eric Yee
- Silicate weathering and mineral chemistry in the Eastern Piedmont of Maryland Critical Zone.** Kyle Farrington, Mary McWilliams, Daniel J. Bain, Claire Welty, Joel Moore
- Baltimore Street Trees: Distribution and Diversity.** Trinidad Fleming, Meghan Avolio, Nancy Sonti, Dexter Locke

- 2:00 - 3:00**    **Session 2 (Rebecca Hale, moderator)**
- 2:00            **Assessing Climate Adaptation for Socio-ecological Systems at the State and County Scale.** Katie May Laumann, Annie Carew, Conor Keitzer, Lili Badri, Ann Foo
- 2:15            **Shaping Baltimore's Urban Forests: Past Insights for Present-Day Ecology.** Nancy Sonti, Matthew Baker, John Lagrosa, Michael Allman, J. Morgan Grove
- 2:30            **5 Million Trees: Tracking Trees and Climate Progress.** Frances Marie S. Panday, Rachel Lamb, JT Bowers, and Justin Arseneault
- 2:45            **Heavy Metals and Microbiomes: Empowering Under-resourced Institutions through Genomics, Data Science, and Cloud Computing.** Michael Schatz
- 3:00 - 3:30**    **Lightning Talks:** Rapid fire up and coming ideas or new and emerging science needs and projects
- 3:30**            **Conclude**
- 5:00**            **Reception hosted by Pastor Mark Montgomery and Terris King II**  
Union Baptist Church, 1219 Druid Hill Avenue, Baltimore

**Day 2 Friday, October 13th**

**9:10 - 9:15 Welcome, Morgan Grove, USDA Forest Service**

**9:15 - 10:30 Session 3 (Nancy Sonti, Moderator)**

9:15 **Baltimore Green Space Science for Policy, Planning, and Management.**  
Katie Lautar

9:30 **Evidence for altered seasonal patterns of solute export from urbanized watersheds.** Jon Duncan, Peter Groffman, Claire Welty, Larry Band

9:45 **Teaching Earth Science of Baltimore for all Baltimore High School Students.** Alan Berkowitz and Angela Hood

10:00 **Hydro-bio-geo-socio-chemical interactions and the sustainability of residential landscapes.** Peter Groffman, Amanda K. Suchy, Dexter H. Locke, Robert J. Johnston, David A. Newburn, Arthur J. Gold, Lawrence E. Band, Jonathan Duncan, J. Morgan Grove, Jenny Kao-Kniffin, Hallee Meltzer, Tom Ndebele, Jarlath O'Neil-Dunne, Colin Polsky, Grant L. Thompson, Haoluan Wang, Ewa Zawojaska

10:15 **Baltimore City Water Resources Science for Decision Making.** Kim Grove

**10:30 - 10:45 Break**

**10:45 - 12:00 Session 4 (Terris King II, Moderator)**

10:45 **How does tree genetic background and management context affect associated insect communities in Baltimore city?** Eva Perry, Beatriz Shobe, Nancy F Sonti, Meghan Avolio, Karin T Burghardt

11:00 **Ongoing and New efforts from the USDA Forest Service Field Station: STEW-MAP; UTC Change with Front / Back; and Urban Silviculture Training Program with Stillmeadow and TurnAround Tuesday.** Morgan Grove, Nancy Sonti, and Ian Yesilonis

11:15 **Simulation of spatially distributed sources, transport, and transformation of nitrogen from fertilization and septic system in Baisman Run.** Ruoyu Zhang, Lawrence E Band, Peter M Groffman, Amanda K Suchy, Jonathan M Duncan, Arthur J Gold

11:30 **Legacy effects of long-term autumn leaf litter removal slows decomposition rates and reduces soil carbon in suburban yards.** Max Ferlauto, Lauren Schmitt,

and Karin Burghardt

11:45      **Differences in mosquito and plant communities along socioeconomic gradients.**  
Sarah Rothman, Dr. Paul Leisnham, and Dr. Shannon LaDeau

**Concluding Remarks**

**Steward Pickett**

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**The BES 25th Annual Meeting was organized by**

Meghan Avolio, Johns Hopkins University  
Karin Burghardt, U. Maryland, College Park  
Tanaira Cullens, Biohabitats  
Rebecca Hale, Smithsonian Environmental Research Center  
Meghan Hazer-Álvarez, Department of Public Works, Baltimore City  
Terris King, II, Temple X Schools  
John Lagrosa, U. Maryland, Baltimore County  
Dexter Locke, USDA Forest Service  
Beatriz Shobe, Johns Hopkins University  
Nancy Sonti, USDA Forest Service  
Chris Swan, U. Maryland, Baltimore County  
Claire Welty, U. Maryland, Baltimore County