

Summer 2011 Newsletter

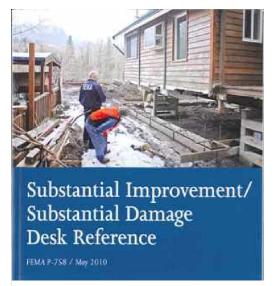
# **Administering Substantial Improvement / Substantial Damage During Non-Disaster Times**

~Mary Lou Kalsted, P.E., CFM, Village of Lisle

If you are a local government official, you've probably heard about what you need to do regarding substantial damages if a disaster strikes your community. But, you need to be paying attention to the NFIP requirements for substantial improvement/substantial damages (SI/SD) on a routine basis if you have properties located in the special flood hazard area.

Let's start with two key definitions:

Substantial Damage: Damage of any origin sustained by a structure whereby the cost of restoring the structure to its before-damaged condition would equal or exceed 50% of the market value of the structure before the damage occurred. Work on the structures that are determined to be substantially damaged is considered to be substantial improvement, regardless of the actual work performed.



This FEMA manual, available to communities at no cost, is a useful reference for SI/SD issues.

Substantial Improvement: Any reconstruction, rehabilitation, addition, or other improvement of a structure, the cost of which equals or exceeds 50% of the market value of the structure before the "start of construction" of the improvement. This term includes structures that have incurred "substantial damage", regardless of the actual repair work performed.

Note from the definitions that the NFIP considers these two terms to be interrelated, and not two separate things.

It is your community's responsibility to look at each permit application that comes in, and determine:

- Is this property located in the special flood hazard area?
- If so, are the proposed improvements "substantial improvements"?
- Or, if so and the work is needed to restore a damaged building to its pre-damaged condition, does it constitute repair of "substantial damage"?

Once you've determined that a property is in the special flood hazard area, then you need to verify the cost of the work that's being done; determine the market value of the structure; determine whether the improvement or repair constitutes substantial improvement or substantial damage; require the owner to obtain a permit; and keep records. Let's look at each of these tasks.

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Verify the cost of the work. You will need a detailed cost estimate, either provided by the property owner or contractor, or prepared by your building department. Costs should include materials at fair market value; labor using prevailing wage rates; site preparation; demolition and debris disposal; costs to comply with code requirements; costs to elevate the structure; contractor's overhead and profit; sales taxes on materials; structural elements; interior and exterior finishes; built in appliances, cabinets, bookcases, and furniture. Costs that should be excluded are plans and specifications, permit fees, land survey costs, carpeting over finished floors, outside improvements such as driveways, walkways, patios, irrigation systems; costs to correct EXISTING violations of health, safety, and sanitary codes; appliances that are not built in. Include the cost of labor even if it is done by the owner or donated by a charitable group; include the cost of materials even if they are donated; always include a percentage for contractor's overhead and profit, even if the owner does the work; and include ALL work being done, even if it's something for which you would not normally require a permit.

<u>Determine the market value of the structure.</u> Your local assessor is the best source for a market value for the structure (not the land, just the structure). If challenged by a property owner, the property owner can provide a property appraisal at his cost. Some buildings won't have an individual value determined by the assessor, and an appraiser also won't be able to help. Examples of these types of buildings include condominium common buildings (clubhouses, pools, laundry buildings), individual apartment buildings in large complexes, and college buildings. For these, the owner will need to hire an architect to provide a value using R.S. Means or other cost sources. Your building department staff can also do the estimate if resources are available.

Make the SI/SD Determination. Take the cost of the improvement or cost to repair to the pre-damage condition and divide by the market value of the building. If it is greater than or equal to 50%, then the project is considered to be substantial damage or substantial improvement. In order to do the work, the property owner must bring the entire structure into full compliance with current NFIP standards and your local floodplain requirements. Make the property owner aware of the SI/SD requirements, and notify him of the results of your determination.

<u>Recordkeeping</u>. As each permit is issued, clearly document the SI/SD determination made at the time the permit is issued. Keep it as a part of the permanent record. You can easily make a form to use to record the cost of the work, the market value of the structure, the results of the determination, and any notification you did to the property owner.

Most property owners and contractors are unfamiliar with the requirement for SI/SD and with what is needed for a compliant cost estimate, so creating handouts is very helpful to explain the concepts and requirements. Also, public education such as an article in your community's newsletter is also very helpful.

Listed below are several resources you can use for more information about SI/SD:

- IAFSM Desk Reference: This is available at www.illinoisfloods.org. Section 16 of the document discusses this subject.
- FEMA Publications, available at no cost to local governments. They can be obtained at www.fema.gov:
  - o Book: Substantial Improvement/Substantial Damage Desk Reference (P-758). Available to download, on a CD, or in print.
  - Software: Substantial Damage Estimator (P-784). The software is available on CD, and there is a manual on CD, in print, or downloadable, and there is also a video included called "SDE and Your Community".

Enforcing the substantial improvement/substantial damage requirements is a community's responsibility in order to remain in good standing with the National Flood Insurance Program. Obtain copies and use the resources listed above.

For more information, or for copies of recordkeeping forms or handouts, contact Mary Lou Kalsted, P.E., CFM, Staff Engineer/Stormwater Administrator for the Village of Lisle, a Class 6 CRS community, via e-mail at mkalsted@villageoflisle.org.

# **2011 Flood Photos**

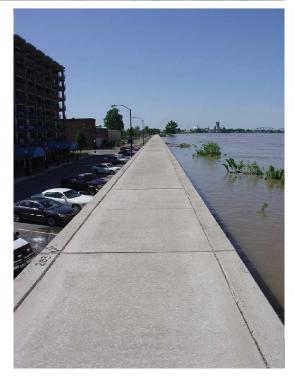
This spring's weather brought another year of flooding to Illinois and the midwest. These photos remind us of the importance of proper floodplain planning and management.













Top left: Levee breach on Embarras River, Lawrenceville, IL. Top Right: Fort Calhoun Nuclear Power Plant on Missouri River.

Middle Left: Little Wabash River at Maunie, IL.

Middle Right: Harrah's Casino on Ohio River in Metropolis, IL.

Bottom Left: Floodwall on Ohio River in Cairo.

Bottom Right: Farmhouse on Missouri River.

Illinois flood photos courtesy IDNR.

Missouri River flood photos courtesy Larry Geiger, picasa.

# **Repetitive Loss in Illinois**

"Holy Cow! How many times does that building have to flood"?! According to FEMA, the answer is at least twice in any ten year period. The flooded property then falls into a category called "repetitive loss structures". Repetitive Loss (rep loss) properties have the highest flood loss frequencies and therefore account for a disproportionately high percentage of the state's overall flood losses.

We have an abundance of rep loss structures here in Illinois. Not so many years ago, Illinois ranked #5 in the nation for repetitive flood insurance claims. We were also ranked #3 in the nation for the number of communities with rep loss properties. As of January 2010, the FEMA database identified 3,555 rep loss properties across the state. But, the news gets better. Since the 1993 flood, these rep loss properties have become a primary focus of both compliance and mitigation programs.

The Office of Water Resources has just completed a large statewide study of our repetitive properties. The findings are amazing. Based on current rep loss numbers, Illinois has now dropped to #21 in the nation. It appears no other state in the nation has done more to reduce or eliminate repetitive loss claims.

#### **Study Findings**

In the summer of 2010, Red Oak Consulting contacted the local officials from all 334 communities in Illinois with rep loss properties. Local officials were provided with information on their repetitive loss properties and were asked to provide updated information on building status. Updates for all 3,555 properties have been provided by community officials.

The updated Illinois database identifies that 1,465 (41.6 %) of the 3,518 statewide repetitive loss properties are mitigated, representing nearly half of our rep loss properties. Specifically, that means the properties have been elevated, bought out, protected by a structural measure, identified by FEMA as being mitigated already, or are currently part of a mitigation project. The Interagency Mitigation Advisory Group (IMAG) has funded many buyouts but relatively few elevation projects in Illinois. Therefore, many of the elevation projects identified in the study can be attributed to local floodplain compliance or Increased Cost of Compliance coverage.

Although measures of elevation and structural protection have not completely removed the properties from the threat of flooding, the risk of repetitive losses and resulting flood insurance claims have been reduced dramatically on these properties. However, it has been noted that many of the elevated repetitive loss structures continue to make claims for damage to contents (presumably in compliant lower areas) and therefore remain on the FEMA repetitive loss list, despite the building itself being mitigated against structural flood damages and structural flood insurance claims

There are 1,769 (50.3%) properties in Illinois that remain floodprone. Most of these are reoccupied in the same condition with the same owners. There are a few floodprone properties that have changed ownership, and these new property owners may be unaware of the real and repetitive threat of flooding. A small fraction (1.9%) of the properties are uninhabited due to the structure being damaged or destroyed.

#### Financial Benefits of Mitigation

The financial benefits of rep loss mitigation are very impressive. There have been 4,631 rep loss claims over the last 32 years of recorded flood insurance claim data. The total amount paid to those 1,465 properties equal \$48,487,073.14. Assuming those claims will be eliminated or significantly reduced, the average annual savings equals \$1,515,221!

The average number of losses per mitigated property is three, with an average payment of \$10,470.11, resulting in the average annual payment per property of \$33,096.98. Therefore, \$33,096.98 is the average annual savings per mitigated property.

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## Rep Loss Communities

The Illinois database identifies 334 communities with repetitive loss properties. When the top ten communities with the highest number of repetitive loss properties are identified, one can easily see that the focus on mitigation will benefit the repetitive losses payments. Specifically, if you consider Jersey County, the number one ranked repetitive loss community in Illinois, mitigation has taken place on 210 (or 83%) of the repetitive loss properties. Nearly all of these structures are located on U.S. Army Corps of Engineers lease property. Insurance claim payments on those 210 properties total \$7,048,052. Therefore, by mitigating 83% of the repetitive loss properties in Jersey County, we have saved \$220,251 in average annual claim payments (based on the 32 years of claim data and assuming the claims would continue at the same rate).

Top Ten Communities with Highest Number of Rep Loss Properties (RLP)

Rank	Community	Total	Flood Risk of Total RLP in Community							
	Name	Rep	Mitigated		Uninhabited		Floodprone		Unknown /	
		Loss							Duplicate	
			#	%	#	%	#	%	#	%
1	Jersey Co.	253	210	83 %	1	0 %	37	15 %	5	2 %
2	Peoria Co.	252	118	47 %	7	3 %	103	41 %	24	9 %
3	Calhoun Co.	186	141	76 %	5	3 %	35	18 %	5	3 %
4	Rockford	122	32	26 %	0	0 %	90	74 %	0	0 %
5	Will Co.	118	26	22 %	3	3 %	50	42 %	39	33 %
6	Rock Island Co	114	47	41 %	0	0 %	66	58 %	1	1 %
7	Des Plaines	88	2	2 %	0	0 %	86	98 %	0	0 %
8	Grafton	74	55	75 %	3	4 %	15	20 %	1	1 %
9	Kankakee Co.	69	7	10 %	0	0 %	45	65 %	17	25 %
10	Woodford Co.	58	20	35 %	2	3 %	28	48 %	8	14 %

Numbers are from FEMA's database and may not represent current rep loss statistics in these communities.

#### The Next Step

Every rep loss community in the state has been contacted to update their floodplain ordinance to include a definition for repetitive loss and cumulative substantial damage. This compliance action will help to ensure that rep loss properties are eventually mitigated using local floodplain regulations or Increase Cost of Compliance funds. Every future flood will move us closer to our goal of reducing rep loss claims.

IDNR-OWR has also plotted each rep loss property onto the division's GIS database. In many cases, these properties have already been surveyed and the structure's lowest floors tied into real time mapping. This will help the state and local officials track flood depths and damages which may trigger substantial damage compliance actions.

The rep loss study will also provide IDNR-OWR and IEMA a resource to identify and target the communities with the most repetitive loss properties and to prioritize mitigation opportunities for those properties. IDNR-OWR and IEMA will utilize the rep loss study to identify the statistics from past and current mitigation projects in reducing flood losses and provide guidance for future mitigation projects.





## From the Chair

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

It must be summer in the Midwest. Rivers have hit or exceeded flood stage, levees have been tested or failed and Illinois had its highest average rainfall for April since record keeping began in 1895. There have been record rainfall totals of 30.90 inches in Cairo and greater than 25 inches in many other communities. I am old enough remember years when people complained about drought conditions, but then again I remember a housing boom. It seems that every year we are meeting or exceeding the flooding conditions of the previous year in some portion of the Midwest. Flooding and the associated costs are often an impetus for stormwater related studies, new regulations and residential acquisition of flood insurance. Hopefully the current economy does not negate this momentum.

I was fortunate enough to attend the national Association of State Floodplain Managers (ASFPM) conference in Louisville, Kentucky. The conference was once again well organized and drew over 1,000 attendees. The conference was a great experience and offered a chance to hear from federal agencies and learn about work going on elsewhere in the nation. It was also rewarding to meet some of our counterparts in neighboring state chapters. West Virginia was welcomed as the 30th ASFPM chapter. West Virginia is the third ASFPM chapter in Region 3 and they bring the national membership to 14,000 members with 30 Chapters.

A topic of national interest which I heard many times at the conference was the reauthorization of the National Flood Insurance Policy (NFIP). The current NFIP authorization will expire on September 30, 2011. Around 5.6 million NFIP policy holders count on their policies as a source of protection against flooding. An extension of the NFIP provides security to recovering real estate markets and all other associated facilities such as homeowners, small business owners, builders, real

estate agents, mortgage lenders, etc. All of these entities depend on this program for flood damage protection.

For some time now, the Congress has been approving short-term extensions of the NFIP authority to issue flood insurance policies. Since September 2008, there have been nine extensions and, last year, the NFIP authority was allowed to expire twice for multiple weeks each time. During the June 2010 lapse, 47,000 home sales were delayed or cancelled according to NAR survey data.

On May 13, 2011, the House Financial Services Committee accepted a 5-year NFIP reauthorization bill H.R.1309 by a unanimous vote of 54 to 0. The bill now goes to the full House for consideration, before moving on to the Senate. The Senate Banking Committee also began discussing reauthorization of the NFIP when it held its first hearing on the issue on June 9.

IAFSM does not have an official opinion on H.R. 1309 but anyone interested in the current state of the NFIP should keep up to date on its status. I am sure we will be hearing more about the resolution in the near future, which hopefully will be before September 30, 2011.



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# Floodplain Management Resource Guide

A Floodplain Management Resource Guide for Illinois Communities is now available online. The purpose of this document is to provide a resource of floodplain management programs and technical assistance available to local communities in Illinois. Many of the programs listed in this document can help communities in their efforts to reduce or eliminate flood risks. To view the Guide, visit:

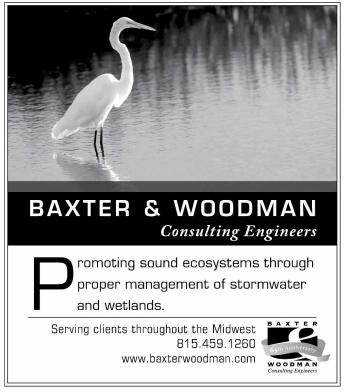
http://dnr.state.il.us/owr/Publications/Resman resource guide for IL.pdf

# Save the Date! Annual IAFSM Conference and Field Tours, March 14-15, 2012

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.

For those who may be submitting 2012 budget requests, please be aware that the conference registration fee will be greater than last year's fee. Registration information will be e-mailed to members in January, 2012.









# **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.

# More Ways to Stay in Touch!

IAFSM now 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 e-mail). 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 have a new 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!



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# **CEC/Training Opportunities**

#### **HEC-RAS** Unsteady Flow Course

The Central Illinois Section of ASCE is sponsoring a HEC-RAS Unsteady Course on July 25th – 27<sup>th</sup> in Springfield. The 3-day course will be taught by David Williams. A half day ethics course on July 28 is also included in the registration to the Unsteady HEC-RAS Course for those interested. Please contact Steve Brown at (217) 747-9265 or e-mail him at sbrown@hanson-inc.com if you have questions or wish to register. Registration deadline is July 11.

## Sustainable Paving Solutions

Unilock would like to invite the IAFSM to attend our Sustainable Paving Solutions for Cities, Communities and Campuses symposium on Tuesday, July 26, 2011 at UIC, 214 Student Center East, 750 S. Halsted.

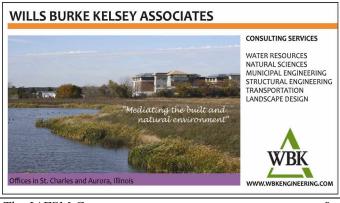
The U.S. leading researcher on permeable paving, Bill Hunt from North Carolina State University, will present his findings.

Eventually all cities, communities and campuses will mandate some type of green infrastructure. Federal, state and local jurisdictions are all migrating towards more sustainable approaches to managing stormwater. Transitioning from traditional methods through current ordnances can be challenging. This symposium will highlight recent local projects successes using permeable paving to meet these new green infrastructure requirements while illustrating they can still be functional and aesthetically pleasing. Several case studies will be examined and discussed. This symposium is intended for all city managers, chief engineers, park district administrators, sustainability directors, college presidents, campus planners, developers, owners and design professionals working with unicipal facilities and public and private institutions. Design professionals attending are encouraged to bring mnicipal and institutional clients.

Registration is free but must be done in advance by RSVPing to brad.swanson@unilock.com or calling 630-742-4168. There is no day of event registration.

# Topics include:

- RESEARCH Permeable paving benefits and opportunities, William Hunt, NC State Univ.
- CITIES Developing a new, sustainable downtown: West Union, IA, Tom Price, Conservation Design Forum.
- COMMUNITIES Paving Comparison of Lakeshore East and Mary Bartelme Park, Ernie Wong, Site Design Group.
- CAMPUSES –Successful transformations: Waubonsee Community College Campuses, Paul Wiese, JJR.







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## 2011 Conference Presentations Available for Download

Presentations from the 2011 IAFSM Annual Conference are now posted on our website at www.illinoisfloods.org. There is a link to the presentations from the right-hand side of the home page. If you notice a presentation is missing or did not convert to PDF correctly, please let us know (iafsm@sbcglobal.net) and we'll attempt to rectify.

# 2011 IAFSM Membership Drive – FREE Membership!

In March 2011, the IAFSM Board voted to extend the membership fee waiver for municipal and county government employees and those who are retired or currently job seeking. Please help us get the word out and encourage your collegues to join IAFSM by forwarding the link below. http://illinoisfloods.org/documents/membership.pdf

## **2011 CFM Exam Schedule**

• Woodridge: **September 15, 2011** (V3 Companies)

• Champaign: **September, 2011** (ISWS, date TBD)

• Rosemont: **December 7, 2011** (CBBEL)

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 Board Meeting is scheduled for 10 a.m. on Wednesday, July 12, 2011 at the Intercontinental Hotel, Getty Room, 5300 N. River Road, Rosemont. All members are welcome and encouraged to attend. This is a great way to get involved with IAFSM. See you there!

## Johmart

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 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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