

THE IAFSM CURRENT

Floodplain and Stormwater Management

Fall 2017 Newsletter

Water, Water Everywhere: The Garden as Floodplain

~Bob Kirschner, Chicago Botanic Garden, August 24, 2017, from http://my.chicagobotanic.org/news/garden-flood-plain/

Last month, torrential rains fell over much of our region, particularly in Lake and McHenry counties, as well as southeastern Wisconsin. Here at the Chicago Botanic Garden, high water levels in the Skokie River forced us to close on July 13 and 14—the first time in the Garden's history that we've been closed to visitors for two consecutive days. So what exactly happened that required us to close? And how did the flooding affect our plants?

The Garden is situated in the "watershed" of the Skokie River that extends north to Waukegan. A portion of the rain that falls in this upstream, 20-square-mile watershed eventually finds its way to the Skokie River. During the early morning of July 12, between 3 and 5 inches of rain fell in that watershed area over a matter of hours, resulting in a rapid rise in the Skokie River as it flows around the west side of the Garden. In fact, the rainfall was so severe that portions of the village of Lake Bluff (located in our watershed) experienced rainfall intensity and quantity that is predicted to occur with a frequency of only about once every 140 years.

Prior to the Garden's creation, the Skokie River meandered through the middle of our property. As the Garden began to take shape in the late 1960s, heavy construction equipment excavated our lakes (some exceed 16 feet deep), and those soils were then used to create the islands and display gardens that you enjoy today.

At the same time, the Skokie River was moved into a defined channel on the west side of our property near the highway, and two dams were installed at the north and south ends of our lake system to isolate it from the river except during high flows. These dams were installed to help protect communities downstream of the Garden from flooding: if levels in the Skokie River rise high enough, river water flows over the north dam into the Garden lakes and we'll temporarily store over 100 million gallons of floodwater. After the river's flood peak has passed, we slowly release that water out of the Garden's lakes and back into the Skokie River.





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Last month's flooding at the Garden was dramatic. Our lake levels rose more than 5.5 feet above normal and were on par with the highest we've ever encountered. At one point early in the flood, an intersection along the Garden's visitor entrance was submerged under more than 30 inches of water—thereby necessitating our closure.

The image shows one of our service roads during normal water levels as it crosses a narrow point in our lake system. Compare that image to the video, taken at the peak of the floodwater inflow to the Garden, showing swift and powerful water flowing through this area.

About three days after the heavy rains fell, the flood peak had passed, and the Garden was able to begin releasing lake water back into the Skokie River via a 10,000 gallon-per-minute pump near the south dam. Nine days later, all 100 million gallons of floodwater had been removed and our lake levels were back to normal.

Because the Garden was intentionally designed from the very beginning to accept and temporarily store floodwater from the Skokie River, we've experienced few long-term impacts from the recent flood. None of our buildings took on any water. Most of the vegetation near the lakeshore that went underwater survived. There was some damage to plants in the Garden—a few inundation-sensitive shrubs and herbaceous plants, as well as some turf were affected (particularly along the water's edge of the Malott Japanese Garden). Some were pruned and others may need to be replaced with more water-tolerant taxa. Importantly, more than 500,000 native shoreline plants that we've installed along the Garden's lakeshore withstood being underwater for up to nine days without impact. These plants will continue their important "engineering function" to stabilize our fragile shoreline soils and keep the slopes from eroding into the lake.

The recent heavy rainfall and flooding were of historic proportions and caused devastation to many communities in our region. Looking forward, residents can take steps to help lessen flooding: for example, installing a rain garden on your property can

help reduce flooding, particularly for small- and modest-sized storm events: click here for more information. Regional solutions for stormwater management can be particularly beneficial for larger rainfall events. Countywide stormwater management agencies in our region work to implement flood control programs and help homeowners who have been affected by flooding. For more information about these agencies and the programs they offer, in Cook County, contact the Metropolitan Water Reclamation District; in Lake County, contact the Lake County Stormwater Management Commission.

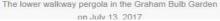
And so while the recent flooding may have left a bit of soil residue on some leaves of plants located nearest the lakeshore, rest assured that all is quite well here at the Garden. In fact, the frequent rains this summer have contributed to luxuriant growth and some amazing blooms, and we look forward to a continued explosion of color as summer progresses into fall.













The lower walkway pergola in the Bulb Garden on August

"Mr. Floodplain" in Illinois Retires

On September 29, 2017, a giant in Illinois' floodplain management retired. For almost 40 years, David Schein of FEMA has been our go-to expert on virtually all aspects of the NFIP and floodplain management. His expertise and experience are recognized nationally, but we claim him as ours in Illinois.

David has visited every community in Illinois. Local officials from Gurnee to Cairo, from Quincy to Danville remember David. They may not always recall his name, but they all remember the fast-talking guy from Chicago, who, dressed like a cowboy or a Russian Submarine pilot, blew into town and knew everything about their geography, their floodplains, the flood history, the names and addresses of everyone who flooded, their high school sports team, and more... Those who've met David do not easily forget.

David's passion and devotion to floodplain management combined with his common-sense approach to dealing with local officials makes him a most sought after resource. His explanations are direct, accurate, and understandable.

David Schein exemplifies good floodplain management in Illinois and he will be greatly missed by his friends at IAFSM. We wish David the best in his new adventures. Ride on cowboy!









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Trump Lowers Flood Risk Management Standard

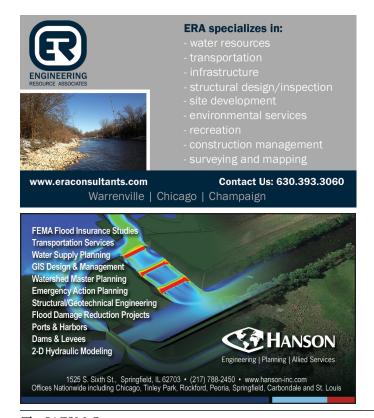
On August 15, President Trump signed an executive order to roll back various environmental permitting regulations, including federal flood risk standards that were established by President Obama in 2015. The Federal Flood Risk Management Standard had required federal agencies to protect new developments to one of three flood protection levels: an elevation informed by the best available climate change science; an elevation two feet above the 1% annual chance flood elevation; or an elevation matching the 0.2% annual chance flood elevation. The standard did not apply to private development projects, and was intended to ensure taxpayer dollars were not being used to fund projects at risk for flooding. More information can be found in newspaper articles including here and here.

Award Season is upon us! 2018 Chapter & Project Awards Are Open

If you know of a project or person worthy of recognition by IAFSM, consider submitting a nomination for a Chapter or Project Award. The award nomination forms can be found on our website at illinoisfloods.org.

Chapter Awards: Chapter awards are typically presented to individual people, groups, or agencies that represent the Chapter's best in the Floodplain and Stormwater Management profession. These awards honor the efforts of one person over a career, or honor an agency over an extended period of time and/or through many projects.

Project Awards: Project Awards recognize excellent projects across the state where a team has been assembled to accomplish a specific task. Entries are accepted in four categories to honor the best projects in Flood Reduction, Sustainability, Stormwater Master Planning, and Innovation.







Belgard's team of site solution specialists is committed to helping design professionals create sustainable sites for commercial and municipal development. The Belgard Commercial team also works to help resolve regulatory and budgetary issues that may arise during design. Designed property, Belgard permeable powers provide storm water infiltration, detention, pollutant removal, groundwater recharge, a powement surface that can handle event the heaviest of traffic loads, a 50 year lifecycle, and a system that can be easily cleaned and restored to near initial infiltration rates.

IAFSM's Rapid Assistance Flood Team (RAFT) Volunteers Assist Fox Lake

In March 2015, the IAFSM formally organized the Rapid Assistance Flood Team (RAFT) to assist communities in times of flooding or other natural disasters.

On August 2, 2017 Village of Fox Lake Mayor Donny Schmit formally requested assistance from IAFSM's RAFT, to provide assistance with damage assessments. At the time of the request, it was estimated that more than two hundred buildings were affected by flooding.

The call was issued for IAFSM volunteers from the current RAFT membership. Six days later, fourteen volunteers met at 8:30 a.m. at the Village Hall. Fox Lake officials had maps, tax assessment information, flood notifications, building tags and aerial photography ready for the RAFT. The flooded area was divided into 4 geographic areas of focus, and RAFT teams were in the field by 9:00. The teams worked fast, canvassing the neighborhoods on foot, and entering data into laptops using FEMA's Substantial Damage Estimating software. Before the end of the day, the RAFT team had assessed the entire Special Flood Hazard Area.

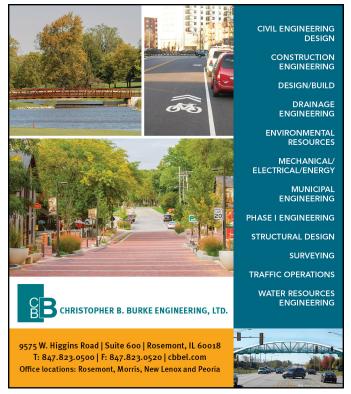
IAFSM and Fox Lake thank the volunteers who helped with this deployment. If you'd like to volunteer with RAFT, contact Mike Sutfin, msutfin@cityofottawa.org, for future training opportunities.

- Bruno Athmanathan, Kevin Hoobler, Mark Hoskins, Paige Kupfer, Paul Osman (all IDNR),
- Matt Stafford and Mike Sutfin (both City of Ottawa),
- Paul Kruse (Village of South Elgin),
- Shirley Wolfe (Cook County DOT),
- Amanda Flegel, Zoe Zaloudek, Sam Chakrovorty (all ISWS),
- Hillary Kramer (exp U.S. Services),
- Sarah Runger (Hey and Associates)





IAFSM RAFT volunteers assist Fox Lake after the July/ August 2017 flood



Thoughts on the Recent Natural Disasters

~From the Chair, Glenn Heistand, P.E., CFM, ISWS

I just finished listening to The Johnstown Flood, by David McCullough, a historical account of the catastrophic 1889 flood event that occurred in Johnstown, PA when the upstream Lake Conemaugh dam broke and killed about 2,209 people in its wake. My wife, who used to be a library clerk, contests any claims that I read the book, because audio-books don't count. Notwithstanding a certain amount of guilt for not being a reading purist, the data in the pages of that book still ended up in my head and I enjoyed consuming it. In fact, I was riveted for the full two weeks' worth of commuting that it took to listen through. Some people may consider me strange for being so engrossed by the grim details of a Gilded Age flood, but I wager that most of you have been eager to follow the recent news reports of Harvey, Jose, Irma, and Maria, names that need no introduction in the world of weather in 2017. We are naturally curious about natural disasters.

Our nation has faced many natural disasters this year, enough to fill the bandwidth of most people's attention, even overloading it to the point of apathy. Being aware of our risk and being prepared before it strikes is paramount in addressing future situations. In the case of the Johnstown Flood, everyone in town knew about the dam and its threat, but no one took the threat seriously. "The dam has held just fine for many years," was the retort. Assumptions were made by the residents that "someone" must have known what they were doing when the dam was built, and that "someone" was responsible for maintaining the safety of the dam. Those assumptions were false, and a series of preventable mistakes and oversights, stretching many years, cost the lives of thousands.

Rules and regulations play an important role in managing risk. Those of you reading this are generally aware of your flooding risk, and many of you are paid to be responsible for public safety in some capacity. As such, the general public is looking to you for answers and trusting that things are under control, but communicating risk to them is hard. People are bad at understanding risk and good at ignoring it for short-term tradeoffs or to defend political or ideological beliefs. Incredibly short memories of past natural disasters and short-sighted policymakers don't make things any easier.

This is why our next IAFSM annual conference will highlight the 25th anniversary of the 1993 "Great Flood" of the Mississippi and Missouri Rivers. Without reminders, we are all at risk of forgetting the harsh lessons of the past. It is important to share our collective past with those who were not here to experience it. We must "stand on the shoulders of giants to see further" (Newton, 1675).

In response to numerous inquiries from the media about the recent Texas and Florida hurricanes, the Association of State Floodplain Managers (ASFPM) has written two articles that were recently printed in the Washington Post and The Hill. These are good articles and worth reading.

- Sept. 1, 2017: We already knew how to reduce damage from floods. We just didn't do it.
- Sept. 3, 2017: Policy changes needed at every level to survive the next storm

To wrap up, I draw your attention back to the IAFSM board. Our beloved two-time chair, Stu Richter, is retiring on September 29 from his 35+ year career at Whiteside County. Read all about it here. Stu will be stepping down from his Board role as Past Chair to pursue his retirement plans. As such, the Board has officially re-activated Loren Wobig as the acting Past Chair. Stu will be remembered on the Board for his dry sense of humor, penchant for witty puns, strict adherence to Robert's Rules of Order, his bylaw aptitude, and commitment to the individuals of the Board.

Stu, we wish you the best and thank you for the time and care you placed in this organization. IAFSM and the State of Illinois are better for your efforts. You will always carry emeritus status as Past Chair.

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Speakers, Vendors, Exhibitors, and Tours Wanted for 2018 Conference

The IAFSM Annual Conference will be Wednesday and Thursday, March 14-15, 2018 at the Holiday Inn & Tinley Park Convention Center in Tinley Park, and may include a pre-conference workshop and CFM exam the day before, March 13.

Call for Speakers

IAFSM invites speakers from municipal, public and private sectors to present information on floodplain and stormwater management topics. Submit abstracts online: https://goo.gl/forms/WeqUQCPVrv6QEhJx2

IAFSM intends for the 2018 Annual Conference to provide focused/in-depth education and training in the principle committee disciplines of IAFSM, including Floodplain Management, Stormwater Management, Mitigation, Wetlands, CRS, and Legislation. A portion of the 2018 Conference Breakout Sessions will be dedicated to specific core topics developed by IAFSM Technical Committees. Remaining Conference Breakout Sessions will be dedicated to topics completely based on presentation abstracts submitted by the membership as part of this call for speakers.

The abstract submittal deadline is October 31, 2017. Presenters will be notified of their acceptance or denial by December 20, 2017.

Tours / Field Trips Wanted

Does your community have a floodplain, stormwater, mitigation, or wetland project in the vicinity of the conference hotel that you would like to show to other floodplain managers? IAFSM is considering offering Technical Field Tours again, if enough tour sites are submitted to make up a tour. Please submit nominations for potential tour sites.

For More Information

For more information, view the complete Call for Speakers on our website at http://www.illinoisfloods.org or contact Erik Gil, Conference Chair, at egil@cbbel.com, or Sarah Harbaugh, Executive Secretary, at egil@cbbel.com, or egil@cbbel.c







CEC Education & Training Opportunities

Looking for training opportunities? The following opportunities are coming up in the next few months. If you are looking for credits, be sure to review the material and confirm they meet the appropriate requirements.

IAFSM Sponsored Training Opportunities:

- •IDNR Permitting and Floodplain Map Change Seminar, October 18, 2017, Schaumburg, IL
- •2018 Annual Conference, March 14, 15, 2018, Tinley Park, IL

Additional Training Opportunities:

EMI provides a wide range of training opportunities and upcoming training

- •EMI courses are free for local and state government employees. Learn more at the EMI website: http://training.fema.gov/EMI/ Upcoming courses include:
- •Nov 27-30 E0179 Application of Hazus-MH for Disaster Operations
- •Nov 6-9 E0190 ArcGIS for Emergency Managers
- •Dec 4-5 E0253 Introduction to Environmental and Historic Preservation Compliance
- •Dec 18-20 E0272 Managing the Floodplain Post Disaster
- •Dec 4-7 E0273 Managing Floodplain Development through the NFIP
- •Dec 21 E0285 Providing Post-Disaster Substantial Damage Technical Assistance to Communities

Webinars:

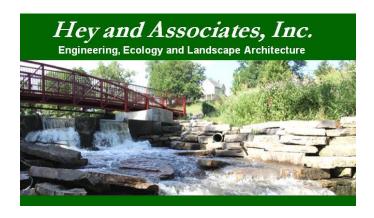
ASFPM - http://www.floods.org/n-calendar/webinars.asp

- •10/12/17 No Rise, No Problem! Managing Infrastructure in the Floodway
- •11/9/17 After the Disaster: Mitigating Infrastructure Against Flooding

Conferences:

- •6/17-6/22/18 ASFPM Annual Conference Phoenix, AZ
- •11/6-11/10/17 State of Lake Michigan Conference, Green Bay, WI

Other training and CEC opportunities can be found on ASFPM's calendar: http://www.floods.org/n-calendar/calendar.asp?







Important Stuff We Tell You in Every Newsletter...

Save the Date! 2018 IAFSM Conference

The 2018 Annual Conference will be March 14 & 15, 2018, at the Tinley Park Convention Center.

Wanted: Newsletter Ideas and Articles

IAFSM members, this is YOUR newsletter! Email Jennifer Maercklein, editor, at jmaercklein@v3co.com if there are topics that you'd like us to cover. You don't need to write the article - we just want your ideas! If you're gifted with a pen and would like to provide content, we welcome your written contributions as well.

Get Involved with IAFSM!

IAFSM Committee Chairs welcome your help and involvement. See the list of chairs on the last page of this newsletter, or visit the committee webpage to learn more about volunteer opportunities. http://www.illinoisfloods.org/committees.html

Borrow our Water Table

IAFSM has Watershed Tabletop Models available for all members to check out (free of charge) and bring to Public Works Open Houses, Scout meetings, 4-H meetings, school classrooms, etc. This offers a great opportunity to educate about the dangers and impact of unplanned development and human activity in the floodplain. IAFSM currently keeps one in Springfield and one in Bartlett. We are planning for a second table in Bartlett and one in Champaign. Contact Sarah at IAFSM@illinoisfloods.org to make arrangements.

Next Board Meetings

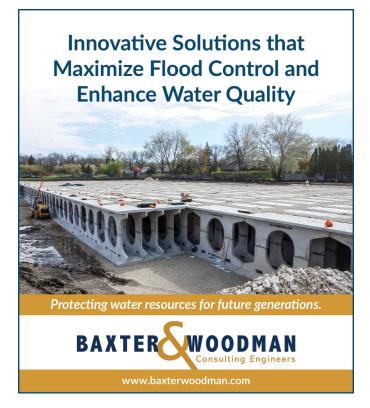
The next IAFSM Board Meeting will be held on Wednesday, November 15 at 9:00 a.m. at V3 Companies, 7325 Janes Ave, Woodridge. This is a great meeting for members to attend, as we focus on conference planning. All members are welcome and encouraged to attend Board meetings. See you there!

Jobmart

Visit our Jobmart at http://www.illinoisfloods.org/jobmart.html
Jobmart is a free service to members of IAFSM. If you would like to post a position, send complete information to iafsm@illinoisfloods.org
illinoisfloods.org

2017 CFM Exam Schedule

To view 2017 exam dates and register, visit <u>www.illinoisfloods.</u> <u>org/certification.html</u>.







The IAFSM Newsletter is published quarterly for members of the Illinois Association for Floodplain and Stormwater Management. Information and opinions contained herein do not necessarily reflect the views of all members. Items for publication and other editorial matters should be directed to the editor at jmaercklein@v3co.com.

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