

# 18th Annual WAFSCM Conference

Go-to-Webinar

October 22, 2020



Wisconsin Association for Floodplain,  
Stormwater, & Coastal Management

# Schedule of Presentations

Thursday, October 22	
8:00 am - 8:45 am	<b>Morning Plenary - ASFPM Update</b> <i>Chad Berginnis, ASFPM Executive Director</i>
8:50 am - 9:20 am	<b>1st Presentation</b> A Comprehensive Scorecard Assessment of Wisconsin Municipal Flood Vulnerability <i>Presenter: Emma Holtan</i>
9:25 am - 9:55 am	<b>2nd Presentation</b> Accuracy of Curve Number Models of Flood Flows in Small Wisconsin Watersheds <i>Presenter: Aaron Volkening</i>
10:00 am - 10:30 am	<b>3rd Presentation</b> Lessons in Cost Effective Flood Management from a Commercial Building Floodproofing vs. Acquisition Evaluation <i>Presenter: Michael Schwar &amp; Mark Mittag</i>
10:35 am - 11:05 am	<b>4th Presentation</b> Identifying Local Depressional Drainage Areas <i>Presenter: Molly Garrow</i>
11:05 am - 11:25 am	<b>Break</b>
11:25 am - 12:10 pm	<b>Mid-day Plenary</b> The Impacts to Floodplains from Changes in Rainfall and Landuse and the Benefits from Green Infrastructure Mitigation <i>Presenter: Shane Hubbard</i>
12:15 pm - 12:45 pm	<b>5th Presentation</b> FEMA 406 Mitigation, Public Assistance and Long Term Recovery <i>Presenter: Cody Kamrowski</i>
12:50 pm - 1:20 pm	<b>6th Presentation</b> Streamflow Trends in Wisconsin - Stream Discharge for Federally Declared Disasters in La Crosse County <i>Presenter: Guen Drewes</i>
1:25 pm - 1:55 pm	<b>7th Presentation</b> Total Phosphorus (TP) Leaf Credit Analysis: For the Interim TP Reduction Credit for Leaf Management Programs <i>Presenter: Jon Lindert</i>
1:55 pm - 2:15 pm	<b>Break</b>
2:15 pm - 2:45 pm	<b>8th Presentation</b> Identifying and addressing 'potential violations' of local floodplain management regulations through FEMA's Letter of Map Amendment (LOMA) and Letter of Map Revision based on Fill (LOMR-F) processes <i>Presenter: Frank Shockey</i>
2:50 pm - 3:20 pm	<b>9th Presentation</b> City of Monona: North Winnequah Park Lagoon Improvements Project <i>Presenter: Justin Gutoski</i>
3:30 pm - 4:15 pm	<b>Afternoon Plenary</b> Adapting to a Changing Great Lakes Coast <i>Presenter: Adam Bechle</i>
4:20 pm	<b>Conference Adjourns</b>

# Speakers & Presentations

Please become familiar with the speakers and their topics to be presented during the 2020 Virtual WAFSCM conference on October 22, 2020.

## **Chad Berginnis | ASFPM Update**

In 2011, Chad joined the staff of the Association of State Floodplain Managers (ASFPM). Since 1993, his work has focused on floodplain management, hazard mitigation, and land use planning at the state, local and private sector levels.

## **Emma Holton | A Comprehensive Scorecard Assessment of WI Mubnicipal Floodplain Vulnerabilitiy**

Over the past decade, flooding in Wisconsin has become more frequent, severe, and costly both in terms of finances and human health. To aid communities in determining their existing vulnerabilities and also to provide recommendations for their improvement, the Wisconsin Department of Health Services (DHS), Wisconsin Sea Grant and The Association of State Floodplain Managers have developed and piloted a three-part comprehensive scorecard to be used by local public officials and municipal staff. By completing each portion of the scorecard, municipalities will identify institutional, social, and environmental vulnerabilities that could hinder their ability to prepare for and to respond to flood events. The scorecard is being piloted with Washburn, Wisconsin, a small rural community in a climate change hotspot on the Chequamegon Bay of Lake Superior. The pilot will aid in evaluating the tool's feasibility and effectiveness. Ultimately, the tool is intended to merge the fields of public health, urban planning, and civil engineering to allow Wisconsin municipalities to adapt to and become more resilient in the face of the anticipated frequency and intensity increases of precipitation events.

*While in school, Emma lived for 4 years on Anishinaabe land in Ashland on Lake Superior working for the campus water research center doing both inland lake research and communications work. She has a passion for community connection and relationship to*

*water and feels lucky to be the Flood Resiliency Intern through the WI Department of Health Services and WI Sea Grant during the summer/fall of 2020 where she is working on a tool to help communities assess their flood risk.*

## **Aaron Volkening | Accuracy of Curve Number Models of Flood Flows in small Wisconsin Watersheds**

How accurately do rainfall-runoff models such as the NRCS curve number / unit hydrograph method predict flood flows? Uncalibrated curve number / unit hydrograph models were developed for 20 small gaged rural watersheds in southern Wisconsin. These NRCS-type models were used with design rainstorms to predict flood flows. Separately, a flood frequency analysis was performed on the USGS-measured annual peak flow data at each site. Techniques to better align rainfall-runoff model results with observed flood flows, such as adjustments to tabular curve numbers, are discussed.

*Aaron, a civil engineer with over 20 years of experience, currently serves as a senior project manager at Stantec.*

## **Michael Schwar & Mark Mittag | Lessons in Cost Effective Flood Management from a Commercial Building Floodproofing vs. Acquisition Evaluation**

The Milwaukee Metropolitan Sewerage District (MMSD) adopted a voluntary building floodproofing policy intended to reduce flood risk for structures within the regulatory floodplain in April 2020. MMSD's building floodproofing evaluation policy compares voluntary building floodproofing versus voluntary building acquisition in a cost-effective manner while considering residual flood risk. This presentation will review several technical and policy-related aspects of evaluating potential floodproofing measures for such a commercial structure and strengthen the case that carefully reviewing development plans in/near flood prone areas to minimize flood risk and protect investments/tax base cost-effectively reduces flood risk.

# Speaker Bios & Presentations - continued

*Michael is Principal Water Resources Engineer at Stony Point Hydrology LLC, with over 30 years of professional and academic experience. Mark is a senior project manager at MMSD. He has 20+ years of experience working in both the private and public sectors, specializing in water resource projects.*

## **Molly Garrow, CFM | Using GIS Maps to Evaluate Local Flooding Area**

In recent years, rainfall events are occurring more frequently and with higher intensities and communities are looking for ways to improve urban drainage. One way to improve drainage in urban and residential areas is to identify overland flow paths and local depressional areas. Using GIS software and topographic information, maps with these flow paths and depressional areas can be used by community staff during the permitting process to protect development from known flooding hazards.

*Molly has 6 years of experience as a design engineer working on stormwater studies and hydrologic/hydraulic modeling with ERA. She holds a Bachelor of Science in Biological Systems Engineering from the University of Wisconsin-Madison and is a Certified Floodplain Manager.*

## **Dr. Shane Hubbard | The Impacts to Floodplains from Changes in Rainfall and Landuse and the Benefits from Green Infrastructure Mitigation**

The US has seen a dramatic increase in magnitude and number of flood events in recent years. In Wisconsin, major floods from these events have cost communities billions of dollars. This presentation details the results from a flood study in coastal Georgia that looks at the current flood impacts and potential flood impacts in the future and relates those findings to the potential future damages for Wisconsin into the future.

*Dr. Hubbard is a research scientist at the Space Science and Engineering Center at UW-Madison.*

## **Cody Kamrowski | FEMA 406 Mitigation, Public Assistance and Long Term Recovery**

Presidentially declared disasters hold a plethora of complex issues such as response, financial complications, as well as the FEMA paperwork gauntlet for local communities. Having worked on community recovery and resiliency from a local to state level, Cody has learned what is needed by local communities to get necessary FEMA recovery funding and to unlock additional mitigation funding for resiliency. The FEMA process is complex and challenging and due. Gain inside knowledge of the process, learn from Cody how to mesh all these challenges and goals together. Through this presentation, participants will learn how to avoid returning damaged sites back to pre-storm condition and develop a better understanding of what needs to be done throughout a FEMA declared event, as well as what they can proactively do today to potentially increase FEMA funding for recovery and improved resilience.

*Cody is currently a Disaster Response and Recovery Planner in the Hazard Mitigation Section at WEM.*

## **Guen Drewes | Streamflow Trends in Wisconsin - Stream Discharge for Federally Declared Disasters in La Crosse County**

Wisconsin is home to a unique ecoregion known as the Driftless Area. Within this region lies the Black River located in La Crosse County. Streamflow trends for the Black River indicate a rise in flood events, but stream gauge data indicates that these events don't necessarily correlate with the peak discharge of that stream. This analysis will look at five federally declared disasters for La Crosse County and the discharge trends of each disaster event for the declaration year.

*Guen is a Disaster Response and Recovery Planner at Wisconsin Emergency Management.*

## Speaker Bios & Presentations - continued

### **Jon Lindert, PE, LEED AP | TP Leaf Credit Analysis: For the Interim TP Reduction Credit for Leaf Management Programs**

This presentation will review Strand's experience with practical application of the WDNR's March 2018 Interim Municipal Phosphorus Reduction Credit for Leaf Management Programs guidance. The presentation will provide an overview of the requirements to achieve a credit as well as Strand's experience with practical application of the guidance in 4 MS4 communities (Stoughton, Whitewater, Monona, and Rothschild). Overview of credit calculations and approval process with the WDNR will be highlighted as well as discussion on analysis challenges and lessons learned. In an era of onerous TP reduction requirements in TMDL watersheds, MS4s seeking cost-effective desktop analysis for additional TP reduction through this credit will be interested in the presentation.

*Jon currently serves as the chairperson of the CSWEA-WI Watershed and Stormwater Committee.*

### **Frank Shockey, PhD, CFM | I thought I was going to get out of buying flood insurance and all I got was this lousy letter from FEMA Headquarters that says my property is a "potential violation" instead! What can I do now?**

Have you, your mayor or county board chair, or a client ever received a letter from FEMA saying that a Letter of Map Change application is suspended because a potential violation of NFIP-minimum floodplain management standards has been disclosed? In this presentation, we focus on the kinds of missteps in floodplain development that can be identified through processing of LOMC applications, ways to prevent such mistakes, and methods that can be used to correct violations—sometimes enabling the applicant to get a LOMA or LOMR-F that removes the development from the special flood hazard area.

*Frank is a Senior Natural Hazards Program Specialist with FEMA at its Region V office in Chicago, IL.*

### **Justin Gutoski, PE | City of Monona: North Winnequah Park Lagoon Improvements Project**

This presentation will summarize the City of Monona's North Winnequah Park Lagoon Improvements project that included mechanical dredging of a lagoon that contained contaminated material exceeding NR720 standards. Many unique restoration methods were implemented around the lagoon including coir fiber roll and turf reinforcement mat system, vegetated boulder revetment, and a native vegetative buffer. Discussion topics of the presentation will include the funding, design, permitting, and construction of the project with associated challenges and lessons learned.

*Justin has been a stormwater/municipal engineer with Strand Associates, Inc. for over 12 years.*

### **Adam Bechle, PhD | Adapting to a Changing Great Lakes Coast**

Water levels in the Great Lakes have been above their long-term average levels for several years. Wisconsin's Lake Michigan and Lake Superior coasts have experienced widespread and rapid erosion while low-lying coastal areas have suffered from flooding events. A "top-down" approach to protecting coastal properties takes into account processes from both the land and the water. This talk will discuss the current high water conditions on the Great Lakes, the impacts that high water levels have had on Wisconsin's Great Lakes coasts, and an overview of the mitigation strategies that are being taken to adapt to a changing coast.

*Adam is a coastal engineering specialist with Wisconsin Sea Grant.*

Every great conference needs wonderful sponsors and exhibitors and we are no different. We have a wide range of opportunities to support next year's conference. Details are available on the WAFSCM website or contact Dave Fowler at 608-828-6345 or [dave@floods.org](mailto:dave@floods.org)

## sponsors



## CFM Exam

### CFM Certification Exam - FALL EXAM

Friday, Nov. 6, 2020 from 10:00 AM – 1:00 PM  
SEWRPC  
W239 N1812 Rockwood Dr., Waukesha, WI  
53187

The exam will take place in a large conference room, and masks will be required.

Registration for the exam is handled directly through ASFPM. You must apply at least two weeks in advance to take the exam. Application materials to sit for the CFM exam and access to the CFM Exam Study Guide is provided at the ASFPM website ([www.floods.org](http://www.floods.org)).

## PDHs & CECs

Up to 6.75 Professional Development Hours (PDHs) can be earned by attending the 2020 WAFSCM virtual conference. A PDH form will be provided to registered attendees at the conclusion of the conference.

To obtain Continuing Education Credits (CECs) for the CFMs, attendance will be recorded by confirmed audience participation. A list of CFMs that responded to conference poll questions will be provided directly to ASFPM.

## Contact

Any conference questions can be directed to Conference Chair:

Megan Bender  
[megan.bender@jacobs.com](mailto:megan.bender@jacobs.com)  
414-847-0208

**NEXT YEAR:** The 2021 WAFSCM conference will be held jointly with the Minnesota Association of Floodplain Managers at the La Crosse Center in La Crosse, WI on November 3 - 5, 2021.