Baltimore Urban Waters Partnership 2015 Activity Report

The following is a report on activities of the Baltimore Urban Waters Partnership in 2015. It is based on our conceptual framework model:

Baltimore Urban Waters
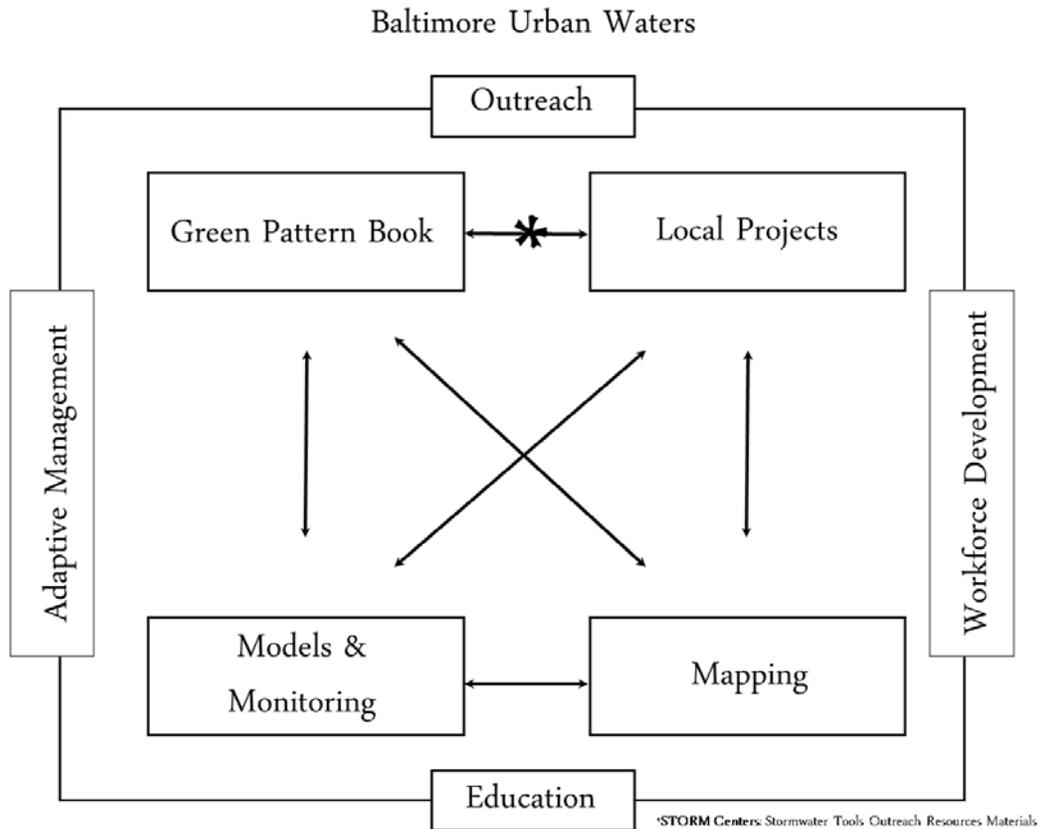
To access the hyperlinks, move the mouse over the GLOBE icon in each item until the URL appears; then, click on it.

To access the notes, move the mouse over the PAGE icon and click on. After reading the text, click on the heading for that topic to return to the main diagram.

Baltimore Urban Waters Partnership 2015

Models and Monitoring
- Urban FIA
- BRASS
  - Library
  - BES/BOS science meetings
- Networks and Collaborations
- Sustainability Research Network
- Water Quality Monitoring subgroup
- Adoption of Household Stormwater BMPs
- Bioaccumulation of pharmaceutical and personal care products (PPCPs) in crayfish of the Gwynns Falls urban watershed

Outreach
- Urban Waters Learning Network

Education
- Green Street Academy

Green Pattern Book
Green Pattern Registry
- Community-Managed Open Space
- Stormwater
- Urban Forests and Buffers

Local projects
- Growing Green Design Competition
- Greater Baltimore Wilderness Coaliton
  - NFWF resilience grant
  - Coalition
- Urban agriculture tour
- Every Kid in a Park
- Middle Branch working group
- Gwynns Falls/Leakin Park
  - Cahill Recreation Center
  - NFWF grant: Baltimore's Birds, Habitat, and People: Essentials for a New Urban Bird Treaty City
- Second Harbor
- G-LiHT data fusion
- Reducing residential water pollution
- Jones Falls DNA-based microbial source tracking
- Howard County stream restoration project
- Baltimore City and County trash TMDL plans
- Brownfields 101 training
- Baltimore Green Network Plan

/Baltimore Urban Waters Partner.../Models and Monitoring/Urban FIA

The Urban FIA program fuses the infrastructure of the traditional, rural-focused FIA program with the urban inventory expertise provided by i-Tree. New Urban FIA methods and protocols will be used to produce estimates of the quantity, health, composition, and benefits of urban trees and forests. The Urban FIA program will complement existing regional and local efforts to provide a cohesive picture of urban forest conditions in the U.S.

http://www.fs.fed.us/research/urban/fia.php

/Baltimore Urban Waters Partner.../Models and Monitoring/BRASS

Baltimore Regional Academy of Sustainability Sciences

/Baltimore Urban Waters Partner.../Models and Monitoring/BRASS/Library

As part of our effort to increase science based decision making, we have developed an on-line library of BES related publications for use by City and County partners, government agencies, NGOs, community groups, and educators. This private library has been created using Zotero.

Zotero is free and easy-to-use. The BES Library in Zotero contains bibliographic references such as journal articles about BES urban research. This library may contain citations, abstracts and links to copies of articles that are not currently publicly available.

Items appear in the center column. The metadata for a selected item is in the right column—including titles, creators, publishers, dates, and other data.

To join the BES Zotero Library please email beyarh@caryinstitute.org and request that you be invited to the BES Library.

If you are seeking a copy of a particular paper that is not attached to the citation listing please contact BES Project Facilitator Holly Beyar at beyarh@caryinstitute.org

http://beslter.org/landing-bes-library-in-zotero.html

In 2014, the Baltimore Ecosystem Study and the Baltimore Office of Sustainability established a series of meetings to facilitate science informing sustainability planning efforts. This series continued in 2015, with the following topics being addressed (supporting materials are available at the links):

January:
  Environmental messaging (https://www.dropbox.com/sh/xkuuy6lv86r77hn/AACscqa9ASR5rD3U28qk0Wlda?dl=0)
  Social benefits of urban forestry (https://www.dropbox.com/sh/zcqnvdebu1w3o62/AADi27AGq01F6NiKxIOSbTz0a?dl=0)

June:
  Vacants to Values (https://www.dropbox.com/sh/54bqbmka04eehoz/AAAzrPOoo84pToLzlr8TEkZ3a?dl=0)

September:
  N/A

The series resumes in January 2016 on the topic of BES research on environmental justice.

Our efforts on Networks and Collaborations, or Stew-MAP 2.0, did not advance this year. We hope to advance this work in 2016. Some supporting materials can be found here: https://www.dropbox.com/sh/ih2oj21ul8z9xdo/AADpyuLWMwNvvWVoRhhQh64Ka?dl=0
http://www.stewmap.net

Urban resilience to climate change-driven extreme events.
https://drive.google.com/open?id=0B8IfDQN1NmFyRkpLRm1mYlNwMGM

The Water Quality Monitoring subgroup has continued to meet through 2015. Primary activities included:
- Compiling a series of questions related to regulatory reporting data and submitting them to MDE for response (response is pending)
- Submitting grant applications to the Abell Foundation and EPA Urban Waters Small Grants for the long-term trends analysis of the Gwynns Falls that was a recommendation from the 2014 Waters Quality Monitoring workshop
- Preparing the agenda for the March 2016 Water Quality Monitoring workshop

Key Points
• Existing adoption levels are low for all household stormwater best management practices (BMPs), particularly rain gardens (2.5%) and rain barrels (7.6%).
• The ratio on awareness-to-adoption is much greater than one for all practices (e.g., for every 17 households that have heard of rain gardens only one household has an existing rain garden).
• Households with ower or vegetable gardeners have much higher awareness and adoption levels for most BMPs than those who are not gardeners.
• Households with higher environmental concern for protecting the Chesapeake Bay and reducing urban runoff have signi cantly higher adoption levels for lawn-care practices and rain barrels than those with lower environmental concern.
• The main barriers for rain garden adoption are that the costs are too high and that households do not feel informed enough.
• Survey responses to a hypothetical rebate program for rain gardens indicate that the adoption rate more than tripled when comparing no rebate to offering a 50% rebate.
• When providing options on payment method, the majority of households would prefer to receive a cost-share payment or cash/ check prior installing a rain garden, as compared to a tax credit or rebate where the payment is made only after installation.

Recommendations
• Take the time to engage with early adopters and community leaders to enhance social diffusion of BMP adoption into the larger community.
• The survey results identify gardeners and concerned environmentalists as early adopters and therefore outreach professionals should work with groups such as Master Gardeners, garden clubs, watershed groups, and other concerned citizens when planning outreach activities
https://extension.umd.edu/sites/default/files/_docs/Household_Stormwater%20BMPs_UMD%20Extension%20Bulletin%202013.pdf

https://docs.google.com/file/d/0B6knQ4zNTxD1NjNWdUs2VDdPWlE/edit?usp=docslist_api&filetype=mspresentation

The Baltimore City Growing Green Design Competition: Vacant Lots Transformed was launched in conjunction with the Mayor's Growing Green Initiative in May, 2014 to showcase innovative concepts for retrofitting vacant lots in Baltimore City and turning community challenges into community resources. Goals of the competition were to foster partnerships between community groups, design firms, non-profits, and private organizations, test the Green Pattern Book, and reduce and treat Stormwater.
Thanks to the Department of Planning, Department of Public Works, US EPA, and the Chesapeake Bay Trust, $300,000 has been awarded to teams to implement their designs.
http://arcg.is/1O1hkNt

The Greater Baltimore Wilderness Coalition is a voluntary alliance of public agencies, non-governmental organizations, professional associations, and conservation coalitions. The region it spans includes the area from the Chesapeake Bay on the east to the Piedmont in the west, and from Pennsylvania in the north to the suburbs of Washington, DC in the south. It includes the counties of Anne Arundel, Baltimore, Carroll, Harford, Howard, Montgomery, and Prince George's and the cities of Annapolis, Baltimore, Bowie and others.

http://www.conservationfund.org/projects/greater-baltimore-wilderness-coalition

/Baltimore Urban Waters Partner.../Local projects/Greater Baltimore Wilderness C.../NFWF resilience grant

https://docs.google.com/presentation/d/1ozpGzgoc9TbTT1qRggQ5jPW8kDXckkrWWLlWxSh1Kx4

/Baltimore Urban Waters Partner.../Local projects/Greater Baltimore Wilderness C.../Coalition

https://docs.google.com/file/d/0B8IfDQN1NmFyRmlBUG1RSGdXMnc/edit?usp=docslist_api&filetype=mspresentation

/Baltimore Urban Waters Partner.../Local projects/Urban agriculture tour

https://drive.google.com/open?id=0B8IfDQN1NmFyYW9IWkI5emFwRlE

Every Kid in the Park
Baltimore, Maryland

Event:
The Blue Heron Project at Hampstead Hill Academy Baltimore, MD
This project is being conducted in conjunction with the National Audubon Society, The University of North Carolina, The Baltimore City Department of Parks and Recreation and the USDA Forest Service Baltimore Field Station,.

When: June 8, 2015-June 8, 2020

Focus: Wildlife Biology, Natural and Environmental Science instruction for 7th Grade

Deliverable: A new outdoor laboratory for middle school students to become more aware of their environment, as it relates to being connect to the air, soil, fungi, water, plants and animals (let alone all the people) around them, their school and their park (Patterson Park).

Trapping methods will be used that allow the capture of birds on their foraging grounds. The birds will be harnessed with GPS/GSM transmitters (tags) so their movements can be tracked. The technology used in the tags is the same as that which is found in a smart phone. Students will be able to track the birds during the course of this study.

Major Impact: Students in urbanized areas will become familiar with the productivity of managed aquatic ecosystems and to be able identify the types of water fowl, such herons or egrets, who utilize urban habitats.
This project will help stimulate an interests in STEM subjects and will help to develop the scientific skills and problem solving skills by introducing students representative future for a diverse workforce in wildlife and conservation biology from an urban perspective.
http://www.nationalparks.org/ook/every-kid-in-a-park

https://docs.google.com/file/d/0B8IfDQN1NmFyVFpPMjY2TXNjSm8/edit?usp=docslist_api&filetype=mspresentation

Event: Ground-breaking event for new $12 million Cahill Recreation Center nested within Gwynns Falls/Leakin Park, the largest urban forest in Baltimore City.

When: Spring 2016 (specific date TBD) Project is currently under architectural design

Focus: Building a state-of-the art recreation center within an urban forest to support nature programming and jobs for at-risk youth.

Deliverable: Construction of a new recreation center that will serve as ground zero for transitioning youth from traditional recreation to outdoor recreation and natural resource employment through the Conservation Jobs Corps program at Gwynns Falls/Leakin Park.

Major Impact: A significant contribution to helping revitalize a distressed community by providing families and youth with opportunities to connect with and restore Baltimore's largest urban forest.

/Baltimore Urban Waters Partner.../Local projects/Gwynns Falls/Leakin Park/NFWF grant: Baltimore's Birds,...

http://www.nfwf.org/fivestar/Documents/2015_five-star_project-list.pdf

/Baltimore Urban Waters Partner.../Local projects/Second Harbor

https://docs.google.com/file/d/0B8IfDQN1NmFyTnphN0YwYjdCYW8/edit?usp=docslist_api&filetype=mspresentation

/Baltimore Urban Waters Partner.../Local projects/G-LiHT data fusion

https://docs.google.com/file/d/0B8IfDQN1NmFyWEZzaXhMSzNUd00/edit?usp=docslist_api&filetype=mspresentation

/Baltimore Urban Waters Partner.../Local projects/Reducing residential water pol...

https://docs.google.com/presentation/d/1LKJWMe9qrAAv_aG5JWDjJyxvPUwqa2sxUnznntv2N3o

/Baltimore Urban Waters Partner.../Local projects/Jones Falls DNA-based microbia...

https://drive.google.com/open?id=0B8IfDQN1NmFybUFfVlJ6N3ZUdm8

/Baltimore Urban Waters Partner.../Local projects/Howard County stream restorati...

https://drive.google.com/open?id=0B8IfDQN1NmFyLWxtcXhEUzUyNlU

/Baltimore Urban Waters Partner.../Local projects/Baltimore City and County tras...

https://docs.google.com/presentation/d/1Ym8sPFHeU3nYMLTTM7tvS593iLN9MBxwNopAA00w_Og

/Baltimore Urban Waters Partner.../Local projects/Brownfields 101 training

https://docs.google.com/file/d/0B8IfDQN1NmFyMVZfMjUxVUpLejg/edit?usp=docslist_api&filetype=mspresentation

/Baltimore Urban Waters Partner.../Local projects/Baltimore Green Network Plan

https://docs.google.com/file/d/0B8IfDQN1NmFycm0yVnFvN2RNLXM/edit?usp=docslist_api&filetype=mspresentation

/Baltimore Urban Waters Partner.../Education/Green Street Academy

Green Street Academy (GSA), a non-profit, tax-exempt 501(c)(3) corporation, is a public charter school located in Baltimore, MD, founded in 2010. The school's mission is to prepare middle and high schools students in Baltimore City for college and careers in the 21st century economy.

The USFS Baltimore Field Station is partnering with Green Street Academy on a number of initiatives related to agriculture and aquaculture to help prepare students for the new green economy.

http://greenstreetacademy.org/home-mobile/

/Baltimore Urban Waters Partner.../Green Pattern Registry

The three green patterns shown are being updated, has been completed, and is being created, respectively. The Baltimore Neighborhood Indicators Alliance-Jacob France Institute has applied for an EPA Urban Waters Small Grant to complete the build out of the Green Pattern Registry.
http://water.bniajfi.org/map

/Baltimore Urban Waters Partner.../Green Pattern Registry/Community-Managed Open Space

The Community-Managed Open Space green pattern mapping is being updated in 2015 by Baltimore Neighborhood Indicators Alliance-Jacob France Institute courtesy of a grant from US Forest Service Northern Research Station.

/Baltimore Urban Waters Partner.../Green Pattern Registry/Stormwater

The Stormwater green pattern mapping was completed in 2015 by Baltimore Neighborhood Indicators Alliance-Jacob France Institute courtesy of funding from Baltimore City.

/Baltimore Urban Waters Partner.../Green Pattern Registry/Urban Forests and Buffers

The Urban Forests and Buffers green pattern mapping began in 2015. It being done by Baltimore Neighborhood Indicators Alliance-Jacob France Institute courtesy of a grant from US Forest Service Northern Research Station.

/Baltimore Urban Waters Partner.../Green Pattern Book

The USDA version of the Green Pattern Book was published in hard copy and electronic form in September 2015 as US Forest Service Northern Research Station publication NRS-INF-32-15.
USFS Baltimore Field Station staff have put together a distribution plan as follows:
- BFS is distributing to a suite of national organizations
- BFS is distributing to a variety of internal partners
- Baltimore Office of Sustainability and Parks & People Foundation will share responsibility for distributing to local partners, community organizations, neighborhood associations, and other end-users.
http://www.fs.fed.us/nrs/baltimore/local-resources/downloads/nrs_inf_32-15-green-pattern.pdf

The Urban Waters Learning Network is a peer-to-peer network of people and organizations that share practical on-the-ground experiences in order to improve urban waterways and revitalize the neighborhoods around them.

More information, including how to join, is available here: http://www.urbanwaterslearningnetwork.org

http://www.urbanwaterslearningnetwork.org/wp-content/uploads/2015/08/Baltimore-Urban-Waters-Partnership1.pdf

Patterns ▼   Layers ▼   Indicators ▼   🔧 ▼

🏛 BNIA

Community Managed Open Spaces ✕

Percentage of Residential Properties That Are Vacant and Abandoned ✕

🟥 Show All

Community Statistical Area Name

☐ Select all/ None

☐ Allendale/ Irvington/ S. Hilton

☐ Beechfield/ Ten Hills/ West Hills

☐ Belair-Edison

☐ Brooklyn/ Curtis Bay/ Hawkins Point

In Interval

☐ Select all/ None

☐ 0.03 - 4.51

☐ 4.51 - 13.45

☐ 13.45 - 25.07

☐ 25.07 - 32.69

Pattern
🟢 All Sites

Layer
☐ 0.03 - 4.51
☐ 4.51 - 13.45
☐ 13.45 - 25.07
☐ 25.07 - 32.69
☐ 32.69 - 34.67

Selection ▼   Make a selection...   Submit

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![USDA United States Department of Agriculture]

GROWING GREEN INITIATIVE

GREEN PATTERN BOOK

USING VACANT LAND TO CREATE GREENER
NEIGHBORHOODS IN BALTIMORE

Addressing Baltimore's Vacant Land Problem

Baltimore Urban Waters Partnership
Baltimore, MD

Keywords: vacant lot, community green space, job training, supporting local non-profits, collaboration, historic materials salvage, green infrastructure

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About the Organizations:

Baltimore Urban Waters Partnership
The Baltimore Urban Waters Partnership (BUWP) works to develop projects devoted to protecting and restoring urban waters; promoting community revitalization and strengthening the social fabric through the removal of blight, establishment of open spaces, and creation of economic development to serve as catalyst opportunities for disadvantaged neighborhoods, and capitalize on the social and economic benefits derived from improved urban waters and adjacent lands.

SavATree

SavATree provides project support to the U.S. Forest Service Northern Research Station; a key partner in the BUWP. They also facilitate linkages between BUWP and other agency efforts in Baltimore. Mike Galvin, Director of SavATree is the Baltimore Urban Waters Ambassador/ Project Manager.

Setting

Baltimore Maryland, home to over 30,000 vacant and abandoned lots and numerous economically disadvantaged neighborhoods, is also home to some of the most innovative job creation strategies and vacant lot reclamation projects in the nation. Through the Baltimore Urban Waters Partnership (BUWP), waterways are being cleaned up, communities are reconnecting with their urban waters, and abandoned lots are being transformed for community benefit.

Patapsco River, Downtown Baltimore

Photo Credit: University of Maryland Center for Environmental Science

The BUWP is focused on the Patapsco Watershed, which flows to the Baltimore City Harbor and ultimately into the Chesapeake Bay. The watershed includes Maryland's largest population area of approximately 650,000 people . The eastern portion of the Patapsco River is in a highly developed region and is subject to trash buildup and pollution from wet weather events.

Recognizing a need in Baltimore to not only address water quality in the Patapsco watershed and access to Baltimore's waterways, the City of Baltimore knew there was a need for community revitalization and the opportunity to capitalize on the social and economic benefits derived from improved urban waters and adjacent lands.

The Baltimore Urban Waters Partnership, led by the USDA Forest Service's Baltimore Field Station, is working to develop projects devoted to protecting and restoring urban waters; promoting community revitalization and strengthening the social fabric through the removal of blight, establishment of open spaces, and creation of economic development to serve as catalyst opportunities for disadvantaged neighborhoods.