NEWS & VIEWS

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ASSOCIATION OF STATE FLOODPLAIN MANAGERS

Dedicated to reducing flood losses and protecting floodplain resources . . .

INSIDE

An Unprecedented Storm:

What Colorado learned and what it will do better when the rains come again

On Sept. 9, 2013, the rain began to fall in Colorado. This was not unusual in the Rocky Mountains or Front Range urban corridor in September, nor was it unexpected. However, something then happened that no one expected – it continued to rain, and then it rained harder. When the rain finally ended a week later, records had been broken, emergencies declared and the northeast quarter of Colorado was reeling from a series of flood disasters of epic proportions. The September floods had forever changed the way Coloradoans understood the power of nature and flooding hazards.

The regional flooding affected 24 counties in Colorado and approximately 15 percent of the total land area of the state (shown in Figure 1). Eleven states received Presidential disaster declarations. *(Cont'd on Page 2)*

ASFPM Washington Liaison Report

-Meredith R. Inderfurth, Washington Liaison

This report appears regularly in "The Insider," ASFPM's member newsletter produced on odd-numbered months. Visit ASFPM 2013 Legislative and Policy Priorities on ASFPM's website. This and other documents are also available at National Policy and Programs > Working with Congress. We urge you to join ASFPM as an individual, agency member or in a corporate partnership so you can receive this important benefit on a timely basis.

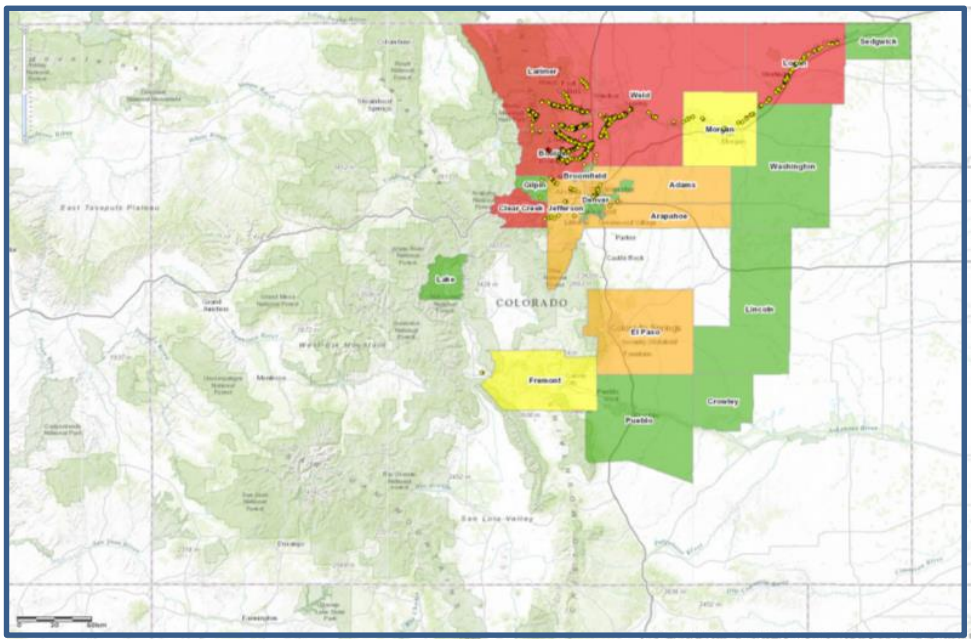


Figure 1. Counties in Colorado affected by September 2013 flooding (FEMA 2013). Severity is indicated by color, where green is least affected and red most affected.

Communities from Estes Park to Boulder, and across the eastern Denver metropolitan area experienced seven-day rainfall totals exceeding the 0.1-percent annual chance storm event, or the 1,000-year storm. In Aurora, much of the 13-inch rainfall total occurred in a single day. The affected areas of Colorado typically experience 14 to 15 inches of rain per year. However, in September these same areas received up to 18 inches (see Figure 2).

The Cache la Poudre River, Big Thompson River, St. Vrain Creek, Little Thompson River and Boulder Creek all rose to between 50- and 100-year flood stages. Portions of the South Platte River receiving water from these tributaries raised water levels to their highest recorded flood volumes, in some cases in excess of a 500-year flood event. These hydraulic responses to the rainfall event are illustrated in Figure 3.

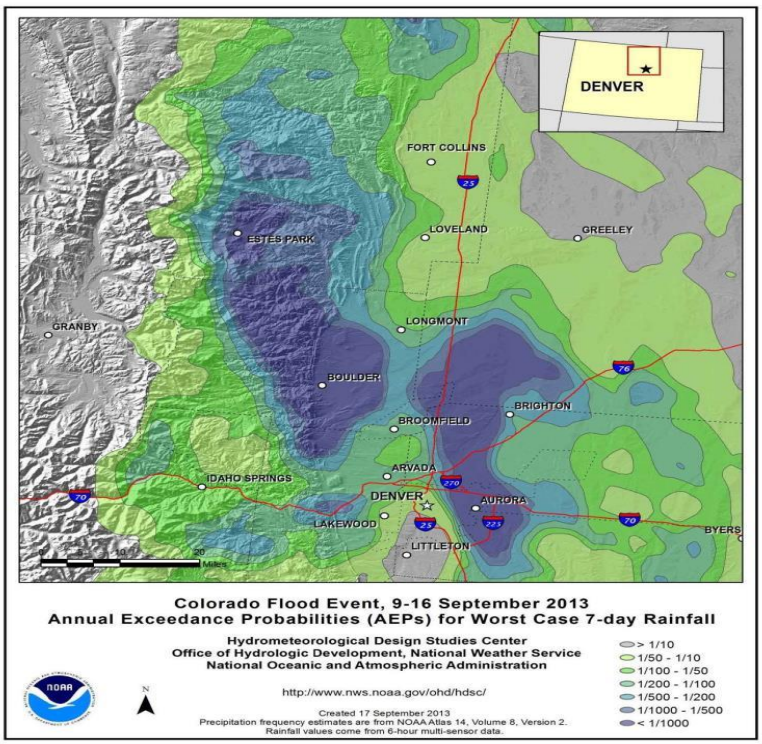


Figure 2 (left). Probability of exceedance of September 2013 flooding across Colorado, as determined by the NOAA Atlas 14 (2013).

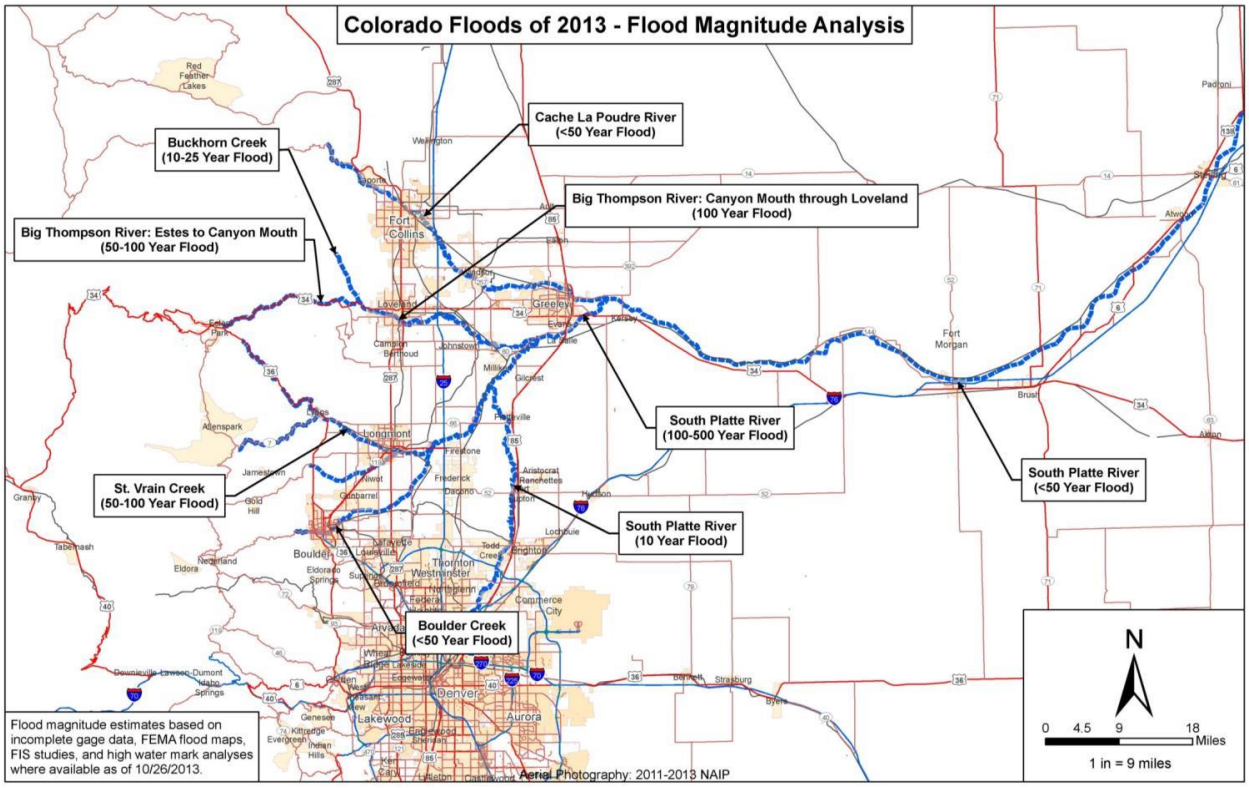


Figure 3. Peak flood magnitudes across northeast Colorado during the September 2013 floods (CDOT 2013).

Human Impact

Colorado storms took a toll on homes, businesses and infrastructure. A total of nine flood-related deaths were reported by the middle of November. Damage estimates published in the *Denver Post* indicated about 26,000 homes had been damaged, and another 1,800 destroyed similar to the houses visible in Figure 4. On Dec. 12, the governor's office reported $815 million in emergency aid had been earmarked from state and federal resources. Emergency response teams evacuated 707 people by ground, and another 2,256 by air, making the Colorado 2013 flood event the largest aerial evacuation effort in the United States since Hurricane Katrina.

Figure 4. Homes destroyed in Big Thompson Canyon, courtesy of the *Denver Post* (Hyoung Chang 2013, *http://goo.gl/TQcthV*).

The towns of Glen Haven, Drake, Lyons and Jamestown were nearly destroyed by flooding, and experienced severe losses and devastation to their infrastructure. The utility and transportation infrastructure was heavily damaged in many cities and towns, and key transportation routes were destroyed for miles, making ground transportation between isolated communities impossible. The damage to the infrastructure from one town, Estes Park, is visible in Figures 5 and 6.

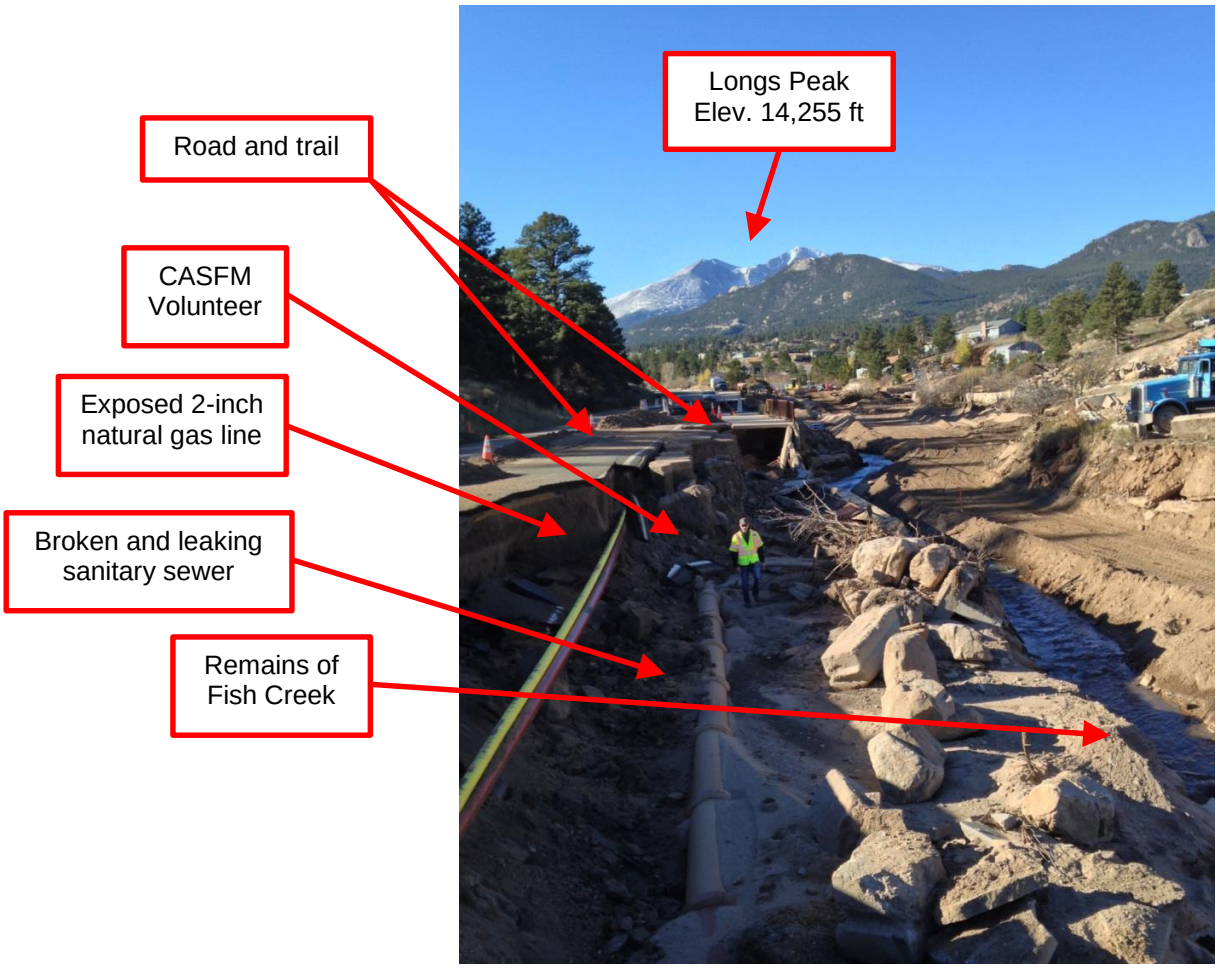


Figure 5. A view of public infrastructure heavily damaged along Fish Creek in Estes Park during a CASFM volunteer effort to collect high water mark information (Varrella 2013).

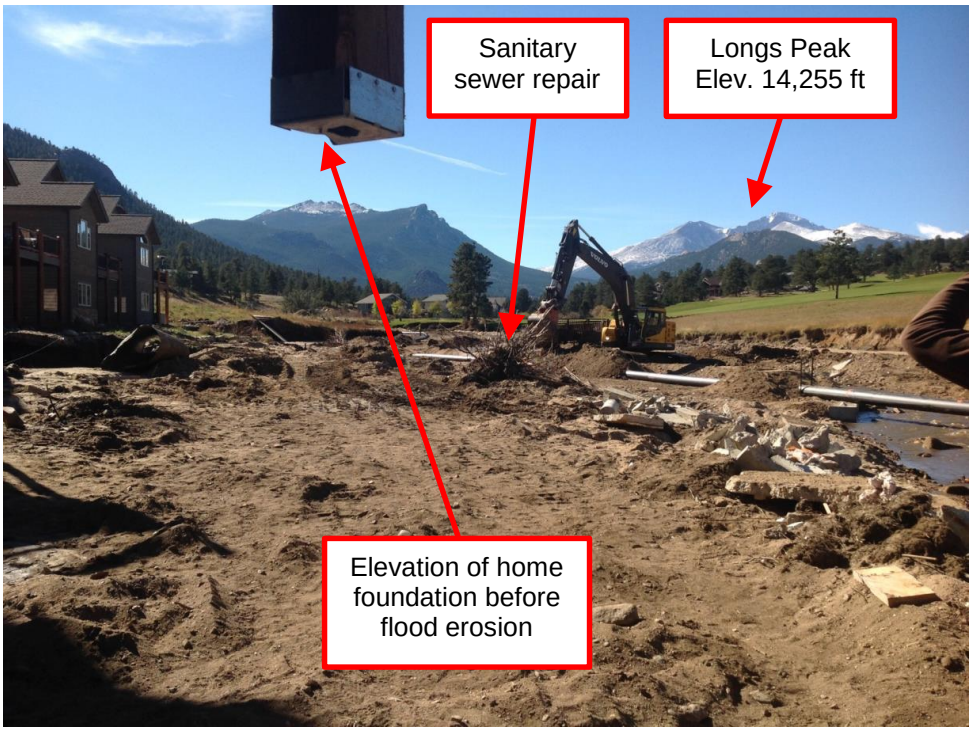


Figure 6. Repair work underway on Fish Creek, as seen from underneath a home foundation eroded during 2013 flooding. Photo was captured during a CASFM volunteer effort to collect high water mark data after floods (Varrella 2013).

Hazard Complacency

The Colorado floods opened the eyes of a public that had become complacent about flood hazards. Prior to 2013, the state had not experienced a Presidential declared disaster since 1999. In the 14 years leading up to the recent floods, floodplain managers, engineers and hydrologists reported a trend in public opinion that indicated a strong perception that flooding would not occur in Colorado. This perception was fueled by a drought cycle that had lasted for 11 years. The bottom line was that Coloradoans had become accustom to ignoring flood hazards and flood risk.

The Colorado Water Conservation Board worked in 2009 and 2010 to adopt statewide floodplain standards exceeding NFIP minimum standards, but public outreach events met with vocal resistance and measurable outrage, providing further evidence of the public perception that flooding was not a Colorado problem.

If flooding is not a problem, mitigation solutions are generally not supported. Without support for structural and non-structural mitigation, communities will be underprepared for disaster. When disaster hits, unprepared communities experience heavy losses, which was the outcome for much of Colorado's Front Range towns and cities. For those that were prepared, nature packed a punch that no one could have anticipated prior to 2013. These events in combination proved deadly and disastrous.

Unprecedented Recovery

The regional flood story of September 2013 is not entirely a story of disaster and destruction. The road to recovery is paved with hope, collaboration and a spirit of community resiliency. Coloradoans are rising up from the debris to talk anew about master planning, pooling resources across jurisdictions on a watershed level, and recognizing that these floods will happen again. The word mitigation is spoken across kitchen tables. In communities across the Front Range, building officials and floodplain administrators have been greeted on the streets by handshakes and thank you's from a grateful public. Volunteer efforts have sometimes been overstaffed, and coordinators have to schedule people for later dates. Towns like Estes Park have branded the phrase "Mountain Strong," to show that a community can face devastation without being devastated.

Two federal highways and three state highways linking mountain communities across the disaster area were all repaired and reopened ahead of their Dec. 1 deadline. All no-flush orders in Estes Park were lifted before winter weather settled into the valley. Community resiliency is not just a buzzword in affected communities, but it has become a rally cry for residents and business owners impacted by floodwaters.

River corridors in the foothills and along the Plains are in many places unrecognizable. Some reaches experienced aggradation of 15 feet, and degradation of 12 feet. Channels migrated laterally outside their previous mapped floodplains, and it is not uncommon for the original channel to be hundreds of yards away from previous banklines. Figure 7, published by the *Denver Post*, shows a severely impacted reach of the Big Thompson River near Drake, where US Highway 34 was destroyed at intervals along its original alignment.

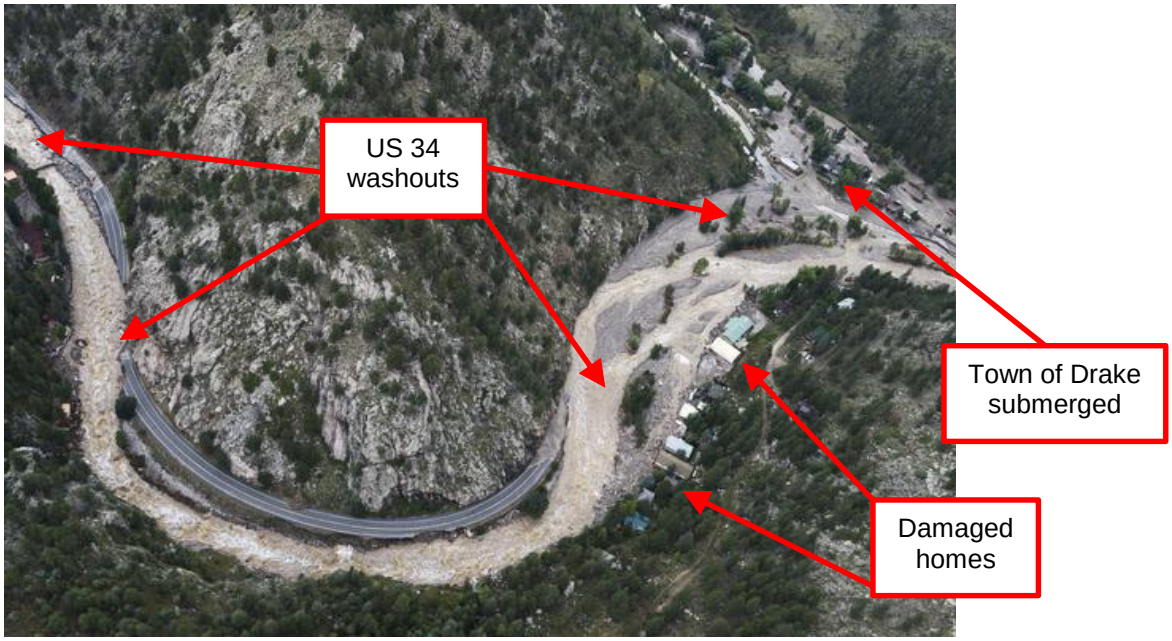


Figure 7. US 34 in Big Thompson Canyon upstream of Drake. Erosion of the highway embankment and damage to adjacent structures is evident along this half-mile reach of the Big Thompson River (Cross 2013, *http://goo.gl/2iLyDI*).

Communities along the Colorado Front Range and Plains have taken recovery into their own hands. Some Coloradoans in the flood zones were surprised to find out there was no government plan or responsibility for relocating rivers to their historic channel alignments. The public works director of Longmont summarized the situation in the Nov. 3 *Denver Post* when he made the following statement, "*Everywhere I've been, people have asked me, 'when are they going to come fix it?' They? There is no 'they.' No cavalry is coming to make the decisions. It's us*."

Estes Park leaders proactively issued moratoriums on all development in disaster-affected watersheds, obtained high water marks, and passed emergency legislation to utilize those high water marks as advisory base flood elevations (ABFEs) until detailed hydraulic and hydrologic studies can be completed. Hundreds of square miles of disaster area have been flown for aerial photography and new ground topography. Communities are developing new master plans for flooded watersheds, and professionals across Colorado are reaching out to colleagues in Wisconsin, New Jersey, Vermont, Texas and other disaster-affected states for wisdom and guidance.

The Colorado Association of Stormwater and Floodplain Managers jumped into action during the 2013 flood event. Members were holding their annual conference as flood waters were rising, and half of the participants abandoned the event to immediately return to work. The newly-formed Outreach and Training Committee mobilized volunteers to assist disaster impacted communities within days of the regional event. CASFM members collaborated with state, local and federal partners to provide expertise to response and recovery plans, and to connect communities in need with experts in floodplain management, fluvial geomorphology, hydrology and hydraulics. The organization will be hosting a flood recovery workshop Feb. 27, 2014, in conjunction with corporate and governmental sponsors and Colorado State University.

CASFM were heavily supported by the expertise and guidance of colleagues across the nation. ASFPM Executive Committee and Board answered the first call for assistance within 24 hours of the first reports of damage to the state. Assistance also came from the New Jersey Chapter (NJFMA), Texas Chapter (TFMA), and colleagues in Oklahoma, Montana and other states. CASFM members were quick to realize that all local resources were stretched thin by the end of day one, and the direct assistance from across the nation was necessary. Without the moral support and direct assistance of our floodplain family, CASFM would have been overwhelmed.

Colorado has clearly adopted a recovery policy that draws from the experience of other states and communities. This provides the flood-ravaged areas of the state with a head start on recovery that considers the social, economic and environmental needs of individual communities. There is a clear commitment to building infrastructure and private development to a safer and more resilient status than pre-2013 conditions.

Success stories in some communities have become models for neighboring towns and cities. In Fort Collins, a 50-year flood passed through the city with minimal damage thanks to a strong commitment to non-structural mitigation practices. Fort Collins employed high floodplain development standards, property buyouts, open space preservation, a robust flood warning system, and ongoing public outreach programs to protect citizens and property from flood damage. The

same mitigation practices saved multiple communities in the Urban Drainage and Flood Control District boundary in and around Denver from damage and devastation. The bottom line, as quoted by Marsha Hilmes-Robinson in a December 2013 FEMA article, is that "*mitigation works"* when it comes to preparing for a disaster.

Bright Futures

Disaster response and recovery in Colorado is a story of human awakening, of applied learning and a commitment to community resilience. Stream teams are forming in watersheds to bring stakeholders of varying backgrounds and needs together for the singular purpose of watershed restoration. These stream teams, led in part by CWCB geomorphologists Chris Sturm, are changing the pre-2013 flood perceptions of natural hazards, and have embraced the concept that flood hazards are foreseeable, human impacts can be mitigated, and that collectively, Coloradoans are stronger together than they are individually.

Sturm was recently quoted by the media posing an important question, "*If you could rebuild it all over again, would you do it the same way?*" This question is currently the subject of much debate across Colorado. With the assistance of national colleagues, local experts, and stakeholder groups like the stream teams, Colorado is collaborating to reshape its future to focus on hazard resiliency. At a recent symposium sponsored by Colorado United, guests from Missouri, Vermont and Kansas encouraged Coloradoans to take charge of their own recovery, to focus on the long-term while achieving short-term successes, and to use disasters to create new visions for their community with a renewed focus on flood hazard mitigation.

It must be stated, and never forgotten, that it takes a community to recover. CASFM is tremendously grateful to our community of national floodplain experts that contributed to our response and recovery, and who still support us daily during the recovery effort. Colorado will be a better state due to everyone's efforts, here and nationally.

Years down the road it is my sincere belief that Colorado will have constructed a future better than the pre-2013 state we knew and loved. The benefit of hindsight is wasted if it is not used to improve human welfare, economic stability and environmental quality. It is these benefits that make all of our lives better, and if we cannot leave a better future for the generations behind us, then we have strayed from our mission and purpose as floodplain professionals. Communities across the globe commit to rebuilding after disasters. Colorado is ready to build back smarter, safer, and stronger ahead of the next floods.

Brian Varrella is a Certified Floodplain Manager and Professional Engineer in Colorado, and currently serves as the Chair of CASFM, and Region 8 Director for ASFPM Board. For more information about flooding and flood mitigation in Colorado, visit www.CASFM.org.

Honors & Awards

A team, made up of several federal agencies, was recognized with a 2013 GreenGov Presidential Award for developing the Sea Level Rise Tool for Sandy Recovery, which is now being used in New York and New Jersey where planning and rebuilding is underway. Pictured from left are Doug Marcy (National Oceanic and Atmospheric Administration), Chris Weaver (U.S. Global Change Research Program), Mark Huber (USACE Army Geospatial Center), Kathleen White (USACE Institute for Water Resources), Mark Crowell (Federal Emergency Management Agency), Susan Ruffo (Council on Environmental Quality), Adam Parris (National Oceanic and Atmospheric Administration), Sandy Eslinger (National Oceanic and Atmospheric Administration on detail to FEMA), Billy Brooks (National Oceanic and Atmospheric Administration), Megan McVey (U.S. Global Change Research Program). Photo by USACE.

City of Fort Collins, Colo. wins sustainability award

The city of Fort Collins recently received the*2013 Special Recognition Award* from the Sustainable Living Association, according to a press release from the city.

Fort Collins was honored for reducing the impacts of recent Poudre River flooding primarily through long-term visioning and partnerships between Fort Collins Utilities' Stormwater Utility and Natural Areas.

These groups have worked together for 15-20 years to protect the Poudre River floodplain through regulations focused on the protection of citizens and property, and also to purchase existing developed land areas, which are then restored to open spaces. Floodplains have the combined advantage to serve as recreational amenities while allowing the river to flush sediment and spread out during floods, refreshing the beneficial functions of the river.

Visit fcgov.com/utilities/what-we-do to learn more.

Letter to the Editor

Your article on levees and flood risk management in the August issue of News and Views properly reported that a National Research Council committee recommended that FEMA analyze flood risk behind levees rather than implementing the proposed Levee Analysis and Mapping Procedure to map hazard. You then asserted that, "Few engineers in the nation are even capable of performing such an analysis..."

Your opinion about capability is contrary to what the undersigned engineers know the facts to be.

The risk analysis that we recommended is consistent in concept with risk analyses completed now by the Corps of Engineers for federal planning studies and for dam and levee safety analyses. It is consistent with risk analyses completed in California and elsewhere for state and regional flood risk management planning. It is consistent with risk analyses completed for power plant design and licensing. These risk analyses are completed by engineers and scientists across the United Sates using procedures that are well documented and tools that are readily available. The analysis does require technical knowledge beyond that required by current methods or the LAMP, but the outcome is better information about flood consequence and likelihood--information that represents the expected performance of any levee or other flood defense measure.

We should not continue on the wrong path just because it is familiar and easier. We should make decisions about flood risk management using information developed with the best available technology. The engineering community is capable of providing that information, using and sharing that technology. To suggest otherwise is irresponsible and incorrect. The following who signed this letter were participants in the NRC committee that reviewed and produced the report to FEMA on how to map and manage flood risk associated with levees.

David T. Ford, PE, PhD
David Ford Consulting Engineers, Inc., Sacramento, CA
Gerald E. Galloway, PE, PhD
University of Maryland, College Park, MD
Clive Q. Goodwin, CEng
FM Global Insurance Co., Johnston, RI
Karin M. Jacoby, PE, JD
Spica Consulting, LLC, Kansas City, MO
Martin W. McCann, PhD
Jack R. Benjamin & Associates, Inc., Menlo Park, CA
Earthea Nance, PE, PhD, CFM
Texas Southern University, Houston, TX
Kenneth W. Potter, PhD
University of Wisconsin-Madison, WI
J. David Rogers, PE, PhD, PG, CEG, CHG
Missouri University of Science & Technology, Rolla, MO

From the **Chair**

William S. "Bill" Nechamen, CFM

Here we go again – another major flood! My last "From the Chair" message talked about the Alberta floods from last spring and wondered if any government leader had the will to say, "We'll bail you out once and that's all." Now we turn to news about devastation in Colorado, with flooding also hitting Wyoming, New Mexico and Nebraska. As with Sandy last year, Congressional debates could turn disaster recovery decisions into a political football.

Meanwhile, the impacts of Biggert-Waters are hitting home, with Congresswoman Maxine Waters herself expressing outrage at the price increases caused by the law with her name on it. ASFPM has been saying all along that affordability is an essential issue, but that flood insurance must still provide an accurate message about risk, even if there is some kind of overt subsidy. The problem not being addressed is that the money has to come from somewhere. As a society, we can wipe our hands of the problem and let people fend for themselves, we can provide some kind of direct subsidy to people either before or after a disaster, or we can close our eyes and assume everything will be all right. The third option hasn't worked out very well in recent years.

As I watched the news of the latest major flood, saw the beginning of the Biggert-Waters flood insurance rate changes, and read news of "Stop FEMA Now" rallies on the east and Gulf coasts, it occurred to me that the situation we find ourselves in is really quite simple. Our entire field can be summed up in two statements:

1. The water must go somewhere, and
2. The money has to come from somewhere.

If we focus on the first statement, we can more easily explain why we can't stop the flooding and why we must make room for rivers and coastal waters. If we focus on the second statement, we can realize that as a society, we will not turn our backs on natural disasters. However, our ability to pay time and time again is limited. So we have to broaden our vision in order to stretch limited funds. We should not do that by focusing solely on the cost of flood insurance. We have to instead focus on the overall best use of funding and programs to identify and communicate risk and mitigate that risk. For example, could $1 billion in direct flood mitigation do more to lower flood insurance costs with greater benefit than a similar dollar value used to subsidize flood insurance directly?

There is a lot of chatter out there these days with respect to flood insurance and flooding. I suggest that we take advantage of the attention being paid to these issues to broaden the discussion, while keeping it simple. The water has to go somewhere and the money has to come from somewhere.

Sincerely,
Bill Nechamen, Chair

What's happening around the nation?

Moving out of Harm's Way

Center for American Progress released a report that finds voluntary buyouts of flood-prone properties are a critical step in protecting communities, and saving federal tax dollars. Read the release and report here.

Seawater Levels are on the Rise

Communities and coastal habitats in the southern Chesapeake Bay region face increased flooding because, as seawater levels are rising in the bay, the land surface is also sinking. A new USGS report released Dec. 9 concludes that intensive groundwater withdrawals are a major cause of the sinking land that contributes to flooding risks in the region. Read the full report.

Addressing the Growing Threat of Recurring Floods in Virginia

Virginia legislators propose a joint committee to foster a comprehensive and coordinated flood mitigation action plan. Read the press release here.

The Bottom Line: Mitigation Works

FEMA spotlighted Fort Collins, Colo. as "On Top of the Game in Floodplain Management." Read the article here.

Lawmakers Seeking Delay on Flood Insurance Rate Increases lost one Legislative Option

Times-Picayune story explaining where the delay on flood insurance premiums stands. Read article here.

Federal Flood Maps Left NY Unprepared for Sandy—and FEMA Knew It

ProPublica, in conjunction with WNYC Radio, released a story Dec. 6 that highlights once again why updated flood maps are so necessary. ASFPM's Executive Director Chad Berginnis is quoted in the article, and a 2005 letter from our current board chair, Bill Nechamen, to FEMA, warning that that the failure to update flood zone maps "will lead to higher than necessary flood damages and more expenses placed on individuals and on FEMA," is featured in this story.

Natural Infrastructure Project in Queens to Strengthen Resiliency against Storm Surges and Sea-Level Rise

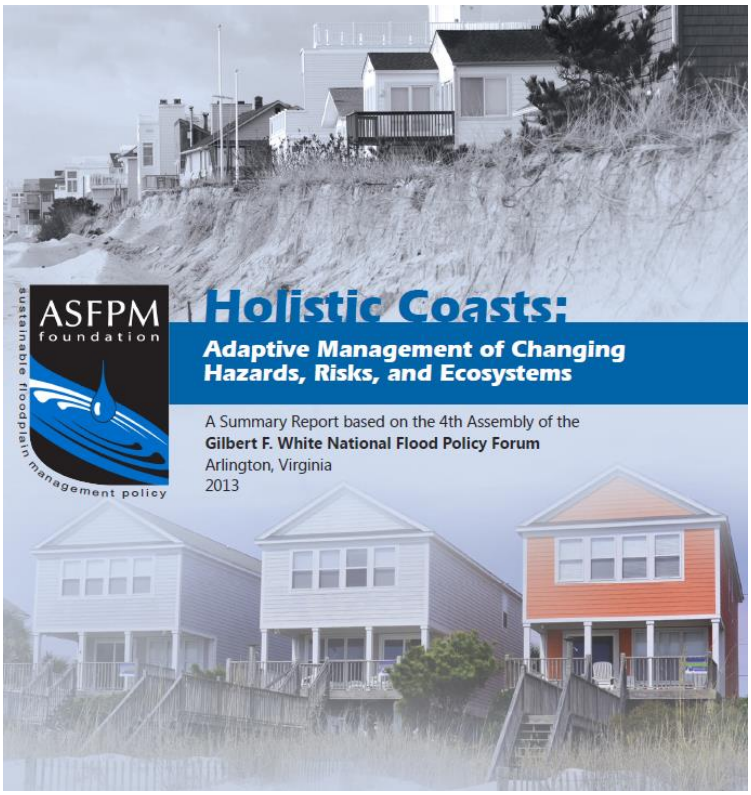
NY Gov. Andrew Cuomo announced Nov. 29 that federal funding has been approved for an innovative resiliency project on a 150-acre span along Spring Creek and Jamaica Bay in Queens to better protect homes and businesses from destructive storm surges. Read the full press release here.

Taking the Very Long View in Floodplain Management

ASFPM member highlight: New Jersey Spotlight just published a profile on John Miller, cofounder and legislative committee chair for the New Jersey Association for Floodplain Management. Photo courtesy of John Miller. Read profile.

"Holistic Coasts" Report Released by ASFPM Foundation

"Holistic Coasts: Adaptive Management of Changing Hazards, Risks, and Ecosystems" is a bold vision – an integrated management approach and philosophy that breaks stove pipes, promotes individual and collective accountability and responsibility, and balances human use, environment and economy into a resilient system.



It is a compilation of 4th ASFPM Foundation Forum, conducted over two days at George Mason University in February 2013, which carefully considered coastal issues as they relate to flood and other hazard management. One hundred invited experts engaged in brainstorming, small group discussions, and group feedback to define major coastal problems and concerns, identify management opportunities and impediments, and develop key action agenda items for broader discussion. The plenary speakers addressed human use and human adjustment, natural resources, international and domestic perspectives, and coastal challenges today and in the future.

Readers of this report will not find all answers regarding how to achieve Holistic Coasts, but will see a starting point for a vision and partnership that, if undertaken successfully, will help secure a sustainable future for our nation.

This report can be found on the ASFPM Foundation 2013 Forum page, along with the Forum's agenda, background papers by participants, speakers' PowerPoint presentations, and assembly participants. This event was sponsored by AECOM, Atkins, Baker, Black & Veatch, CDM Smith, Dewberry, ESP Associates, H2O Partners, Stantec Consulting and URS.

From the **Director's Desk**

Chad Berginnis, CFM
Executive Director, ASFPM

NFIP: What IS the purpose?

This month I want to get downright philosophical. I have been giving a lot of thought lately to the purpose of the NFIP. Whether it is the Oct. 1, 2013 insurance rate changes resulting from the Biggert-Waters Reform Act of 2012 (BW-12) and subsequent Congressional activity to rethink those changes, the Hurricane Sandy anniversary, or the recent flood that most of the front range of Colorado has experienced – I am pondering the purpose of the NFIP and the program's long-term goals.

We only have to look at the legislation itself to understand the NFIP purpose. In fact, if you have never done so, Google 42 USC 4001 and 4002 that speak to the program's purpose. There are 12 different purpose statements. Why is this relevant? Because there is a lot of reaction to BW-12 changes – Congressional and otherwise – where folks are beside themselves that such changes could possibly occur under the NFIP. It seems that a prudent thing to do is step back and really think about the program's purpose. Below are the 12 purpose statements in Sections 4001 and 4002:

(1) Authorize a flood insurance program by means of which flood insurance, over a period of time, can be made available on a nationwide basis through the cooperative efforts of the Federal Government and the private insurance industry.
(2) Provide flexibility in the program so that such flood insurance may be based on workable methods of pooling risks, minimizing costs, and distributing burdens equitably among those who will be protected by flood insurance and the general public.
(3) Encourage State and local governments to make appropriate land use adjustments to constrict the development of land which is exposed to flood damage and minimize damage caused by flood losses.
(4) Guide the development of proposed future construction, where practicable, away from locations which are threatened by flood hazards.
(5) Encourage lending and credit institutions, as a matter of national policy, to assist in furthering the objectives of the flood insurance program.
(6) Assure that any Federal assistance provided under the program will be related closely to all flood-related programs and activities of the Federal Government.
(7) Authorize continuing studies of flood hazards in order to provide for a constant reappraisal of the flood insurance program and its effect on land use requirements.
(8) Make available, by means of the methods, procedures, and instrumentalities which are otherwise established or available under this chapter for purposes of the flood insurance program, protection against damage and loss resulting from mudslides that are caused by accumulations of water on or

under the ground.
(9) Substantially increase the limits of coverage authorized under the national flood insurance program.
(10) Provide for the expeditious identification of, and the dissemination of information concerning, flood-prone areas.
(11) Require States or local communities, as a condition of future Federal financial assistance, to participate in the flood insurance program and to adopt adequate flood plan ordinances with effective enforcement provisions consistent with Federal standards to reduce or avoid future flood losses.
(12) Require the purchase of flood insurance by property owners who are being assisted by Federal programs or by federally supervised, regulated, or insured agencies or institutions in the acquisition or improvement of land or facilities located or to be located in identified areas having special flood hazards.

A few things strike me when I read these purpose statements. First, is the absence of any mention of keeping the cost of flood insurance low. Yet I am hearing a lot of reactions these days that it is or was the intent of the NFIP. Instead, these statements suggest that it is the primary aim of the NFIP to make flood insurance widespread, available and minimize costs by pooling risks. This is where I think the subsidy elimination issue is particularly relevant. Could we have maintained the NFIP without the BW-12 insurance reforms? Was that path really sustainable?

Secondly, there is a recognition of equity, partnership and joint responsibility. Equity or fairness between those who live in floodplains versus those who do not in bearing costs and impacts of at-risk development. That states and communities also have a duty to undertake activities that reduce flood damages and losses, and partner with the private sector in providing insurance. I think there is a lot of improvement needed as far as states and communities go in being active, willing partners in flood loss reduction. It is not just all about FEMA and the Feds (read federal taxpayers)!

Third, flood mapping is really, really important! Of course I argue that one of the most significant reforms in BW-12 was actually the authorization of the National Flood Mapping Program. The good news is that we, as in taxpayers and policyholders, have invested about $6 billion in the nation's flood maps to date (adjusted for today's dollars), but we still have a $4 billion to $7 billion flood mapping job ahead of us to complete flood mapping for the nation before we can get into a routine of maintaining the maps.

Fourth, the program was meant to steer development away from at-risk areas. This is where the NFIP, partner states and locals, have a long way to go to meet that particular purpose statement. Not that the minimum standards haven't reduced risk for structures that would otherwise have been built in the floodplain, but most floodplain managers would agree that minimum standards are focused on how to build more safely in a floodplain versus steering development away from them.

Finally, that flood insurance is a requirement for many types of loans and for receiving disaster assistance. Yet, any recent evaluation of the NFIP suggests 25-40 percent of those required do not have insurance, clearly indicating that we are still not fully meeting the mandatory purchase intent of the law.

The bottom line is that the NFIP has achieved its purpose in some areas, not achieved it in others, and is somewhere in the middle on most. As we move into the 46th year of the existence of the NFIP, we are having a healthy national debate on how to achieve the purposes of this program that has helped many. While it is clear that some changes need to be made to address flood insurance affordability, and ASFPM is deeply engaged in this conversation in Washington (see ASFPM's updated Affordability Paper), sadly none of the Congressional proposals to "fix" BW-12 released to date do anything to further the long-term goals or purposes of the NFIP.

Your partner in loss reduction,

Chad

New ASFPM Staff Member in Madison!

It is with great pleasure that we announce Michele Mihalovich has accepted the public information officer position for ASFPM. This position was previously filled by Katrien Werner who left us in May.

Michele's duties will include copy-editing all major publications, including our bimonthly newsletters "News & Views" and "The Insider," content creation and platform management across all departments to ensure connectedness to our members, and the driver of ASFPM's web, social media, voice, video, images and advanced technologies. She will also serve in the development of proposals and outreach for Science Services.

Michele was most recently editor of the SnoValley Star in Issaquah, Wash., and has served as a reporter for several Washington and Oregon newspapers. Michele is the 2013 recipient of the Washington Newspaper Publishers Association's community service award for her editorials and stories on homeless issues in the Snoqualmie Valley. She is a King County/Seattle Public Health Medical Reserve Corps volunteer and has completed FEMA NIMS/ICS, and also instructed new public information officers on a media panel for Washington Emergency Management.

Michele holds a BA in Journalism and Mass Communication from Iowa State University. She is an avid hiker, having completed a 750-mile trek along the Columbia and Okanogan Rivers in 2011. She is a huge football fan and enjoys photography, biking and gardening in her spare time. Michele began Nov. 4. Feel free to send her a note at Michele@floods.org.

Policy Matters!

Larry Larson, P.E., CFM
Director Emeritus – Senior Policy Advisor, ASFPM

All of us are aware of the heat about the BW-12 rate increases that are just starting to kick in, with another wave due a year from now if the NFIP has the data to implement them. This column is aimed at putting NFIP and the current discussion into context of the bigger picture – national flood policy and national disaster policy. John Barry wrote about the great Mississippi flood of 1927 in "Rising Tide," when there was no federal disaster relief. All disaster assistance came from volunteer groups or the community. Flood insurance did not exist until 1968 because concentrated flooding claims would wipe out many insurance companies that were mostly locally based, and without reinsurance to spread the risk wider.

In 1939 Gilbert White said our national flood policy should protect the occupants of a floodplain from flooding with dams, levees, etc; aid them when they suffer flood losses; and encourage more intensive use of the floodplain.

The NFIP was an attempt to break that pattern and reduce the consequence side of the risk equation [risk = probability x consequences] by adjusting human behavior toward building in less risky areas, and to have those occupants pay for some of the risk through flood insurance. While one intent was to reduce taxpayer-funded disaster costs, the NFIP was never tied to disaster policy and the two continue to largely operate in separate stovepipes.

With only 7 percent of the nation's land in the high risk 1-percent-chance floodplain, it seemed reasonable that building in high risk areas could be avoided or at least reduced or built to standards that would reduce damages. To accomplish this, the NFIP is a quid pro quo program that provides federally-backed flood insurance in exchange for local and state actions to guide development to be less at risk.

The NFIP was a grand experiment for the U.S. Has it worked? Are property owners better off with it? Are communities better off or taxpayers better off? While NFIP regulations have reduced flood losses of structures built in compliance, has the availability of flood insurance and the continuing unfettered availability of disaster relief encouraged even more intense development of high risk flood lands?

The NFIP is more than $24 billion in debt and growing. And even with the 2012 rate increases in BW-12, that debt will likely never be paid. Even if Congress were to clear the program of that debt, it would simply be right back in debt after just one major disaster like Katrina or Sandy.
Without going into too much detail in this column, we know the basic reasons why the NFIP and disaster programs do not reduce flood losses:

- Insurance premiums do not reflect true risk, and have not for more than 45 years;

- The standards for development and mandatory insurance are too low (1 percent chance flood, map yesterday's flood, no freeboard, etc.);
- True risk is not being communicated. And for 45 years, policy holders haven't even been told their insurance was being subsidized, nor that they were at high risk;
- And lastly, communities that make the decisions on where to develop do not suffer the consequences of developing in high risk areas. In fact, they gain the real estate tax revenue, but lack any incentive to do the right thing, which results in federal taxpayers footing the bill for disaster costs and infrastructure replacements and repairs after massive disasters.

Will the NFIP exist 45 years from now? That seems dubious, and will almost certainly be abandoned if the flood insurance premiums cannot move toward true risk rates. It is important to realize that the heat on subsidies is primarily directed at 715,000 insured primary homes—out of a total of 140 million homes in the nation—that is .005 percent of U.S. homes. Surely we can find a way to transition the premiums, and elevate or relocate those homes, so they not only have reduced premiums and are protected from property loss and loss of life, but also reduce the drain on the NFIP fund so it is a viable program, and more importantly, stop the drain on the federal taxpayer for disaster relief.

The Forgotten Great 1913 Flood

While Hurricane Sandy and the Colorado floods are still fresh in our minds, 100 years ago this nation was reeling from the Great 1913 Flood, considered the most widespread disaster in American history, and yet it has largely been forgotten.

On March 23 of that year, on Easter Sunday, weather forecasters in the Midwest predicted a nice, warm day – perfect for showing off new Easter outfits. But by 5:30 that evening, the skies of Nebraska were filled with what many called "Devil Clouds." Seven tornadoes, many F3s and F4s, tore through many Nebraska and Iowa towns, including Omaha, killing 168 people. Gas lines ruptured and fires raged…and then the rains came.

After days of relentless rain across the Midwest, levees in Ohio and Indiana started failing. Entire families were swept away in the floods…as were circus and farm animals, bridges, roads, railroads, houses and entire towns. The Great 1913 Flood was responsible for nearly 1,000 deaths; caused more than $100 billion in damage in 15 states; and states that counted on meat and produce from the "bread basket of the nation" went without because the infrastructure for bringing the food was decimated.

Although the rain finally stopped after three days, all the water that inundated the Midwest had to eventually travel south to drain into the Gulf of Mexico, and the resulting flooding lasted into early May. Weeks after the storm, the Mississippi River spilled over into Memphis, Natchez, New Orleans and other cities along its banks. At the time, weather forecasters had no understanding of weather fronts; early warning systems had not been established; and building codes and floodplain

management were loose, if they existed at all.

And according to History in the Headlines, in the wake of the disaster, states acted to prevent a repeat occurrence. Indiana established a flood control commission, Pennsylvania approved the construction of new dams and stalled flood control legislation in Texas and California was suddenly enacted. The communities around Dayton, Ohio, established the Miami Conservancy District and hired engineer Arthur Ernest Morgan to design a massive system of dams and levees that took five years to build. In the 1930s, Morgan applied his flood control knowledge to manage the larger Tennessee River system after President Franklin D. Roosevelt appointed him the first chairman of the Tennessee Valley Authority. Morgan's greatest legacy may be that since his flood control system for Dayton was completed in 1922, the city has never again been deluged as it was 100 years ago.

If you interested in learning more about the Great 1913 Flood, there are several resources, although be warned, even though we know today that the storm system was connected, most videos, books and articles focus on how the weather events affected individual states.

WFYI Public Television just aired "When Every River Turned Against Us: Lessons from the Great 1913 Flood." Some may recognize several people interviewed in the 30-minute video, like ASFPM member Siavash Beik, with Christopher B. Burke Engineering in Indiana, Scott Morlock, with ASFPM partner USGS, and ASFPM Regional Director Rod Renkenberger with the Maumee River Basin Commission. The video was produced by Gary Harrison, an Emmy award-winning WFYI Public Television producer, in partnership with the Indiana Silver Jackets emergency readiness coalition and the Polis Center at IUPUI, with assistance from FEMA, U.S. Army Corps of Engineers, Indiana Homeland Security, Indiana Historical Society, U.S. Geological Survey, NOAA, National Weather Service, USDA--NRCS and the Indiana Department of Natural Resources.

The Ohio and Indiana Silver Jackets Teams also released this video: http://mrcc.isws.illinois.edu/1913Flood/index.shtml.

The Nebraska Educational Television chronicled the tornadoes here: http://www.netnebraska.org/basic-page/news/devil-clouds-tornadoes-strike-nebraska.

Books

Geoff Williams, wrote "Washed Away: How the Great Flood of 1913, America's Most Widespread Natural Disaster, Terrorized a Nation and Changed It Forever."

Blog

Trudy Bell's blog, "Our National Calamity" is a treasure trove of information about the flood, how the event was connected, and how the science has changed today. Bell, a former editor for Scientific American and IEEE Spectrum magazines, has been researching the 1913 flood since 2003 and has since wrote "The Great Dayton Flood of 1913" and the "Smithsonian 101 volume Weather."

ASFPM Science Services Project Updates and Announcements

Great Lakes Coastal Resilience Planning Guide

The ASFPM Science Services division, in partnership with the NOAA Coastal Service Center, is leading the Digital Coast Partnership to work with coastal communities on the Great Lakes to improve community resiliency and build NAI into community comprehensive planning and management efforts. The major outcome of this project is the development of the Great Lakes Coastal Resilience Planning Guide.

Through the Planning Guide, local floodplain managers, stormwater managers and planners can discover how Great Lakes communities are using science-based resources to address hazards, habitat conservation and restoration, and green and gray infrastructure through a coastal resilience approach. They can use the Planning Guide to explore case studies to access locally-relevant data, tools, methods and solutions for improving existing and future land use, infrastructure and natural resource planning and policies throughout the coastal watershed. The goal is to help local practitioners find answers to these questions and others:

- How are communities planning for the future?
- What's the economic toll of hazards and climate change?
- How are natural hazards affecting coastal communities?
- What information is available for my geography?

This extensive collaborative effort includes all the members of the Digital Coast Partnership: American Planning Association (APA); Coastal States Organization (CSO), National Association of Counties (NACo); National States Geographic Information Council (NSGIC); and The Nature Conservancy (TNC) along with the University of Wisconsin – Madison Sea Grant Institute and University of Wisconsin – Green Bay Extension and many others.

We are looking for ideas for case studies or local stories that highlight planning or management projects that effectively deal with building coastal community and watershed resilience in the Great Lakes. Contact Jeff Stone (jeff@floods.org) with any questions or thoughts about potential case studies or interest in the Planning Guide.

The Nature Conservancy's Coastal Resilience 2.0

ASFPM Science Services is pleased to share news of the release of TNC's Coastal Resilience 2.0, a suite of tools that enables decision-makers to assess risk and identify nature-based solutions to reduce socio-economic vulnerability to coastal hazards. Coastal Resilience 2.0 was developed in

partnership with NOAA, Natural Capital Project, University of Southern Mississippi, ASFPM and many other national and local partners.

The Coastal Resilience suite of tools, available at www.maps.coastalresilience.org, allow you to interactively examine storm surge, sea level rise, natural resources, vulnerable communities and assets and to develop risk reduction and restoration solutions. These tools are just one part of a wider array of resources available at www.coastalresilience.org.

Since the first release of Coastal Resilience tools in 2008, they have been used to reduce risk to people and the environment across the nation and globally. For example:

- Coastal Resilience maps were used in 10 communities in Connecticut by hazard managers before Irene and Sandy for pre-disaster planning because of the easy accessibility to risk maps;
- In Grenada these tools have been used to identify areas for mangrove and reef restoration and with the Red Cross in developing better assessments of community vulnerability;
- They have been critical in the development of statutes in Connecticut that define sea-level rise and enable natural erosion control; and in Bridgeport they help identify effective risk reduction strategies;
- They have been used to identify oyster reef restoration sites in the Gulf of Mexico where restoration and risk reduction goals could be jointly met;
- In the Florida Keys, they are being used to inform sea-level rise planning;
- For post Hurricane Sandy, these tools have been used in New York to identify where marshes may offer the most potential for risk reduction.

A Strategy to Reduce the Risks and Impact of Dams on Floodplains

When a community consider the impacts of dams on their community, they most often think only of the consequences of the failure of a dam. However, there can be severe consequences to a community even when a dam does not fail, and in some instances, operates exactly as planned. With funding from the Federal Emergency Management Agency, ASFPM's Science Services program has developed a strategy document to help floodplain management officials and communities better understand how dams affect flood risk, and the impacts dams may have on their communities. The report includes examples from locations throughout the United States to illustrate some of the issues dam owners and communities face associated with dams and flood risk reduction. Building on these case studies, recommendations and best practices were developed for the following categories:

- Residual risk, hazard creep and mapping guidelines,
- Changing hydrologic conditions,
- Impacts on the natural and beneficial functions of the floodplains,
- Federal and state governance,
- Communication of flood risk,
- Access to data and information security,
- Training and technical assistance,
- Education and outreach and

- Funding.

During the past several years, FEMA has worked to modernize its inventory of Flood Insurance Rate Maps (FIRMs) and has recently implemented the Flood Risk Mapping, Assessment and Planning (Risk MAP) strategy to reduce flood risks in the nation. While this initiative estimates the risks associated with levees, there has been no comparable effort by FEMA to assess the risks associated with dams.

It is known that dams affect floodplains and communities in the watershed in a number of ways, including public safety, flood risk and the environment. This report includes an analysis of the relationship of dams to the floodplain and flood risk management and recommendations on how to better integrate dams into floodplain management and risk reduction activities.

The objective of this project was to develop a national risk reduction strategy for communities affected by dams, especially those not designed for flood protection, keeping in mind the wide range of issues associated with ownership, purpose and the environment. This strategy provides suggestions on:

- How to improve community understanding of the effects of dams on flood risk and floodplain management,
- How communities can find information on dams from their states that may impact their responsibilities, and
- Steps that can be taken to ensure that communities and states are aware of the hazards associated with dams and are prepared to deal with them through appropriate mitigation strategies.

The final report is available for download here.

Commemoration: This project was funded in large part due to the efforts of Les Bond. Les approached the ASFPM Board of Directors with a request to form an ad hoc committee to address the impact of dams on flood risk management. This committee identified some of the key issues needing to be addressed. Using this assessment as justification for the development of a strategy to reduce the risks and impact of dams on floodplains, Les then helped obtain funding that enabled ASFPM to develop this strategic document. Les passed away shortly after this document was published. Thank you – Les. You will be remembered as someone who always found ways to make things happen!

ASFPM Foundation offers 4th Annual Collegiate Student Paper Competition
--Abstract Submittal Deadline is Jan. 31, 2014

Know a college student who has something to say about floodplain or stormwater management?

Every spring the ASFPM conducts an annual technical conference that attracts more than 1,200 people for a week-long event that showcases state-of-the-art techniques, programs, resources, materials, equipment, accessories and services to accomplish flood mitigation, risk reduction and other community goals. This year's competition will be a part of the program at the 2014 ASFPM Conference June 1-6 in Seattle. Collegiate teams consisting of one or more students are encouraged

to submit abstracts on subjects relating to floodplain or stormwater management at the conference, and could be invited to give a presentation at the conference. The goals of this program are to encourage student engagement in floodplain management topics and to identify talented individuals with the potential to make lasting contributions to floodplain management's body of knowledge.

Eligibility:

Any full-time student enrolled in a floodplain management related field at any college or university is eligible to submit. The related fields include, but are not limited to, engineering, geology, geography, planning and public administration (see below for suggested topics list). Papers may be written by a team of students, but only one scholarship will be awarded to each of the top three teams, and only one person will be invited to attend the conference as our guest to present the paper.

Submission Process:

Abstracts should be submitted by **Jan. 31, 2014** electronically as a PDF file to ASFPM Outreach and Events Manager Diane Brown at diane@floods.org. Abstracts will be reviewed by an ASFPM panel and three semifinalists will be invited to submit a full paper, which will be due by April 15, 2014. The three semifinalists will receive up to $1,000 for travel assistance to make their presentations at a special student session during the conference, and they will be judged by an eminent panel of floodplain managers. From these, first-, second-, and third-place winners will be selected and will receive scholarships of $1,000, $500, and $250 respectively.

Topic Areas of Consideration:

Students are encouraged to submit abstracts on studies related to one or more of the following topics: coastal, Great Lakes, riverine, alluvial fans, estuary issues, higher (than minimum federal) stormwater control standards, compliance with flood regulations, flood insurance, Community Rating System, post-flood activities, Letters Of (flood) Map Changes (LOMCs), National Flood Insurance Program reform, flood mitigation planning, noteworthy flood mitigation project success, GIS applied to flood risk assessment, recertification of dams and levees, impacts of decertification, dam failure, levee inventory, non-levee embankments, natural and beneficial floodplain functions, environmental/green construction for flood mitigation, flood outreach/education programs, stormwater, watershed modeling, hydrology and hydraulics (H&H), flood hazard data management and tools, LiDAR, floodplain mapping, Digital Flood Insurance Rate Maps (DFIRMs), local/state mapping programs (including higher standards), floodway standards, geomorphology of floodplains and resultant implications on the built environment, human impacts on floodplains including water quality and ecological factors, Endangered Species Act (ESA) present and anticipated impacts on floodplain management, and Risk MAP.

Faculty Advisors:

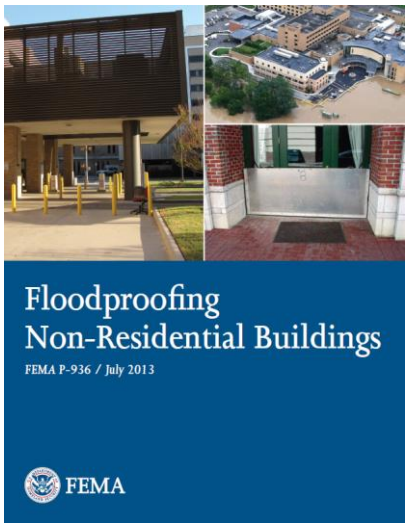
Each student is allowed a faculty advisor or advisors. The advisors may provide advice and resources, and may review the papers and presentations prior to their submittal. The advisors may be recognized as a junior author on papers, however the papers should principally be the work of student teams. Faculty advisors for participating teams may not serve on any of the selection or judging panels.

Abstract Criteria:
The body of the abstract must be 500 words or less, double-spaced, and should concisely describe the research and expected results from the study. The abstracts will be evaluated based on their significance and applicability to the field of floodplain management, and on the originality of the idea of the abstract. The abstract must be submitted in a PDF file by **Jan. 31, 2014**, to Diane Brown at diane@floods.org. Students who have competed as semifinalists in the past are ineligible to submit again. Students who submitted an abstract that was not selected may compete again.

Paper Criteria:
If selected as a semifinalist, deadline for submission of the paper is April 15, 2014.

- Length of paper is six to eight, double-spaced pages, including figures, tables and references.
- The typeface will be 11 point Times New Roman for all parts of the paper. Do not change typeface within the paper.
- The line spacing will be double-spaced.
- The page margins will be one inch on all sides.
- Titles, authors, authors' affiliation should be centered, single-spaced at the top of the first page.
  For questions regarding the competition criteria, contact ASFPM Outreach and Events Manager Diane Brown at diane@floods.org or 608-828-6423. To see student papers submitted in previous years, click here.

Floodproofing Non-Residential Buildings (FEMA P-936) Publication Release



Severe flooding is on the rise in the United States. This can be attributed to changes in weather, increased storm frequencies, and manmade changes to our built environment. Now more than ever, effective mitigation measures such as floodproofing need to be employed. The Federal Emergency Management Agency has developed the publication titled *Floodproofing Non-Residential Buildings* (FEMA P-936) to support the construction of floodproofing projects.

This new publication, which was released in August, reflects the latest information on floodproofing retrofits for non-residential structures, and provides guidance on floodproofing existing non-residential buildings in riverine areas subject to shallow flooding and coastal areas not subject to wave action. FEMA P-936 focuses primarily on dry floodproofing, which is making a structure watertight below the expected flood level. It also

provides an overview of other flood protection measures that can be used in conjunction with or independent of dry floodproofing, including wet floodproofing, floodwalls, levees, utility protection and other mitigation efforts.

FEMA P-936 has the most up-to-date information on floodplain management regulations and building codes that can affect the type and design of floodproofing measures. The publication explores factors critical to a successful floodproofing project, which include design requirements, design loads, site characteristics, flood characteristics, site factors, vulnerability assessments and functional, operational, and economic factors. This comprehensive publication explores several aspects of floodproofing such as:

Dry Floodproofing Measures

- ✓ Permanently closing openings in building's exterior
- ✓ Applying sealants on wall systems
- ✓ Installing flood shields in building's exterior
- ✓ Installing watertight doors inside buildings
- ✓ Dry Floodproofing critical interior core areas
- ✓ Dry Floodproofing utility connections
- ✓ Installing backflow valves and internal drainage systems

Other Floodproofing Measures

- ✓ Constructing floodwalls and levees
- ✓ Using flood damage-resistant materials
- ✓ Elevating utilities above flood levels
- ✓ Installing flood openings to allow the automatic entry and exit of floodwater
- ✓ Using sandbags and flood wrapping systems as emergency measures

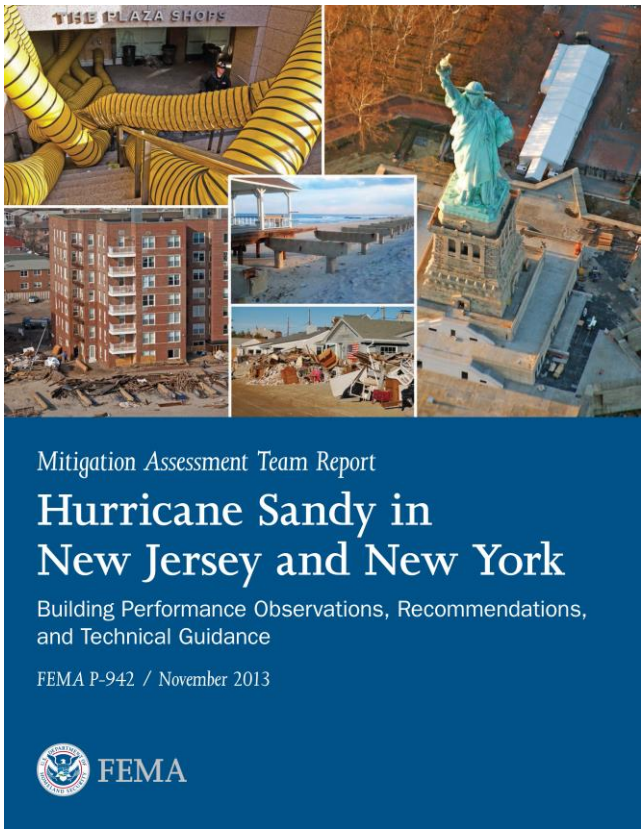
FEMA P-936 will assist local government officials, engineers, architects and property owners involved in the planning and implementation of floodproofing retrofits. Readers interested in floodproofing residential structures should refer to *Engineering Principles and Practices of Retrofitting Floodprone Residential Structures*, Third Edition (FEMA P-259). Readers interested in the design and construction of one- to three-story residential buildings in coastal areas should refer to *Coastal Construction Manual*, Fourth Edition (FEMA P-55).

Hard copies of *Floodproofing Non-Residential Buildings* are available from the FEMA Publications Warehouse. The contact information for the FEMA Publications Warehouse is:

Phone: 800-480-2520 Fax: 240-699-0525 Email: FEMA-Publications-Warehouse@dhs.gov

Three other federal reports were released in December

One was the much anticipated "Mitigation Assessment Team Report: Hurricane Sandy in New Jersey and New York." This report reviews performance of buildings in Sandy. View the report and recommendations here.



USACE and FEMA released their Final Report of the Flood Protection Structure Accreditation Task Force, which was mandated by BW-12 to foster alignment of the agencies levees programs. The report describes actions that USACE and FEMA will take to align processes and information related to USACE levee inspections and assessments and the NFIP levee accreditation requirements. It also provides recommendations for future changes to further reduce risks to life, and to continue progress toward more comprehensive alignment between the two agencies.

FEMA also announced and released a new Report to Congress, called "Including Building Codes in the National Flood Insurance Program." The report describes the impact, effectiveness, and feasibility of including widely used and nationally recognized building codes as part of the NFIP floodplain management criteria. The report found the overall impacts of including building codes as part of the NFIP would be positive in helping to reduce physical flood losses and other hazard losses, which would in turn positively affect the land use planning and regulatory climate. Current model building codes, such as the International Codes used in the US, have flood provisions that are consistent with or exceed NFIP requirements for buildings and structures, and are effective in reducing flood-related damage because of the specific mitigation provisions required in those codes for compliance.

All three are important, and ASFPM looks forward to hearing reactions to the reports.

Les Bond's wife gifting copies of "Federal Flood Policies: The Cause of Flood Disasters

"Federal Flood Policies: The Cause of Flood Disasters," which was written by Leslie A. Bond before he passed away in September, discusses past and current federal flood policies on flood damage reduction and the need for revisions to our current policies. Les's widow Estelle would rather see his message carried out than earn money from book sales. She donated CDs of his book and is giving them away for free. If interested, email French Wetmore at French@frenchasoc.com with your mailing address info to get your free CD. A description of the book follows.

"Federal Flood Policies: The Cause of Flood Disasters," released last spring, is written for two audiences: those who make federal policy and the floodplain management professionals the policy makers turn to when they have questions. Flood disasters cost Americans between $40 billion and $60 billion, on the average, each year. These costs are increasing at 5-10 percent each year. The book examines the current high cost of flood disasters and the causes of these rising costs. It then recommends a comprehensive framework for changes in federal policy. Whether or not you agree with the recommendations, the facts and figures in the book can be very useful. More information can be found at www.federalfloodpolicy.org. Les had 40 years of experience in floodplain management, flood hazard mitigation, flood warning and related areas. He had a B.S. in hydrology, a Masters in Public Administration, and worked for Maricopa County Flood Control District and Arizona Dept. of Water Resources before starting LA Bond Associates in 1987. Les was a very active ASFPM member since 1983, when he attended our first national conference, and served in numerous Board and Committee leader capacities over the years, including Vice Chair and our first webmaster. He received ASFPM's prestigious Goddard-White Award in 2005, our Jerry Louthain Service to Members Award and is designated as an ASFPM Pioneer.

ASFPM 2014 – Seattle, Washington

The Northwest Regional Floodplain Management Association (NORFMA) will be our host when we convene June 1-6, 2014, at the Washington State Convention Center in downtown Seattle to discuss issues relevant to our theme "**Making Room for Floods & Fish**." The Call for Presenters was a smashing success once again and the Program Team is hard at work sorting presentations and formulating an exciting and educational conference program. Selected presenters will be notified in January of their placement in the program. Keep an eye on your inbox for more information as it develops!

The hotel reservation website is now live. Please visit www.asfpmconference.org and click on "The Hotel" to complete your reservation. We look forward to seeing you in Seattle!

ASFPM Calendar

The events listed below are only the highlights of events of interest to floodplain managers.
A complete list of flood-related training, conferences, and other meetings, including ALL the workshops and conferences of State Chapters and associations is always posted at http://www.floods.org/n_calendar/calendar.asp

June 1–6, 2014: 38TH ANNUAL CONFERENCE OF THE ASSOCIATION OF STATE FLOODPLAIN MANAGERS, Seattle, Washington. Contact (608) 828-3000 or see http://www.floods.org

May 31–June 5, 2015: 39TH ANNUAL CONFERENCE OF THE ASSOCIATION OF STATE FLOODPLAIN MANAGERS, Atlanta, Georgia. Contact (608) 828-3000 or see http://www.floods.org

May 15–20, 2016: 40th ANNUAL CONFERENCE OF THE ASSOCIATION OF STATE FLOODPLAIN MANAGERS, Grand Rapids, Michigan. Contact (608) 828-3000 or see http://www.floods.org

May 21–26, 2017: 41st ANNUAL CONFERENCE OF THE ASSOCIATION OF STATE FLOODPLAIN MANAGERS, Kansas City, Missouri. Contact (608) 828-3000 or see http://www.floods.org

Looking for training opportunities to earn CECs for your CFM? If so, be sure to check out our web calendar, which already has several training opportunities listed for 2014! Search the calendar by state using the directions below, or use the category drop down menu.
http://www.floods.org/n-calendar/calendar.asp

- Go to the calendar and click on the search feature icon at the top of the calendar. Type your state's initials in parenthesis (for example "(WI)") into the search field and it will pull all the events (training, conferences, etc.) that are currently listed on the calendar for your state. What a great way to find upcoming training for CECs! The only events without a state listed in the event title are EMI courses which are all held in Emmitsburg, MD.

Questions, items for publication and other editorial matters should be directed to:

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editor@floods.org

Deadline for News & Views is the first day of odd-numbered months.
For address changes and member services, contact the ASFPM Executive Office at the address in the box above.

NEWS & VIEWS

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