

**BES Annual Meeting October 17, 2024**  
**Stillmeadow Community Fellowship**  
5110 Frederick Ave, Baltimore, MD 21229  
<https://baltimoreecosystemstudy.org/events/>

Attend remotely: [umbc.webex.com/umbc/j.php?MTID=m...](https://umbc.webex.com/umbc/j.php?MTID=m...)

Webex info: ID: 28676471446, password: Ph2pHgUuE87

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**Agenda**

- 8:30 Coffee and Conversation
- 9:00 Welcome, Introductions, and Announcements
- 9:10 Opening remarks and context: Pastor Michael

***Theme 1: Science Education and Outreach - Moderated by Beatriz Shobe***

- 9:30 **Terris King II, The Baltimore Forest School Framework**  
*InDiGO: Inward Discovery Grows Outdoors*
- 9:45 **Alan Berkowitz, Cary Institute of Ecosystem Studies.** Co-Authors: Garner, K., Hood, A., Covitt, B., Grooms, J., Draney, K., Mitzel, E., Browning, L., Fischer, D., Caires, A., Mehta, S., Bean, J.  
*Our Evolving Partnership to Advance Earth, Science Across Baltimore City Public Schools' Biology, Chemistry, and Physics Courses*
- 10:00 **Michele Romonlini, Loyola Marymount University Center for Urban Resilience.** Co-Authors: McPherson, J.  
*Art-Based Engagement as a Tool for Community-Based Urban Forestry Research*
- 10:15 Questions/General Discussion
- 10:30 Break

**Theme 2: Water Quantity and Quality** - Moderated by Chris Swan

- 10:45      **Peter Groffman, City University of New York.** Co-authors: Welty, C.  
*Dissolved gasses in streams provide insight into urban watershed function*
- 11:00      **Jaleel Shujath, University of the District of Columbia.** Co-Authors: Behera, P.  
*Analysis of Extreme Storm Events in Baltimore*
- 11:15      **Zach Clifton, US Geological Survey.** Co-Authors: Foss, E., Majcher, E., Psoras, A.,  
Mejia, S., Chase, J.  
*Contaminated stormwater sediment source tracking for polychlorinated biphenyls  
within the Back River Watershed, 2022-2023*
- 11:30      **Ally Kido, University of Maryland, Baltimore County and Institute of Marine  
and Environmental Technology.** Co-Authors: Mansfield, N., Schott, E.  
*Using a Native Mussel to Sequester Nutrients in Baltimore Harbor*
- 11:45      Questions / General discussion on water quantity and quality
- 12:00      **Lunch** *We will provide grilled cheese sandwiches and apples. Donations welcome  
but not necessary.*

We encourage a walk on the trails through Stillmeadow Peace Park.

**Theme 3: Grab bag topics: Urban Ecology in General and in Baltimore** - Moderated by  
Lenwood Hayman

- 1:15      **Morgan Grove, US Forest Service.** Co-authors: Pickett, S., Buckley, G., Boone, C.  
*Forging just ecologies: 25 years of urban long-term ecological research  
collaboration*
- 1:30      **Kim Grove, Baltimore City DPW**  
*Update on research focuses*
- 1:45      **Selena Livas, University of Maryland, Baltimore County,** Co-Authors: Locke, D.,  
Sonti, N.F.  
*An Analysis of Baltimore's STEW-MAP Networks*

2:00 Questions / General discussion

2:15 Break

**Theme 4: Organisms in the City - Moderated by Claire Welty**

2:30 **Meghan Avolio, Johns Hopkins University.** Co-Authors: Hoffman, A., Cocciardi, J.  
*Cosmopolitan plants do not show consistent parallel urban evolution across five US cities*

2:45 **Anna Mothersole, University of Maryland, Baltimore County.** Co-Authors:  
Swan, C.  
*Freshwater Invertebrate Response to Urbanization: A Large Scale Analysis of Functional Diversity*

3:00 **Dexter Locke, US Forest Service.** Co-Authors: Ossola, A., Schmit, J.-P., Grove, J.M.  
Social, spatial and temporal analyses of urban tree canopy: The need for Sub-parcel Analysis.

3:15 **Beatriz Shobe, Johns Hopkins University.** Co-Authors: Avolio, M.L., Sonti, N.F.  
*Selection in the City: How artificial selection of trees impacts the genetic diversity of urban forests.*

3:30 **Marus Tuah and Kajall Hylton, Baltimore Tree Trust.**  
*Tree Care and Technology in Baltimore City*

3:45 Questions / General discussion

**4:00 Posters**

4:50 Closing Remarks

5:00 Adjourn and keep the discussion going at the Difference Makers Center of West Baltimore, starting at 5:30

**Poster presenters**

**Max Carroll, Johns Hopkins University.** Co-Authors: Avolio, M.L.

*Examining Patterns of Urban Weeds Adaptation to Elevated Salt Levels*

**Aiden Kirchgraber, Smithsonian Environmental Research Center.** Co-Authors: Nowakowski, A.J., Bennett, S.K., Wernoch, R., Cawood, A.

*The resilience of bird vocalization behavior to extreme heat events in urban forest settings*

**Mary McWilliams, University of Maryland, Baltimore County.** Co-Authors: Welty, C., Duncan, J., Lagrosa, J.

*Use of long-term, high-frequency sensor data to evaluate interannual trends in stream metabolism in an urban watershed*

**Mary McWilliams, University of Maryland, Baltimore County.** Co-Authors: Welty, C., Miller, A.J., Duncan, J., Groffman, P.

*Initial lessons learned from a year of high-frequency data at BES stream chemistry stations*

**Hannah Obenaus, Smithsonian Environmental Research Center.** Co-Authors: Cawood, A., Wernoch, R., Bennett, S., Nowakowski, J.

*Effects of forest restoration on insect communities in urban and exurban forests*

**Gabrielle Pezich, Pennsylvania State University.** Co-Authors: Duncan, J.M., McPhillips, L., Groffman, P.

*Quantifying spatial and temporal variability of biogenic greenhouse gas emissions in Baltimore*

**Gabriel Pickus, The Baltimore Forest School Flower.** Co-Authors: Terris King II.

*InDiGO: Inward Discovery Grows Outdoors*

**Margaret Schaefer, University of Maryland College Park.** Co-Authors: McGurrin, K., McCloskey S., Pierre, A-L., Burghardt, K.

*Does a history of redlining or higher urban temperatures across Baltimore neighborhoods affect young street tree health?*

**Rashmi Sharma.**

Study of plants to reduce environmental temperatures.

**P.J. Terhune, University of Maryland, Baltimore County.** Co-Authors: McWilliams, M., Welty, C., Moore, J., Bain, D., Gomes, M.

*Analysis of sulfate concentrations in riparian soils of headwater streams in Dead Run watershed*

**Samantha Votzke, Johns Hopkins University.** Co-Authors: Szlavecz, K., Avolio, M.L., Johnson-Bond, O.

*An assessment of photosynthetic activity in tree species across Baltimore City*

**Darryn Waugh, Johns Hopkins University.** Co-Authors: BSEC

*BSEC Weather Station Network: Spatial and Temporal Variations of Heat within Baltimore*

**Dick Williams, St. James Development Corporation.**

*Streetscape Green Infrastructure as Environmental Justice in 21217*

**Dick Williams, St. James Development Corporation.**

*The Rev. Donald O. Wilson Park as Environmental Justice at an Inner Block in 21217*

**Ian Yesilonis, US Forest Service.** Co-Authors: Szlavecz, K., Schwartz, S., Sonderberg, P., Driftwood, L.

*Understanding water flow dynamics in urban soils: Implications for stormwater management*