

**AGENDA**  
**BES 24th Annual Meeting**  
**October 13-14, 2022**

<https://baltimoreecosystemstudy.org/>

**Location:**  
**1st Floor, Auditorium**  
**Merrick School of Business**  
**11 West Mount Royal Avenue, Baltimore, MD, 21201**  
[Google Maps Link](#)

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 13th**

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

**9:20-9:30 Karl Steiner, Vice President for Research, UMBC**

**9:30-10:00 Introduction, Dan Coy, new Chief of Forestry, Baltimore City**

**10:00-11:00 Session 1 (Meghan Avolio, moderator)**

**Stewardship Mapping and Assessment Project: Results from 2011 and 2018**

Dexter Locke, USDA Forest Service; Nancy F Sontj, USDA Forest Service; J. Morgan Grove, USDA Forest Service; Sarah Carpe, UMBC; Molly Radwell, Johns Hopkins University

**Changing probability of extreme rainfall in the Baltimore metropolitan region: some findings from a 22-year radar rainfall record**

Andrew Miller, UMBC; James A. Smith, Princeton University; Mary Lynn Baeck, Princeton University; Elijah Clagett, Carnegie-Mellon University; Macawan Luu, UMBC

**Population genetic structure of weedy plant species in cities**

Ava Hoffman, University of Maryland, College Park; Jenny Cocciardi, Johns Hopkins University; Meghan Avolio, Johns Hopkins University

**Cutting the Vines of White Supremacy: Urban Ecology and the Environmental Humanities**

Mckay Jenkins, University of Delaware; Terris King, Temple X and UMBC

**11:00-11:15 Break**

**11:15-12:15 Session 2 (Dexter Locke, moderator)**

**The Baltimore Neighborhood Indicators Alliance as a Platform for Social-Ecological Data and Engagement**

Seema Iyer, University of Baltimore

**Modeling Multi-Scale Influences on Household Lawncare Decisions: Formal and Informal Neighborhood Effects on Fertilizer Use in the Baltimore Metro Region**

David Newburn, University of Maryland, College Park; Robert Johnston, Clark University; Colin Polsky, Florida Atlantic University; Haoluan Wang, Tom Ndebele, Clark University

**21st Century Cities Initiative and the Baltimore Area Survey**

Mike Bader, Johns Hopkins University

**Project VITAL: Vacant lot Improvement to Transform Adolescent Lives**

Kristin Mmari, Johns Hopkins School of Public Health (JHSPH); Beth Marshall (JHSPH); Megan Latshaw (JHSPH); Anton Kvit (JHSPH); Rebecca Fix (JHSPH); Ross Hatton (JHSPH); Deborah Odih (JHSPH); Cara Wynchgram (JHSPH); Jamie Harding, Center for Livable Future; Morgan Grove, USDA Forest Service; Dexter Locke, USDA Forest Service; Michelle Kondo, USDA Forest Service; Seema Iyer, Baltimore Neighborhood Indicator Alliance; Cheryl Knott, Baltimore Neighborhood Indicator Alliance; Kimberly Knox, Baltimore City Office of Sustainability, Abby Cocke Baltimore City Office of Sustainability; Katie Lautar, Baltimore Green Space; Laura Connelly, Parks and People Foundation; Naomi Sachs, University of Maryland, College Park; John Ciekot, Civics Works; Meghan Hazer, Department of Public Works; Natasha Neale, Environmental Control Board/BMORE Beautiful; Brandi Welsh, Environmental Control Board

**12:15-1:30 Lunch**

**1:30-2:30 Posters**

**The Impact of Stream Restoration on Seed Dispersal Across Floodplains**

Sara Kramer, Laura Gough, and Vanessa Beauchamp, Towson University

**The influence of domestic artificial selection on the genetic diversity of maple trees in urban forests**

Beatriz Shobe, Meghan Avolio, Johns Hopkins University

**Visualizing high-resolution, high-frequency stream temperature data in Dead Run watershed, Baltimore County, Maryland**

Hanna L. Donovan, John J. Lagrosa IV, Claire Welty, Mary McWilliams, Andrew J. Miller, UMBC

**Characterization of hydraulic conductivity of soil and saprolite cores in Dead Run watershed, Baltimore County, Maryland**

Mitchell Richards, Mary McWilliams, and Claire Welty, UMBC

**Simulation of coupled groundwater-surface water interactions in the urban critical zone**

Maryam Rishehri and Claire Welty, UMBC; Mahdad Talebpour, Johns Hopkins University

**Urban effects on saprophagous macro-arthropods**

Zsolt Tóth, Institute for Soil Sciences, Centre for Agricultural Research, ELKH; Pallieter de Smedt, Ghent University; Elisabeth Hornung, University of Veterinary Medicine Budapest; Katalin Szlavecz, Johns Hopkins University

**SUSTAIN: Software Infrastructure for Transformative Urban Sustainability Research**

Claire Welty and John Lagrosa, UMBC; Shrideep Pallickara, Mazdak Arabi, Sangmi Lee, Pallickara, Jay Breidt, and Sudipto Ghosh, Colorado State University; Mikhail Chester, Arizona State University; Amir Agha Kouchak, San Diego State University

**2:30-3:30 Session 3 (Dexter Locke, moderator)**

**An overview of the fifth phase of research at the CAP LTER Program**

Dan Childers, Arizona State University

**Investigating the sensitivity and quality of running WRF-UCMs in LES mode for fine-scale simulations of urban hydrometeorological processes using Baltimore as a case study**

Mahdad Talebpour, Johns Hopkins University; Claire Welty UMBC; Elie Bou-Zeid, Princeton University

**A Comparison of Benthic Communities and Water Quality in Red Run Watershed Over Two Decades of Urban Development**

Nguyen Tien Anh Quach, Towson University; Susan Gresens, Towson University

**Preliminary investigation of freshwater mussel reintroduction feasibility in a contaminated urban watershed**

Nathalie Lombard, UMBC; Rachel Harrison, University of Maryland College Park; Lance Yonkos, University of Maryland College Park; Alfred Pinkney, US Fish and Wildlife Service; Upal Ghosh, UMBC

**Evaluating shifts in stormwater management using a hydrosocial framework**

Mitch Pavao-Zuckerman, University of Maryland, College Park; Matthew Wilfong, Arizona State University; Paul Leisnham, University of Maryland, College Park; Debasmita Patra, University of Maryland, College Park

**3:45 - 4:15 DOE IFL Urban Initiative (Claire Welty, moderator)**

**Social-Environmental Collaborative IFL (Integrated Field Laboratory)**

Ben Zaitchik, Johns Hopkins University

**4:15 Conclude**

**Day 2 Friday, October 14th**

**9:10-9:15 Welcome, Nancy Sonti and Dexter Locke, USDA Forest Service**

**9:15-10:30 Session 4 (Meghan Avolio, Moderator)**

**Long-term watershed studies in Baltimore**

Peter Groffman, Cary Institute of Ecosystem Studies

**The National Urban Landowner Survey: Results from Baltimore**

Nancy Sonti, USDA Forest Service; Dexter H. Locke, USDA Forest Service; Jesse Caputo, USDA Forest Service; J. Morgan Grove, USDA Forest Service; Amanda Robillard, UMass Amherst; Emma Sass, UMass Amherst; Brett Butler, USDA Forest Service

**Long-term changes in remnant forest soils and earthworm communities**

Ian Yesilonis, USDA Forest Service; Sarah Placella, Root Applied Sciences; Csaba Csuzdi, Eszterházy Károly Catholic University; Katalin Szlavecz, Johns Hopkins University

**Adaptation to the Urban Heat Island Across US Cities in Common Dandelion (Taraxacum officinale)**

Eric Yee, Johns Hopkins University; Meghan L. Avolio, Johns Hopkins University

**Urban Wildlife Conservation in the U.S. Fish & Wildlife Service**

Ela-Sita Carpenter, US Fish and Wildlife Service

**10:30-10:40 Break**

**10:40-11:55 Session 5 (Nancy Sonti, moderator)**

**Deployment of a high-density sensor network to quantify stream thermal regime in Dead Run watershed, Baltimore County, MD**

Claire Welty, UMBC; Mary McWilliams, UMBC; Andrew J. Miller, UMBC

**Ecosystem consequences of urban design from local to macro scales**

Rebecca Hale, Smithsonian Environmental Research Center

**A Flooded Future for River Chub (*Nocomis micropogon*)? Future impacts of climate change and urbanization on reproduction of a keystone native fish species**

Stanley Kemp, University of Baltimore

**Virtuous Cycles and Research for a Regenerative Urban Ecology: The case of urban wood systems in Baltimore**

Morgan Grove, USDA Forest Service

**Effects of race and wealth on perceived ecological outcomes in Baltimore**

Meghan Avolio, Johns Hopkins University, Kelsey Coates, Johns Hopkins University, Amy Vasquez, Johns Hopkins University

**Concluding Remarks      Meghan Avolio**

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**The BES 24th Annual Meeting was organized by**

Chris Swan, UMBC

Meghan Avolio, Johns Hopkins University

Claire Welty, UMBC

J. Morgan Grove, USDA Forest Service

Nancy F. Sonti, USDA Forest Service

Dexter H. Locke, USDA Forest Service