The Levee Dilemma

~Loren Wobig, P.E., CFM, IDNR-OWR

As we learned during the IAFSM conference this year, the advent of accelerated global warming brings an increase in extreme precipitation events in the Midwest and increased flood elevations on many Illinois streams. Record flood stages mean diminished freeboard elevations on a growing number of levees in Illinois which in turn, drives the desire to raise levees to restore the freeboard that was originally provided. Additionally, anyone seeking to remove floodplain areas protected by levees from the FEMA Flood Insurance Rate Maps must demonstrate that the levee is sound per the provisions of Section 65.10 of Title 44 of the Code of Federal Regulations (44 CFR) for levee accreditation. Such accreditation requires at least 2 feet of levee freeboard and more often 3 feet. Again, the need for sufficient freeboard drives the need for levees to be raised.

Enter the dilemma. Raising levee elevations further raises flood elevations and reduces freeboard on these and other levees. Many communities and unprotected private properties along Illinois streams, including the Mississippi and Illinois Rivers, are already vulnerable to flood damages due to the current configurations and elevations of the existing levees along these rivers. Additional increases in river flood profile elevations resulting from levee elevation increases equals additional flood damages on these flood prone properties and in these flood prone communities. Flooding in 1993, 2008, 2011, and 2013 highlighted the impacts of levees on flood stages.

The Rivers, Lakes and Streams Act (615 ILCS 5) administered by the Illinois Department of Natural Resources, under the 17 Illinois Administrative Code Part 3700 Rules, was enacted to protect landowners from unmitigated increased flood damages due to floodway construction activities, including new levee construction and levee modifications, thereby minimizing the need for emergency flood response and litigation. According to these rules, levee construction or modifications must not singularly or cumulatively (assuming neighbors get to build the same levee) result in increased flood damages or create new flood damages due to increased flood heights or velocities outside the project right-of-way or must be contained within the existing channel banks or project levees, or be mitigated with recorded flood easements. To demonstrate compliance with these rules, levees in Illinois must meet these standards during a worst case analysis.

In response to the extensive flood damages experience in Illinois by the 1993 flood, the Joint Committee on Administrative Rules approved amendments to the IDNR Administrative Rules in 1994 to add Special Provisions for Levees and Floodwalls to require that a worst-case analysis for these structures be completed using a river discharge that would just overtop the new levee or floodwall.

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This rule change created two challenges for state permit applicants wanting to raise their levees. The first challenge created by the change is in trying to determine the overtopping discharge for regulatory purposes when river flood profiles often do not parallel uneven top of levee profiles. When freeboard is involved, these overtopping discharges can easily published 500-year frequency exceed discharges and any other previously reviewed and approved hydrology. Determining the appropriate discharge adds a significant amount of time to the review of levee modification applications. Secondly, the rule change also made it difficult for levee owners to comply with other previously mentioned federal levee requirements which call for levee owners to provide adequate freeboard on their levee systems to assure sufficient flood protection for stability and Earlier this year a bill was insurance purposes. introduced in the Illinois House to strip the Illinois Department of Natural Resources, Office of Water Resources of much of its regulatory authority related to levee construction and modifications.

As an alternative to further movement of the bill and to make the state permitting process for levees more straightforward, timely and consistent with federal levee requirements, the Illinois Department of Natural Resources, Office of Water Resources intends to develop amended 17 Ill. Admin. Code Part 3700 Administrative Rules (Part 3700) for consideration by the Joint Committee on Administrative Rules (JCAR) that amend the upper regulatory limit for a worst-case analysis to be the flood discharge with a 0.2% annual chance of exceedence (500-year frequency) for levees and floodwalls. If approved by JCAR, this change will continue to preserve the state's regulatory standards for floodwalls and levees and the goal of the State of Illinois to protect the people of Illinois from unmitigated levee induced flood damages caused by others for all flood frequency events up to and including the 500-year event.





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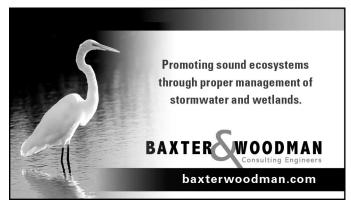
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Life on the Mississippi, Now

~Reproduced from On Earth magazine, Barry Yeoman, June 2014, www.onearth.org

We've spent billions of dollars on dikes, locks, and levees in a vain attempt to subdue what Mark Twain called 'that lawless stream.' Is it time to let the river have its way? To read the full article:

http://www.onearth.org/articles/2014/06/should-we-let-the-mighty-mississippi-be-mighty-again



Flooding Beyond the Floodplain

The Center for Neighborhood Technologies (CNT) has prepared three short videos that are intended to educate people about urban flooding problems. Each of the videos is about three minutes long. They tell the stories of some of the people in the Chicagoland area whose properties are not located in the floodplain but flood frequently with moderate storms, not just the very large storms. The videos, along with more information on the CNT's stormwater program, can be found at: http://www.cnt.org/water/projects/stormwater/





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ATHLETIC FIELDS & FACILITIES





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Kidzeum Gets Grant, Excepts to Begin Construction

In June, the Kidzeum of Health and Science got a \$1M grant from the State, which will allow them to begin construction on the children's museum in IAFSM has supported Springfield. Kidzeum's efforts and provided a grant to Kidzeum to fund the design and construction of a watershed exhibit and huge water table exhibit within the Healthy Earth Gallery. IAFSM hopes to have an opportunity to influence the final design of the exhibit, which will conceptually include dams, levees and BMPs. The museum's target opening date is summer 2015. Read more at:

http://www.sj-

r.com/article/20140626/News/140629555#ixzz35ltGUc3Y







From the Chair: Are you a CFM?

~Loren Wobig, P.E., CFM, IDNR-OWR

From Todd Abrams to Mei Zhu, IAFSM has approximately 500 Certified Floodplain Managers (CFMs) and growing. This certification is awarded directly by IAFSM, as a Chapter Association that has been accredited by the Association of State Floodplain Managers, Inc. (ASFPM) Certification Board of Regents (CBOR) in accordance with the CFM Program Charter, to floodplain managers who successfully pass the CFM Program exam. As noted on the ASFPM website (Floods.org), the professional certification of floodplain managers program recognizes continuing education and professional development that enhance the knowledge and performance of local, state, federal, and private-sector floodplain managers. There are over 8500 CFM's nationwide. The primary goal of the Certified Floodplain Manager Program (CFM Program) is to help reduce the state's, and the nation's, flood losses and protect and enhance the natural resources and functions of its floodplains by improving the knowledge and abilities of floodplain managers overseeing those floodplains. A second goal of the CFM Program is to increase the prominence of floodplain management in decision-making by local officials and the public.

IAFSM's CFM Program Committee Chair, Matt Wahl and I recently attended a meeting held between members of CBOR and the representatives from the six accredited states (Arkansas, Illinois, New Mexico, North Carolina, Oklahoma, and Texas) to discuss the CFM Program. Here are a few interesting facts, stats, and updates related to the CFM Program that were provided during that meeting:

- IAFSM is the second largest Accredited Chapter in the Nation (Texas is the largest);
- National ASFPM membership is not required to maintain your IAFSM CFM designation;
- The National CFM Exam has been offered 89 times across the nation in the past 12 months;
- Illinois averages 52 examinees each year but the number of examinees has been gradually declining since 2008;
- The average CFM Exam grade in Illinois is 78.14 (passing is 70) compared to a lower national average score of 76.73;
- Illinois has an 83% passing rate compared to a lower national passing rate of 78%;
- The National CFM Exam Workgroup is eliminating all true/false questions from the exam in accordance with recommendations in a recent Reliability and Validity Study conducted on the exam new exam questions are always welcome for consideration;
- IAFSM's CFM Program is audited by ASFPM once every six years and the next IAFSM audit is scheduled to occur later this year;
- IAFSM's CFM Committee and Board of Directors will be considering a new Charter and Policy Manual for the CFM Program.

ASFPM recently released a video about the benefits and importance of being a CFM. Check it out on youtube: $https://www.youtube.com/watch?v=E_TZ7TWiWIA\#t=182$

If you are not already a CFM in Illinois, please consider certification in your career goals. The next regularly scheduled CFM Exam is set for August 13th from 2-5 pm at V3 Companies in Woodridge, Illinois. The CFM Study Guide is available on the IAFSM website (illinoisfloods.org) and is an excellent reference for floodplain management in Illinois. Please contact Sarah Harbaugh at 630-443-8145 or iafsm@illinoisfloods.org for more information about becoming a CFM.



Stormwater Management News

~Shauna Urlacher, P.E., CFM, Smith LaSalle

Stormwater Committee News and Updates

I was recently invited to attend the Ohio Stormwater Conference in an effort improve collaboration with other stormwater groups our region. This conference provided a new perspective and reminded me of the exciting time in which we live. Across the country, stormwater regulations are changing rapidly as are the frequency of severe storm events. Also, as stormwater and floodplain managers, we are a part of the green movement that seems to be gaining steam. As a result of these changing times, we have more tools at our disposal than ever before and more complex problems that need to be solved.

The Stormwater Management Committee is gearing up for more training sessions and some new ways to for IAFSM members to get involved and excited about stormwater management. As your Stormwater Management Committee Chair, I'm excited about the events we are planning and I hope you will join us as we strive to improve your experience as a member of IAFSM. If you have any comments, suggestions, or training needs, feel free to e-mail me at surlacher@smithlasalle.com.

MWRD's Watershed Management Ordinance (WMO)

The WMO went into effect May 1, 2014 and includes significant changes from the legacy Sewerage Permit Ordinance. In an effort to streamline the submittal process, MWRD has published resources on their website and hosted training sessions. MWRD is currently putting together their next training session, which will cover the use of HEC-HMS for WMO detention modeling compliance. The final details for the training are still being developed; however, it is expected to be held in August at the Stickney plant in the computer training room and will include a hands-on demonstration of the HEC-HMS modeling software. Additional information on this training will be provided on the WMO website (wmo.mwrd.org) under "Training Schedule".

Farmers Insurance: Illinois should plan for Climate Change to Reduce Flood Damages

In May, Farmers Insurance filed lawsuits against nearly 200 Illinois municipalities, arguing that municipalities did not do enough to prevent flooding that occurred in 2013. These lawsuits are believed to be the first of their kind, where Farmers Insurance claimed that local governments knew, or should have known, that climate change is resulting in heavier rains. Local governments, according to Farmers, failed to make the necessary repairs and upgrades to sewer and stormwater drains in response. In June, Farmers Insurance filed motions to dismiss these lawsuits; however, the insurance company hopes that the suit will encourage municipalities to take steps to reduce future flooding. Regardless of where you stand on climate change, this was an important lawsuit and something that stormwater and floodplain management professionals should be aware of.

IAFSM Seeks New Inter-Organizational Chair

The Inter-Organizational Committee is looking for a new Chair. This committee is charged with assuring regular communication between IAFSM and other closely-related professional organizations. The committee encourages information sharing through conferences, publications, and networking between various groups and associations. If interested in serving as Chair, please contact Loren Wobig at loren.wobig@illinois.gov.





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**

- IAFSM and ASCE are co-hosting a basic HEC-RAS course for July 28th to July 30th in Springfield, Illinois. The course will prepare participants to set up and run HEC-RAS steady flow applications. The course will be taught by David T. Williams, Ph.D., P.E., P.H., CFM, CPESC and is \$700 for ASCE or IAFSM members.
 - o https://www.123signup.com/register?id=yfxqp
- IAFSM and ASCE are co-hosting a basic Stream Restoration Basics course on July 31st in Springfield, Illinois. The course will be taught by David T. Williams, Ph.D., P.E., P.H., CFM, CPESC and is \$150 for ASCE or IAFSM members.
 - o https://www.123signup.com/register?id=yfxxj
- IAFSM and ASCE are co-hosting Ethics in Engineering and Risk and Uncertainty in Water Resources course on July 31st in Springfield, Illinois. The course will be taught by David T. Williams, Ph.D., P.E., P.H., CFM, CPESC and is \$150 for ASCE or IAFSM members.
 - o https://www.123signup.com/register?id=yfxxr

Additional Training Opportunities:

- EMI provides a wide range of training opportunities and upcoming training includes Advanced Floodplain Management Concepts (E194) August 25-28, NFIP/CRS (E278), August 11-14, and Managing Floodplain Development through the NFIP, (E273) September 15th-18th.
 - o EMI courses are free for local and state government employees. Learn more at the EMI website.
 - o http://training.fema.gov/EMI/

Webinars/ Online:

- STARR/FEMA, atkinsglobalna.webex.com and search by title, free-registration required
 - o Introduction to CRS: July 15th
 - o CRS Webinar Series: Drainage System Maintenance, July 16th, September 17th
 - o CRS Webinar Series: Preparing and Annual Recertification, August 19th, September 16th
 - CRS Webinar Series: Natural Floodplain Functions, August 20th
- Association of State Floodplain Managers (ASFPM), **Finding that Base Flood Elevation** (**BFE**)! July 25th, \$30 members, \$60 non-members, 11-12pm CT

http://www.floods.org/n-calendar/uploads/Find BFE Webinar Promo.pdf

Out of state annual conferences:

- **7th Annual Hazus Conference**, "Translating Risk Assessment into Resilience and Policy" Indianapolis, Indiana, August 4th to August 6th. Registration is free, but limited.
 - o http://www.usehazus.com/events/conferences

Important Stuff We Tell You in Every Newsletter...

Save the Dates! 2015 Conference on THURSDAY AND FRIDAY

The 2015 Annual Conference will return to Bloomington-Normal and be held THURSDAY AND FRIDAY, March 12-13, 2015, at the Marriott Bloomington-Normal Hotel and Conference Center. This is a departure from our typical Wednesday and Thursday conference, so please mark your calendar and plan accordingly.

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 two 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 keeps one in Springfield and the other in northeast Illinois. Contact Sarah at IAFSM@illinoisfloods.org to make arrangements.

Next Board Meeting

The next IAFSM Board Meeting will be held on July 16, 2014 at 10:00 a.m. at V3 Companies, 7325 Janes Ave, Woodridge IL. All members are welcome and encouraged to attend these 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@sbcglo bal.net.

2014 CFM Exam Schedule

To view 2014 exam dates and register, visit www.illinoisfloo ds.org/certificati on.html.



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Summer 2014 Newsletter

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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