

# Runoff Review

June 2018 Volume 13, Issue 1

An official publication of the Maryland Association of Floodplain and Stormwater Managers



## Spring conference on the Eastern Shore

The Maryland Association of Floodplain and Stormwater Managers hosted our first spring conference on Wednesday, June 6, 2018, at Chesapeake College in Wye Mills, MD. The theme was “People, Data and Tools to Minimize Flood Risk on the Eastern Shore.” The conference featured many interesting presentations and was a great opportunity to network and share ideas on floodplain and stormwater management.

## Save the date: MAFSM’s annual conference

The 14th Annual MAFSM Conference will take place on Thursday, November 8, 2018, at the Maritime Institute in Linthicum, MD. We’re excited to announce that the keynote speaker will be Harriet Festing, Executive Director of Anthropocene Alliance. Harriet has been managing award-winning programs that tackle climate change for 25 years. Her diverse experience spans water, energy, agriculture, and housing and government, non-profit, and academic sectors in the United States and United Kingdom.

We are currently accepting abstracts (deadline is August 13) and we encourage you to [submit!](#) Topics should be related to stormwater and floodplain management in Maryland or other areas in the United States. Abstracts on the following topics will be considered:

- Floodplain management/mapping
- Stormwater management
- Mitigation
- Climate Change
- Outreach
- Other



*Michael S. Scott, PhD, GISP, Salisbury University Presents on Coastal Flood Vulnerability on the Upper Eastern Shore.*

## Pooled monitoring: A novel approach to funding research on restoration versus site- and project-specific monitoring

*Sadie Drescher, Chesapeake Bay Trust*

Restoring the water quality and habitat in Chesapeake Bay and its tributaries will require increasing the number of watershed-level projects significantly. Questions persist in the regulatory and restoration practitioner communities about the performance and function of the restoration practices that delay the implementation of projects. As a result, the Pooled Monitoring Program was initiated to speed up, increase confidence in, and improve cost effectiveness of restoration projects by helping to get answers to questions from regulatory and practitioner communities on stormwater and stream restoration practices that can delay project implementation.



*Conowingo Dam by YukunXing*

Over the last several years, regulatory and practitioner communities have articulated pressing questions about restoration practices. Examples are questions about cumulative impacts of restoration practices on a watershed scale, differences in the efficacy of stream restoration techniques, trade-

## Lunch and learn on Climate Cost Project

One June 12, 2018, Sieren Ernst gave a lunch-and-learn online presentation on the Climate Cost Project, an initiative to document the immediate costs of climate change impacts in order provide data that will help with climate and resilience planning at the local level. See the article on page 4 for more information about the project and the presentation slides can be viewed on our website.

If you're interested in giving a lunch-and-learn presentation or have an idea for a topic, please contact a MAFSM officer.



Foggy Morning by Brent Jett



Sea Shells by Brent Jett

offs of restoration activities in terms of the positive and negative impacts to resources (e.g., trees removed during stream restoration), whether and how iron flocculate is associated with stream restoration techniques and whether it is “bad,” and how to predict or model structural stability of stream restoration. The initiative articulates **the** “burning” restoration questions that regulators and practitioners need to have answered so they can make informed decisions. The novelty of the initiative is in identifying funds used for other types of monitoring that have more power in a pool.

Results of the research are communicated to the regulatory and restoration communities to maximize their ability to inform their work. The Pooled Monitoring Program aims to increase confidence in proposed restoration project outcomes, clarify the optimal site conditions in which to apply particular restoration techniques, provide information useful to regulatory agencies in project permitting, and provide information that will help guide monitoring programs. New questions are added to the program every year to ensure that the top restoration questions are answered.

The initiative has been supported in the past through the Restoration Research Request for Proposals by the Chesapeake Bay Trust, Maryland Department of Natural Resources, Environmental Protection Agency's Chesapeake Bay Program Office, Maryland State Highway Administration, and Montgomery County Department of Environmental Protection.

### Projects funded in 2017 included:

Project Title	Project Description
Assessing Watershed-scale Restoration Effectiveness: Treatment Impacts and Monitoring Requirements	Evaluation by the South River Federation and Smithsonian Environmental Research Center of the cumulative performance of multiple Best Management Practices at a subwatershed scale and a comparison of watershed-level discharges of sediment and nutrient pollutants from seven interconnected, restored subwatersheds of Church Creek.
Using a Novel Research Framework to Assess Water Quality Impacts of Urban Trees	Quantification of the stormwater treatment value of trees across urban forest types and the identification of urban forest characteristics that influence water quality and ecosystems and determine whether more complex urban forest types result in greater runoff volume reduction.
Long-term Impacts of Living Shorelines to Sub-Aquatic Vegetation (SAV) Habitats in the Chesapeake Bay	Assessment of the long-term performance and potential impacts to adjacent seagrass beds of living shorelines, which involves using natural shoreline habitat rather than hard shoreline armor to prevent erosion.
Tree Trade-Offs in Stream Restoration Projects: Impact on Riparian Groundwater Quality	Quantification of the effects of riparian deforestation on groundwater quality across restored, degraded, and forested reference urban sites because predicting the impact of tree removal associated with stream restoration on riparian water quality remains a challenge.
An Evaluation of Forest Impacts as Compared to Benefits Associated with Stream Restoration	Gaining a better understanding of the impacts of stream restoration on forest resources by inventorying trees, understory vegetation, reptiles, and amphibians to identify potentially negative impacts, if any, as a result of positive stream restoration practices.





**Kevin Wagner, Community Assistance Program Manager of the Maryland Department of the Environment, facilitates the reports from groups responding to a potential riverine flooding scenario.**



**Solitude by Brent Jett**



**Sunset on the Narrows by Kevin Wagner**

## Practice to Prepare: Practitioners Work through Floodplain Management Emergency Scenarios during Tabletop Workshop

*Necolle Maccherone, Michael Baker International*

On April 11, 2018, more than 60 floodplain administrators, emergency management professionals, planners, engineers, public works officials, code enforcement officers, and GIS staff gathered at the Kent Island Fire Department in Chester, MD, for the Maryland Flood Tabletop Workshop. The day-long workshop was led by the Maryland Department of the Environment, State Coordinating Office of the National Flood Insurance Program (NFIP), and FEMA Region III's Floodplain Management and Insurance Branch with support from the Maryland Emergency Management Agency, Maryland [Resiliency Partnership](#), and [Maryland Silver Jackets](#) team.



**Participants listen as Heather Davis-Jenkins, CFM, of FEMA Region III Mitigation Division describes a potential tidal flooding scenario.**

The workshop was designed as a tabletop exercise. Participants were placed in small groups and given scenarios involving potentially disastrous weather events that could cause flooding in tidal, coastal, and riverine areas. The scenarios were developed by the National Weather Service. The groups used real-life experiences in their own communities to help determine how they could prepare and respond to the scenarios from a floodplain management perspective. Information shared in the groups facilitated discussions about opportunities for coordination, communication, mitigation, and best practices.

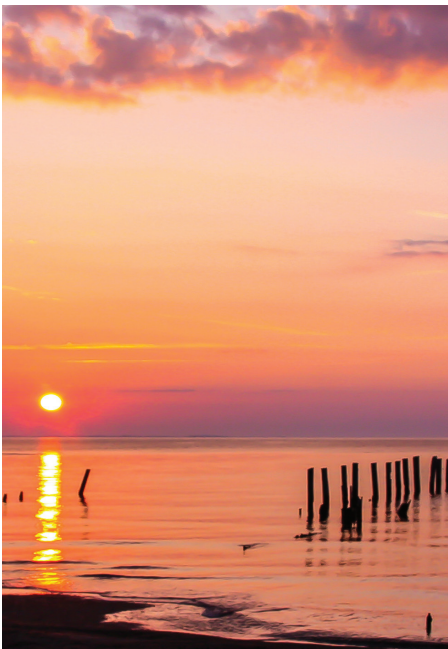
Participant Catherine Escarpeta, GISP, of Prince George's County Department of the Environment commented that "the Flood Tabletop Workshop was very beneficial to not only meet some people and put faces to the names of people I often hear of, but to see how other jurisdictions manage their flood and emergency response. I got some really good ideas on how to develop exercises for my organization as required for credit for the Community Rating System (CRS) program."

For more information on the Flood Tabletop Workshop, contact Kevin Wagner, Community Assistance Program Manager, State NFIP Coordinating Office at Maryland Department of the Environment at [kevin.wagner@maryland.gov](mailto:kevin.wagner@maryland.gov).





*No Hope by Brent Jett*



*Chesapeake Bay Sunset*

# The Climate Cost Project

*Sieren Ernst, CEO and Co-founder*



The Climate Cost Project ([www.climatecostproject.org](http://www.climatecostproject.org)) is a non-partisan, non-profit organization that documents the immediate costs of climate change impacts to provide data that will help with climate and resilience planning at the local level.

Resilience planning is often focused on future impacts, and floodplain managers know that climatic changes are increasing the frequency of both coastal flooding and heavy downpours, resulting in increasing flood management costs for both private property owners and municipalities that are responsible for dealing with flooding.

The Climate Cost Project's new tool, the Climate Impact Census (CIC) ([www.climatecostproject.org/cic](http://www.climatecostproject.org/cic)), is being used to survey costs related to climate change impacts such as uninsured costs. For municipalities, these costs might be unreimbursed costs that federal and state programs or emergency management funds do not cover.

The changing landscape of flooding creates challenges for municipalities doing cost-benefit analysis of resilience and adaptation projects and communicating with their own communities as well as state and federal governments about how best to approach flooding issues. For example, the cost of adaptation projects is clear, but the cost of inaction is hidden. Many practical changes can take place at both the property owner and community levels to manage flood risks.

The CIC is helping to increase public awareness and enhance the ability of municipalities and private property owners to understand, manage, communicate, and adapt to the changes they are experiencing. Data from the CIC will be available to floodplain managers. If you're interested in having your community participate in the CIC or have more questions, please contact Sieren Ernst at [sernst@climatecostproject.org](mailto:sernst@climatecostproject.org).



*Maryland Landscape*



## Treasurer's Report

Current balance = \$19,953.38

## Ward's® 3D Flood Simulation Model, Recent Demonstrations

- John T. Baker Middle School, Damascus
- Discover Engineering Family Day, National Building Museum, Washington, DC
- Fountaindale Elementary School, Hagerstown
- Eastern Middle School Career Day, Silver Spring, MD
- Take Your Child to Work Day, Michael Baker International, Linthicum
- Phelps Luck Elementary School Science and Enrichment Fair, Columbia
- Little Falls Watershed Festival, Bethesda

If you're interested in using the flood model at a local school or event, please contact Paul Slonac ([PSlonac@mbakerintl.com](mailto:PSlonac@mbakerintl.com)) or Ben Kaiser ([benjamin.kaiser@aecom.com](mailto:benjamin.kaiser@aecom.com)).



Ward's 3D Model Demonstration at the Salvation Army Boys and Girls Club

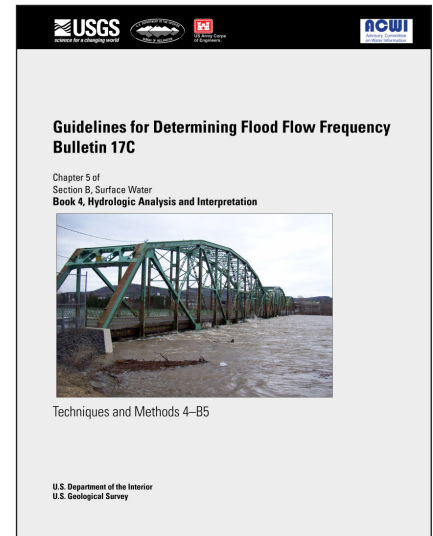
## USGS Publishes Bulletin 17C, "Guidelines for Determining Flood Flow Frequency"

Reprinted from ASFPM News and Views, Vol. 31, No. 2, April 2018

Accurate estimates of flood frequency and magnitude are a key component of any effective nationwide flood-risk management and flood-damage abatement program. Bulletin 17C's Chapter B5 of book 4 (TM 4-B5) deals with flood flow frequency analysis at gauged sites using the Expected Moments Algorithm. The use of extreme flood data represented by interval and censored data types, including historical, paleoflood and botanical evidence, is emphasized.

The ASFPM Flood Science Center facilitated a Cooperating Technical Partner webinar on "Flood Frequency Computations Using Bulletin 17C" last November. Information on this webinar can be found [here](#). This is one of the webinars ASFPM conducts as part of the CTP Information Exchange in coordination with FEMA. The slides and recording of the webinar can be accessed via the referenced link.

There will also be a workshop at the ASFPM national conference in Phoenix June 21. The title of the workshop is "Characterizing Flood Risk Using Bulletin 17C, the Updated Federal Guidelines for Flood Frequency Analysis."



## A Look Back at 30 Years of Mitigation Helping Communities Rebuild Stronger

Reprinted from ASFPM News and Views, Vol. 31, No. 2, April 2018

This year marks the 30-year anniversary since the Robert T. Stafford Act was amended to include funding for hazard mitigation grants as a way to help communities recover and rebuild after a presidentially-declared disasters. In the last three decades, FEMA's [Hazard Mitigation Assistance](#) programs have expanded to three mitigation grant programs for pre- and post-disaster events and recently surpassed \$15 billion in funding provided for state, local, tribal and territorial mitigation projects. Communities across the nation are now more resilient, and that growth continues. Watch Hazard Mitigation Assistance Branch Chiefs **Karen Helbrecht**, **Michael Hillenburg**, and **Anna Pudlo** share their reflections on the value and benefits of mitigation: <https://www.fema.gov/media-library/assets/videos/161686>.

## Notice: NRCS Funding Available

The Natural Resource Conservation Service (NRCS) currently has funding available for new watershed and flood reduction projects. Applications are to be submitted to the NRCS State Conservationist and are due August 3, 2018. For more information, visit the NRCS [website](#).

# Message from the Chair

## Welcome!



In Maryland, we're fortunate to be data-rich thanks to various data investments over the past decade, and we're fortunate to have individuals and organizations (at both state and local levels, and across sectors) who are leveraging this data and collaborating on a shared mission of resilient communities and related water issues. In support of this collaboration, MAFSM is proud to have just hosted a **new Spring Conference** on the Eastern Shore, on **June 6th at Chesapeake College in Wye Mills** (a stone's throw from the Bay Bridge). This conference featured a series of related presentations about flood risk reduction and awareness of the tools and other resources to facilitate that process. Although this conference was targeted for the Eastern Shore, the presentations were valuable to

a broader audience, and we had several individuals from Central or Southern Maryland attend. Additional details and information are available at [www.mafsm.org/conferences](http://www.mafsm.org/conferences).

Also you should have recently received an invitation to submit abstracts for our 14th Annual Conference. Take note that this year's annual conference falls a little later on the calendar. So, please **save the date for November 8, 2018!**

Coinciding with this year's conference, we'll be accepting nominations and electing a new board, regional representatives, and committee chairs. Even if you're unable to commit to a regular role and could only be involved intermittently, we greatly welcome new faces and new voices (especially public sector representatives) to help

guide our mission in serving our membership and the public. Feel free to reach out to me or other board members (see the [About Us](#) page) to learn more about participating.

Looking back, our 13th Annual Conference in October 2017 was a great success, with the highest attendance to date (over 170). We'd like to extend our appreciation to our attendees, presenters, sponsors, and exhibitors. We invite you to have a look back to find yourself, friends, and colleagues in our [2017 Conference Photos](#).

Lastly, the school year will be over soon, and many of you are probably anxious for summer getaways. On behalf of MAFSM, I would just like to say thanks, stay safe, and we'll be in touch.





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MAFSM is grateful for their support.**

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