Route One Green Team Convening:

Stormwater/Flooding

September 22, 2021

UNIVERSITY OF MARYLAND 18 56

ENVIRONMENTAL FINANCE CENTER

Land Acknowledgment

"At the University of Maryland, we believe it is important to create dialogue to honor those that have been historically and systemically disenfranchised. So, we acknowledge the truth that is often buried: At the University of Maryland, we are on the ancestral lands of the Piscataway People, who were among the first in the Western Hemisphere. We are on indigenous land that was stolen from the Piscataway People by European colonists. We pay respects to Piscataway elders and ancestors. Across the state, we honor the original custodians of this land, including the Accomack, and Pocomoke on the Eastern Shore all the way to the Massawomeck in Western Maryland. Please take a moment to consider the many legacies of violence, displacement, migration, and settlement that bring us together here today."

We also invite people to identify the original custodians of your land and offer acknowledgement in chat. **https://native-land.ca/**

Agenda

- **Welcome/Land Acknowledgment/Introductions/Goals**
- **Stormwater/Flooding: Current and Expected Future Conditions**
- **Where are the Hotspots? Who to Coordinate With?**
- **Potential Partnerships? Potential Policies?**
- **Potential Funders and Technical Assistance Resources?**
- **Comfort Level with: Technology? Water Re-Use?**
- **Wrap Up/Next Steps**

Current Conditions

- The amount of precipitation falling during intense multi-day events **has increased significantly** in the Northeast US.
- **Annual total precipitation has increased** over the last few decades.
- The Route One corridor is a heavily urbanized area particularly **susceptible to flash flooding**.

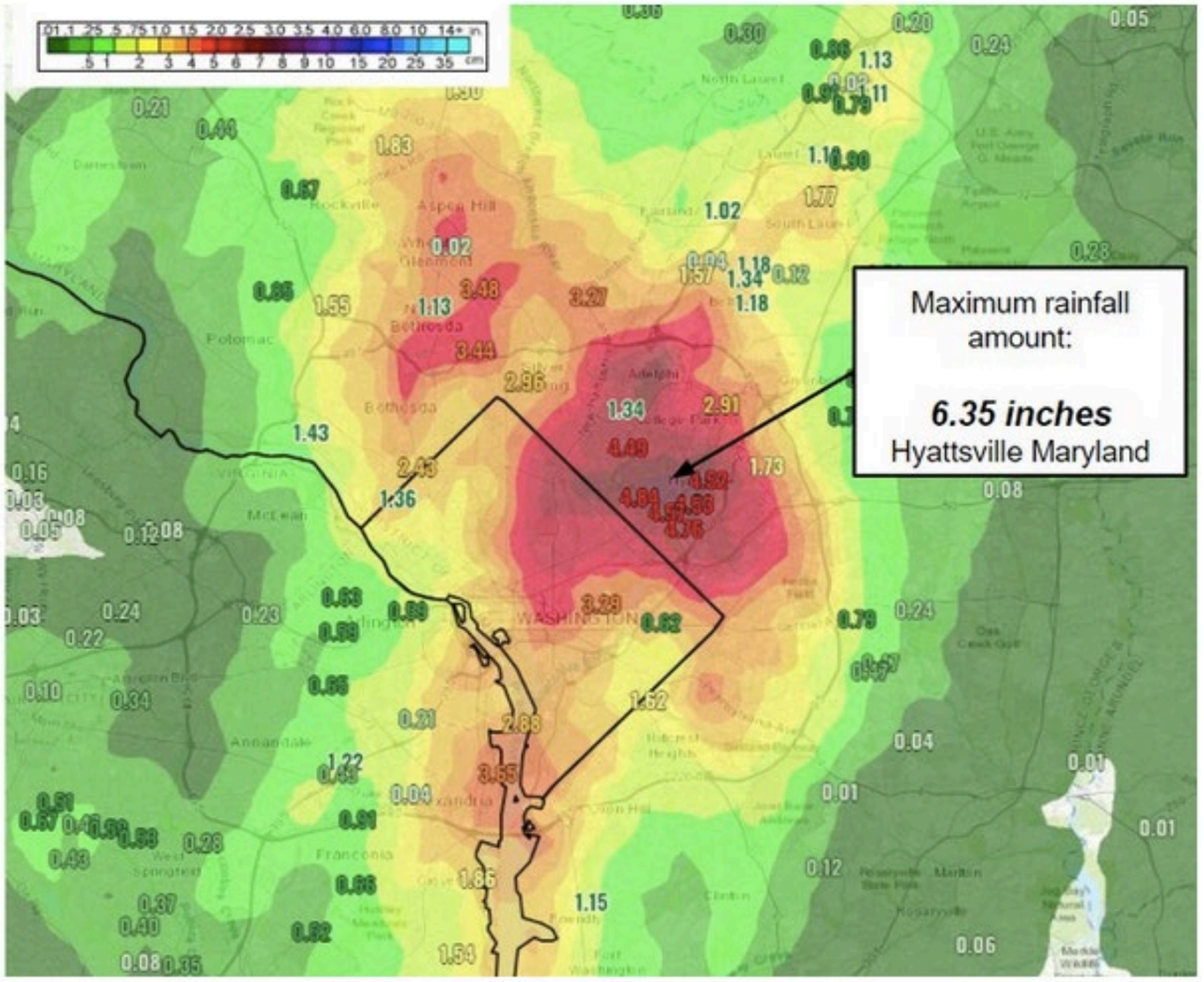
Expected Future Conditions

- **Average annual precipitation is projected to increase** in Maryland over the 21st century, particularly during winter and spring.
- The 100-year rain storm event, as defined by historical data, is expected to occur **every 20 to 50 years** by the end of the century.
- Increasing and more intense extreme precipitation events will likely **expand the flood hazard areas.**

(Source: NOAA State Climate Summary – MD & DC, https://statesummaries.ncics.org/chapter/md/)

September 10, 2020

- **6 inches of rain** in a few hours
- **Worst affected:** Mt. Rainier, Hyattsville, Bladensburg, Colmar Manor, Cottage City, and Edmonston.



Rainfall observed Thursday. (National Weather Service)

Guilford Run, UMD

East-West Highway

Green Street, Edmonston

Pervious Pavers, Brentwood

Tree Planting, Brentwood

Green Roof, Riverdale Park Station

Where are the Hotspots?

- Dueling Creek in Cottage City
- The Anacostia in general
- Calvert Hills
- Wells Run – from Queens Chapel Road to Route 1 and then into Riverdale Park
- Lakeland in College Park
- Mt. Rainier Perry Street behind Pennyroyal Station
- Mt. Rainier Otis Street on south side of Route 1
- Indian Creek – channelized
- Windom Road and Allison Road in North Brentwood
- 41st Street and Bladensburg Road in Cottage City
- University Park Clagget-Pineway and the part of Pineway feeding into Guilford Run above Baltimore Ave
- 4800-4900 block of Longfellow Street in Riverdale Park
- Lots of places in Colmar Manor, mayor can provide more information
- Ward 1, Riverdale between 410 and Wells Run, road runoff and Wells Run overflow, 7-11 tree removal
- Bladensburg Road and 41st to 43rd Street in Cottage City
- 40th Ave and Madison Street in Hyattsville
- Peace Cross intersection
- Baltimore Ave @ Charles Armentrout in Hyattsville
- 38th Ave and Gains Alley
- Bladensburg Waterfront Park
- Hyattsville 41st Place behind the soccer field

Who to Coordinate With?

- **County DOT**
- **Army Corps**
- **MNCPPC**
- **State Highways**
- **AWS**
- **County: DoE, Public Works, Emergency Management, DPIE, Parks**
- **County Council as these issues relate to the County Climate Action Plan**
- **Anacostia Watershed Advisory Committee**
- **MW COG**
- **Municipalities collectively**
- **District of Columbia**
- **WSSC**
- **UMD**
- **NPS, USDA, NASA**

Potential Partnerships?

- UMD
- local businesses
- Development community
- Anacostia Riverkeeper
- Watershed Stewards
- Friends/watershed groups
- LID Center
- EFC/SM
- Municipalities collectively
- Thriving Earth Exchange

Potential Policies?

- Volume management
- state bill regarding state, counties and communities better coordinating and improved data collection that informs decision making
- Utility pruning
- Raising expectations on new development
- County climate action plan's blueprint for stormwater management
- Complete streets
- Dig Once approach
- Tree replacement ordinances – new/update or enforce what is on the books
- Prioritizing green infrastructure
- Parking maximums
- Shared use parking
- State tree conservation law to maximize conservation
- Guidelines for permeable pavement – max/min standards
- Subwatershed approach coordinated across jurisdictions to manage volume

Potential Funders?

- CBT
- ARPA funding – resilience and climate change needs, flood mitigation, pooling resources, infrastructure needs – happening at the County and municipal level
- NFWF
- NOAA – environmental literacy RFP current open through November 1
- County-sponsored funders meet and greet
- Maryland DNR – Trust Fund/Grants Gateway
- Faith-based institutions – Alternative Compliance program
- Rain Check Rebate program
- County Stormwater Stewardship grants
- County stormwater fees
- US EPA

Potential Technical Assistance Resources?

- Neighborhood Design Center
- LID Center (SW study done for Mt. Rainier)
- EFC/SM – Maryland Black Mayors project for residential installations
- Engineering firms, GI design firms
- Bowie State University
- Prince George's County Community College
- US EPA/Maryland DNR – Beth Olsen's research, Guide to Assessing Flood Risk
- Interfaith Partners for the Chesapeake
- iTree software modules from Forest Service
- Maryland DNR/Forest Service

What is Comfort Level with Technology?

Dr. Hendricks and team conducting pilot project on campus using IoT sensors to provide real time data on water quality and quantity to inform water resource decision making. Provides hyper-local data. Funding for the pilot came from the UMD Sustainability Fund which is offering proof of concept for the team to pursue additional funds from other sources and expand beyond campus.

Per station costs were about $10K to $15K including wireless equipment and installation fees.

Interest in expanding beyond the University borders given that runoff ignores jurisdictional boundaries and to be a better neighbor to surrounding jurisdictions. Initial community meeting identified different types of mapping, building and engagement needs.

What role could technology play in your own community/stormwater program?

- Develop better understanding on what is happening on the ground during increasingly frequent and intense rain events – inform plans for local responses, interventions and budgeting
- Sarah expressed interest
- Potential for data sharing broadly across jurisdictions
- Smaller towns more interested in the data analysis from a trusted source
- Data and analysis also valuable as a community engagement tool
- Informing multi-jurisdictional needs – pinpointing opportunities to collaborate
- Insight on the sufficiency of existing infrastructure
- Weather stations can also offer micro-information collection and community engagement at a lower entry point price

What is Comfort Level with Water Re-Use?

Harvesting water for non-potable uses:

- Infiltration to green spaces
- Groundwater recharge
- Community garden needs
- Composting facility needs

Next steps

- Map
- Next convening November/December

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