



*A newsletter for people concerned with water management issues.*

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### **M**essage from the Editor

The WAFSCM newsletter is published twice a year to update members on chapter activities and to provide information on publications, seminars, etc. that may be beneficial to our water community. If you have articles, announcements, or other information that you would like us to include in future newsletters, please forward it to me at [cindi.debruine@rasmithnational.com](mailto:cindi.debruine@rasmithnational.com).

Thank you to all the newsletter contributors and to Rhonda Chapman for the newsletter preparation.

*Cindi DeBruine*  
Newsletter Editor



## *Message from the Chair*

As we close out our summers reluctantly and begin to look to the end of the year, we realize our state has been through a lot this year. We've survived numerous floods throughout the state, tornados, and numerous political battles over funding allocations. Also, we've started and completed numerous construction projects (from personal home improvement projects to statewide corridor highway projects), and as a chapter, we've forged forward with planning our annual conference for November 2010 at the Wilderness Resort.

We are lucky in that those actively involved and supporting WAFSCM are truly genuinely interested in the progress of not only our chapter, but our industry. With that being said, as floodplain managers, we have come to realize this past month that our system has failed in providing a level of comfort to the citizen. By that, I mean that there were a lot of disappointed homeowners from this recent flood. The system just didn't work for them in their opinion. Unfortunately, that is the cross we must bear as floodplain managers. We are damned if we do and damned if we don't (every pun intended). What this last lesson has revealed is that there is room for progress and improvement. As we continue to plan more activities on a regular basis for our chapter, it will be a great vehicle for brainstorming, networking, and making progress in every sense.

At our last board meeting, which we held in person, we walked away with a more defined sense of accomplishment. A decision was made to have regular meetings in person. Additionally, a more formal gathering will be planned mid-year opposite from our annual conference. To supplement our regular meetings, lots of ideas were discussed regarding a twilight session in conjunction with WTS (Women's Transportation Seminar). WTS is a group that strives to advance women in transportation. One of their primary missions is to raise money for scholarships for transportation engineering students. They have approached us to have a joint session regarding transportation and drainage/stormwater issues. We look forward to having a fundraising event with them in the near future.

In closing, we have had many bumps in the road (or actually waves in the lake), but, as we look ahead, so many exciting things are planned for our chapter. I want to thank our conference committee led primarily by Dan Cook and Ryan Kloth as well as the board members (Carrie, Laura, Ryan, and Tom) for their continued hard work in pulling this conference together. Also, always lending a hand is Gary, Cindi, and Roxanne unconditionally whenever needed. Special thanks to the newsletter editor (Cindi Debruine) for making sure we get this published on a regular basis.

Respectfully Submitted

Minal Hahm, PE, CFM  
Chairperson





## Water Quality Standards Regulatory Changes

### Summary

EPA is planning to propose a limited set of targeted changes to the water quality standards regulation to improve its effectiveness in helping restore and maintain the chemical, physical, and biological integrity of the nation's waters. EPA expects to publish a proposed rule in the Federal Register in summer 2011. Prior to publishing a proposed rule, EPA held two informal public listening sessions via audio teleconference in August 2010 to inform the public about the rulemaking, and to receive views on changes to the water quality standards regulation that are under consideration. The sessions will provide a review of EPA's current regulation and a summary of the clarifications that EPA is considering, and will allow time for questions and comments. You can find additional information about outreach efforts on this Web page. EPA will also hold separate, individual listening sessions for tribal, state, and local governments. A fact sheet is available.

### Written Comments

If you were unable to make a comment during the listening sessions, or otherwise have comments on the regulatory changes EPA is considering, you may provide them to EPA in one of the following ways.

1. Send your comments by email to [SHPDcomments@epa.gov](mailto:SHPDcomments@epa.gov).
2. Mail your comments to  
Thomas J. Gardner  
Office of Science and Technology (Mail Code 4305T)  
Office of Water  
U.S. Environmental Protection Agency  
1200 Pennsylvania Avenue, NW  
Washington, DC 20460

The full contents of your letter, or your email including your email address, will be entered into the EPA Docket for this action, EPA-HQ-OW-2010-0606, and available to the public at <http://www.regulations.gov>

### Background

Water quality standards serve as the foundation for the water quality-based approach to pollution control, including Total Maximum Daily Loads (TMDLs) and National Pollutant Discharge Elimination System (NPDES) permits, and are a fundamental component of watershed management. EPA developed its federal regulations to implement the requirements of the CWA. The Federal Water Quality Standards regulations are found at 40 CFR Part 131. Fundamentally, the regulation: 1) defines when and how designated uses may be revised; 2) requires criteria to protect those uses and be based on sound science; 3) requires EPA and states to prevent the degradation of water quality, except under certain circumstances; 4) requires states/tribes to review their water quality standards at least every three years and engage the public in any revisions to water quality standards; and 5) specifies roles of states, tribes, and EPA and provides administrative procedures for EPA's review.

### Potential Scope of the Changes

The core requirements of the current regulation have been in place since 1983. These requirements have provided a solid foundation for water quality-based controls that have been put in place since then. The intent of the changes EPA is considering is to improve the regulation's effectiveness by strengthening protection for high quality waters, ensuring that standards reflect a continued commitment to the goals of the Clean Water Act wherever attainable, improving the transparency of standards actions to the general public, and strengthening EPA oversight. Specifically, EPA is considering providing clarity in the following key areas: 1) antidegradation implementation methods, 2) Administrator's determination, 3) designated uses, 4) variances to water quality standards; 5) Triennial review scope and requirements, and 6) updating the regulation to reflect court decisions.



## ASFPM Conference in Oklahoma is a Huge Success

Notes from Dave Fowler



In Oklahoma City, Oklahoma, from May 16 to 21, 2010, I was lucky to join about 1150 flood management professionals gathered for the 34th annual conference of the Association of State Floodplain Managers. All 50 states were represented, along with Puerto Rico, Canada, Bermuda, the Netherlands, Poland, and the United Kingdom. The week was filled with chances to share knowledge, challenges, and successes in understanding and managing floodplains from different perspectives and disciplines. The theme, “Building Blocks of Floodplain Management,” reflected the multiplicity of approaches, techniques, points of view, and specialties needed to successfully reduce flood losses and protect and restore the natural functions and resources of flood prone areas around the world. Plenary sessions featuring distinguished speakers, small-group panels and subsequent discussions, training, technical field trips, exhibits, and networking filled the week.

Oklahoma’s Lieutenant Governor Jari Askins welcomed the participants to her state and shared some of her experiences of living with the threat of flooding and with working to create a state in which people simply do not—or are not allowed to—build in places that are prone to flooding. The opening plenary session featured Dennis S. Mileti, Professor Emeritus of the University of Colorado at Boulder, who reviewed his research into ways of altering human behavior to induce preparedness and mitigation measures. He admonished the audience that people do not respond to threats of risk or to knowledge about levels of risk but rather to specific instructions that are repeated and are received

from different sources. Doug Plasencia, Michael Baker, Jr., Inc., summarized the recent Gilbert F. White National Flood Policy Forum, (which I participated in representing local municipalities) at which experts assessed the potential for creating and applying a risk management framework to the nation’s flood problems and floodplain resources. Agreeing on a vision, principles, and standards for flood risk management is paramount, he said, but equally as important will be determining what attributes we should monitor to tell us whether we are making progress. I thought the best speaker of the conference was Sandra K. Knight, FEMA’s Deputy Administrator for Mitigation, who overviewed the agency’s approach to minimizing future losses through various programs, grants, and also through the sheer dedication of its employees. She noted that disasters, while tragic, do present the opportunity for a community to move along the road towards resiliency and sustainability.

The last plenary session, “Floodplain Management in a Changing World,” looked to the future and what approaches may be needed to be successful in that uncertain world. Harold Brooks, National Severe Storms Laboratory, reminded the audience that all the advanced technology and science for understanding and warning about extremes in weather can not reduce losses without appropriate human response to that knowledge. “During events,” he said, “very few people go to the storm shelters in large buildings. Rather, most go to the window to see what’s happening.” This was a very important take home message. Another excellent speaker

was Anne Riley, of the Waterways Restoration Institute, who re-focused attention on the very big picture: the nation’s floodplains have numerous natural functions and provide innumerable resources—if we would just leave them alone, we could reduce losses and reap benefits. “We spend money to build facilities to treat water when we could be allowing the floodplains to do the same thing on their own.” Videotapes of the plenary speakers’ presentations are posted on the ASFPM website at [www.floods.org](http://www.floods.org), and can be watched in conjunction with their respective PowerPoints or notes.

Due to my numerous duties as an ASFPM board member, I was unable to attend the number of concurrent sessions that I had hoped to. However, those I was able to attend were excellent. Most dealt with non-structural flood mitigation and preserving floodplain natural functions.

As busy as I was I did manage to find some great bars and restaurants where I could relax after a busy day. The best was an excellent steakhouse called the “Cattleman’s Steakhouse”. It was a rustic place located right next to the stockyards so you know the steaks are fresh. According to the story on the wall, the place was won in a game of craps back in 1930. The food was fantastic and for \$14.95 I had the best steak dinner I have ever had. It was so good I went there twice.

I highly recommend attending when you have the opportunity. It is a great way to network with other flood managers from around the country and get the CEU credits needed for Certified Floodplain Managers



## ***Introduction to White Paper***

### ***Relabeling Extreme Rainfall Events so the Public***

***Understands Their Severity*** By Thomas M. Grisa, P.E.

The following six pages is a white paper about relabeling the 100 year storm. I wrote this in June 2009 out of frustration, having experienced at that time the fourth 100-year storm in Brookfield in 13 years (as of July 2010, we are now up to five 100 year storms in 14 years). This concept was mostly prepared as therapy for me, kind of like writing that scathing email that makes you feel better, but never intend to send. Once I completed the paper, however, I received compliments on it from some of my peers locally, as well as thoughtful questions.

Unbeknownst to me, someone sent my paper to ASFPM members for feedback and comment. I received emails from all over the country with encouragement and more questions. This led to refinements of the paper and the start of something I thought might have real merit to be adopted as a national rating scale for extreme rain events.

I have presented this concept at several conferences in Wisconsin and most recently presented this at the Association of State Flood Plain Managers (ASFPM) national convention in Oklahoma City in May, and at the National Weather Service's (NWS) Eastern Region Flash Flood Conference in Pennsylvania. At the ASFPM conference, I was asked to lead a morning discussion on this topic. There were dozens of people there despite the 7 a.m. start time, indicating to me that there is broad interest in this topic. I have since connected up with NWS headquarters in DC to see if there is broader support on this subject.

Encouragement and support have come from people of all professions including: floodplain managers, civil engineers, municipal engineers, planners, meteorologists, hydrologists, consultants, and university professors. Even members of the general public think this proposed rating system better communicates the severity of the rain event than the recurrence intervals we use today.

I should say that there has not been universal support for this as some would prefer this to be a rating system for floods (which it is not). However, I recently placed my white paper as a comment on the National Weather Service's website regarding their Strategic Plan, and in the first day it became the most agreed with comment on the website. It has since been passed up and is now number two. But as of August 20<sup>th</sup>, 143 people have agreed with the comment, which is almost double the number who agree with the third most popular comment (72).

I think there is support for a change in how we communicate with the public about these types of heavy rain events, and I hope a change will be made sooner rather than later, before the next big storm hits. Take a look for yourself and let me know if you agree. You can even let the National Weather Service know too by commenting at their website until September 7, 2010. Website Link is: <http://www.weather.gov/com/stratplan/>

*Tom Grisa is Director of Public Works for the City of Brookfield. Contact him by email at: [grisa@ci.brookfield.wi.us](mailto:grisa@ci.brookfield.wi.us) or by mail at 2000 N. Calhoun Road, Brookfield, WI 53005.*

# Relabeling Extreme Rainfall Events so the Public Understands Their Severity

By  
Thomas M. Grisa, P.E.

## Frustration – It Happened Again

The 100-year storm. How many times can our City experience the 100-year storm? It has now happened five times in Brookfield in the past 14 years. It happened back to back in 1997 & 1998 and back to back to back in 2008, 2009, and 2010. How can this be?

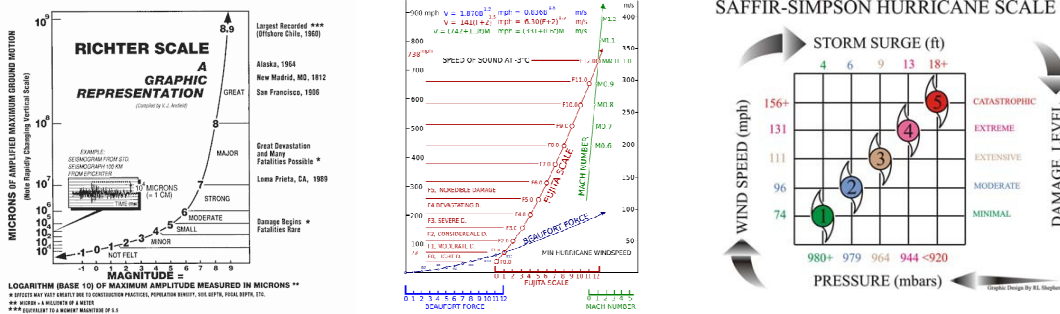
Professionals tell us the 100-year storm has a 1% chance of occurring each year. According to binomial probability formulas, the odds of this occurring 5 times in 14 years is approximately 1 in 5.5 million. If so, we are beating the odds, and not in a good way.

Why are rain events labeled based on recurrence intervals? This is misleading. How can the 100-year rain event occur more than once in 100 years? In addition, two 100-year events may occur that are completely different in duration and intensity, but are both called the 100-year event.

This paper offers an alternative rating system for rainstorms. It should be noted that the proposed system does not apply to rainfall runoff, floods, or floodplains, since these are influenced by many other factors than just rainfall.

## Other Types of Natural Disasters Defined Differently

Scientists label other natural disasters in other ways. Seismologists use the Richter scale to rate earthquakes, basing the rating on a measure of the amount of energy released as the strength and duration of the earthquakes seismic waves. The Fujita scale (or F-scale), now the Enhanced Fujita scale (since 2007) uses the intensity and area affected / damage created by tornadoes to rate them. Meteorologists use the Saffir-Simpson scale to rate hurricanes using barometric pressure, wind speeds and storm surge to define a hurricane's intensity into categories.



These professionals do not estimate recurrence intervals for these events or predict probability of these events occurring. They use a simple scale to describe the severity of the event. We understand that for earthquakes, tornadoes and hurricanes, the higher the number the worse the storm.

Footnote: Mr. Grisa is Director of Public Works for the City of Brookfield. Contact him by email at: [grisa@ci.brookfield.wi.us](mailto:grisa@ci.brookfield.wi.us) or by mail at 2000 N. Calhoun Road, Brookfield, WI 53005.

Severity versus Rarity

We identify with the ratings for these other natural weather events since the main concern is how severe the event may be. However, the current rating for rain events defines how rare the event is, not how severe it is. It is not uncommon for severe storms to hit an area more than once in a decade, as has been the case in Brookfield. Defining the storms by their frequency unfortunately misleads the public into thinking that once it happens, it will be a long time until it happens again. However, defining the storm by its severity impresses on people that these are huge events and we should do what we can to minimize the storm’s impact to our property.

It is inappropriate to continue to foster this notion that these storms are rare. The profession needs a different method of describing these storms to the public to reinforce the concept of severity of the storm, not rarity of the storm.

An Alternate Rating System Proposed

Rain storms could be rated based on rainfall intensities and total rainfall accumulation. This builds on and uses the data and science already established. A simple formula can be developed to convert rainfall totals, duration of the event, and rainfall intensity to a simple scale that rates the storms between 0 and 10, with 10 being the worst (or most rain with the highest intensity). Relating this to the public is easier for all to understand since it is already done to some extent with the other natural disasters already listed in this paper.

Adjustment for Duration and Intensity of the Storm

Different rain events have different effects on runoff and flooding. When two very dissimilar events are both called the 100-year storm, the public gets confused. Short duration 100-year storms may result in culvert and roadside washouts, while long duration 100-year storms can result in widespread flooding.

Table 1 shows the rainfall depth in inches for Southeastern Wisconsin by recurrence interval.

**Table 1 - Recurrence Interval and Depth of Rainfall (inches)**

Storm Duration	2 year	5 year	10 year	25 year	50 year	100 year
1 hour	1.31”	1.60”	1.84”	2.20”	2.50”	2.82”
2 hour	1.54”	1.93”	2.23”	2.73”	3.16”	3.64”
3 hour	1.68”	2.07”	2.40”	2.93”	3.39”	3.89”
6 hour	1.95”	2.40”	2.79”	3.44”	4.03”	4.70”
12 hour	2.24”	2.74”	3.17”	3.89”	4.53”	5.25”
24 hour	2.57”	3.14”	3.62”	4.41”	5.11”	5.88”

*Rainfall data is based on Milwaukee rainfall data for the 108-year period of 1891 to 1998. Source: Rodgers and Potter (2000)*

A Proposed Method for Categorizing Extreme Rainfall Events  
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Note: There is also data for rainfall periods exceeding 24 hours, but it is easiest for the public to understand rain storm classifications in terms of one day duration or less rainstorms, so the rest of this data is not provided or included in this system (though it could certainly be extrapolated if needed).

Using the data from Table 1, a simple ratio between the total rainfall for a given duration event as compared to the 24-hour duration event becomes the duration adjustment factor. The 24-hour duration is the basis for comparison since most people think of weather in terms of days and civil engineers most commonly use this duration for design storms.

In addition, a simple ratio between the total rainfall for a given duration event divided by the total rainfall for the “100-year storm” of the same duration becomes the intensity adjustment factor. The 100-year event is the basis for this adjustment since this is typically the most common extreme event for which the public is familiar and is used for design storms.

Placing the rainfall totals into a table based on the historical rainfall data over a given duration, yields the data shown in Table 2.

**Table 2 – Rating for Rain Storms**

Storm Duration	Total Rainfall (inches)					
1 hour	1.31"	1.60"	1.84"	2.20"	2.50"	2.82"
2 hour	1.54"	1.93"	2.23"	2.73"	3.16"	3.64"
3 hour	1.68"	2.07"	2.40"	2.93"	3.39"	3.89"
6 hour	1.95"	2.40"	2.79"	3.44"	4.03"	4.70"
12 hour	2.24"	2.74"	3.17"	3.89"	4.53"	5.25"
24 hour	2.57"	3.14"	3.62"	4.41"	5.11"	5.88"

Table 3 shows the specific G-factor rating for rain storms adjusted for the duration and intensity of the storm. The factors are represented by numbers and colors to make it easier to see which rain events fall into which categories.

**Table 3 – Specific G-factor Rating for Rain Storms**

Storm Duration	G-factor Rating					
1 hour	0	1	1	2	3	4
2 hour	1	1	2	3	4	5
3 hour	1	1	2	3	4	5
6 hour	1	1	2	3	4	6
12 hour	1	2	2	4	5	7
24 hour	1	2	3	4	6	8

Defining the Numbers

Another way to consider this is to use language to define the storm. From National Weather Service furnished items, the author developed descriptions for the numbers on the G-factor scale to provide additional meaning to the public, similar to the earthquake and hurricane scales. Below in Table 4 is the Rain Storm Severity Index. This index describes the scale



using simple language instead of numbers as some may find that more understandable. Proposed descriptions are given below for ratings on this scale:

**Table 4 – Rain Storm Severity Index**

G-Factor rating	Description of rain event
1 to 2	Minor
3 to 4	Moderate
5 to 6	Major
7 to 8	Extreme
9 to 10	Catastrophic

These descriptions provide a sense of severity of the storm, confirming the public's understanding with other scales that the bigger the number the more severe the storm.

#### Does this System Work Elsewhere?

Engineers, meteorologists and other professionals can use this method throughout the country. A check of two significantly different areas, from a hydrometeorology perspective, shows this system works everywhere. Las Vegas, NV is very dry and receives little and infrequent precipitation. Washington D.C. on the other hand is much wetter annually and per storm. Precipitation data was found on the National Oceanic and Atmospheric Administration (NOAA) website (Hydrometeorological Design Studies Center - HDSC) for these two cities.

The proposed rating system for rainstorms in each City rated large and long duration storms highest and the ratings proceeded in a logical manner decreasing with duration and intensity.

#### Criticism and Defense of this Proposal

Some have criticized this system for being too simplistic. That is, however, precisely the point. It should be simple for the public to understand, the bigger the number the more severe the storm, not the more rare the storm.

Another criticism is that it is inherently difficult to categorize all variety of storms into this simplistic system given the variety of rainfall events, the changes in rainfall intensity that occur during a rainfall event, and the subjective method of defining the duration of the rainfall event to identify the category above. However, this is also true of the current system, so this proposed change is no worse than the use of recurrence intervals in this regard.

This proposal introduces a more appropriate scaling factor to the storm rating system by defining these in categories that increase numerically by one. Many people are surprised to hear that the total rainfall from a 2-year storm is almost 50% of the total rainfall from a 100-year event for a given duration. Many wrongly assume that the 2-year event has 2% of the rain that a 100-year storm has, or that the 50-year event has 50% of the rain as a 100-year event. That is not the case. Using this proposed method it is more clearly understood that the Category G-6 storm is almost as severe as the Category G-7 storm.

## A Proposed Method for Categorizing Extreme Rainfall Events

Thomas M. Grisa, P.E., F.ASCE

Some have suggested including an adjustment factor for things like soil moisture content. This, they argue, would account for the increased runoff from the rain events that occur during periods of saturated soil conditions. However, that would make this a rating of the runoff from the storm and not the storm itself. Other rating systems rate the natural disaster or weather event, not necessarily the impact of the event. Impacts from earthquakes are different depending on soil conditions; stiff clays respond differently than sands and silt (e.g. liquefaction). Other factors that affect the impact of an earthquake include the type of construction materials and the building code standards used during construction. However, these things do not change the Richter scale number of the earthquake itself. Similarly, hurricanes have different affects in the United States where building codes are much stricter than those in the Caribbean, for example; yet the rating is not changed based on its impact.

Things that affect runoff from major storms include slope, soil type, topography, snow cover and land cover with impervious surfaces, etc., some of which can change block by block. These are factors that engineers and hydrologists use to determine runoff, but do not enter into the rating for the rain storm as they are more akin to the aforementioned construction variables that affect impacts from earthquakes. Accordingly, this proposed method does not include these types of modifications.

The recurrence interval method of rating storms leads to common misperceptions regarding floodplains and their association with the rainfall events with similar sounding names. The public mistakenly believes the 100-year floodplain fills only when there is a 100-year storm and the 100-year storm will always fill the 100-year floodplain. Not necessarily so; yet try explaining that to a crowd of angry residents who already experienced the 100-year flood twice in as many years.

So not only should we consider modifying the 100-year storm rating system, but that could lead to a relabeling of the 100-year floodplain, which will have a positive impact on how the public perceives and understands the flood risk inherent to their property. If this is what it takes to get the public to take positive steps to protect themselves during these major rain events then that is a step in the right direction and could have lasting and significant impacts throughout areas that are prone to or more likely to flood.

### Conclusion

The current system for rating extreme rain events does not work. The current system does not serve the public well by calling these storms something that the public perceives they are not and that they do not understand.

A revised method, building on the existing science that is already in place but using a similar method as used for rating other natural disasters, will work better. The method proposed in this paper develops a simple scale that the public understands, the bigger the number, the bigger the storm. Changing the rating of these storms is imperative for public acceptance. This will require the cooperation of all professionals in this industry. Anyone with me?

### Acknowledgements

The author would like to express gratitude to the engineers, floodplain managers, hydrologists, and practitioners who reviewed early versions of the white paper proposing a change in the rating of the extreme rains. Their comments, questions and encouragement were instrumental in modifying this method and addressing issues that improved the overall concept. Specific thanks go to: Theresa Caven, Rick Eilertsen, Dave Fowler, Mike Hahn, Victor Hom, Larry Larson, Mike Lemens, Tom Simmons, and Janet Thigpen

### References

Loucks, E. et. al. (2000). “Technical Report No. 40 – Rainfall Frequency in the Southeastern Wisconsin Region.”, *Chapter 4 – Frequency Analysis of Extreme Rainfall in the Southeastern Wisconsin Region, Table 18*, Southeastern Wisconsin Regional Planning Commission, Waukesha, WI (50).

National Oceanic and Atmospheric Administration (NOAA) National Weather Service website (2009). “Hydrometeorological Design Studies Center Precipitation Frequency Data Server.” [http://hdsc.nws.noaa.gov/hdsc/pfds/sa/nv\\_pfds.html](http://hdsc.nws.noaa.gov/hdsc/pfds/sa/nv_pfds.html) and [http://hdsc.nws.noaa.gov/hdsc/pfds/orb/md\\_pfds.html](http://hdsc.nws.noaa.gov/hdsc/pfds/orb/md_pfds.html). (Nov. 2, 2009)



## **2010 WAFSCM Conference "Healthy Watersheds, Healthy Communities"**

**November 3rd and 4th**

**Glacier Canyon Lodge, Wisconsin Dells**



The WAFSCM 2010 Conference is **November 3rd - 4<sup>th</sup>** at the Glacier Canyon Lodge in the [Wilderness Hotel and Golf Resort](#) in **Wisconsin Dells, WI**. Speakers will include DNR Secretary Matt Frank; Ken Hinterlong, FEMA Region V; and Gary Heinrichs, NFIP State Coordinator. Three workshops are offered on Wednesday, November 3<sup>rd</sup>. In addition, you will learn about the status of Wisconsin Water Resources, find out what FEMA is doing in our area, refresh your CFM knowledge, obtain the connection between TMDLs and the state Administrative Code, hear case studies, get the latest on flood frequency analysis in Wisconsin, and much more.

A full conference brochure and registration form will be distributed later this month via e-mail. The Wednesday workshops are included in your registration, but require a separate registration on the [WAFSCM website](#).

Please note: separate advance registration through ASFPM is required to take the CFM exam which will be offered at the conference on Nov. 3 from 4-7pm. To register for the CFM exam [click here](#).

### **Lodging**

Lodging at the Glacier Canyon Lodge will be available at the special conference rate of \$70 for a single. Space is limited. To reserve your room call **1-800-867-WILD (9453)**, and tell the reservation agent that you are booking a room under **Block #185083 WAFSCM 2010** at the [Glacier Canyon Lodge](#). Reservations must be received on or before October 4, 2010. Total balance due will be collected upon check in, unless Direct billing has been set up.

### **Award Nominees Sought**

See the following page for information on making an award nomination.

### **Sponsor & Exhibitor Information**

The Conference Organizing Committee invites you to support WAFSCM by attending the conference, exhibiting your products and services, and by becoming a conference sponsor. [Click here](#) to view all of the attractive exhibitor and sponsor packages available. (Deadline for Sponsor and Exhibitor registration is October 20, 2010)

### **WAFSCM Scholarship Opportunity**

See page 14 for information on scholarship opportunities. Applications are due by October 1, 2010.

### **QUESTIONS?**

Please feel free to contact the following individuals with questions or special requests for this event:

#### **General Conference Questions / Workshop Registration:**

[Dan Cook](#): 262-366-7855

#### **WAFSCM Awards Questions:**

[Gary Korb](#): 262-547-6721

#### **Exhibitor & Sponsor Questions:**

[Cindi DeBruine](#): 262-317-3254

#### **Scholarship Questions:**

[Roxanne Gray](#): 608-242-2311



## WAFSCM AWARD NOMINEES SOUGHT

At its November conference in Wisconsin Dells, the Wisconsin Association for Floodplain, Stormwater, and Coastal Management would like to present several awards. **Nominations are being sought through September 24, 2010** in the four award categories described below. The Awards Program was begun in 2006.

The **Chapter Service Award** is intended to recognize individuals who, through significant accomplishments and/or long-term efforts, have clearly influenced the work of the Association to improve floodplain, stormwater, or coastal management in Wisconsin. Previous recipients have been Dave Fowler, Milwaukee Metropolitan Sewage District; Roxanne Gray, Wisconsin Emergency Management; and Cindi DeBruine, R. A. Smith National.

The **Local Award for Excellence** is intended to recognize an individual, organization, program, governmental unit, or the like, which has contributed outstanding or essential work toward implementing sound floodplain, stormwater, or coastal management. Previous recipient of this award was Donna Haugom, Jefferson County Emergency Management Director.

An **Excellence in Project Design or Implementation Award** was offered for the first time in 2009. This category is a means to provide recognition focusing on particularly meritorious project efforts more so than individuals. Thereby, teams, firms, agency divisions, etc., may find a recognition niche. Previous award recipient was the WDNR Dam and Floodplain Management Section re: Lake Delton restoration.

A **Lifetime Achievement Award** would also be entertained for distinguished and extensive service, normally over the course of a career, toward advancing the cause and/or ideals of best practical floodplain, stormwater, or coastal management. This award may be given annually as warranted.

To make award nominations a fairly easy process, the following information is sought, pertaining to both the nominee and person submitting the nomination (may be one-in-the-same):

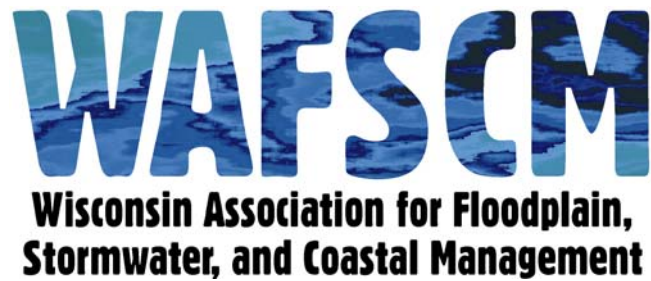
- Name
- Title
- Agency, organizational, and/or governmental unit affiliation
- Contact information, including telephone and email
- Brief description of merit (regarding nominee; no resumes, please)
- Statement of familiarity with the meritorious work (nominator relationship/perspective)
- Past affiliation with WAFSCM and its events, if applicable

Brief supporting materials are acceptable, but please refrain from extensive documentation. If appropriate, the Awards Committee may contact persons submitting nominations for additional information.

**Send materials electronically by September 24, 2010**, and please feel free to direct any questions to:

Gary Korb, WAFSCM Awards Chair  
UW-Extension/SEWRPC  
Phone: 262-547-6721  
[gkorb@sewrpc.org](mailto:gkorb@sewrpc.org)

Thank you for the consideration on behalf of deserving individuals, groups, and efforts.



**WAFSCM SCHOLARSHIP PROGRAM  
8TH ANNUAL WAFSCM CONFERENCE  
"Healthy Watersheds, Healthy Communities"  
Wilderness Hotel and Golf Resort  
Wisconsin Dells, WI  
November 3-4, 2010**

The purpose of the Wisconsin Association for Floodplain, Stormwater and Coastal Management is the following:

1. Promote public awareness of proper floodplain, stormwater, and coastal management;
2. Promote the professional status of individuals involved in floodplain stormwater, and coastal management and secure all benefits resulting there from;
3. Promote a liaison between individuals concerned with proper floodplain, stormwater, and coastal management and to encourage the exchange of ideas;
4. Keep individuals concerned with proper floodplain, stormwater, and coastal management well informed through educational and professional seminars and to provide a method for dissemination of information, both general and technical;
5. Inform concerned individuals of pending floodplain, stormwater, and coastal management legislation and other related floodplain, stormwater, and coastal management matters; and
6. Study and support legislation pertinent and necessary to the effective implementation of floodplain, stormwater, and coastal management matters.

WAFSCM is pleased to announce that they will be awarding scholarships for attendance at the 2010 Wisconsin Association for Floodplain, Stormwater and Coastal Management's Annual Conference, November 3-4, 2010, in Wisconsin Dells. **Any current member of WAFSCM or non-member local government official** is eligible to apply for a scholarship to attend the 2010 conference. This is a great opportunity to interact, exchange ideas, make contacts, form partnerships and prepare for an improved and sustainable future for flood damage reduction.

The scholarships will include the registration and lodging for November 3rd. The scholarship recipients will be responsible for their own travel and per diem costs.

Criteria that may be considered in selection of scholarship recipients include:

- Whether the applicant is a Certified Floodplain Manager
- Past participation in the Wisconsin Association for Floodplain, Stormwater and Coastal Management
- Commitment to participate in WAFSCM activities (committees, conference, workshops, etc.)
- Other criteria to be determined

The **WAFSCM Scholarship Application Form** on the following two pages should be completed and submitted by October 1, 2010. If selected to receive a scholarship, you will be required to write an article for the next WAFSCM newsletter *Water Matters* about your experiences attending the conference, or another appropriate subject matter relating to floodplain, stormwater or coastal management.



**Wisconsin Association for Floodplain,  
Stormwater, and Coastal Management**

**WAFSCM SCHOLARSHIP APPLICATION FORM  
FOR  
8TH ANNUAL WAFSCM CONFERENCE  
Wilderness Hotel and Golf Resort  
Wisconsin Dells, WI  
November 3-4, 2010**

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Employer: \_\_\_\_\_

Address: \_\_\_\_\_

City/State/Zip: \_\_\_\_\_

Phone: \_\_\_\_\_ Fax: \_\_\_\_\_

E-Mail: \_\_\_\_\_

***Must be a current WAFSCM Member or non-member local government official.***

Indicate years a past WAFSCM Member: \_\_\_ 2002 \_\_\_ 2003 \_\_\_ 2004 \_\_\_  
2005 \_\_\_ 2006 \_\_\_ 2007 \_\_\_ 2008 \_\_\_ 2009 \_\_\_ 2010 \_\_\_

Certified Floodplain Manager (CFM): \_\_\_ Yes \_\_\_ No

**Check which WAFSCM activities you are willing to participate in and provide support to the association:**

- \_\_\_ Participate on standing committee/s
- \_\_\_ Stormwater Management
- \_\_\_ Floodplain Management
- \_\_\_ Coastal Management
- \_\_\_ Membership
- \_\_\_ Conference
- \_\_\_ CFM (Certified Floodplain Managers)

- Website
- Newsletter
- Awards/Scholarships

Provide support in workshops or other training events

Other (explain) \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**Describe any past involvement or participation you have had in WAFSCM**

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**How will attending this conference assist you in your present position?**

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**Why do you want to attend this conference and what do you hope to gain by attending?**

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Scholarship recipients will be required to write an article for the next WAFSCM newsletter *Water Matters* about your experiences attending the conference, or another appropriate subject matter relating to floodplain, stormwater or coastal management.

Sign below to acknowledge that you have reviewed and agree to the above requirements.

\_\_\_\_\_  
 Name

\_\_\_\_\_  
 Date

Please send this form no later than **October 1, 2010** to:

Wisconsin Association for Floodplain, Stormwater, and Coastal Management  
 Roxanne Gray  
 c/o Wisconsin Emergency Management  
 2400 Wright Street, P.O. Box 7865  
 Madison, WI 53707-7865  
 Phone: 608-242-2311  
 E-Mail: [Roxanne.gray@wisconsin.gov](mailto:Roxanne.gray@wisconsin.gov)





## ***Floodplain Management Booster Shot for the Local Official***

Do you need a break to re-write your Intro to Floodplain Management 101 talk? Does it usually get condensed into a five minute phone conversation with a resident of a SFHA? If your answer is yes, then the six day ASFPM National Conference is exactly what you need. Like a doctor recommended tetanus booster shot, the annual ASFPM Conference will give you a boost to return home and fight the adversaries to good floodplain management. Expert speakers, on-topic sessions, and positive interactions with professionals from diverse backgrounds will provide a well deserved recharge of one's battery.



The benefits of attending the conference are many. Placing names to faces, developing new relationships, and the exchanging of new are ideas are just a few. Since La Crosse County is currently in a re-mapping effort with the WDNR, exposure to Risk Map and meeting the people involved with that was of great benefit. The use of better topographic data and GIS in Risk Map will make the local official's job just a bit easier and that personally, is a promising idea.

Finally, the well of information is quite deep at the ASFPM National conference. As I revisit some of the Plenary Session speakers on YouTube, I am reminded of how positive of an experience it is to attend and be exposed to that deep well. The talk given by Dr. Mileti was very beneficial. While the ASFPM's channel on YouTube is a great resource, it won't take the place of experiencing it live.

<http://www.youtube.com/watch?v=2KyYJPGFS6A>

See you in Louisville. <http://www.floods.org/index.asp?menuid=381>

Doug Kerns, CFM  
Engineering Department, City of La Crosse

***Doug was the recipient of a WAFSCM scholarship to the 2010 ASFPM National Conference in Oklahoma City***



## ***Association of State Floodplain Managers Region V Report (IL, IN, OH, MN, MI, WI) 2010 Conference – Oklahoma City, Oklahoma***

**NFIP/Local Coordination** 16 counties are going final in FY 10, our largest workload to date, which will really ramp up our ordinance review and approval workload. With an average of eight to 10 communities per county, we will definitely overmatch the ordinance review task in our CAP contract. We continue to coordinate the scheduling and management of all open houses, with six planned for this year. Community compliance work has really suffered, as has education and outreach activities.

**NFIP Compliance** FEMA has made close-out of open CAV's a high priority and we are working on identifying how to reduce the backlog. We are planning at least three comprehensive CAV's in FY 10, but R5 workloads makes this very difficult. We continue to work on mitigating major floodway violations which were uncovered through the re-mapping efforts, many involving state highway projects. As a result we are working on guidance for highway agencies at all levels regarding their responsibilities for permitting, floodplain studies and LOMC's in mapped areas. Our draft proposal on this matter is mostly complete, but further negotiations with R5 staff regarding LOMR standards is holding up the release of the final guidance. We are also working on an MOU regarding development in floodplains related to cranberry operations. State statutes exempt cranberry growers from some dam regulations. Last summer's rains caused not only flooding but also several near dam failures. The flooding has uncovered some serious compliance problems; communities that will require a lot of hand holding and patience. Our regional staff is really stretched between inspecting dams and responding to flood related issues and central office has no additional resources to support them.

**CAP and FEMA Staff work loads** FEMA travel budgets are almost non-existent. It's been difficult to schedule routine CAV and training activities with R5 staff. The engineering branch chief is still our primary contact for technical questions, and it's unclear when the transition will occur to the designated staff engineer. Much of DNR central office time in the past year has been devoted to ordinance review and approval, leaving less time than desired for compliance, training and policy development. Due to the heavy ordinance workload this year, the workload mix won't return to normal until 2011.

**Map Modernization** Kenosha, Racine and Washington counties in the Milwaukee metro area continue to be delayed due to new studies and appeals processing. Also had some issues with the use of NAVD 88 data in several counties. Rusk County in the northwestern part of the state refused to adopt the new study and maps and was subsequently suspended on February 3<sup>rd</sup>, along with three other communities in the county. The major problem is the lack of adequate topographic data and concerns about floodplain boundaries along several major lakes. We have begun new studies along the Baraboo and Rock Rivers through the Risk Map program. This will lead to new county-wide mapping in Juneau County and updated mapping in the watersheds through Vernon, Sauk, Columbia, Dodge, Jefferson and Rock counties. The state has also allocated about \$3 million in CDBG dollars to acquire LIDAR data in 14 southern Wisconsin counties. This effort will enable the state to provide county-wide mapping for three of the counties and watershed mapping in the other 11.

**Pre Mitigation Grant Funding at the Federal Level** No comment.

**Mitigation (Restoration of HMGP Funding)** No comment.



## *Association of State Floodplain Managers, Region V Report (cont.)*

**Disaster Coordination** Same concerns. Floodplain management requirements are being ignored/discounted in the rush to expedite aid to affected communities. Not enough resources devoted to assisting community officials with substantial damage inspections, training on minimum NFIP standards, mapping concerns, floodproofing options, etc.

**Levee Safety** No comment.

## SUMMARY STATE REPORT

### WISCONSIN

**CAP Activities** – Wisconsin has committed to do 10 CAV's this year, 10 CAC's, review/approve 104 ordinances, produce three newsletters, and conduct 20 training/outreach sessions. At this point, we're on schedule with everything and way ahead on ordinance reviews, having reviewed and/or approved over 80 to date.

We have distributed over 20,000 copies of our general purpose floodplain management brochure – "Living in the Floodplain" - in partnership with the realtors, builders and local government associations. This brochure covers the basics of buying, building, and altering floodplain areas and also provides information on purchasing flood insurance, mitigation programs, mapping and the LOMC process.

We have developed a new PowerPoint presentation which will be deployed in post-effective map counties to tie together floodplain mapping, regulations and flood insurance. Key topics include why the maps changed (why am I now in?), advice on contesting a flood zone determination (outreach to lender, LOMR, LOMA), flood insurance basics, and grandfathering overview. We plan to schedule a workshop in 10 or more counties this year.

We are also planning a comprehensive update of our floodplain/shoreland management web pages. We plan to include a lot more links to technical data and studies, and federal agency websites and other national organizations.

**Model Floodplain Ordinance** – We have contacted approximately 500 communities as part of our comprehensive ordinance update process, with over 35000 communities having updated their ordinance to date, with most of the rest in process.

When this project is complete, the department will have contacted over 600 communities to update their floodplain ordinances. The first phase began in August 2004, with 37 Mississippi River communities (2001 flood disaster) receiving notification letters. In January 2005, 37 counties which received a 2004 disaster declaration were notified. The third letter went out last June, covering 68 cities and villages in the above counties, with priority based on population, severity of flood damage and age of ordinance. The last letter was mailed in April 2007, covering the remaining cities, villages and counties in the state who are not included on the current map modernization schedule. Most of these communities are in the northern third of the state.

The new model ordinance represents the first comprehensive update since 1986. 22 workshops have been held to date to introduce the new ordinance to local zoning administrators. We have also scheduled additional presentations for local chapters of the Wisconsin County Code Administrators.



## ***Association of State Floodplain Managers, Region V Report (cont.)***

**Floodplain Management Workshops** – We completed our fourth round of 10 county-wide workshops last year, focusing on local officials' responsibilities for permitting new floodplain development and for tracking improvements to existing nonconforming structures. A new format has been developed, targeting all participating communities in one county and bringing them together to discuss floodplain management issues and share concerns which transcend municipal boundaries. We are experimenting with a partnership arrangement with county staff – they handle logistics, make sure everyone shows up, provide coffee and doughnuts, and we just come, do the presentation and answer questions. We have also tried to schedule the workshops in the morning of the day FEMA holds the Flood Risk Open Houses. We will continue this format in a reduced schedule for 2010 and add additional presentations for local government organizations and private organizations with a focus on flood insurance as explained above.

**State Association** – WAFSCM held another successful conference last November in Superior. Approximately 100 persons attended.

**Floodplain Analysis Database** – The database is fully functional and features easy internet access to all floodplain maps in the state of Wisconsin, along with dam safety information and many other layers, including quad maps, aerial photos, soils maps and wetland maps. This database has been very popular with the consulting community and has dramatically reduced the number of external contacts with these folks, freeing up our staff for more pressing duties.

**Floodplain Ordinance Database** – We recently updated our state database to improve its functionality and utility. We have trained our regional staff on database input and will assist central office with the ongoing maintenance needs.

**Mapping** – We have hosted 47 Flood Map Modernization Open Houses in the state since April 2006. For FY 2010, we have done open houses in Grant, Pierce, Manitowoc, Dunn and Lincoln counties and will schedule at least two more open houses in Bayfield and Douglas counties this summer.

**Staffing** – State government is under a hiring freeze and we currently have three permanent vacancies in our program, two engineers and one GIS specialist. We have also lost a half-time ordinance specialist. The Map Mod program is fully staffed at this time, but if any vacancies occur it will be difficult to quickly fill those positions. State staff is taking eight mandatory furlough days per year and further cuts are expected to travel, training and supplies budgets. We're just hoping that no one retires this year, because that position likely will not be filled.



**Wisconsin Association for  
Floodplain, Stormwater and Coastal Management  
(WAFSCM)**

## ***Membership Application/Renewal Form***

For January 2010 – December 2010

Membership Fee: \$20.00

<b>Name:</b>			
<b>Title:</b>			
<b>Organization:</b>			
<b>Address:</b>			
<b>City:</b>	<b>State:</b>	<b>Zip Code:</b>	
<b>Phone:</b>	<b>Ext.:</b>	<b>Fax:</b>	
<b>E-mail:</b>			
<b>Would you like to receive occasional announcements, newsletters and/or notices via E-mail:</b>			
Yes		No	
<b>Other Affiliations:</b>			
<b>Primary Interest:</b>	<b>Floodplain</b>	<b>Stormwater</b>	<b>Coastal</b>
<b>Specific Interest:</b>			

**Please include a check for the annual Membership Fee of \$20.00 made payable to WAFSCM**

Return to: Carrie Bristol-Groll, PE, CFM  
WAFSCM  
c/o Stormwater Solutions Engineering, LLC  
100 East Sumner Street  
Hartford, WI 53027

If you have questions, call Carrie Bristol-Groll at (262) 673-9697 or [cbg@stormwater-solutions-engineering.com](mailto:cbg@stormwater-solutions-engineering.com).