

## **Responsible Development** – **Pay Now, or Pay Later**

~Terri L Turner, AICP, CFM, City of Augusta, GA, and members of the ASFPM NAI Committee

Along the Kinnickinnic River in Milwaukee, Wisconsin, innovative flood management strategies are being used to revitalize polluted rivers, redevelop blighted properties, and add value to riverside neighborhoods.

According to Milwaukee's Mayor Tom Barrett,

Flood conditions on the Kinnickinnic River, June 2008. ~Photo courtesy of Dave Fowler, MMSD

"Residents are weary of watching floodwaters from the Kinnickinnic River fill their basements and also of dealing with property loss and flood insurance costs. Addressing flooding problems in urban neighborhoods requires a lot of resources and partners. I believe that, with a sustainable development approach, we're going to turn this concrete-lined river--which has been seen as a threat to both property and public safety--into an urban oasis that spurs new economic opportunities for local businesses and entrepreneurs."

Milwaukee is not alone in facing the challenge of managing floodprone areas. Floods are the most frequent and costliest natural disaster in the United States and one in three Federal Disaster Declarations is a direct result of flooding. Hopefully, recent flood disasters have taught us a lesson: that there is no possibility of a sustainable economy, or for that matter, any economy at all, unless we plan and prepare for natural disasters such as flooding. Poorly designed development in the wrong location can exacerbate the effects of Mother Nature's fury. APA's Executive Director, Paul Farmer, recommends that "we need to take a look at both where we build and how we build. We can't just build in bad locations. We must build safely and properly."

Every mayor and city/county administrator dreams of a community where the government works so well that the community flourishes economically, socially, and culturally, with low crime and unemployment rates and a high quality of life. To reach and keep that equilibrium, a community must acknowledge, plan for, and minimize exposure to many risks, including natural disasters such as floods.

The decisions that local governments make today shape their future development patterns. Those patterns, in turn, not only determine how much damage future floods will cause, but also how healthy the community's river and coastal areas will be. There are common-sense solutions to improve that decision-making process and build a more secure and livable future. The No Adverse Impact (NAI) strategy, developed by the Association of State

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Floodplain Managers, is one of those common-sense approaches. The NAI principle is simple - the action of one property owner or community should not adversely impact the flood risks for other property owners or communities. Any impacts that are unavoidable must be mitigated.

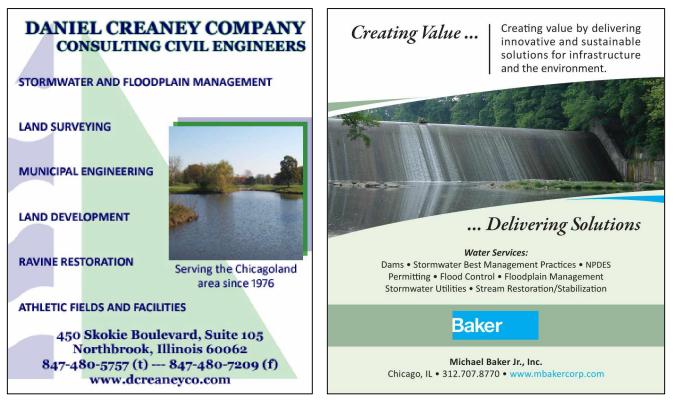
No Adverse Impact techniques fit well within a sustainable development framework. Local governments can utilize these concepts by implementing comprehensive, watershed-based plans that recognize existing hazards; using environmentally sensitive zoning ordinances; promoting floodplain management regulations that will protect existing and future generations; expanding floodplain, wetlands, and resource mapping; and adopting disaster-resistant building codes.

More and more, state and federal case law supports local protection of floodplain resources and functions, as well as the No Adverse Impact "do-no-harm" principles. Legal research has shown that courts and legislatures have interpreted the basic rules of liability to hold governments responsible for their actions that result in or increase damage to others. In most cases, communities were apt to be required to pay damages not when they denied a development permit, but rather when the development they did permit caused damage to others. Flood-damaged landowners also are winning lawsuits against governments that do an inadequate job of administering their floodplain regulations, especially by permitting development that results in damage to others.

The late Gilbert F. White, fondly referred to as the Father of Modern Floodplain Management, said it best: "Floods are acts of nature, but flood losses are largely acts of man." The NAI principles and a broad sustainability framework are key elements in avoiding future flood-related disasters and also preserving natural water-related resources. A community can pay now, or it will have to pay later – the choice is clear.

For more information about the No Adverse Impact strategy see the Association of State Floodplain Managers (ASFPM) website at www.floods.org – No Adverse Impact for NAI Case Studies, the NAI Toolkit and NAI Legal Research.

This is an excerpt of an article which was published by the Newsletter of the Mayors Water Council, United States Conference of Mayors, in January 2010. It is reprinted with the permission of the authors. Further dissemination is both permitted and encouraged.



#### National Levee Database Open to the Public

Reprinted from National Committee on Levee Safety Levee Safety Connections Newsletter, Sept. 2011



On October 27, 2011, the U.S. Army Corps of Engineers (USACE) opened the National Levee Database (NLD) to the public. The NLD is a living, dynamic database that, for the first time, allows visualization and the ability to search nationally the location and condition of levee systems. Currently the NLD includes information on more than 14,600 miles of levee systems in the USACE program. USACE is currently working with the Federal Emergency Management Agency to include information on levees participating in the National Flood Insurance Program.

The goal is to expand the database to include all levees constructed and/or operated by other federal agencies as well as non-federal levees. When information on all federal and non-federal levees is included, the NLD will provide a single comprehensive source for users, will allow those flood-fighting to identify areas of concerns, and will allow residents to become more informed about the levees in their neighborhood.

The database can be accessed at http://nld.usace.army.mil/

#### What is a Floodplain? PBS NewsHour Online has Answers for Students

~originally published in "Flood News for Michigan Floodplain Managers", 2011 3<sup>rd</sup> Edition

The Teacher Center of the Public Broadcasting System's website "NewHour Online" has a package of resources about flooding for teachers of middle- and high-school science and economics classes – but the materials would be useful for public outreach and awareness projects as well. A lesson plan for two class periods and one night of homework is provided, through which the students:

- View flooding scenarios and, using maps, hypothesize how much flood risk they face at home and at school;
- Estimate the expense of living through a flood;
- Compare the cost of flood damage to the cost of flood insurance and to the cost of repairing flood damage;
- Discuss the benefits and costs of living near water, or in an area likely to be flooded; and
- Explore how to prepare, stay informed, and build before, during, and after a natural disaster.

The module also includes photos, videos, additional lesson plans, worksheets, and links to more information useful for students and others.

"What is a Flood Plain? Background, Activities and Critical Analysis" was produced for PBS by Shannon Sullivan, a specialist in online learning and a former teacher. Access it at: http://www.pbs.org/newshour/extra/teachers/lessonplans/science/july-dec10/floodplain\_09-24.html



The IAFSM Current

#### Get Those Award Nominations Sent To Us!

It is time to get those IAFSM Awards nominations sent to the awards committee. The awards categories are below. New: the **NATURAL SELECTION AWARD**, a "fun" award given to the most unique, outrageous, or completely stupid floodplain activity identified in the past year!

#### FLOODPLAIN MANAGER OF THE YEAR

Recognizes outstanding individual efforts and contributions at the local level.

#### **OUTSTANDING SERVICE**

Awarded to an IAFSM officer, a Federal, State, or Local Official, or a consultant who has gone above and beyond normal expectations and duties to promote or encourage IAFSM goals.

#### STORMWATER MANAGEMENT

Awarded to an individual or group who have improved stormwater management or reduced urban flood risks through creative engineering, regulatory measures, or other approaches.



#### MITIGATION

Given to an individual or community that has encouraged flood hazard reduction through a buyout program, retrofitting, preparation of a mitigation plan, or other similar mitigation efforts.

#### JOURNALISM OR PUBLIC EDUCATION AWARD

Given to a media outlet that has produced floodplain or stormwater management special features during the year. The award can include individuals or agencies who have contributed to outreach and public awareness of floodplain or stormwater management issues.

#### LEGISLATION

Honors Illinois law makers or local officials for their efforts in floodplain issues. The award can also be given to an individual who makes extraordinary efforts to encourage the passage of legislation or to a community that has adopted unique local regulations that promote floodplain management or flood damage reduction.

#### LIFETIME ACHIEVEMENT

This award is the IAFSM's highest honor. It is reserved for outstanding longtime floodplain managers. These individual's long-term contributions have made a noticeable impact on floodplain and stormwater management efforts in the State of Illinois. This award is not always given on a yearly basis.

And our newest award category:

#### NATURAL SELECTION AWARD

This "fun" award is given to the most unique, outrageous, or completely stupid floodplain activity identified in the past year!

If you have any awards nominations please email a brief description of the person or program and the award category to: paul.osman@illinois.gov. **Deadline for the awards submittal is February 17, 2012**. The awards committee may request additional information to support any submittal. The awards committee will review and vote on each nominee. Awards will be presented during the Annual Conference awards luncheon on March 15.

#### IAFSM is ALWAYS looking for leaders

#### Who should be on the Board?

The Board should include representation from a variety of sectors and disciplines (state, local, private, etc). Board members should have experience dealing with floodplain and stormwater issues and have shown, at a minimum, a commitment to IAFSM through membership and event attendance.

#### Who should be nominated?

Nominations may be made by any IAFSM member. The nominations committee is charged with securing nominations for the various elected officers positions that provide representation from the various sectors and disciplines. Only those nominees that meet the minimum requirements will be listed on the ballot.

#### When are elections??

Officers are elected annually, with a two year term limit. Current officers have served one term and may serve one more term in the same position. Elections are held at the IAFSM annual conference. Nominations must be submitted by the conference registration deadline for consideration, no write-in candidate will be considered. Only IAFSM members may vote and all ballots must be signed. Nominations should be sent to: paul.osman@illinois.gov

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#### From the Chair

- Michael D. Cothard, P.E., CFM, Christopher B. Burke Engineering, Ltd.

Happy January 2012. I hope everyone is rejuvenated from a wonderful holiday season and looks forward to the new year ahead of us. While the last year was difficult for many both economically and environmentally, I look forward to a year of growth and advancement for our entire membership.

I went back and reread the minutes of the 2011 IAFSM meetings with the intent of commenting on each of the Association accomplishments during the last year. I wanted to thank the responsible board members and committee chairs individually for the time and effort they have donated to the Association. As I began reviewing the minutes, I realized that during the last year each and every board member and committee chair had worked extensively to impact and increase the value of the Association. Addressing each of the individual accomplishments from last year would greatly exceed the newsletter space I am allotted, and I am fearful that I would possibly miss someone's contribution to the Association, or even worse, misalign a contribution with the associated volunteer.

That being said, I do wish to thank all of the board members and committee chairs on behalf of the Association membership and myself for the time and effort put into the Annual Conference, Treasury accounting, Secretarial documentation, Seminars covering Stormwater Management, Floodplain Management, The Community Rating System, Mitigation, Inter-organization and Wetlands, as well as Certification of testing and exams, production of the Newsletter, collecting and reviewing Award nominations, implementing Legislative initiatives, and for the current work being done to update the Association webpage. I also want to thank our Executive Secretary for being the Association's contact and helping to keep us moving forward.

The contributions associated with each of these Board and Committee members are constantly updated on the Association webpage and are often addressed in this newsletter. My hope for the next year is that the Association membership takes the time to bookmark our webpage and review the work being done by your board and committee chairs. The minutes are even available from the last few years if you would like to review what we have been up to.

This would be a good time to decide if you would like to assist the IAFSM. If you are interested in learning more about the Association please feel free to attend any of the bi-monthly meetings, contact our Executive Secretary, or contact any of the Board members or Committee Chairs with questions about or suggestions for the Association.

During the next year we can all look forward to possible winter storms, spring rains, summer thunderstorms, fall winds, a presidential election, and hopefully an economic upturn. I hope that each and every one of these upcoming adventures finds both you and your family safe and happy. I look forward to seeing all of you in Rosemont this March at the annual conference.



#### **Costs of Green and Gray Stormwater Infrastructure**

~Bob Murdock, P.E., CFM, Michael J. Baker Engineering, IAFSM Stormwater Committee Chair

The IAFSM Stormwater Committee held a workshop on October 25, 2011 titled "Costs of Green and Gray Stormwater Infrastructure". There is still much debate and discussion regarding when 'green' methods are costeffective as compared to more traditional 'gray' infrastructure. This workshop compared costs of green and gray infrastructure and provided considerations of the elements that influence the selection of one or the other. It consisted of well balanced set of presentations designed to support decision makers in determining when one approach may be justified over the other. The proceedings started with an EPA update on the Stormwater NPDES Rules Making status and then proceeded with providing a framework of factors that influence the evaluation of cost. Subsequent presentations focused on real-life case studies, presented by both private and public sector subject matter experts. Sixty two participants attended the event, which was well received. Presentations can be found on the IAFSM website for those who are interested in more details.

#### **Did You Know that IAFSM Workshop Presentations are Online?**

IAFSM offers workshops on a variety of floodplain and stormwater management topics year-round. Most presentations are posted to our website after the workshop. This provides an opportunity for all members to access the presentation content and learn about stormwater and floodplain management topics. Presentations can be accessed at http://www.illinoisfloods.org/conferences.html

#### Go On Tour!

~Loren Wobig, P.E., CFM, IDNR and IAFSM Vice Chair

Don't spend your entire time at the 2012 IAFSM Conference sitting on hotel chairs - go on tour! New to the IAFSM Conference in 2012! Plan to see and learn about a 250 cfs pump station, tollway bioswales, floodwalls, closure gates, levees, golf course flood measures or the O'Hare Airport expansion up close and personal.

Watch for conference tour details and registration information in the upcoming conference flyer in January 2012. Tours are included in your conference cost, but pre-registration is required and these are expected to "sell out." Register early!

#### **IAFSM Sponsors IAR Booth**

~Kerry Behr, P.E., CFM, Engineering Resource Associates, IAFSM Inter-Organizational Chair

In October, the IAFSM sponsored a booth at the annual Illinois Association of Realtors Conference held in St. Charles. Members of IAFSM were able to reach a new audience and provide them with information about our association. We also provided them with resources to help them determine if a property is in the floodplain, including websites such as Illinoisfloodmaps.org, msc.FEMA.gov and the new iPhone app called FloodMap. We also educated them about flood insurance and letters of map amendment. We

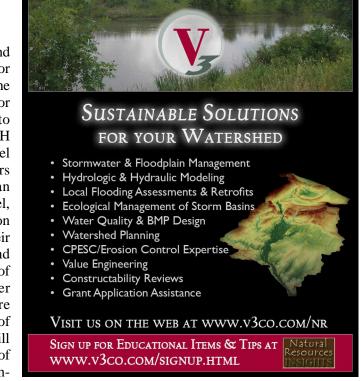


Kerry Behr at IAFSM's booth at the IAR Conference

received lots of good feedback from conference attendees, including a number of people who said we were the best booth at the conference, and the only one that provided an opportunity to learn something new. We hope to be back next year to exhibit and speak at their conference to continue our education and outreach efforts.

#### **Borrow our Water Table**

Our Water Tables have been a big hit with kids and grown-ups alike! You may have seen our table (or played with it) during the Annual Conference. The table belongs to IAFSM members and is 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 new model offers a real opportunity to educate about the dangers and impact of unplanned development and human activity in the floodplain. Through the use of this model, students can explore the value of wetlands and retention ponds in flood management. They can construct their own levees and witness how stream flow is affected and can impact downstream communities during times of high runoff. They can simulate ice damming and other seasonal risks in the floodplain. They can measure runoff volume and construct their own hydrograph of stream flow over time. Most importantly, they will work as a team to find and test solutions to a variety of floodplain problems simulated by the model. An in-



depth curriculum guide is available to introduce students to important tools in the management of our critical watershed resources. Curriculum is geared towards middle school and high school students, with adaptations for younger grades. IAFSM has two models and keeps one in Springfield and the other in northeast Illinois. Contact Sarah at iafsm@sbcglobal.net to make arrangements to borrow the model.

#### 2012 and 2013 Conferences: Save the Dates! Sponsor our Conference!

The 2012 IAFSM Annual Conference and Technical Field Tours will be held March 14-15, 2012 at the InterContinental Hotel – O'Hare, in Rosemont, Illinois. A CFM exam and pre-conference continuing education workshops will be held March 13, 2012. Conference hotel rooms can be reserved for \$129 + tax by calling 800-341-7949. Please consider supporting our conference as a Sponsor. Sponsors who register before 1/9 receive additional recognition in the conference registration materials. www.illinoisfloods.org for sponsor registration.

The 2013 IAFSM Annual Conference will be held March 6 - 7, 2013 at the Marriott in Bloomington-Normal, with pre-conference continuing education workshops and the CFM exam on March 5, 2013.

#### More Ways to Stay in Touch

As a reminder, in addition to email, IAFSM has more ways to stay in touch with members. IAFSM has a LinkedIn Group. Membership in the group is limited to current and past IAFSM members. All official IAFSM communication will continue to come via email, but our LinkedIn group provides a way for committee members to communicate with each other (if preferred over email). The LinkedIn group provides another way to network and stay in touch with other members; for example, one subgroup has been set up for users of HEC-RAS Unsteady Flow, and a second subgroup has been set up for CRS communities. Type IAFSM into the group search box on LinkedIn to find us, or click the hyperlink on our homepage at www.illinoisfloods.org. We also have a Committee page on our website. Visit www.illinoisfloods.org/committees.html to learn more about what each committee is up to, check meeting dates, and get involved!

#### 2012 CFM Exam Schedule

- Rosemont: March 13, 2012 (InterContinental Hotel)
- Bartlett: Summer 2012 (IDNR)
- Woodridge: Fall 2012 (V3 Companies)
- Champaign: September 12, 2012 (ISWS)
- Rosemont: **December 12, 2012** (Christopher B. Burke Engineering, Ltd)

As a reminder, IAFSM uses the National Association of State Floodplain Managers (ASFPM)



Exam. The National Exam includes questions on coastal floodplain requirements and excludes Illinois-specific questions. The Illinois Floodplain Management Desk Reference found on our website is a valuable tool for floodplain managers in Illinois, but it is not a comprehensive study guide for the National Exam. To register, visit www.illinoisfloods.org/certification.html.

#### **Next Board Meeting**

The next IAFSM Board Meeting is scheduled for 10:00 a.m. on Wednesday, January 11, 2012 at the Starved Rock State Park Visitor's Center, Routes 178 and 71, Utica. All members are welcome and encouraged to attend. See you there!

#### Jobmart

Visit our Jobmart at http://www.illinoisfloods.org/jobmart. Jobmart is a free service to members of IAFSM. If you would like to post a position, send complete information to IAFSM@sbcglobal.net. The information should include a detailed job description and information on how to obtain an application (e.g., contact person, phone/fax numbers, URL). Please also include an expiration date for the posting.





# THE IAFSM CURRENT

Illinois Association for Floodplain and Stormwater Management

Winter 2011- 2012 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. To advertise in this newsletter (\$100-\$200 per year depending on ad size) contact the association at IAFSM@sbcglobal.net.

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