



Before the Storm

Indiana Association for Floodplain and Stormwater Management

WINTER 2016

2016 Conference Updates

2016 INAFSM
ANNUAL
CONFERENCE
SEPTEMBER 7-9

BELTERRA CONFER-
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Have you ever considered submitting an abstract for one of the 43 education sessions at the INAFSM Annual Conference? The 2016 Conference Committee is now [accepting abstracts](#) for sessions. The three day conference offers four different educational tracks with both floodplain, stormwater, and MS4 focuses. The abstracts **deadline is Monday, February 15th.**

The conference committee is also holding a logo design contest for the 2016 conference. The winner receives a certificate for an overnight stay at Belterra Resort. Contest submissions need to be submitted to Karen Avery by **Noon on Monday, February 29th.** See the [website](#) for additional details and design criteria.

With Hazardous Dams, Failure is Just a Matter of “When”

Floodplain managers expect flooding in their communities. They study their local floodplain maps and know the vulnerable areas. They do their best to minimize risk and work proactively with emergency responders to reduce impacts should the worst happen. And, in areas with hazardous dams, the worst will happen. Most of these dams were built decades ago and many are past their engineered lifespan. In many cases, homeowners were never informed of the risks associated with living downstream of a dam.

According to the [2013 Report Card on America's Infrastructure](#), issued by the American Society of Civil Engineers (ASCE), greater than 90% of Indiana's dams are at some risk of failure. More than 700 of them pose significant hazards, and another 241 are considered high-hazard dams. When these dams fail, the resulting flooding will cause significant economic and environmental losses. In the case of high-hazard dams, failure means loss of life. Unfortunately, repairing or removing these dams is often not an option.

The Cost Conundrum

ASCE estimates it will cost more than \$180 million just to bring Indiana's high hazard dams up to current standards. Most are privately owned, so their repairs are generally not eligible for federal or state funding. They're also unlikely to be cov-

ered by private insurance. So, the owners of high hazard dams and property owners downstream are in a pretty tough spot.

Floodplain managers are, too. With no appetite on the federal level to provide needed funding, they're faced with communities at high risk and few options for protecting them when the inevitable happens.

Emergency Planning is Key

One of the most cost-effective ways to reduce risk associated with hazardous dams is an Incident and Emergency Action Plan (IEAP). With costs ranging 6-7 figures, many dam owners can't afford to repair their dams. However, they or a local floodplain manager can develop an IEAP for a fraction of that cost, usually \$10-20 thousand. With a focus on emergency planning, IEAPs help mitigate the downstream risks and significantly reduce an owner's liability.

IEAPs can also help floodplain managers manage flood risk. Currently, there's no legal requirement for the hazardous dam owner or someone selling property downstream to disclose the risks associated with the dam. Floodplain managers need to begin identifying the most vulnerable areas downstream of hazardous dams and working with local governments to inform peo-

ple of these risks. With the information on inundation areas they contain, IEAPs can help local governments disclose these risks.

Dam failure often occurs in a matter of hours, making time of the essence—a plan in place to direct emergency response immediately after a failure can help protect property and save lives.

With hundreds of dams throughout the state on the brink of failure, Indiana's floodplain managers can play an important role by identifying hazardous dams in their areas. And, by proactively working with owners to help them understand their liability and encourag-

ing them to develop IEAPs, they can help avoid the inevitable and disastrous consequences of inaction.

Brian McKenna is a licensed professional engineer and dam specialist with Christopher B. Burke Engineering, LLC and a member of the American Society of Civil Engineers (ASCE). Dam owners with questions regarding the safety of their dam and the development of IEAPs can contact Brian at bmckenna@cbbel-in.com.

Reserve your rooms for the 20th Anniversary Conference today! Call 1-800-235-8377 and use group code S09161A to qualify for the IN-AFSM conference rate of \$89 per night.

Talk Pretty to Me

Finding and Using the Right Words to Communicate Stormwater Issues to the Public

From an early age, we learn to tailor words to fit our audience. We learn the vernacular of our peers and how to talk our parents into bending the rules. We learn that talking to teachers in the classroom is quite different from talking to teammates and coaches on the field. And, if we're lucky, we find the right words to convince an attractive date to go out with us. By matching our tone and our words to our audience, we increase the likelihood that we'll be understood and that we'll get what we want.

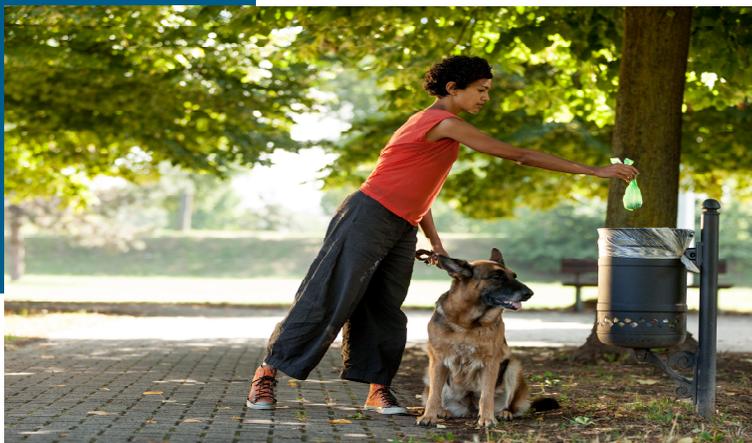
Stormwater professionals should likewise understand and consider the needs and values of their audiences in order to inspire homeowners, business owners and community groups to change behaviors to decrease stormwater pollution.

Inspiring lasting behavior changes—from picking up pet waste and raking leaves properly to installing pervious pavers and using silt fencing—requires strategic thinking and planning. Planning tools, like those outlined in this article, can help stormwater professionals create compelling messages and effective materials.

Values-based communication

Values-based communications strategies create social change by building personal connections to an issue. Values are broad ideas and are deeply held: community pride, personal responsibility, each generation should have it better than the last, equality for all. When developing values-based messages and strategies, communications professionals consider an audience's values and try to relate the problem to those values through specifically chosen pathways. Values-based appeals speak to a person's emotions, hopes and fundamental beliefs.

By using some basic planning tools, values-based communications can move people toward sustainable decision-making. These tools support real-world communications practices and help communicators choose the most effective means for reaching an audience. Applying these tools while developing communication strategies can make or break efforts to change behaviors and promote sustainable decision-making.



Developing a communications strategy

The goal of a communications strategy is to motivate a target audience to take some action or change a behavior. Behavior change campaigns are not about simply educating an audience, although education is usually a component of the campaign. In reality, educating people about an issue seldom leads to behavior changes. In order for people to make real, lasting behavior changes, we must appeal to their values and beliefs and remove the barriers that might prevent them from making a change.

A communications strategy is a roadmap that outlines the specific goal of a campaign, what behaviors must be changed to reach that goal, who needs to make those changes (the audience), and how to inspire that change (what activities and tools to use to reach the audience).

To illustrate how a communications strategy builds an effective public campaign, let's say that a popular community beach has been degraded by algal blooms caused by excess nitrogen and phosphorus in stormwater runoff. Town engineers want to reach families who enjoy and live near that beach and inspire them to change their lawn-care practices—especially leaf maintenance—to reduce this algal pollution.

In this scenario, the **impact** of the strategy is the town's big, broad, long-term goal for its stormwater program. For this hypothetical scenario, the impact is to generally reduce algal blooms and bacterial pollution in Our Lake. Unlike the impact, an **objective** is short-term (one-two years), project related and measurable. Objectives are the stick by which you measure your campaign's success. For our hypothetical scenario, the objective could be to reduce levels of phosphorus and nitrogen in runoff by 15% by the end of an 18 month campaign.

To achieve this objective, we must **ask someone**—homeowners, politicians, chambers of commerce, restaurant owners, city councils, etc.—to do *something*. The **ask** tells our audience what to do, it is the behavior we want them to change or the action we want them to take. In the Our Lake scenario, we want our **audience**—in this case homeowners with property adjacent to Our Lake—to change lawn-care practices. Specifically, we want them to properly manage fall leaves so they do not end up decomposing in Our Lake. Let's say the municipality asks residents to bag their leaves for collection instead of blowing them into streets and gutters where they can be washed into Our Lake. The **ask** for this campaign would be to bag fall leaves according to the municipal collection guidelines.

Now we must ask: *why* are they not already doing this? What **barriers** might prevent our audience from adopting this behavior? Sometimes the barrier might be obvious, but not always. We can determine barriers by brainstorming with peers, surveying audience members, holding focus groups or conducting opinion polls. In our hypothetical, Our Lake homeowners might be prevented from bagging their leaves for a wide variety of reasons. Maybe they don't have access to bags. Maybe they all use landscaping companies for their lawn care and the companies charge more to bag leaves. Maybe bagging leaves takes longer and they don't have time to waste on additional lawn care. Maybe they think it is more envi-

ronmentally-friendly to rake leaves to piles than bagging them because the bags are made out of plastic. Maybe they don't know what they are supposed to do.

But we can only be certain about these barriers—and figure out the best ways to remove these barriers—by asking sample audience members. Informal conversations with audience members are sometimes the best, and cheapest, ways to find out this information. If our audience sites the cost of the bags as a barrier to adopting this behavior, then the campaign message and materials should include information on where to find cheap or free bags.

By knowing your audience, you can also determine their **pathways**: all the ways that they receive information. Audiences receive information from hundreds of pathways, but not all pathways might be accessible to you. For example, an audience might receive information from the radio on the morning commute, Facebook, evening news, Sunday newspapers, local business owners and church bulletins. Communicators have to choose the best pathway to distribute information to an audience, depending on a campaign's budget and the ultimate objective. While an audience may get a majority of their general information from blogs and Facebook, they are not necessarily trusted venues for a stormwater campaign.

Once we've determined the ask, audience and potential barriers, we can determine the **activities** we will use to reach the audience and the **message** we will deliver to motivate behavior change. In our hypothetical situation, while we are asking sample members of the audience about barriers, perhaps we discover that there is one hardware store in town where most people buy lawn care products. One activity for reaching our audience could be posting flyers about bagging leaves in the hardware store. Or, perhaps we find out that most people attend the same Sunday church service. Then we could place an ad in the church's bulletin with information on proper leaf management. Knowing the target audience well helps communicators use limited resources to implement the campaign in places most likely to reach the audience.

Taking the time to develop a thorough communications strategy can add steps to the initial planning phase of a communications campaign. But the resulting strategy directs resources to the very heart of the problem, to the audiences who have the authority and potential to adopt the desired behavior changes. In our hypothetical situation, because we've taken the time to narrow our objectives, determine a specific ask and talk to audience members, we can easily determine winning strategies for reaching them.

A thoughtful communications strategy increases the value and effectiveness of communications efforts. We can change human behaviors to significantly reduce runoff, but only if we use informed communications to ask the right audiences to make necessary changes.

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Chapter News

- * Check out [job listings](#) on the INAFSM website periodically.
- * [Award nominations](#) for the 2016 Annual Conference are now being accepted. The deadline for submittal is Friday, May 27th.
- * The Stormwater Subcommittee – Pollution Prevention (P2) and Good Housekeeping (GH) Group is excited to announce that the Municipal Operations Pollution Prevention and Good Housekeeping Guide presented at the 2015 INAFSM Conference will soon be available for download. The Group will be working on our webpage located on INAFSM's website in February. Additionally, the Group has received confirmation from IDEM's Office of Land Quality for a speaker at the 2016 Conference. The speaker will explain IDEM's Street Sweeping Debris Disposal and Management Fact Sheet and the process for a municipality to complete waste determinations. Check out our Group page soon for more information on the P2 & GH Group activities.
- * Keep watching for 20th Anniversary Conference scholarship opportunities from INAFSM.
- * Early Bird Registration for the 2016 Annual Conference is now open. Register now for just \$225.
- * INAFSM 2016 Conference Golf Outing will be held on Tuesday, September 6th at 12pm. For \$78 per golfer you will enjoy 18 holes on the Belterra Golf Course in Florence, Indiana.

Floodplain Training Opportunities

- March 15 — [Operation Stay Afloat](#) (Indianapolis)
 - April 18-21 — [The Community Rating System](#) (EMI — E0278)
 - May 2-5 — [Retrofitting Floodprone Residential Buildings](#) (EMI — E0279)
 - June 27-30 — [Managing Floodplain Development Through the NFIP](#) (EMI — E0273)
 - July 11-14 — [Advanced Floodplain Management Concepts II](#) (EMI — E0282)
 - July 18-21 — [The Community Rating System](#) (EMI — E0278)
 - August 9-12 — [Managing Floodplain Development Through the NFIP](#) (Indianapolis)
 - September 12-15 — [Managing Floodplain Through the NFIP](#) (EMI — E0273)
 - September 19-22 — [The Community Rating System](#) (EMI — E0278)
- 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.

A complete list of all training opportunities may be found on the INAFSM Calendar of Events at [INAFSM.net](http://inafsm.net)

Stormwater Training Opportunities

- February 18 — [LTAP Stormwater Drainage Conference](#) (West Lafayette)
 - February 24 — [Introduction to RUSLE2: Applications for Construction Site Erosion Control](#) (webinar)
 - February 25 — [Energy Master Planning for Facilities](#) (webinar)
 - March 8-July 21 — [Surface Water Master Class Series - 6 sessions](#) (webinar)
 - May 17 — [MS4 Annual Meeting](#) (Indianapolis)
- 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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