FLOODPLAIN MANAGEMENT IN 2050

The participants in the Second Assembly of the Gilbert F. White National Flood Policy Forum agreed that the future in store for us if we continue our current approach to flood hazard mitigation and water resources management is not a pretty sight. The final report of the Forum, which convened 92 experts to debate the prospects for “Floodplain Management 2050” [see News & Views, December 2007, page 1] has been released by the ASFPM Foundation. It notes that existing programs and policies at all levels are short-sighted, fragmented, focused on economic development at the expense of sustainability, and insufficiently grounded in science. Further, the legacy of decades of using these approaches is overtaking us even as new conditions make meticulous planning and long-term management even more critical.

The Forum experts declared that new ways of thinking and operating are needed to achieve safe and sustainable relationships with our water resources. The report lists dozens of steps that are crucial to remedying gaps in research, data, and policy, organized around these six action principles.

- Make room for rivers, oceans, and adjacent lands. Avoiding these inherently dangerous and environmentally sensitive areas when contemplating new or replacement development or infrastructure is essential. A gradual pattern of voluntary resettlement of people away from certain of these areas needs to be initiated.

- Reverse perverse incentives in government programs. Too many federal—and corresponding state and local—policies and activities for water-related resources and hazards operate at cross purposes and even foster activities that undermine safety and environmental quality.

- Restore and enhance the natural, beneficial functions of riverine and coastal areas. It should be a national priority to reclaim lost riparian and coastal resources wherever possible, including dunes, bottomland forests, estuaries, and marshes.

- Generate a renaissance in water resources governance. Clear, integrated vision and policy are essential. We need legislation for a national policy on floodplain management and riparian and coastal areas, as well as an official shift to a goal of sustainability.

- Identify risks and resources and communicate at public and individual levels. Individuals, communities, and decisionmakers at the highest levels all need concrete, easy-to-understand, visually appealing information about flood risks and about environmental degradation.

- Assume personal and public responsibility. The nation needs a framework that will foster individual and localized responsibility for flood risk and for stewardship of water-related resources.

>>> Printed copies of the 65-page report will be available for purchase in a few weeks. Meanwhile, it can be downloaded free at http://www.floods.org/Foundation/Files/GFW%20Forum%20Report.pdf.
Dealing with the Public and Usual Suspects

The cornerstone to any floodplain management program is that “bug-a-boo” known as education and outreach. [Hey, that sounds like the French word “beaucoup.”] As you may know from first-hand experience, assisting your community to grow in ways that protect against future floods is an important responsibility. The hard part is inserting that into the heads of the public and the elected officials (whom I refer to as “the usual suspects.”)

Your approach in educating the two groups—your community’s citizens and its locally elected officials, state officials and legislators, that sometimes puzzling Congressional delegation, and any miscellaneous others who might be blinded by self-created rainbows—can be multi-pronged or consist of a single thrust of logic. [Much like the good energy flow advocated by Feng Shui or the balance of Chi, your mental preparations should be centered.] Floodplain managers tend to be intense creatures that eat “inconvenient truths” for lunch, so pulling the emergency brake in a public meeting can be difficult at times. Sneaking up on the people’s preconceived ideas can be your greatest challenge.

As we all know, the collateral issues produced by the flood map modernization initiative often lead to interesting opportunities to excel. Let’s look at the following hypothetical scenario. After a three-year process, a countywide preliminary Flood Insurance Rate Map (FIRM) was delivered to the community officials and a Flood Risk Open House that attracted 70 people has been conducted. All of the public’s questions were answered and advice was given to people who were newly mapped within an A Zone. You move on to the next project. Then, one month into the protest and appeals period, the local media begins to spin out inaccurate tales of woe, your phone begins to ring constantly, and your e-mail in-box fills with reports of wild rumors about the accuracy of the maps. There are tales of various levels of politicians demanding a review of the entire federal mapping program, angry developers, Realtors®, and homeowners carrying pitchforks and torches marching down the streets in search of the horrid monster that “put them into the floodplain.” You know, mass hysteria. Oh, and now you are summoned to a “town hall” style meeting by the local Congressional delegate’s field office. [One of the local officials uses the phrase “you will be a fish in the barrel.”] The crosshairs are now apparently centered squarely on you.

So, what is your next move? How do you deal with an anxious and misinformed public? [Although it should be impossible for an individual to base personal decisions concerning the flood risk to his or her greatest personal asset (the home) purely on hopes or wishful thoughts, many people don’t hesitate to do just that.] Has someone created bad karma, kismet, and serendipity? Possibly, but it is your duty to take charge and turn things around.

Only a small percentage of people in any given community really understand the risks associated with flooding. To increase the public’s awareness concerning the 1% chance flood within their locale, consider the use of websites, newspaper articles, letters to the editor, on-line blogs, mail outs, or other forms of dissemination. All can be utilized to enlighten those who are willing to listen, read, and learn. There is no such thing as too much information, especially if you can get it in the hands of a reporter who will use it to provide accurate sound bites to the public. [Unfortunately, I always seem to be interviewed by THAT reporter who is the local “spin meister” with an agenda.] Is there any way out of this tempest? I would submit that the truth concerning the mapping process itself should work. [I know, truth can be a matter of personal perception, but we ARE talking science here.]

Now back to the “Jerry Springer Show”… I mean the “town hall” meeting scenario. Another briefing with the local officials is scheduled, to be followed by a two-hour moderated grilling by what is promised to be a couple of hundred angry citizens. (It seems that an excellent flyer is being circulated by an unknown person(s) that is designed to elicit a desired response from the people and get them there en masse.)
Musings from the Chair (cont.)

Keep in mind that these people are your fellow citizens, possibly pay your salary or a portion of it, and are concerned that they have been identified as being located in a high risk flood zone. [You will have to ignore the political agendas at play.] Now, huddle up with your mapping partners and your Public Information Officer. A conference call with your FEMA regional office and other select individuals and your team formulates an informational plan of attack of which Rommel would have been proud. Your very own floodplain public outreach “schwerpunkt.”*

The key point to make is that the floodplain’s high risk area has always been there, just not mapped in all cases. [Surely, after the locals understand that the entire state is a mapped flood zone (low, moderate, and high risk zones) and they are shown a good digital earth model topo map of the county depicting the big picture of the actual surface, they will calm down… ☺] After all, the preliminary DFIRM provides a more current and detailed depiction of the flood zones in what will be a GIS-compatible format and an excellent tool for mitigation. You prepare handouts, display boards with photographs of neighborhoods during a recent flash flood, copies of all the correspondence between you and the local officials, and the sign-in sheets from each meeting that was conducted with them. It’s time to mount up, plug in the iPod, put a smile on your face, and drive to the site. [One last item, remember to keep in mind that “Rational-Emotive Behavior Therapy” workshop you recently attended. You learned that there are four parts to any experience: (1) event; (2) meaning/interpretation; (3) feeling/emotion; and (4) behavioral response. In other words, an event doesn’t cause your reactions, your neo-cortex and lymbic systems accomplish the deed.] You think you’ve thought of everything, so what could go wrong?

The meeting with the local officials goes well enough. The local press blows in for quick sound bites and quotes from the group. The sound of clanking metal chairs tells you that the crowd is gathering in the next room. [It will be absolutely critical that at no time you cast a furtive glance towards the exit. They will sense your unease and cut you from the herd for special attention.] Every public map meeting is different, but it will generally have a common feeling that will resonate throughout the session, that richly ironic mentality of “Y’ALL put me in the floodplain.” This will be a tough nut to crack. Now, take your seat in front of the crowd and answer the questions that the moderator has prepared. Then, take a few minutes of time to introduce your team, explain the National Flood Insurance Program, the concept of floodplain management, and the national/state flood map modernization initiative.

Now, as the TV camera rolls, it is time for the public to question you directly. The most frequent comments (very few actual questions) will consist of “It has never flooded here,” “The land didn’t change since the last map,” “It will only happen once every 100 years,” “How dare you put people into the floodplain and make their homes worthless,” “If we spend our money to provide better information, we should be reimbursed by the government,” “Why didn’t you walk the entire area to see how the water flows,” “You just want to sell flood insurance policies to pull the NFIP out of debt,” “You said that I’m in an approximate study area, so your map is just guessing,” “I had a LOMR, now it is no good,” etc., etc.. [The loud applause and shouting as the person standing at the microphone hits you with what the crowd perceives as a real zinger can be distracting, but ignore it.] Stay cool, smile, and have some convincing answers ready. [FYI, I’ve dropped the term “approximate” from all of our training and outreach materials; I can’t find it in 44 CFR. The proper descriptive term for an A Zone is “Area of special flood hazard without water surface elevations determined.”] The following morning, the local newspaper will run an editorial supporting/quoting the crowd and not your team. So, now y’All have become part of the local myths, legends, and stories that are told to scare small children. [I wonder if a decertified levee on the map would add yet another wrinkle. If you consider the recently flooded areas in the Midwest, due to the failure of several levees vs. the unreported communities that mitigated with buyouts or elevation projects and suffered little or no damage, well . . . who knows?] Wouldn’t such a meeting be fun?

Does this hypothetical scenario scare you? It shouldn’t, for I hear that it happens quite frequently. So, what is my point? How should you handle such a public meeting? Have you done it and come out unscathed? Hopefully, many of you have. If you have thoughts and/or materials that your Association’s members would find useful in the delivery of flood risk information in a public setting, please contact the Training and Outreach Policy Committee. [Yes, this is yet another article asking y’All to get involved with our policy committees.] Just as there is strength in numbers, there is strength in knowledge.

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* Schwerpunkt (It’s a German word.): center of gravity, focal point, area of concentrated effort.
WILL FREEBOARD BE INCLUDED IN THE
2009 INTERNATIONAL RESIDENTIAL CODE?

Rebecca C. Quinn, CFM
Consultant to FEMA’s Building Science Branch,
Mitigation Directorate

There’s a chance the answer to that question could be “yes”—but it’s still up in the air and your support is still needed.

In the December issue of The Insider FEMA reported that it had proposed a modification to the International Residential Code (IRC) to include one foot of freeboard. Based on the ASFPM’s updated information from National Flood Insurance Program State Coordinators, many states already require freeboard and more than 60% of the NFIP’s communities that have mapped floodplains administer freeboard standards.

The total number of communities that require at least one foot of freeboard is even higher, because only a few states estimated the number of communities that voluntarily adopt this added factor of safety. Clearly, there is widespread recognition that a minimum requirement established by the NFIP 40 years ago can fall short of providing adequate protection today to homes and businesses built in floodplains.

Earlier this year the International Code Council (ICC) held hearings to deliberate proposals to amend the I-Codes for the 2009 edition. The committee handling the IRC proposals has 12 members, including four code officials (local or state), four builders representing the National Association of Home Builders, and four others (representing engineers, architects, code consultants, or the insurance industry).

FEMA presented testimony on the benefits of freeboard, summarizing the concrete evidence in one of the reports of the NFIP Evaluation in terms of damage avoided as well as annual insurance savings. Anticipating some opposition based on the added costs, FEMA suggested that those who are concerned about housing affordability should also be concerned about whether homeowners can afford flood insurance. Adding one foot of freeboard lowers the cost of insurance by 20 to 40%—savings that owners will enjoy year after year, for the life of the home.

FEMA’s testimony also highlighted the ASFPM’s support and that of state chapters across the country. The New Jersey Association for Floodplain Management testified in support and, of particular importance, had asked for and received a unanimous vote of support from the board of the Building Officials Association of New Jersey.

Only the National Association of Home Builders spoke in opposition. In particular, NAHB expressed concern about how costly it is to truck in large quantities of fill in order to elevate homes. FEMA countered by noting that there are other, less expensive, ways to elevate homes.

After the debate, the committee initially voted to disapprove the proposal to add freeboard to the IRC. A motion was made for floor action, which allows any eligible attendee to vote. Based on a majority vote, the floor action was to approve the proposal.

Since then, FEMA has met with an NAHB code committee to review the economic analyses contained in the NFIP Evaluation report and to discuss the merits of freeboard. As a result, the NAHB has agreed to support freeboard in V Zones, where the benefits are most significant, especially in terms of reduced flood insurance premiums.

While this is good news, there is one more step to get freeboard into the IRC. Both the action of the committee (to disapprove) and the floor action (to approve) will be debated again at the final action hearing in September, to be held in Minneapolis, Minnesota. Two-thirds of the governmental members in attendance must vote to overturn the committee’s action and to sustain the action to approve freeboard.

This is can be achieved with your help. Two other proposals will also be considered: one to add freeboard only in V Zones; and one to add freeboard in V Zones and Coastal A Zones (where such zones are delineated). If you support including freeboard in the IRC, reach out to code officials who are voting members of the ICC, and ask for their support and presence at the code hearing scheduled for mid-September in Minneapolis.

Contact me at your earliest convenience to learn more about how you and your state chapter can support the proposal (rcquinn@earthlink.net).
NEW ROUND OF MIDWEST FLOODING PUTS NATIONAL POLICY IN PERSPECTIVE

Tom Waters, P.E.
CH2M HILL

With the recent horrific flood occurring in our Midwest, and with heavy heart, I recently shared with my company, CH2M HILL, the following thoughts on our national approach to flood protection.

Those of us who work in flood policy and programs know that there is no national flood safety standard. Many people confuse the 100-year level of protection (1% annual chance) as a national safety standard. As David Maurstad, FEMA Mitigation Director, says, “the 100-year standard is an actuarial decision for insurance risk.” We use the 100-year storm for insurance purposes and to regulate floodplains. Most of the time, the designed protection is established by the level of protection the community can afford, greater or less than the 100-year standard. Almost every year we experience floods around the nation that exceed the 1%-annual-chance (100-year) storm or result in failure or overtopping of a flood control structure that was designed based on the 100-year event or the constructed level of protection. We who work in flood policy and programs have coined this phenomenon “residual risk,” meaning that Mother Nature regularly chooses to ignore our regulatory requirements and the protection levels we can afford. Many scientists are predicting that climate change will elevate residual risk, with storms becoming more erratic, frequent, and intense. Unfortunately, many who live in flood prone areas believe they are safe if government regulations are in place and levees and flood control structures exist. They do not understand their risk, let alone residual risk. They do not realize that we have no safety standard.

Our country has become prosperous with much of our population settling along rivers and coasts. Much of the flood infrastructure in this country was designed and constructed with economic development as a primary objective. Normally, a federal investment in water infrastructure is made in the plan with the greatest “net economic benefit” consistent with protecting the nation’s environment (the NED plan). The Flood Control Act of 1928 put the federal government into the business of assisting local communities in providing flood protection for their citizens, and the Water Resource Development Act of 1986 required that flood protection be cost-shared between the federal and local governments. We have been wildly successful economically in this country, and the protective infrastructure has yielded billions of dollars of economic benefits. I believe, along with many of my colleagues, that we have now entered an era wherein our country is in transition from an economic development rationale for flood management and infrastructure to a sustainment rationale. Sustainment, however, does not have a simple unitary definition. To me it means that we need to protect life and sustain our economic prosperity by making prudent investments in infrastructure while we make commensurate investments to sustain life, culture, and the environment. The tricky balance point, in my opinion, is that we must make infrastructure investment decisions that do not increase risk to life, culture, and the environment.

The history of the 2008 Midwest floods has not yet been published, but when it is, I believe we will learn that residual risk and economics were significant factors in the large amount of flood damage. The vast majority of levees that were overwhelmed and breached were non-federal levees. I believe we will learn that flood infrastructure designs were exceeded and communities were challenged financially to maintain or improve levees, even as development continued behind the levees. We will also once again have the national conversation regarding government’s responsibility for people who choose to live in flood prone areas.

We will debate again the merits of the National Flood Insurance Program (NFIP). Those of us who have worked for and with FEMA over the years know that the NFIP is not just about insurance. Insurance experts will tell you that the NFIP is not really an actuary-based insurance program. It is a government program that has three components: insurance, hazard identification, and risk management. The NFIP requires that people who live in high-risk areas pay to offset the costs of taxpayer-funded disaster assistance. [continued on next page]
Midwest Floods & National Policy (cont.)

Before Hurricane Katrina, the NFIP had been self-supporting. After 20 years “in the black,” Katrina damage caused the program to overrun by approximately $17 billion. So from a monetary standpoint, the program has been reasonably successful in shifting the flood cost burden to those who live in flood prone areas and away from the taxpaying public. It has also averted damage and saved lives due to its inherent regulatory requirements.

The problem with this debate is that the NFIP is only one tool for managing flood risk. FEMA, the U.S. Army Corps of Engineers, and others have a host of flood management programs that need to be integrated to sustain life, economic prosperity, culture, and the environment. The umbrella for this integration is effective mitigation planning that takes into account a wide array of options for effective floodplain management, including structural and non-structural hazard mitigation programs (buy-out, relocation, elevation of structures, etc.), hazard mitigation planning, structural flood control projects, stream gauging, flood warnings, and weather forecasting. The ideal is that this planning is incorporated into a broader view of the water cycle and the competing purposes of water, and preferably in a basin or watershed context. We need incentives in the current approaches to encourage state and local partners to go beyond minimum standards to reduce total damage and foster innovation and the integration of programs to achieve multiple objectives, such as enhancing floodplain management and reducing flood damage while improving water supply and water quality.

The requirement to purchase flood insurance is waived for people who live in floodplains behind certified 100-year levees. Given residual risk above the 100-year regulatory requirement, this is a very contentious issue today, with many calling for all people in floodplains to pay flood insurance, regardless of levee protection. It becomes an even more significant issue when we consider that the condition of many of our nation’s levees was not known until Katrina put a spotlight on levees. As we have learned since Katrina, many levees cannot meet original design requirements.

Larry Larson, Executive Director of the ASFPM, maintains that the issue is one of who pays for development in high-risk areas. “Those who pay, of course, are mainly those not living at risk, rather the taxpayers, who will pay either now or in the future. Ignoring the cost now of developing in risky areas simply means someone will pay those costs in the future—whether it be the rest of us in the community, state, or nation, or our children and grandchildren.”

A lot of good things have happened in flood programs and policy since Katrina, and perhaps the 2008 Midwest floods will serve as a national reminder that we can’t afford flood amnesia in this country. FEMA and the Corps are working together better than at any time in the history of these two agencies. The Intergovernmental Flood Risk Management Committee (IFRMC) they formed immediately after Katrina, along with the ASFPM and the National Association of Flood and Stormwater Management Agencies, is alive and well and driving improvements in national flood programs and flood policy. The Corps is inventorying levees around the country, developing new risk-based planning approaches, and emphasizing public safety and the consideration of social, cultural, and environmental impacts, as well as economic, in new project studies. FEMA and the Corps are working to update levee certification methods and criteria and Executive Orders pertaining to floodplain management are being updated. The post-Katrina Interagency Performance Evaluation Team (IPET) launched new methods of storm modeling and cutting edge methods to analyze risk and reliability.

FEMA has embarked on a program to update and modernize the nation’s flood maps (MapMod) and to generate a new accurate, credible, continuously updated national mapping program (RiskMAP) focused on an integrated and comprehensive approach of hazard identification, watershed-based risk assessments, mitigation planning, and mitigation. If properly funded and emphasized by Congress and the Administration, the concept for this program has the potential to become the hub for integration of the various federal programs and help the country better and more consistently define, plan, regulate, mitigate, and communicate flood risk.

[continued on next page]
Midwest Floods & National Policy (cont.)

In May of this year, the Senate passed its version of H.R. 3121, the National Flood Insurance Reform Act. Highlights of the bill, subject to a Conference report, included measures to ensure the future of the NFIP; emphasize and enhance communication and outreach to states, communities, and property owners about flood risk; address residual risk associated with levees, dams, or other human-made structures; and authorize federal remediation of the approximately $17 billion deficit in NFIP funding.

Barbara Boxer, Chair of the Senate Committee on Environment and Public Works, with strong support from other Congressional members, has indicated her intent to push through another Water Resources Development Act, which is anticipated to include a National Levee Safety Program.

Much has been done, much is happening, and there is much more left to do. So what is the common denominator needed to accomplish comprehensive water resource and mitigation planning, enhance floodplain management, make smart investments in flood infrastructure and non-structural solutions, improve the NFIP, integrate federal flood programs, increase flood risk communication efforts, provide credible and consistent floodplain mapping, and advance technology? The answer, in my opinion, is not just more money. Political will and smart decision-making are required at local, state, and federal levels and in the private sector to employ comprehensive water resource planning coupled with effective floodplain management and to place a high priority on smart investments in flood and other infrastructure. Yes, funding is required, but flood reduction investments need to be part of a larger, strategic investment by all levels of government, and the private sector, in the total array of infrastructure in this country. There are reports that the required investment in national infrastructure is in the trillions of dollars. While this appears staggering, I believe that basic economics will show that funding for our infrastructure will yield a huge return on that investment.

After the Midwest floods, Pete Visclosky, Chair of the House Appropriations Committee’s Energy and Water Development Subcommittee, stated, “Since Hurricane Katrina, we have witnessed the consequences of not investing in our water infrastructure and not getting things done. Now, as large parts of the Midwest are suffering severe flooding, we are reminded again how important it is to adequately maintain our infrastructure and to improve and expand it for the 21st century.” His comments were echoed and embraced in a bi-partisan way by others in Congress.

Oh, yes . . . did I mention political will?

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Rodney E. Emmer, 1944–2008

With sadness we note the death on August 3, 2008, of Rodney E. Emmer, 64, geographer, floodplain manager, planner, ASFPM member, colleague, and friend.

Emmer was born and reared in New Orleans and, although well-traveled, always called Louisiana home. He earned his bachelor’s and master’s degrees in geography at Louisiana State University. He served in the U.S. Army in Korea for two years and then, after receiving his Ph.D. in geography from Oregon State University, established himself in Baton Rouge and lived there the rest of his life. For almost 20 years he was a partner in Coastal Environments, Inc., and followed that with his own consulting business. Along the way he also held adjunct appointments at the University of New Orleans and at LSU and for the last several years had been an associate professor for research at the Louisiana Sea Grant Program. He had been an officer in the Louisiana groups of the American Planning Association and the American Water Resources Association. He was an early chair of the Louisiana Floodplain Management Association and its Executive Director since 1994. For the ASFPM, he was a conference Program Chair and Local Host, and was Standing Conference Committee Chair for the last four years. He was the author of numerous reports, articles, and other material, and co-authored a graduate-level floodplain management course for the Emergency Management Institute. His able mind grasped the widest concepts of environmental quality, sustainability, coastal degradation, and public perception and how the various disciplines with which he regularly worked could apply themselves to those issues and problems. But he also had the savvy to know how such broad themes played—or did not play—with regular folks.

Emmer’s knowledge of and appreciation for Louisiana’s land use, history, hazards, culture, coastal ecosystems, floodplains, politics, and food was legendary, deep, and always growing. He shared it all readily and lent his energy and good cheer to innumerable missions large and small, across Louisiana and elsewhere. Neither the ASFPM nor Louisiana will be quite the same without him.

Thoughts, memories, and photos may be sent to the ASFPM Executive Office, diane@floods.org.
On June 5, 2008, the U.S. Army Corps of Engineers held a meeting to solicit suggestions from the public and interested organizations on revising the Principles and Standards of the *Economic and Environmental Principles and Guidelines for Water and Related Land Resources Implementation Studies*, dated March 10, 1983. The ASFPM attended the meeting and provided comments on updating these important guidance documents.

What are the Principles & Guidelines (P&G) and why are they important? The P&G is the set of standards used by the Corps to plan and analyze all of its water resource projects. Investments in these Corps projects amount to several billion dollars annually. One of the most problematic provisions of the current P&G is its over-emphasis on the economic value of the project to the nation to the detriment of other considerations, such as the environment and public safety. Although the P&G have received some minor revisions since 1983, they have not seen any sort of significant update. But in the 2007 Water Resources Development Act (P.L. 110-114, Section 2031), Congress directed the Secretary of the Army to revise the 1983 P&G.

The ASFPM was one of 29 organizations and/or individuals to submit comments for the Corps’ consideration in its revision of the Principles and Standards—the first chapter of the full Principles and Guidelines document. The main theme of the ASFPM’s comments was one of sustainability—both in the context of national goal setting (we must be more strategic in the use of our ever-dwindling taxpayer dollars), and ensuring ourselves the ability to adapt to a rapidly changing environment. Some specific recommendations by the ASFPM include:

- Altering the “accounts” used in the P&G so that these four categories are used to facilitate the evaluation of potential effects of a proposed project: (1) Ecosystem Restoration, (2) Public Safety and Other Social Effects, (3) Environmental Quality, and (4) National Economic Development.

- Declaring that, unlike under the current P&G procedures, the National Economic Development account is not the driver of decisions but instead would be, at most, co-equal with the other accounts.

- Using the Public Safety and Other Social Effects account to take into consideration the concept of minimum safety standards for water resource projects (e.g., design standards for levees and dams or safety- and terrorism-related measures for transportation features such as navigation structures) and also the many other attributes that the nation considers important (community cohesion, long-term health impacts from disasters, historic preservation, and others).

Revising the Principles and Standards is the first of two phases planned by the Corps. The second phase will address revisions to the rest of the P&G document. So far, no date has been set for public comment on phase two. Once completed, the revised P&G will apply to all new water resources projects, project reevaluations, project modifications, and project feasibility studies carried out by the Corps.

>>> The Corps has developed a website for this important process. All public comments, including those of the ASFPM, can be viewed at [http://www.usace.army.mil/cw/hot_topics/ht_2008/pandg_rev.htm](http://www.usace.army.mil/cw/hot_topics/ht_2008/pandg_rev.htm).
Generous Gesture or Cruel Disservice?

An issue we all struggle with in floodplain management is the post-disaster “rush to help” actions that inevitably follow every disaster. The larger the disaster, the more the nation tries to do—and the faster it tries to do it. This is a basic human response, especially in our culture. We have a desire, even a passion, to help those in need. Some consider this also to be a political response, with a desire on the part of politicians at every level to want their constituents to see them as compassionate in times of personal and community tragedy.

As professionals working to reduce long-term costs and to help citizens and communities escape suffering the same flood damage or deaths again and again in the future, our challenge is helping decisionmakers at all levels (personal, community, state, and national) to avoid getting so caught up in the compassion that they allow, and even assist or encourage, rebuilding and recovery in a way that will surely lead to a repeat of the tragedy.

The ASFPM fought for many years to explain to national decisionmakers that it is neither wise, nor compassionate, nor cost effective to simply help people and communities rebuild exactly as they were before the disaster. The outgrowth of that struggle was “mitigation,” or helping those affected by the flood rebuild in such a way that they would suffer less or no damage from similar events in the future.

Considerable progress has been made in helping property owners and communities mitigate after the disaster. But many examples exist of missed opportunities. We have received calls from communities in the Midwest, where some local people recognize that reconstruction should not be carried out using old, outdated flood elevations, and should not “help” people rebuild so quickly that they don’t evaluate all their options, both short term and long term. Communities can legally adopt moratoria on permits to reconstruct until new data are available showing a more accurate flood elevation. If they do this, they minimize future costs to property owners, communities, and taxpayers. Publications on our website explain more about that and other steps that can be taken.

This is where it is important for those of us in the profession to help decisionmakers understand that, in reality, compassionate action directed at getting back to “normal” can thoughtlessly set people up to suffer the same fate again in the next flood. We all know examples where this has happened. There are instances in the Midwest floods of 2008 where people who were flooded in 1993 or since had the chance to elevate, relocate or otherwise reduce the potential damage to their property or to the community infrastructure and did not do it—and now once again are suffering greatly. Each of us must continue our efforts to point out the problems inherent to a short-sighted, “compassion-only” approach. Selling the message of long-term relief and cost savings is an important job for us all.

Short-term actions—to rebuild again at risk, to ignore using new flood data to generate more accurate flood maps, to fail to provide information on maps or on the ground showing historical flood elevations—hurt, rather than help property owners, renters, and communities, to say nothing about the taxpayers. One key message is, “Who pays?” Someone always pays the costs of flooding, now or in the future. If those who live at risk or allow development at risk don’t pay, someone else will. It may be that anonymous “federal taxpayer,” but will also be those in the community who chose not to live at risk, but now pay for those who do. Many people are now asking, “Why are we again paying for flood damage in the same spot we paid for it before? Why haven’t those people mitigated the damage to their structure or community infrastructure?” That should be a key part of your message to decisionmakers. Share with us the ideas that have worked for you, and we will share them with others.
Caldwell, Idaho, Sees Its River Again

Editor’s note: Creating public access to rivers and the lands along them is one effective catalyst to creating parks, trails, and greenways and to fostering positive attitudes about river resources and hazards. The June issue of a National Park Service newsletter was dedicated to changing perceptions of urban rivers. One example is reprinted below. See the full issue at http://archive.constantcontact.com/fs023/1101438581355/archive/1102118950885.html.

An “extreme makeover” can be the ultimate perception-changer. In April 2008 a six-block section of Indian Creek, which runs through the historic center of Caldwell, Idaho, was “daylighted” and restored after being buried under streets and buildings since the 1930s. This phenomenal success was showcased with a ribbon-cutting and special community events. In greeting the crowd, Mayor Nancolas said, “Wow! Some people said this was impossible, but in just seven years we went from a vision to a bright, open creek and we’re bringing new life to downtown. We did this by taking each others’ hands and working together.”

Restoration of Indian Creek improves its flood protection capacity by 50%, enhances water quality and fish habitat, and provides a new city park and river trail. The once-deserted downtown is again a magnet for nearby workers, families, and visitors. The City of Caldwell leveraged $9 million for creek restoration which, in turn, is the catalyst for downtown revitalization. Public and private investment partnerships have committed $30 million to initiate mixed-use redevelopment in the heart of town with civic facilities, housing, businesses, shops, services, and restaurants.

The National Park Service’s Rivers, Trails and Conservation Assistance (RTCA) assisted Caldwell and the U.S. Army Corps of Engineers with creative public outreach, including a community workshop to design demonstration sites for creek restoration and to plan a citywide trail network. The RTCA team included two artists-in-residence, who were critical in engaging youth in the project from the outset.

For more information, contact Alexandra Stone at alex_stone@nps.gov.

[reprinted from Conservation and Outdoor Recreation Update, June 2008]

Notes from FEMA

Future of Map Mod

The President’s budget request for Fiscal Year 2009 included $150 million for the Flood Map Modernization Fund, to ensure that the investment made in that five-year initiative (which ended with the 2008 budget) is preserved, and to enable FEMA to make the transition to a long-term program of continuous map updates and maintenance. The budget justification for that request has been made public, and gives some insight into the future direction of the mapping program as envisioned by Administration and FEMA. The short report [continued on next page]
Notes from FEMA (cont.)

states, for example, that FEMA will develop a “robust, multi-year plan to address the full scope of remaining needs” in flood hazard mapping, and to expand and improve the utility and accessibility of the flood hazard and risk data. The goal is to ease the use of digital flood hazard information to inform mitigation planning and decisionmaking, measure flood risk reduction, and engage local and individual action in reducing losses.


Constant Updates on the National Flood Hazard Layer

In mid July, the Federal Emergency Management Agency (FEMA) began daily updates of the National Flood Hazard Layer. New Digital Flood Insurance Rate Map (DFIRM) data now are reflected on the NFHL as of their effective dates, providing users with access to the most current flood hazard information. Online NFHL services, including MapViewer-Web, NFHL Web Map Service (WMS), and Google Earth™ utilities, provide immediate access to these data. The updates also are included in the monthly releases of NFHL geographic information system (GIS) data, which is packaged by individual states.

> > > Visit the FEMA Map Service Center website at http://msc.fema.gov or call (800) 358-9616.

New BCA Tool in Prospect

The Federal Emergency Management Agency is beta-testing a new version of the flood, damage frequency approach, and cost estimation modules of its Benefit-Cost Analysis (BCA) Tool. The new software is the result of many months of effort by the agency and over 200 stakeholders. FEMA has coordinated with government agencies, states, and local communities to obtain input and suggestions on its development. Several ASFP members have volunteered to beta-test this new version, returning testing results and comments to FEMA’s Risk Reduction Division later this month. Revisions and final improvements will be incorporated into a final version of the software, training materials, and related resources.

Since the early 1990s, thousands of grantees have used FEMA’s BCA tool to determine the cost-effectiveness of proposed mitigation projects for several mitigation grant programs. Information about the BCA tool is available at http://www.bchelpline.com/.

State and Local Report

IMMORTAL WORDS FROM MISSISSIPPI

When Mississippi Governor Haley Barbour toured flooded areas of Vicksburg and Warren County this spring, he promised to seek federal funding to provide financial relief for some residents and farmers affected. However, the governor reiterated that those who live in known flood areas—pointing out several subdivisions and neighborhoods—will not qualify. “Because this is a very significant flood, there are going to be people who have never flooded before and they’re going to qualify for some programs,” Barbour said from the tarmac of the Vicksburg Municipal Airport. “If people choose to live somewhere that they know repeatedly floods, at some point it’s not the taxpayers’ responsibility anymore. We can’t expect the taxpayers just to continue to bail people out year in and year out.”

Vicksburg Mayor Laurence Leyens said on that same day that the city intended to meet individually with owners of residential property that was flooded to see if they are interested in alternatives to returning to homes known to flood. He and his building inspections director intended to stand firm on enforcement of the substantial damage rules and on their stance to eradicate homes in areas that repetitively flood. “We need to basically abandon these areas, and accept that Mother Nature will win,” Leyens said.

State & Local Report (cont.)

TENNESSEE AIMS TO REDUCE VEHICLE FATALITIES

Beginning July 1, ignoring a flood warning sign or barricade is a “reckless driving” offense in Tennessee. Further, if emergency personnel have to rescue the violator, the law provides the authority to charge for these services. The law exempts emergency vehicles forced to cross a flooded road to respond to a call.

In Tennessee, being cited for reckless driving can result in up to 6 points (7 points for commercial vehicles) on drivers’ records and can include a fine in addition to paying for rescue services. The maximum fine is $2,500, but generally ranges from $50 to $250 for first-time offenders with clean driving records.

One impetus for this bill were statistics showing the number of instances an individual has been rescued after attempting to cross a flooded stream or creek. Many drivers just don’t learn the first time. To highlight the significance of the Tennessee law, a ceremony is planned with Tennessee’s governor and other legislative members.

National Weather Service staff in Nashville and in Huntsville, Alabama, were instrumental in getting the bill passed. Several Tennessee counties showed foresight in becoming pilot programs for Turn Around Don’t Drown (TADD™) and enacted corrective measures long before the law came into effect. No flood-related deaths have occurred in these counties since endorsing the program.


MASSACHUSETTS REVISES COASTAL BUILDING CODES

The Massachusetts Department of Environmental Protection and the Department of Public Safety have revised Appendix G of the Massachusetts Basic Building Code (780 CMR 120.G).

The amended Code, which went into effect January 1, 2008, promotes the natural storm damage prevention and flood control capacity of coastal dunes, facilitates consistency between the Building Code and the state’s Wetlands Protection Act regulations, adopts recommendations from the Federal Emergency Management Agency’s post-storm damage assessments, and brings the Code into better conformance with the National Flood Insurance Program requirements. In addition, the revised Code establishes special administrative, design, and construction requirements for new and existing buildings and structures located in A and V zones, and/or in coastal dunes. Among the significant changes are that two feet of freeboard is now required in V zones, and construction in dune areas can only take place after the state determines the dunes’ importance to storm and flood protection and imposes appropriate design and construction conditions on the permit.

For detailed information about the new requirements, see the MassDEP website at [http://www.mass.gov/dep/water/resources/wetlands.htm](http://www.mass.gov/dep/water/resources/wetlands.htm).

Washington Report

NOAA WORKS FOR SUSTAINABLE COASTS

To help address the challenges of development along the U.S. coasts, the National Oceanic and Atmospheric Administration and University of New Hampshire’s Cooperative Institute for Coastal and Estuarine Environmental Technology (CICEET) has awarded $2.8 million to project teams that are building and demonstrating tools for effective planning and sustainable growth. Thirteen teams working in coastal states from Maine to Oregon have received grants as part of CICEET’s Living Coasts Program, which was created to provide coastal areas with more effective tools to grow in a way that preserves water quality, protects...
Washington Report (cont.)
natural areas, and improves community resilience. Each project team is working with a committed community partner. By demonstrating the effectiveness of better tools for land use planning, and working to ensure they can be as widely used as possible, Living Coasts projects aim to reduce the problems that happen as a result of poor land use decisions. CICEET will expand the Living Coasts Program in the near future to include collaborative projects aimed at providing tools to help stabilize the shoreline, protect property, and promote healthy habitats along sheltered coasts.
>
> Learn more at http://ciceet.unh.edu/stats/living_coasts.html.

ESTUARIES AND CLIMATE CHANGE AT EPA

The U.S. Environmental Protection Agency has selected six estuaries to be case studies for local action to protect sensitive coastal ecosystems and economies from the potential effects of climate change. This is the first step in EPA’s new Climate Ready Estuaries initiative to build local ability to adapt to climate change.

The six pilots are the New Hampshire Estuaries Project, Massachusetts Bays Estuary Program, Partnership for the Delaware Estuary, Albemarle-Pamlico Sounds National Estuary Program, Charlotte Harbor Estuary Program, and San Francisco Estuary Project. Each estuary program will receive technical assistance to assess and reduce vulnerability to climate change. The programs will apply analyses and tools to help them make decisions to protect their communities and build a knowledge base. Communities with plans approved by their local stakeholders will be designated as “Climate Ready Estuaries” by EPA.

The lessons learned from the pilots will provide information and leadership to other coastal communities around the nation. Under the Climate Ready Estuaries framework, EPA will use the 28 National Estuary Programs, web-based resources, and other means identified through the initial pilots to support local efforts in all coastal communities to effectively plan and adapt to climate change.

The Climate Ready Estuaries program is one of more than 40 specific actions to respond to the water-related impacts of climate change described in a draft strategy developed by the agency’s National Water Program, which aims to help water resource managers adapt their programs to a changing climate.

> For more information on Climate Ready Estuaries see http://www.epa.gov/owow/estuaries/cre.html. To see the water climate change strategy, go to http://www.epa.gov/water/climatechange.

LEGISLATIVE REPORT — CONGRESS RECESSES FOR AUGUST, BUT MUCH REMAINS TO BE DONE

As News & Views goes to press, Congress is poised to recess until September 8th. This recess period will include both the Democratic and Republican Presidential Nominating Conventions. While July has involved a very busy and sometimes difficult work period, September promises to be frenetic. Congress is expected to adjourn for the year at the end of September, although there is some slight possibility of a lame duck session after the November elections if appropriations measures still need action.

In the “left-to-be-done” category are appropriations for the federal government after the end of the fiscal year on September 30th. Notably for floodplain managers, also remaining to be dealt with are flood insurance reform (or at least extension of the National Flood Insurance Program) and re-authorization of the Pre-Disaster Mitigation (PDM) program, both of which expire on September 30th. These bills will be competing for limited House and Senate floor time next month with a number of other major issues and bills that Congress would like to get passed before the elections.
Appropriations

A number of appropriations bills have been marked up in the House and Senate Appropriations Committees, but only one has been considered on the floor. The Military Construction-VA bill for FY ‘09 was taken up on the House floor on July 30th. Five of the 12 regular appropriations bills have been marked up in the House Appropriations Committee, but not officially been reported, nor have Committee Reports been filed. In the Senate, 9 of the 12 bills have been reported and reports filed. The delay on the House side reflects the Chairman’s response to an effort by the Republican Minority to delay action on bills that do not contain provisions for additional oil drilling. In the past week, however, the impasse seems to have been lifted, resulting in more subcommittee mark-ups and consideration of the Military Construction-VA bill on the House floor. The bill could be finalized before the end of the fiscal year.

The general assumption is that the Congress will agree to a long-term Continuing Resolution during September, which would fund government programs at the FY ‘08 level. Most speculation focuses on a CR that would extend into February, after inauguration of a new President. Some guess, however, that the CR could simply extend until after the elections in November, forcing a lame duck session. By February, the new administration will have to release a proposed budget for FY 2010 so that Congressional consideration of budgets for the departments and agencies can begin. It could be that the Congress will be putting together an omnibus appropriations bill for the remainder of FY ‘09 at the same time that it begins consideration of the FY ‘10 budget request.

The Senate Appropriations Committee has reported out its Homeland Security bill and report (S. 3181 and S. Rept. 110-396) as well as its Energy and Water bill and report (S. 3258 and S. Rept. 110-416). The House Appropriations Committee has marked up its Homeland Security and Energy and Water bills, but they have not been officially reported. Mark-ups of the Interior Subcommittee bills have been scheduled and postponed. [See the July 2008 Insider for more details on the House and Senate versions of the two bills.]

A second supplemental appropriations bill for FY ‘08 is being developed. The first supplemental was signed by the President on June 30th. This next is expected to include additional economic stimulus measures including infrastructure projects. It is also expected to include additional funds for recent natural disasters, including the Midwest floods, and for continuing recovery from Hurricanes Katrina and Rita.

Flood Insurance Reform

Progress on reconciling differences between the House- and Senate-passed versions of the flood insurance reform bills (H.R. 3121 RFS and H.R. 3121 EAS) has stalled for the moment. Although House Financial Services Committee Chairman Barney Frank (D-MA) had publicly stated that he thought differences could be settled during July, he now seems hopeful that this can be accomplished in September. Senator Chris Dodd (D-CT) has listed flood insurance reform as a piece of legislation that must be resolved in September.

Presumably, House and Senate staff will review their bills carefully in August and make recommendations for resolving differences. This would allow final agreements to be made by the respective chairmen and ranking committee members. The ASFPM has developed comments on both the House and Senate bills that have been shared with committee staffs.

Since authorization for the NFIP will expire September 30th, some action will have to be taken to extend authority even if the full reform bills cannot be finalized.

Re-authorization of Pre-disaster Mitigation Program

The Pre-disaster Mitigation program also will expire on September 30th if not reauthorized. Final action before that date is not at all certain. The House passed its bill (H.R. 6109 and H. Rept. 110-725) on June 23rd. It provides authorization for three years at $250 million and increases the per-state allocation to $575,000 from the current $500,000.
The Senate Committee on Homeland Security and Governmental Affairs marked up its bill (S. 3175) on June 25th. It provided a five-year authorization starting at $210 million in 2010, with incremental increases culminating in a funding level of $250 million. Mark Pryor (D-AR) added an amendment making flood control projects eligible for funding under PDM. The ASFPM sent a letter to all Senators expressing great concern about opening up FEMA’s mitigation programs to funding levee projects (repair, construction, and improvement), waterway channelization, and beach nourishment when funds are so limited for the kinds of non-structural flood mitigation activities now funded under the PDM program.

Compromise language was developed between the House and Senate Committees and Pryor. It would charge FEMA with evaluating the suitability of funding such flood control projects and asking five states for examples of projects they would fund if such eligibility were permitted. The compromise would permit funding five pilot projects in 2010. The compromise also agreed on a three-year authorization with funding at $200 million for FY ’09, $230 million for FY ’10, and $250 million for FY ’11.

A package of some 35 bills was compiled by the Senate Democratic leadership (S. 3294), all of which had “holds” placed on them by Tom Coburn (R-OK). Senate rules allow bills to be held up by any one senator unless 60 senators vote to allow the bill to proceed. The leadership tried to overcome the Coburn holds by packaging the bills, including many sponsored by Republicans, and by requiring that all bills included must be in a form that would be agreed to by the House. The PDM reauthorization was included in that package. In that context, the ASFPM, while not supporting the compromise on levee projects, decided not to object since this bill appears to be the only option available at that moment to move the PDM reauthorization. The package failed to achieve the 60% of the Senate on a vote of 52-40. Majority Leader Harry Reid (D-NV) has said he will not try to bring up the package again in September. There is some possibility that individual bills could be brought up on the Senate floor.

Meanwhile, the House Transportation and Infrastructure Committee introduced a significant bill amending the Stafford Act in a number of ways. The bill (H.R. 6658) was introduced on the evening of July 30th and a mark-up was held the following morning. A section of the bill reauthorizes PDM and other sections deal with warning systems, building codes, the Emergency Management Assistance Compact, the Disaster Relief Fund, and other aspects of the Stafford Act. The ASFPM will compile comments from its members during August and provide them to the Committee for consideration before the bill is brought to the House floor, probably in September.

Levees and Watershed Management

A bill (H.R. 6040) would clarify the authority of the U.S. Army Corps of Engineers to use funds appropriated for the levee inventory to support the work of the Levee Safety Committee authorized under the Water Resources Development Act of 2007. At a Senate Environment and Public Works Committee hearing on the Midwest floods, Assistant Secretary of the Army for Civil Works John Paul Woodley, Jr., testified that the work of the committee could now begin. Recommendations to the Congress for a Levee Safety Program are to be submitted in six months. Expectations are that a new Water Resources Development Act will be developed in the next Congress, which would authorize a Levee Safety Program incorporating those recommendations. Only senators and Corps of Engineers witnesses testified at the above-mentioned hearing on the Midwest floods, held on July 23rd.

The House Transportation and Infrastructure Committee’s Water Resources Subcommittee held a hearing on June 24th on “Comprehensive Watershed Management Planning.” Larry Larson, ASFPM Executive Director, testified, noting that the 2008 Midwest floods have highlighted problems with the nation’s watershed management approaches. The testimony addressed future trends that can be expected to affect watershed planning and provided historical perspective, noting problems with stovepiping of programs, loss of natural resources, increasing flood levels, adequacy of federal leadership and standards for infrastructure and construction, disaster relief, structural flood control, and agricultural practices. The testimony made recommendations for better, more comprehensive national water resources and floodplain management policy, making room for rivers and oceans, reversing perverse incentives in government programs, restoring and enhancing natural and beneficial functions of floodplains and coastal areas, generating a “renaissance in water resources governance,” and promoting personal and public responsibility. The full text of the testimony is available on the ASFPM website at http://www.floods.org.
Washington Report (cont.)

Insurance

A House Financial Services Subcommittee marked up a number of insurance bills on July 9th. Those included the Insurance Information Act (H.R. 5840), the Increasing Insurance Coverage Options for Consumers Act (H.R. 5792), and the Registered Agents and Brokers Reform Act (H.R. 5611). The Senate Banking Committee held a wide-ranging hearing on insurance regulatory oversight on July 29th.

—Meredith R. Inderfurth, Washington Liaison
Rebecca Quinn, CFM, Legislative Officer

All referenced legislation and committee reports can be viewed at http://thomas.loc.gov.

Publications, Software, AV & the Web

- National Flood Insurance Program: Financial Challenges Underscore Need for Improved Oversight of Mitigation Programs and Key Contacts is a report made by the U.S. Government Accountability Office to the Senate Committee on Banking, Housing and Urban Affairs in response to Congressional concern about structural limitations in how the NFIP is funded, brought to light by the over $17 billion deficit the program faces in the wake of Hurricane Katrina. Although FEMA mitigation programs are intended to minimize the damage and financial impact of floods, FEMA cannot readily determine the extent to which flood-damaged and repetitive loss properties have been acquired through its mitigation programs, according to the GAO. FEMA collects property acquisition data for completed projects in an ad hoc manner, does not record counts of properties as they are acquired (only at the completion of the entire project), and the agency’s grants management system lacks the capability to record acquisition data. The report supplies statistical trends for NFIP policies, insurance amounts, premiums, and losses from 1997 through 2006, and examines the extent to which NFIP losses were attributable to hurricanes and repetitive loss properties. It also evaluates the extent to which FEMA followed its procedures for monitoring selected NFIP-related contracts. U.S. Government Accountability Office. June 2008. GAO-08-437. 94 pp. Available at http://www.gao.gov/new.items/d08437.pdf.

- Preliminary Review of Adaptation Options for Climate-Sensitive Ecosystems and Resources identifies strategies to protect estuaries, forests, wetlands, coral reefs, and other sensitive ecosystems from the impacts of climate change. To develop this assessment, scientists studied the management goals of a range of federally protected areas—national parks, national forests, national wildlife refuges, wild and scenic rivers, national estuaries, and marine protected areas—to understand what strategies will increase the resilience of each ecosystem. The conclusions include that climate change can increase the impact of traditional stressors (such as pollution or habitat destruction) on ecosystems, and that many existing best management practices to reduce these stressors can also be applied to reduce the impacts of climate change. For example, current efforts to reverse habitat destruction by restoring vegetation along streams also increase ecosystem resilience to climate change impacts, such as greater amounts of pollutants and sediments from more intense rainfall. Our country’s ability to adapt to climate change will depend on a variety of factors including recognizing the barriers to implementing new strategies, expanding collaboration among ecosystem managers, creatively re-examining program goals and authorities, and being flexible in setting priorities and managing for change. The peer-reviewed report provides the best-available science to date on management adaptations for ecosystems and resources. U.S. Climate Change Science Program and the Subcommittee on Global Change Research. 2008. SAP 4.4. 910 pp. Available at http://cfpub.epa.gov/ncea/cfm/recordisplay.cfm?deid=180143.

- Great Lakes Regional Collaboration Habitat/Wetlands Initiative: A Progress Report and Call to Action was written by a team of state, federal, tribal, city and non-governmental representatives to describe progress and to advance the habitat restoration recommendations in the Great Lakes Regional
Collaboration’s 2005 Strategy to Restore and Protect the Great Lakes. The report notes the steps that all entities are taking to improve coordination of habitat restoration programs and projects in the Great Lakes basin. However, it found it difficult to measure progress because of the varied methods used for collecting and archiving data throughout the basin. Two new tools are recommended to facilitate collaboration: a habitat projects database and a funding source inventory. The report issues a call to action that challenges the Great Lakes community to accelerate restoration efforts and to work together to accomplish more. Great Lakes Regional Collaboration. 2008. 28 pp. Available at http://glrc.us/initiatives/wetlands/index.html.

BOSS International has launched a streamlined website with product demonstrations, engineering forums, training courses and software case studies to provide educational opportunities for current and potential customers. Users can navigate the site to find product information, such as features and pricing, and can make purchases in the online store. The company has for 20 years been a developer of civil engineering hydrology and hydraulic software, including StormNET, RiverCAD, and WaterNET. View the new site at http://www.bossintl.com.

The Center for Watershed Protection has revamped its website to provide even better guidance and research resources for watershed professionals. Beside information on the Center and its activities, the website now provides access to collaborative projects, such as watershed plans and stormwater manuals. Also, all file downloads are now free, including all 150 short research articles that make up the exhaustive 800-page book, The Practice of Watershed Protection. Resources from other organizations also can be accessed now through a topic search in the Resource Library section of the site. The CWP reports that over the last six years, their websites have logged more than half a million visitors. More resources will be added to the site in the coming months. The CWP welcomes feedback and recommendations of resources to include in the online resource library. Visit at http://www.cwp.org.

The Association of State Dam Safety Officials (ASDSO) has established a nationwide service that matches employers with students interested in pursuing careers in dam engineering and safety. Employers who provide internships and co-ops in dam-related fields may post their information at no charge. Students interested in applying for internships and co-ops should check the site frequently, as it is continually updated. ASDSO, a national, non-profit organization dedicated to improving dam safety through research, education and communication, also awards senior undergraduate scholarships annually (up to $10,000); provides complimentary registration for students who attend ASDSO regional and national conferences; and manages a speakers bureau of dam safety experts available to make presentations to student groups. ASDSO’s Student Employment Opportunities Clearinghouse was created in response to a dwindling supply of college graduates qualified to enter this specialized field. Check it out at http://www.damsafety.org/careercenter/internships/.

Calendar

See more flood-related meetings, conferences, and training at http://www.floods.org/Conferences,%20Calendar/calendar.asp.

August 11–14, 2008: NATIONAL FLOOD INSURANCE PROGRAM COMMUNITY RATING SYSTEM (E278), Emergency Management Institute, Emmitsburg, Maryland. Contact (800) 238-3358 or see http://www.training.fema.gov/EMIweb/.


August 18–21, 2008: ADVANCED FLOODPLAIN MANAGEMENT CONCEPTS (E194), Emergency Management Institute, Emmitsburg, Maryland. Call (800) 238-3358 or see http://www.training.fema.gov/EMIweb/.


September 7–11, 2008: **DAM SAFETY 2008**, Indian Wells, California. Sponsored by the Association of State Dam Safety Officials. Contact (859) 257-5140; info@damsafety.org or see [http://www.damsafety.org](http://www.damsafety.org).


September 15–18, 2008: **Unified Mitigation Assistance Program (PILOT) (E212)**, Emergency Management Institute, Emmitsburg, Maryland. Contact (800) 238-3358 or see [http://www.training.fema.gov/EMIweb/](http://www.training.fema.gov/EMIweb/).


October 13–16, 2008: ADVANCED FLOODPLAIN MANAGEMENT CONCEPTS II (E282), Emergency Management Institute, Emmitsburg, Maryland. Call (800) 238-3358 or see http://www.training.fema.gov/EMIweb/.


October 29–31, 2008: CONFERENCE ON SEVERE STORM PREDICTION AND GLOBAL CLIMATE IMPACT ON THE GULF COAST, Houston, Texas. Sponsored by the American Institute of Hydrology, the SSPEED Center, and the Energy and Environmental Institute of Rice University. See http://hydrology.rice.edu/sspeed/.

November 3–6, 2008: ADVANCED FLOODPLAIN MANAGEMENT CONCEPTS (E194), Emergency Management Institute, Emmitsburg, Maryland. Contact (800) 238-3358 or see http://www.training.fema.gov/EMIweb/.


November 10–13, 2008: ADVANCED FLOODPLAIN MANAGEMENT CONCEPTS III (E284), Emergency Management Institute, Emmitsburg, Maryland. Contact (800) 238-3358 or see http://www.training.fema.gov/EMIweb/.


December 1–5, 2008: Basic Hazus Multi-Hazards (E313), Emergency Management Institute, Emmitsburg, Maryland. Contact (800) 238-3358 or see http://www.training.fema.gov/EMIweb/.

December 15–18, 2008: Managing Floodplain Development through the National Flood Insurance Program (E273), Emergency Management Institute, Emmitsburg, Maryland. Contact EMI at (800) 238-3358 or see http://www.training.fema.gov/EMIweb/.


February 2–5, 2009: Hazus Multi-Hazards for Hurricane (E170), Emergency Management Institute, Emmitsburg, Maryland. Contact (800) 238-3358 or see http://www.training.fema.gov/EMIweb/.


March 23–26, 2009: Unified Mitigation Assistance Program (E212), Emergency Management Institute, Emmitsburg, Maryland. Call (800) 238-3358 or see http://www.training.fema.gov/EMIweb/.


April 6–9, 2009: Retrofitting Flood-Prone Residential Buildings (E279), Emergency Management Institute, Emmitsburg, Maryland. Call (800) 238-3358 or see http://www.training.fema.gov/EMIweb/.

April 6–9, 2009: Basic Hazus Multi-Hazards (E313), Emergency Management Institute, Emmitsburg, Maryland. Contact (800) 238-3358 or see http://www.training.fema.gov/EMIweb/.
April 20–23, 2009: NATIONAL FLOOD INSURANCE PROGRAM COMMUNITY RATING SYSTEM (E278), Emergency Management Institute, Emmitsburg, Maryland. Contact (800) 238-3358 or see http://www.training.fema.gov/EMIweb/.

May 4–7, 2009: ADVANCED FLOODPLAIN MANAGEMENT CONCEPTS II (E194), Emergency Management Institute, Emmitsburg, Maryland. Contact (800) 238-3358 or see http://www.training.fema.gov/EMIweb/.

May 18–21, 2009: MANAGING FLOODPLAIN DEVELOPMENT THROUGH THE NATIONAL FLOOD INSURANCE PROGRAM (E273), Emergency Management Institute, Emmitsburg, Maryland. Contact EMI at (800) 238-3358 or see http://www.training.fema.gov/EMIweb/.


June 15–18, 2009: UNIFIED MITIGATION ASSISTANCE PROGRAM (E212), Emergency Management Institute, Emmitsburg, Maryland. Contact (800) 238-3358 or see http://www.training.fema.gov/EMIweb/.

July 6–9, 2009: ADVANCED FLOODPLAIN MANAGEMENT CONCEPTS II (E282), Emergency Management Institute, Emmitsburg, Maryland. Contact (800) 238-3358 or see http://www.training.fema.gov/EMIweb/.

July 13–16, 2009: BASIC HAZUS MULTI-HAZARDS (E313), Emergency Management Institute, Emmitsburg, Maryland. Contact (800) 238-3358 or see http://www.training.fema.gov/EMIweb/.


July 20–23, 2009: MANAGING FLOODPLAIN DEVELOPMENT THROUGH THE NATIONAL FLOOD INSURANCE PROGRAM (E273), Emergency Management Institute, Emmitsburg, Maryland. Contact EMI at (800) 238-3358 or see http://www.training.fema.gov/EMIweb/.


August 10–13, 2009: ADVANCED FLOODPLAIN MANAGEMENT CONCEPTS (E194), Emergency Management Institute, Emmitsburg, Maryland. Contact (800) 238-3358 or see http://www.training.fema.gov/EMIweb/.

August 17–20, 2009: ADVANCED FLOODPLAIN MANAGEMENT CONCEPTS III (E284), Emergency Management Institute, Emmitsburg, Maryland. Contact (800) 238-3358 or see http://www.training.fema.gov/EMIweb/.

August 31—September 3, 2009: NATIONAL FLOOD INSURANCE PROGRAM COMMUNITY RATING SYSTEM (E278), Emergency Management Institute, Emmitsburg, Maryland. Contact (800) 238-3358 or see http://www.training.fema.gov/EMIweb/.


