



Before the Storm

Indiana Association for Floodplain and Stormwater Management

JANUARY 2017

2017 Conference Updates

SAVE THE DATE

2017 INAFSM ANNUAL CONFERENCE
SEPTEMBER 6-8
CENTURY CENTER
SOUTH BEND, IN

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2017 Conference Registration Now Open

Registration for the 2017 Conference at the Century Center in South Bend on September 6th to the 8th is now open. Click [here](#) for a direct link, or visit the www.inafsm.net and click on the Annual Conference tab on the left side of the page.

Accepting Abstracts

The Conference Committee is now accepting abstracts for the 2017 INAFSM Annual Conference. The deadline for submissions is Wednesday, February 15, 2017. The abstract submission form may be found [here](#). If you have questions

regarding the subject matter of your presentation please contact [Lori Gates](#), and if you have questions about the submission process please contact [Karen Avery](#).

Conference Sponsors

Sponsors are a large part of the reason that INAFSM is able to make the Annual Conference a success. Please plan early to sign up as an Exhibitor and/or event sponsor. There are 9 sponsorship levels ranging from \$395 to \$5000. Please click [here](#) for more details about sponsorship benefits.

COMMUNITY RATING SYSTEM

WHAT IS IT AND HOW DOES IT WORK FOR YOUR COMMUNITY?

Each year flooding causes hundreds of millions of dollars in damage to homes and businesses across the country. A standard homeowner or commercial property policy does not cover flood losses. So, the Federal Emergency Management Agency (FEMA) administers the National Flood Insurance Program (NFIP).

The NFIP makes flood insurance available in participating communities that comply with minimum standards for safe, wise floodplain management. This is achieved by community adoption and enforcement of a local floodplain ordinance.

The NFIP's Community Rating System (CRS) recognizes and rewards community efforts that go above and beyond the minimum standards by reducing flood insurance premiums for property owners. CRS discounts on flood insurance premiums range from 5% up to 45%, depending on the activities a community chooses to undertake. These discounts provide an incentive for new flood protection activities that can help save lives and drastically reduce

property damage in the event of a flood. CRS participation may also benefit communities should federal grant monies become available.

Some of the higher standards for participation in CRS include dissemination of public information advising of the flood hazard, outreach projects such as providing examples of flood protection measures and the natural and beneficial function of the floodplains, and elevating the lowest floors of buildings higher than the minimum NFIP standards.

As community participation in the NFIP is voluntary, so is participation in CRS. However, CRS communities provide a better level of protection to their property owners while lowering flood insurance premiums throughout the community.

In our next issue we will discuss the application process to enroll in CRS.

- Debbie Smith
Floodplain Chair

Meeting the Challenges of Flooding Means Challenging the Way We Plan for Them

Most of Indiana’s cities and towns are missing the boat when it comes to flooding. Despite spending millions of dollars every year on structural mitigation projects, their exposure to flood risks and flood damages keep increasing. The question is why?

With the number of extreme rain events growing each year, it’s easy to assume that climate change is the reason behind the increased flooding within our communities. However, there is a cycle at work in our communities contributing to the problem and creating unintentional harm.

Like thousands of others across our country, most Indiana communities still allow construction in areas with high risk of flooding or erosion that should be left undeveloped – working to mitigate flood risks in one area while creating new risks in another. Our communities continue to take one step forward in their approach to economic development only to fall three steps back when severe flooding occurs.

This ongoing cycle is the result of a disconnect that until recently has gone largely unnoticed. While the connection between land use and flooding is well understood by our hazard mitigation planners and floodplain managers, that information is not getting to those who make the decisions about land use in our communities.

Flood Resilience Planning – a better way to protect our communities

These days, “resilience” is a buzzword used by many agencies in many contexts. Within the context of flooding, developing better resilience means planning that focuses on developing strategies to reduce risk in the long term and make recovery from floods shorter and easier. This includes integrating [Smart Growth](#) principles into state and local policies and enhancing local development regulations to avoid increasing vulnerability to floods.

One of the most important features of flood resilience planning is the integration of the strategies outlined in a community’s Hazard Mitigation Plan with its Comprehensive Land Use Plan.

There will be a series of articles about the CRS appearing in the newsletter over upcoming months.

Flood Resilience Planning Areas		
Planning Area	Area Boundary	Intent of Area Strategy
River Corridor	Floodway or fluvial erosion hazard area, whichever is greater	To conserve land and prohibit new development
Other High Flood Hazard Areas	Undeveloped land in the floodway fringe	To conserve land and maintain the natural and beneficial function of the floodway fringe
Vulnerable Settlements	Existing developed land in the SFHA (floodway fringe and floodway)	To protect people, buildings, and facilities in vulnerable areas and reduce future flood risk
Safer Areas	Outside the SFHA but within the planning jurisdiction	To plan for and promote development in areas that are less vulnerable to future floods
Watershed	Entire drainage area	To promote coordination and partnerships and implement practices to slow, spread, and infiltrate flood water

Table 1: Flood resilience planning areas and the purpose behind developing strategies for each.

Flood Resilience Planning Areas

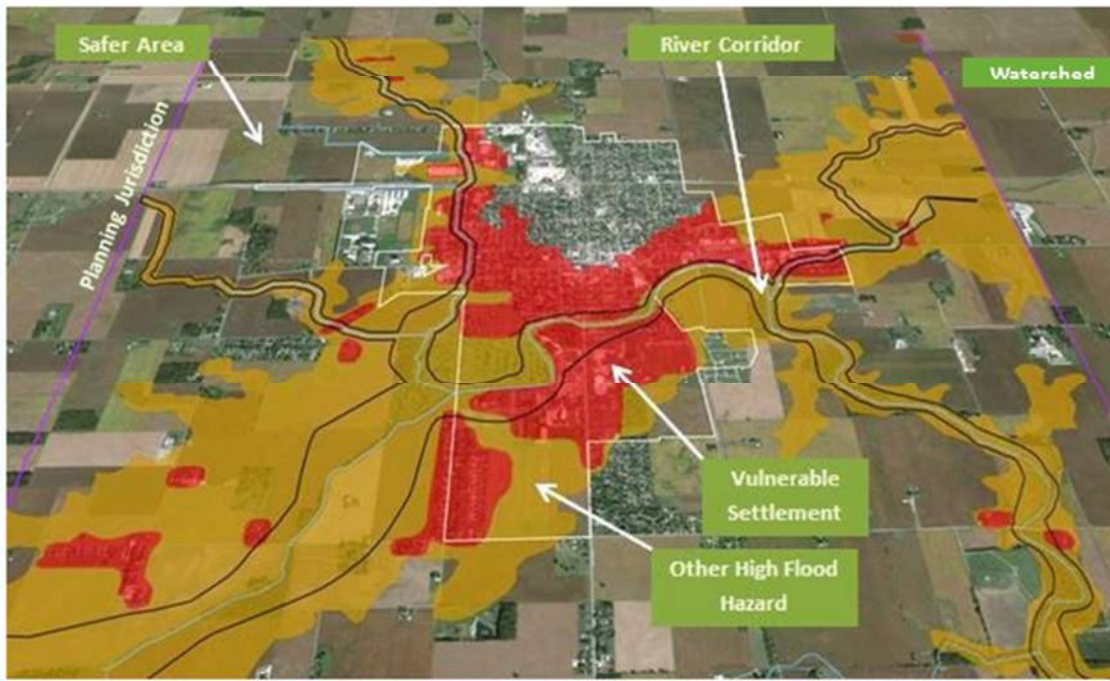


Figure 1: Example of how flood resilience planning areas are geographically defined.

Connecting the dots for greater resilience

Many of the measures needed to better protect our communities from flooding can often be found in their hazard mitigation plans and storm water management plans. However, one of the key factors that can increase flood damages – land use and development in vulnerable areas – is controlled by a completely different planning process, usually conducted by a different set of decision-makers who may or may not be aware of these measures.

Communities engage in comprehensive land use planning to develop their economies and provide a better quality of life for their residents. Yet, despite the potentially significant and long lasting effects that flood events can have on a community and its economy, hazard mitigation is rarely considered in land use planning processes.

The hard truth is that much of the increased flood damage suffered in Indiana's cities and towns (as well as that in much of this nation) is unnecessary. Hazard planners everywhere have access to flood zone mapping tools to identify and better prepare their response to flood events. Most communities know or should know where they are most vulnerable to flood risks and can precisely predict where flooding will occur. The problem is that this information is not

communicated to those making the land use decisions for our cities and towns.

The key is to engage land-use planners and decision-makers in the discussion about flood risk and to help them understand the critical role they play in making their communities safer.

Developing the Flood Resilience Plan

As a first step in developing their plan, key stakeholders at the local level can use a [Flood Resiliency Checklist](#) to guide them through a comprehensive audit of their policies, regulations, budgets, and other relevant information to determine how well they support flood resiliency. State and federal agencies can also provide assistance during the planning effort.

Few Indiana communities consider their flood risks when developing their comprehensive plan. However, they can and should use the planning process to do this. A flood resilience planning effort will help them develop strategies at two scales that they can incorporate into their land use plan to provide

Key Stakeholders in Flood Resilience Planning

On the local level...

- Mayor/City Council members/Town Council members
- Economic development director/staff
- Town/city planners
- Emergency management personnel
- Floodplain and stormwater managers
- County surveyors
- Watershed planning coordinators

State and federal agencies can also help...

- Indiana department of Homeland Security (IDHS)
- Indiana Department of Natural Resources (IDNR)
- Indiana Department of Environmental Management (IDEM)
- Office of Community Assistance and Rural Affairs (OCRA)
- Federal Emergency Management Agency (FEMA)

The Tipton, Indiana

Model

Through an initiative of the Indiana Silver

Jackets and with the assistance of

Christopher Burke

Engineering, LLC, the

City of Tipton,

Indiana recently

became the first

community in Indiana

to develop a flood

resilience plan

following the Smart

Growth approaches

and strategies utilized

in a similar effort in

the State of Vermont.

Click [here](#) for more

information on

Tipton's plan and

how it was developed.

more comprehensive protection from floods. Overall strategies such as conducting regular audits of their policies, regulations, and budgets and checking for consistency, updating, integrating, and revising plans, policies, and regulations work to protect the community as a whole. More specific land use strategies should also be developed for individual resilience planning areas (Figure 1) to meet specific objectives (Table 1).

Implementing the strategies in the Flood Resilience Plan

Once the flood resiliency plan is developed, the concepts and strategies it contains must be codified and incorporated into comprehensive plans and zoning ordinances in order to be effective. Implementation of the flood resilience plan is best led by a community's land use planners. This is because many of the measures needed to improve a community's flood resilience involve decisions about where new development should occur and the ordinances that govern growth, which for most communities begins in the planning department.

In general, implementation follows a three-step process:

- Prevention -- The first line of defense is to keep vulnerability from growing by steering new development to safer areas.
- Preparation – Once measures are in place to prevent their flood risk from growing, communities can turn their attention toward preparing for the next flood through flood response planning and education and outreach.
- Protection – To achieve the greatest gains in flood resilience, communities will focus on protecting current assets after measures for limiting new development in flood-prone areas are in place. Protection involves preferably moving vulnerable assets out of harm's or, where that's not possible, employing measures to provide better flood protection in place.

The relationship between flood resilience and economic growth isn't what you might think

Better flood resilience comes from stricter controls on how we use the space in our communities – a concept that might seem at odds with economic growth. However, it is becoming increasingly clear that sustainable communities are thriving communities. Those that embark on flood resilience planning can build greater long-term economic stability without jeopardizing their

economic development goals.

When weighing the cost of regulation, communities need to consider the impacts of flooding. A severe flood can inflict millions of dollars in damages and take years to recover from. Severe flooding can also lead to higher flood insurance rates within a community, which acts as a disincentive to growth.

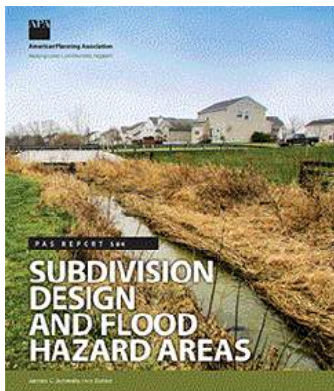
Flood resilience planning offers a balanced approach in which the goals of economic development and flood resilience can be accomplished together by changing our comprehensive land use plans and our capital improvement plans and priorities to incentivize development in safe areas instead of in riskier areas. At the same time, we need to modify and develop our ordinances to make it more difficult to build in areas that increase our vulnerability. Combined, these approaches will achieve a balance between the need to protect from floods while still allowing for continued economic development.

The concepts embodied in flood resilience planning will no doubt require a change in the mindset of many city planners and those working toward economic development. Most have likely never considered land use planning within this context.

Until we start challenging the way we plan for floods, our communities will continue to face ever increasing challenges when they occur. Flood resilience planning provides a process that helps to educate and change the mindsets of the officials and institutions that make land use decisions, making them more aware of the critical role they play in protecting their communities. By embedding flood resiliency strategies into their Comprehensive Plans, communities can make more informed decisions about land use that will better support their economic development goals in the future. Only then does it make sense to spend limited public funds mitigating risk to existing structures to reduce the extent of flood damages, improve lives, and make our way towards our ultimate goal of long-term resiliency.

Siavash Beik is the vice-president and principal engineer for Christopher Burke Engineering, LLC and has worked as a consulting engineer for more than 35 years. Siavash is dedicated to helping Indiana communities solve their problems with flooding. If you'd like to learn more about flood resilience planning, you can contact Siavash at 317-266-8000 or sbeik@cbbel-in.com.

Updates to “Subdivision Design and Flood Hazard Areas”



The American Planning Association’s (APA) latest Planning Advisory Service report, “Subdivision Design and Flood Hazard Areas,” elaborates on new information and tools and outlines a series of planning and design principles. The report stresses an integrated approach to planning for natural hazards by improving regulations and design.

During a 2015 APA symposium—which included subject matter experts and staff from APA, FEMA, and ASFPM—participants developed an over-arching vision for subdivision design in flood hazard areas:

Adopt a comprehensive and integrated approach to protecting floodplain and other natural areas, and aligning development with community goals to increase

community resiliency and reduce flood risks.

Subdivision design in flood hazard areas has become increasingly important due to the high social and physical costs associated with flood damage. More than ever, communities must adapt to the ever-growing threat of human-made and natural disasters.

General Principles

These five general principles lay the foundation for mitigating flood hazards within subdivision design:

1. Maintain natural and beneficial functions of the floodplain.
2. Adopt a No Adverse Impact approach to floodplain management.
3. Avoid new development in the floodplain whenever feasible.
4. Focus on data-driven decision making, using only the best available data to assess risk and inform decisions.
5. Consider future conditions of the floodplain, including development impacts and climate change.

- Source: ASFPM

Floodplain Training Opportunities

January 17 — [Changes in the 2017 CRS Coordinator’s Manual](#) (webinar)

January 27 — [Introduction to Natural Hazards Mitigation Planning](#) (webinar)

January 30-February 2 — [Advanced Floodplain Management Concepts](#) (EMI)

February 9 — [New Officials Floodplain Workshop](#) (Indianapolis)

February 21 — [Introduction to CRS](#) (webinar)

February 22 — [Repetitive Loss Properties and the CRS](#) (webinar)

February 24 — [Natural Hazards Mitigation Planning—Building the Planning Team](#) (webinar)

March 20-23 — [National Flood Insurance Program \(NFIP\) / Community Rating System](#) (EMI)

March 21 — [Preparing for a Verification Visit](#) (Webinar)

March 22 — [Changes in the 2017 CRS Coordinator’s Manual](#) (webinar)

April 18 — [The Role of the Community CRS Coordinator](#) (webinar)

A complete list of all training opportunities may be found on the INAFSM

Calendar of Events at INAFSM.net

Stormwater Training Opportunities

January 18 — [When Basic BMPs are not Enough](#) (Webinar)

January 25 — [Navigating Lean Practices for Achieving Green Certification](#) (webinar)

January 26 — [Sustainable Stormwater Management: Adopting “Green Infrastructure” for Compliance with 2017 SWPPP Requirements](#) (webinar)

January 26 — [Succession Planning: Keeping the Knowledge on Your Team](#) (webinar)

February 1-March 29 — [Water Communications: Master Class Series](#) (webinar)

February 1 — [Avoiding Public Outrage: Communicating](#)

[More with Less](#) (webinar)

February 9 — [A New & Improved Approach to Sewer Renewal](#) (webinar)

March 1 — [Risk Management: What to Say When Things Go Wrong](#) (webinar)

March 29 — [Dealing with the Press: Handling the Tough Questions](#) (webinar)

Are there any training opportunities that you know of and would like to share with other members? Please contact the Outreach Chair at outreach@inafsm.net with the information.



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“Promoting sustainable floodplain and stormwater management”

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