



The purpose of this newsletter is to share recent Silver Jackets news and to provide a forum for team support, sharing successes, lessons learned, and resources.

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## What or Who are "Silver Jackets"?

As a Silver Jackets lead, this is a question you may have to answer a few times. While the name of the program is certainly not self-explanatory, it is a great conversation starter and is representative of a number of program qualities. First, the name is not "government-ese" or a government acronym. The intent of the Silver Jackets program is to implement an alternate approach: collaborative Federal teaming to support states. Funds provided through the Silver Jackets program are intended to facilitate a continuous intergovernmental forum through which participants can access the many available programs and cohesively apply them to a state's hazard priorities.

Second, the name refers to the public's view of Federal emergency response: the U.S. Army Corps of Engineers (USACE) in red jackets and Federal Emergency Management Agency (FEMA) in blue jackets. Instead of operating individually, the intent of Silver Jackets is to facilitate collaboration among many state and Federal agencies, and provide one coherent forum for a state to address their priorities. When referring to this analogy, it is important to note that the jackets are symbolic...as a neutral color, silver is meant symbolize unified Federal action. The scope of the program, however, is much broader than emergency response. The intent of the Silver Jackets program is to bring agencies together to manage a state's flood risk, throughout the life-cycle. All aspects, mitigation, preparation/training, response and

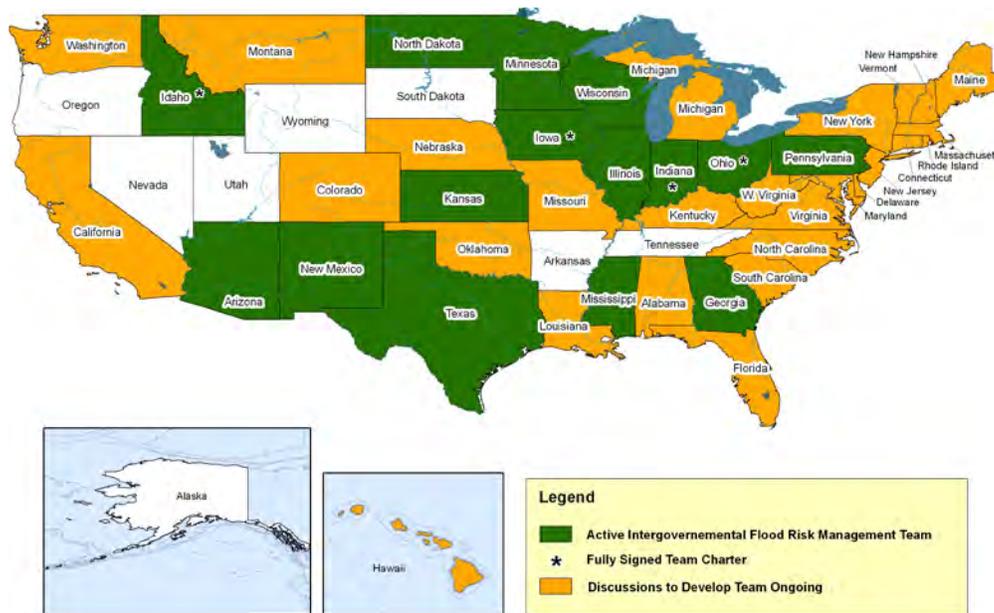
recovery, are within the scope of the team...the team's focus will be determined by the state's priorities, and participation may vary accordingly.

From an organizational viewpoint, Silver Jackets is the state-level implementation tool for the Flood Risk Management Program (FRMP). Created in 2006, the goals of the FRMP can be viewed at [www.iwr.usace.army.mil/nfrmp](http://www.iwr.usace.army.mil/nfrmp). The Silver Jackets program contributes to all of these goals, but most commonly integrates flood damage and flood hazard reduction programs across local, state and Federal agencies, improves public awareness and comprehension of flood hazards and risk, and provides current and accurate floodplain information to the public and decision makers. While the FRMP is managed by the Director, Pete Rabbon, and the Deputy Director, Jeffrey Jensen, the Silver Jackets program is managed by Jennifer Dunn ([Jennifer.K.Dunn@usace.army.mil](mailto:Jennifer.K.Dunn@usace.army.mil)). Both programs are currently managed through the Institute for Water Resources in Alexandria, Virginia.



Jennifer Dunn has served as the Silver Jackets Program Manager since October 2008. She has 15 years experience with USACE, as a liaison to DHS, a planner with the South Pacific Division, a planner and program manager at the San Francisco District and as an environmental engineer at Sacramento District. She received her master's degree from UC Davis and is a Certified Floodplain Manager.

The adjacent map shows the current status of Silver Jackets efforts across the country. The ultimate goal is to offer support for an intergovernmental team to every interested state. In many states, a new team will be created. Sometimes USACE and other Federal agencies participate in existing state teams; this is the case in Kansas, Wisconsin and North Carolina. Sometimes existing state teams will be formally associated with the Silver Jackets team, as was done in Illinois. And sometimes, a state will choose an alternate name, such as the Iowa Flood Risk Management Team. Occasionally a state may choose to establish a team to actively and collaboratively address their risk, but will not desire a formal charter. Because



each of these teams creates or supplements a continuous mechanism to collaboratively solve state-prioritized issues and implement or recommend those solutions, these are all Silver Jackets in the eyes of USACE.

**Congratulations to the Iowa Team** who became the fourth chartered state when all core agencies signed their charter on March 22, 2010.

March 31, 2010

## Silver Jackets Teams Invited to Participate in National Levee Database Rollout

Within the authority of Title IX of the Levee Safety Act of 2007, the US Army Corps of Engineers National Levee Database (NLD) team is working with the National Committee on Levee Safety Committee (NCLS) to develop a roll-out plan for public dissemination of the NLD. The development of the path forward will be a collaborative effort with federal and non-federal levee owners. This will include the transfer of NLD technologies, transfer of non-Corps data to the NLD, and provide access and awareness of the NLD to the nation. The levee owners and/or regulatory groups comprise 12 federal agencies, 50 states, 3 territories and thousands of locals. Silver Jackets has been identified as one of several collaborating and coordinating organizations capable of assisting the NLD team in jointly developing the path forward and being points of contact with states, local governments, and the public.



A 2-hour informational session will be presented on June 24 at the USACE Flood Risk Management and Silver Jackets Workshop, and a more in-depth full-day training session will be presented at the Association of State Dam Safety Officials conference in September. Further information is provided in “Upcoming Conferences and Training Opportunities” at the end of this newsletter.



## Spotlight on: INDIANA Silver Jackets

Indiana was one of the initial pilot teams of the Silver Jackets program, established in 2005. They have found success over a broad range of issues and recently attracted the attention of the United Nations International Visitor Leadership Program. During and following the floods of June 2008, the Silver Jackets team was tested. The state of Indiana found that response and recovery were more effective as a result of the interagency team. Because relationships were strong and members were already very familiar with each agency's roles and



responsibilities, the Silver Jackets team was able to assist the Joint Field Office and quickly respond to multiple requests. A member of Indiana Silver Jackets, Chris Ritz of the US Department of Agriculture spread the word, and the State Department arranged a visit to share Silver Jackets experiences with Ms. Laura Jane Tiberi of the Emergency Operations and Rehabilitation Division of the United Nations Food and Agriculture Organization (see attached). The primary message of the meeting was that one organization can not do it all—many agencies have to come together to address the full range of issues holistically. The Indiana Silver Jackets were able to handle many needs, including dams and levees, because sister agencies were all sitting at the table and getting regular reports. Agency representatives were

already aware of the challenges and focal areas. The Silver Jackets agencies were given access to the WebEOC (electronic EOC relational/communication database), as well as passes to the operations center. The USGS ran models within the state EOC during this event; previously, the USGS had not been active in the EOC. As a result, efficient and effective response and recovery were achieved. Success travels far; similar communities both here in the US and abroad are among those learning from this particular success.

### *How did the Indiana team develop the relationships needed to achieve this cooperation?*

Manuela Johnson of the Indiana Department of Homeland Security (IDHS) reports that the best thing the team did was to take time to get to know each other. They frequently go to lunch following the regular meeting, providing another venue to discuss issues. Often as much work can be accomplished at lunch as in the formal meeting!

### *What are some other successes the Indiana team has achieved?*

Often resolution of seemingly small issues can lead to greater things. For example, in one Silver Jackets meeting, a comment was made that USACE and Indiana Department of Natural Resources (IDNR) data did not match; differing boundaries used in the models produced elevation differences of up to two feet. The team facilitated resolution, and within a short time the data were aligned. Without Silver Jackets, neither agency would have pursued resolution, leaving the communities to deal with the disparity. While this resolution was a success in itself, the discussion opened the door to further solutions of data discrepancies. The state sees this as a valuable service; when all agencies can agree on a single, 'correct' set of data, the state mitigation program, as well as USACE and IDNR efforts, benefit.

These small successes led to an even more open conversation. Participants started discussing what they really needed in their jobs and how insufficient some current practices were. They wanted a real-time data mixer—they needed the ability to know the current location of the water, where it will be, and how much damage it will create. If this could be put together, it would assist both mitigation and response. From this conversation,



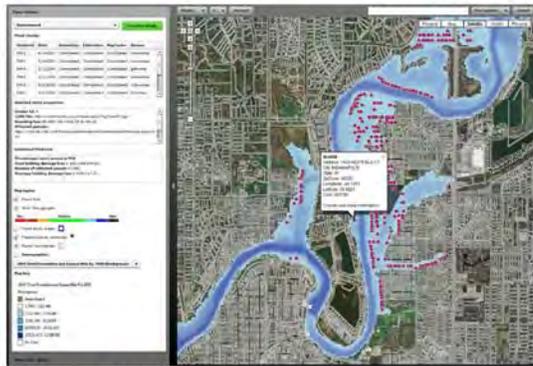
the inundation study was born. Now the National Weather Service (NWS) projections and hydrology from the Advanced Hydrologic Prediction Service are combined with real-time gauge data from the US Geological Survey (USGS). Models create real-time view of the location and depth of the water. When overlaid with the tax roll, an accurate prediction of potential damage can be calculated, employing the USACE depth damage curve and HAZUS modeling (see attached for a more detailed

description). Another area of success and ongoing effort for the Indiana team is outreach to children. The team drafted a coloring and activity book, and distributed within their agencies for proof-reading. The adults enjoyed the fun, but also noticed that the dangers of low-head dams were not incorporated. Since these are common in the state and not often addressed in safety literature, Silver Jackets embraced the opportunity. NWS and Dam Safety contributed content, and all agencies will distribute hard copies as well as electronically.

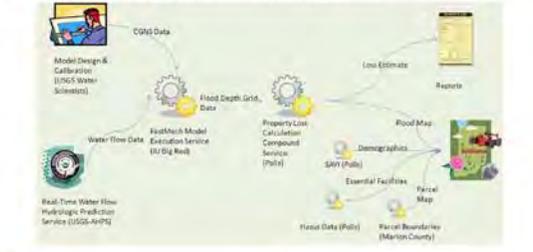


**Responding to Hazard Impacts in the Community**  
*The Next Generation: Using the Web*  
Neil Davidson - Lead Systems Engineer/System Engineering Manager

Web **Service-Oriented Architecture (SOA)** creates a composite application using multiple Web services to generate flood inundation geospatial grids and estimate flood-related property losses. The Polk Center and USGS participated in a Silver Jackets pilot study to demonstrate real-time flood analysis on the White River in Indianapolis.



Home: An interactive web interface (IWI). The application consists of four central panels. The left panel contains controls to start a flood simulation study and access output reports. The top panel displays the process execution application execution status of the process in real-time and is required to start controls. The right side of the IWI contains a control to view generated layers (Legend), Results table, View the Flood Depth (IWI) and Flooded parcel scenarios.



- Benefits of an SOA Analysis:**
- The flood impact scenarios can be saved, which is helpful for mitigation planning against future events.
  - Modeled flood elevations may be compared to the surrounding infrastructure that may be at risk (e.g. bridges). This is useful for resource planning and evacuation exercises.
  - Forecasts potential flood hazard based upon real-time stream gage and NWS inputs. This speeds the process of field work for obtaining disaster declarations.

**What's next for this accomplished group?**

Upper management at the Indiana DHS was so pleased with the performance of the Silver Jackets that the team has been challenged to develop a statewide riverine strategy. This of course will involve even more agencies and partners as it will have far-reaching impact. While this is a team long-term goal, they are determined not to have a single focus, but to manage risk through a variety of approaches. One current effort is **fluvial erosion**. In June 2008, homes were potentially eroding away, but there is a gap in programs: no state or Federal program covers a home that has not yet flooded, but from under which the ground is eroding. The USGS has documented damage from the bank sliding away from under foundations and the IN team is now trying to put together a fluvial erosion hazards program with thanks to the state of Vermont for sharing information regarding their experience.

The Indiana **State Hazard Mitigation Plan (HMP) update** is also a team focal area. All Silver Jackets members participated as contributing authors and editors on the most recent state HMP, which was finalized in April 2008, just before the significant floods of June and September of 2008. Input to the update, due April 2011, is now being solicited; there is a great quantity of new material since the recent floods. The formatting is also being updated; parts will be made digital to allow greater interaction.

A significant portion of the HMP is the **Hazard Identification Risk Assessment**. This interactive, web-based tool is under development. It will help identify challenges, areas to be explored through Silver Jackets. When the group identifies high risk areas, resources can be focused and good information that wouldn't otherwise have been shared can be put to wider use. For example, in the process of writing a report on a Northern Indiana area, IDHS and IDNR needed to gather a list of resources for mitigation activities. Through Silver Jackets, they



found that a partner had done a study on resources for a similar community that could be used for the Northern Indiana report. The Northern Indiana community benefitted from the thorough work done by the Silver Jackets partner, and the taxpayer funds used for the partner’s study were put to greater use. Because IDHS and IDNR were willing to share a draft product and ask for input from other agencies, their service to the community was improved. There are many uses for the products already created by the many agencies that serve the public. Similar to the well-known “reduce, reuse, recycle” model, resources are optimized when data that has already been collected and paid for can be used again. The need for new data and new funding is reduced when access to pertinent existing data is increased and existing data can be reused and recycled, allowing the next follow-on product to develop more efficiently.

In the spirit of employing a patchwork quilt approach to local issues, Indiana Silver Jackets team members from other federal agencies and state agencies are always looking for creative ways to cooperate with each other and leverage resources. This week the Louisville District (lead District for Indiana Silver Jackets) participated in a media event hosted by Congressman Hill to celebrate the installation of stream gages in **Orange County** and an FY10 **Planning Assistance to States (PAS) Study**. The PAS Study



will develop database layers to be used in development of a hydraulic and hydrologic (H&H) model of the karst flood system in Orange County. This model will then be used by USACE, other federal agencies, the State of Indiana, and local communities to analyze flood risks in Orange County. The Indiana Department of Transportation (INDOT), and local governments are providing funding for installation and operation of six U.S. Geological Survey (USGS) stream gages. The USGS is contributing stream gage equipment purchased with American Recovery and Recovery

Act funds and is providing matching funds through its Water Cooperative Program to INDOT and the local communities for installation and operation of the gages. In accordance with USACE Office of Counsel and the USGS, all of these funds and services will serve as the in-kind match for \$75,000 in PAS funds to develop the database and GIS layers for the H&H model. In short, the partnership leverages \$44,800 in local funding to obtain \$142,000 in Federal funds to develop a stream gage network and flood response tool to help Orange County manage flood risk. It’s a success story for all participants involved!

The Indiana Silver Jackets Team meets monthly, usually in Indianapolis since that is where most of the agencies offices are located. Each agency has an equal voice, and shares information allowing agency representatives to become aware of the challenges and focal areas within the state. USACE leads for the Indiana Silver Jackets team are Brandon Brummett and Roger Setters.

## Silver Jackets in the News

Your work developing Silver Jackets teams is being noticed. The Silver Jackets program recently has been highlighted in a number of venues. In November, the Natural Hazards Observer ran “Preventing Human Caused Disasters”, with a highlight on Silver Jackets as an example of leadership at the state level ([http://www.colorado.edu/hazards/o/archives/2009/nov\\_observerweb.pdf](http://www.colorado.edu/hazards/o/archives/2009/nov_observerweb.pdf)), and the Association of State Floodplain Managers highlighted the program and the new website in their January newsletter.



Cartoon by Rob Pudim/Natural Hazards Observer

We’ve also received inquiries specifically about the program from Congress, Sandra Knight, FEMA’s new Deputy Assistant Administrator for Mitigation, and Gerry Galloway. Your monthly updates provide the basis of all responses, so thank you for taking the time to send them in.



## Don't Let Lack of a Charter Stop You: MINNESOTA Silver Jackets

Many Silver Jackets teams are actively managing their state's risk, but have not fully signed a charter. While a charter can help a team focus and build team identity, it is not absolutely necessary to achieve the goals of Silver Jackets; absence of a formal charter should not delay team activities. The Minnesota Silver Jackets have been quite active, holding regular meetings. The core members met in January at the St. Paul District office to participate in a demonstration of a CorpsMap server-based GIS product called MVP Oracle Digital Assets, or MODA. There were twelve team members present from USACE, USGS, NOAA, NRCS, the Minnesota Department of Natural Resources, and the Minnesota office of Homeland Security and Emergency Management. The purpose of the meeting was to demonstrate a new product developed by the MVP Economics and GIS sections. The product uses a GIS interface to access MVP data on existing Rehabilitation and Inspection Program (RIP) levees. The data available includes levee locations, structure inventories of buildings in the 1% flood outline with addresses, structure type, elevation and location attributes. The flood outline is visible, along with various types of base maps (USGS quadrangles, digital orthoquads, or planimetric only). Other attributes include population at risk and many other GIS layers. The tool can be used on the fly as a quick reference before, during, or after flood events to provide information to forecasters and responders. PDF versions of existing FEMA flood insurance study booklets are also included. Planned enhancements include the addition of all MVP flood risk reduction projects, past after action reports, historic high water mark data, the CRREL ice jam database, real time weather radar links, properties bought out from previous floods, National Weather Service river stage forecast and USGS gage data links. Use is anticipated during spring flooding when access, security, and privacy issues are resolved. The non-USACE agencies readily agreed to provide their data to make the product a complete and seamless emergency response tool.

For more information, contact Terry R. Zien, St. Paul District

## Website is Live and Ready for Your Contributions

The national USACE Silver Jackets website, [www.iwr.usace.army.mil/nfrmp/state](http://www.iwr.usace.army.mil/nfrmp/state), is now live and ready for your use and input. Each state has the flexibility to use their page as they see fit. Send in your comments and content today.



## In The Works: Program Guide

One of the most beneficial exercises a developing team can engage in is a discussion of each agency's mission and programs related to flood risk management. A written description of potentially relevant programs may also facilitate collaboration. A Program Guide is currently being developed, but as you can imagine, such an inclusive document is a daunting task. If you have suggestions for programs or resources that should be included, please send them in. The first edition of the program guide will be available at the upcoming Silver Jackets workshop.

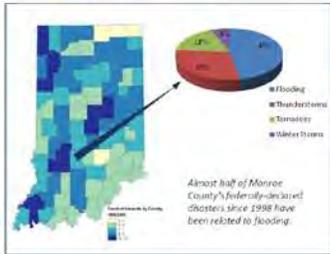


### Mitigating Hazard Impacts in the Community

Example Flood Analysis for Monroe County, Indiana

#### What is HAZARD MITIGATION?

HAZARD MITIGATION is a sustained action taken to reduce or eliminate long-term risk to people and infrastructure from hazards. Mitigation creates disaster-resistant communities by minimizing loss of life, property damage, disruption to local and regional economies, and expenditure of public and private funds for disaster recovery.



Sound mitigation is based on sound risk assessment.

#### What is a RISK ASSESSMENT?

A RISK ASSESSMENT involves quantifying the potential loss resulting from a disaster by assessing the vulnerability of buildings, infrastructure, and people. It identifies the characteristics and potential consequences of a disaster, how much of the community could be affected by a disaster, and the impact on community assets.

#### Steps in Effective Mitigation Planning

##### STEP 1: Identify and Assess Hazards

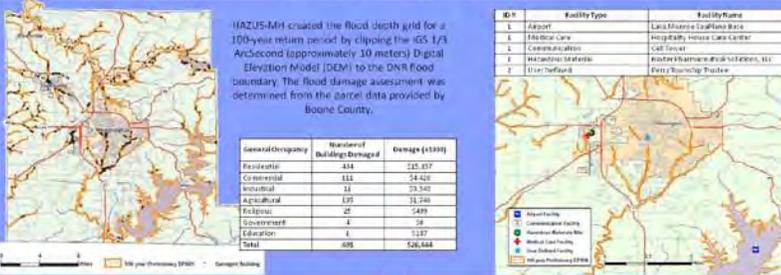
HAZARDS	PROBABILITY	IMPACT	RISK
Tornado	High	Significant	Severe
Flood	High	Moderate	Severe
Dam/Levee Failure	Low	Minimal	Low
Earthquake	Low	Significant	Elevated
Thunderstorm	High	Minimal	Low
Winter Weather	High	Moderate	Severe
Hazmat Release	Medium	Significant	Elevated

Probability rating based on number of historical events within past 30 years:  
 Low: 0-5 events  
 Medium: 6-15 events  
 High: 16+ events

Impact rating guidelines:  
 Minimal: low injuries OR critical facilities down for 24 hrs OR less than 15% property damage  
 Moderate: multiple injuries OR critical facilities down for 1-2 wks OR 30% property damage  
 Significant: multiple deaths OR critical facilities down for 1 month OR 50% property damage

**Probability x Impact = Risk**

##### STEP 2: Conduct Risk Assessment



##### STEP 3: Develop Mitigation Strategies



## Useful Links:

# Mitigation Planning

For an excellent introduction to State and Local Mitigation Planning, please see the FEMA handout attached to this newsletter, and the associated link to the FEMA Mitigation Planning website: [www.fema.gov/plan/mitplanning/index](http://www.fema.gov/plan/mitplanning/index)

As many of you know, FEMA is initiating Risk Mapping, Assessment, and Planning (Risk MAP) and has developed a multi-year plan spanning Fiscal Years 2010-2014. The plan was approved on March 16, 2009, and is now available at [www.fema.gov/plan/ffmm.shtm](http://www.fema.gov/plan/ffmm.shtm). Silver Jackets and RiskMAP share a number of complementary goals. The Multi-Year Plan outlines the FEMA plan for enhancing and maintaining the quality flood hazard data and maps, and building on that data to enable the Risk MAP vision: Through collaboration with State, local, and Tribal entities, Risk MAP will deliver quality data that increases public awareness and leads to action that reduces risk to life and property. Risk MAP aims to improve and maintain flood hazard data and maps; efficiently deliver quality products and services to the right audiences at the right time; reduce loss of life and property through continuous improvement of mitigation plans; increase mitigation actions at the local level; and integrate risk identification, assessment, communication, and mitigation.

While it is widely believed that the benefits of mitigation far outweigh the investment, it is sometimes difficult to demonstrate. The article "Estimating the value of foresight: aggregate analysis of natural hazard mitigation benefits and costs" by David Godschalk, et. al., was recently published in the Journal of Environmental Planning and Management, and follows this newsletter.



## “Ask an Established Team” Corner

*This section will be dedicated to questions from developing teams to established teams. An experience common during initial Silver Jackets team development is hearing from the state representatives that the last thing they need is another meeting to attend. The program is so flexible that it is sometimes difficult to communicate the added value of the effort. While the state of Indiana now highly values their Silver Jackets team, their initial reaction was also that they didn't see a need to attend yet another meeting with the Federal folks. Following is a description of how they came to value Silver Jackets.*

Manuela Johnson advises Silver Jackets leads to start with small, achievable goals, and talk about what the team is doing—people like being part of a successful team. Especially in the initial stages, teams need short-term successes. The world's problems can not be solved quickly, so set attainable goals, build on what is working and take doable 'bites' upfront. Establish a common goal of open and frank discussion of how to leverage resources and share information. Ask each agency to bring a list of their current projects; when discussing actions in the same communities and counties, opportunities tend to come together. Once the team has a focus, a key action is to talk about what the developing team is accomplishing. Although a particular division of the state agency was not initially supportive of the active team, they happened to be in the audience when a team member presented some recent work, and were then convinced of the value. Another team member attracted the attention of a local university as he presented the inundation study success. As a result, the team can now easily access the soils mapping research conducted by the university. Like a complex jigsaw puzzle, various parts of the picture come together separately, and often on varying timelines, but the ultimate goal is for them all to come together to form a complete picture of managed risk. Small successes can build larger successes.

## Upcoming Conferences and Training Opportunities:

- ▶ Flood Warning Systems Preparedness Training Symposium and Workshop  
23rd Conference and Exposition of the ALERT Users Group, Palm Springs, California: May 4–7:  
[http://www.alertsystems.org/aug/2010conf/2010conf\\_flyer.pdf](http://www.alertsystems.org/aug/2010conf/2010conf_flyer.pdf)
- ▶ Association of State Floodplain Managers Annual Conference “Building Blocks of Floodplain Management”, May 16 – 21, 2010, in Oklahoma City, Oklahoma: [www.floods.org](http://www.floods.org)
- ▶ Planning Community of Practice Conference 2010 “Planning Smart, Building Strong: Developing Sound Water Resources Solutions”, June 7-10, Orlando, Florida:  
[http://www.usace.army.mil/CECW/PlanningCOP/Pages/2010\\_plnconf.aspx](http://www.usace.army.mil/CECW/PlanningCOP/Pages/2010_plnconf.aspx)
- ▶ USACE Flood Risk Management and Silver Jackets Workshop, June 22-24, Minneapolis/St. Paul, Minnesota. Website to be announced.
- ▶ Association of State Dam Safety Officials (NLD training session), September 19-23, Seattle, Washington.  
<http://www.damsafety.org/conferences/>
- ▶ Nonstructural Measures for Flood Risk, March 29-April 2, Omaha, Nebraska (Prospect 345)
- ▶ Certified Floodplain Manager (CFM) training and testing is available at the ASFPM Conference.

*Have a question for an established team? Have a topic you'd like more information on? Want to highlight a success your team has achieved? Want to share a useful link? Your contributions to the third quarter newsletter are welcome; send them to [Jennifer.K.Dunn@usace.army.mil](mailto:Jennifer.K.Dunn@usace.army.mil) anytime before May 15, 2010.*