



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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## Senior Leadership Support for Silver Jackets

During the [National Association of Flood and Stormwater Management Agencies \(NAFSMA\) Annual Meeting](#) from 31 October to 3 November, a number of senior leaders expressed support for the Flood Risk Management Program and the Silver Jackets Program. During a dialogue with federal leaders, including Hon. Terrence "Rock" Salt, Principal Deputy Assistant Secretary for the Army (Civil Works), and Hon. David Miller, Administrator, Federal Insurance and Mitigation Administration, both leaders provided their perspective on the role of the federal government in flood risk management. Mr. Salt suggested that federal involvement needs to better enable "boots on the ground," local-level implementation. He identified Silver Jackets as his favorite program within the Corps of Engineers because it had this ability to enable local responsibility, action, and implementation. In response to several questions from the audience about Silver Jackets, both Ms. Karen Durham-Aguilera, Director of Contingency Operations and Office of Homeland Security, and Mr. Theodore Brown, Chief, Planning and Policy Division, both from HQs USACE, provided their personal support and further detail on the program.



Steve Stockton, Director of Civil Works, USACE, Jim Fiedler, NAFSMA President, Terrence "Rock" Salt, Principal Deputy Assistant Secretary of Army for Civil Works, and Susan Gilson, NAFSMA Director.

## New Flood Risk Management Program Leader

The Office of Homeland Security is pleased to welcome Mr. Ray Alexander. As the Acting Deputy Chief, he serves as Director of the Flood Risk Management Program and provides oversight on all matters associated with Flood Risk Management, Critical Infrastructure Protection and Resilience, and Emergency Management. Prior to this interim appointment, he served as the USACE Deputy Chief of Operations responsible for the command's programs involving engineer force structure, current and future

operations, plans and concept development, and training and exercises. Mr. Alexander spent 5 years in the private sector with experience in program management, business development, and contingency operations before returning to federal service in March 2011.

Prior to his time in the private sector, Mr. Alexander completed over 26 years of military service, having commanded at every level from platoon to brigade, and retired at the rank of Colonel. His diverse experiences include: District Commander in the U.S Army Corps of Engineers; faculty member at the U.S. Army War College; division chief at the U.S. Army Maneuver Support Center where he oversaw the \$18 billion Army Engineer program; combat engineer battalion commander in a mechanized Infantry Division; program manager with experience in the Department of Defense's Planning, Programming, Budgeting and Execution System (PPBES) at both Army and Joint Combatant Command staff level; staff experience at the Headquarters of both the Department of the Army and U.S. Army Europe; and command and staff experience in combat engineer troop units with service world-wide. Mr. Alexander is a graduate of the U.S. Army War College, the University of Virginia, and the University of Richmond.





## Spot light on ...

# Silver Jackets Success in Minnewaukan, North Dakota

By Terry Zien, USACE St. Paul District and Michael Hall, ND DES

The City of Minnewaukan has a population of 320 and is located eight miles from Devils Lake. The lake, supported by a 3800 square miles watershed, is a closed basin and has risen 30 feet in the past 20 years causing serious flooding problems for the city and surrounding area. In the spring of 2010, the ND Silver Jackets Team engaged in discussions with the ND Water Commission Department of Emergency Services (DES) and the city due to the continual threat of rising water inundating the city on three sides. The flooding crisis was intensified due to the threat to a public school and city water tower.

Although a reconnaissance study was completed in 2003 that provided a number of potential alternatives to mitigate the effects of the rising lake level, the city was in need of a current review of options and a decision tool to reach consensus on the best approach and the way ahead. The trust and relationships developed through the Silver Jackets Team allowed the federal and state partners to quickly come together to formulate a course of action. The city served as the local sponsor of a Planning Assistance to States study from the USACE with local cost share provided by DES. The cost share agreement was signed in June 2010 and the resulting report was completed in September 2010.

The study supported an intensive interagency effort to evaluate alternatives for flood risk reduction for the City of Minnewaukan and provide recommendations as to which alternatives or combination of alternatives seem viable for a long term solution. In developing the report, several focus meetings were held to gather information and testimony from local and state officials for recommendations on actions to assist with the flooding problems. Several options were identified to step down flood risks, including structural and non-structural solutions, that were supported by multiple federal authorities. The study report served as an important decision tool to help the city understand their remaining viable options for flood risk mitigation.

In the last few years, several homes and a church have been bought out or relocated. In 2011, the city requested St. Paul District USACE build a temporary emergency levee around the eastern edge of town to provide immediate protection from the lake and allow enough time to build a new school and identify a location for a new water tower. The Minnewaukan School District was a key player in working with the city and purchased 45 acres of land about a mile northwest of Minnewaukan. This parcel of land is on high ground not threatened by the lake, and the school and water tower will be located there. An application was submitted to FEMA for the acquisition of an additional 90 homes. Some of these residents have indicated that they would be interested in moving to a new development if it were supported and purchased by the city. The core of the downtown business area, including the historic county seat, is at an elevation above expected impacts from the rising lake. Pending the results of an environmental assessment, the water tower and sanitation sewer upgrades to support both the new development and the city will begin soon.



Devils Lake encroaching on Minnewaukan, ND

The City of Minnewaukan faces many tasks to complete their largely non-structural flood risk mitigation plan. Funding for these projects includes a combination of federal, state, and local loans and grants, resulting in a patchwork quilt solution, with some funding sources still being identified. The cooperation and collaboration enabled by the trust and relationships formed through the Silver Jackets Team have provided a path forward and will continue to be a source of support in the years to come. The ongoing efforts to relocate a large number of people, their vital institutions, and infrastructure serve as an important example of what can be accomplished when citizens and different levels of government come together to provide a shared vision and solutions to our nation's flood risk problems.



## Don't Let Lack of Charter Stop You:

# Hawaii 2060: Visioning Hawaii's Adaptation to Climate Change

By Cindy Barger, USACE

In August 2011, Honolulu District's Silver Jackets initiative, the State of Hawaii's Coastal Zone Management Program, and the National Oceanic and Atmospheric Administration sponsored a workshop to facilitate the development of a statewide climate change policy. Sixty participants engaged in a unique futures approach to policy development. The participants represented a wide array of interests including federal, state and county agencies, academia, Native Hawaiians, environmental non-profits, community organizations, business associates, insurance companies, and youth. The workshop resulted in the development of priority guidelines for climate change adaptation being proposed by the Governor of Hawaii as an addition to the Hawaii State Planning Act in the 2012 State Legislative Session.

"Strategies for adapting to the adverse impacts of climate change require a multi-disciplinary, integrated planning approach that takes into account other stressors such as population growth, economic realities, and Peak Oil. The futures exercise, sponsored by Silver Jackets, allowed diverse stakeholders to experience these futures together, which stimulated more comprehensive strategies to address future climate change impacts," stated Mr. Jesse Souki, Director of Hawaii's Office of Planning and co-sponsor of the workshop.

Participants were transported into the year 2060 and experienced four different scenarios based on futures archetypes of continued growth, disciplined, collapsed, and transformed societies. The participants were asked to "live" within these scenarios, accepting them as their reality and evaluating the pros and cons. Based on their experiences, they developed a "preferred future" centered on aspects of the scenarios they wished to retain or control against. This creative process encourages participants to think "outside of the box" in developing policies.

Day two applied the "appreciative inquiry" process to identify the policy and actions needed to foster the "preferred future". Participants worked together to conduct an "environmental scan" of the trends, stakeholders, contributors, and competitors that may influence the development and implementation of the "preferred future" and climate change adaptation policy. Participants developed a climate change adaption "vision" built on shared values that formed the primary basis for the final climate change policy submitted. The workshop concluded with the identification of two priority strategic issues and associated action plans: (1) Educated Public and Political Will and (2) Integrated Planning and Collaboration.

Captain Jim Coon, the Maui Island representative for the Marine and Coastal Advocacy Council, stated, "This workshop was one of the most effective I have ever attended. The effort that went into creating the four different scenarios of

life in 2060 paid off as we let ourselves live within the scenario. I believe that the vision that was cast was far more effective and realistic because of that effort. Finally the outcome was one that could be presented and defended to our legislators to guide them in their promulgation of climate change policy which will determine how the State of Hawaii and its people plan most effectively for climate change."

"The two-day workshop allowed leaders to develop a shared understanding of the inevitable impacts of climate change in Hawaii along with a common foundation for the future we would like to see for Hawaii's people, systems, businesses, and resources," said Mark Fox, External Affairs Director for The Nature Conservancy's Hawaii Program.



Workshop participants defining shared values that will form a climate change vision statement.



# Arkansas Charter Demonstrates Teamwork

On January 24th, the Arkansas Silver Jackets Team held their official team charter signing ceremony. Their vision is to increase efficiency and coordination between the state and federal governments in developing comprehensive and sustainable solutions to flood risk management for the State of Arkansas. Col. Jeffrey Eckstein, Commander of USACE Vicksburg District, stated, "As our budgets for everyone continue to get reduced, this kind of cooperation and communication framework that we have with the Silver Jackets will help us see solutions out there that we might not normally see without the teamwork and coordination."

Prior to the formal signing of the team charter, the Arkansas Silver Jackets team has been actively pursuing solutions to the state's flood risk issues. They are currently using resources from USACE, FEMA, Arkansas Natural Resources Commission, and USGS to analyze and document the April/May flood event of 2011 for the White, Black, Cache, and St. Francis Rivers in Arkansas.



Signatories - (Left to Right) Randy Young (ANRC), David Maxwell (ADEM), Colonel Glen Masset (USACE Little Rock), Tony Robinson (FEMA), Lt. Colonel Daniel Hamilton (USACE Memphis), Colonel Jeffrey Eckstein (USACE Vicksburg not pictured)



Arkansas Silver Jackets Team - (Front Row Left to Right) - Donna Ryles (ANRC), Theresa Lear (ADEM), Jaysson Funkhouser (USGS) (Second Row Left to Right) Mike Borengasser (ANRC), Don Davenport (USACE Memphis), Josh Rogers (ADEM), Chad Dulaney (USACE Little Rock), Ronald Wanhanen (FEMA) (Not pictured) - Guy Lowes (FEMA), Katy Breau (USACE Vicksburg), Tony Hill (USACE Little Rock), Elmo Webb (Little Rock District)



# Reevaluating the National Flood Insurance Program

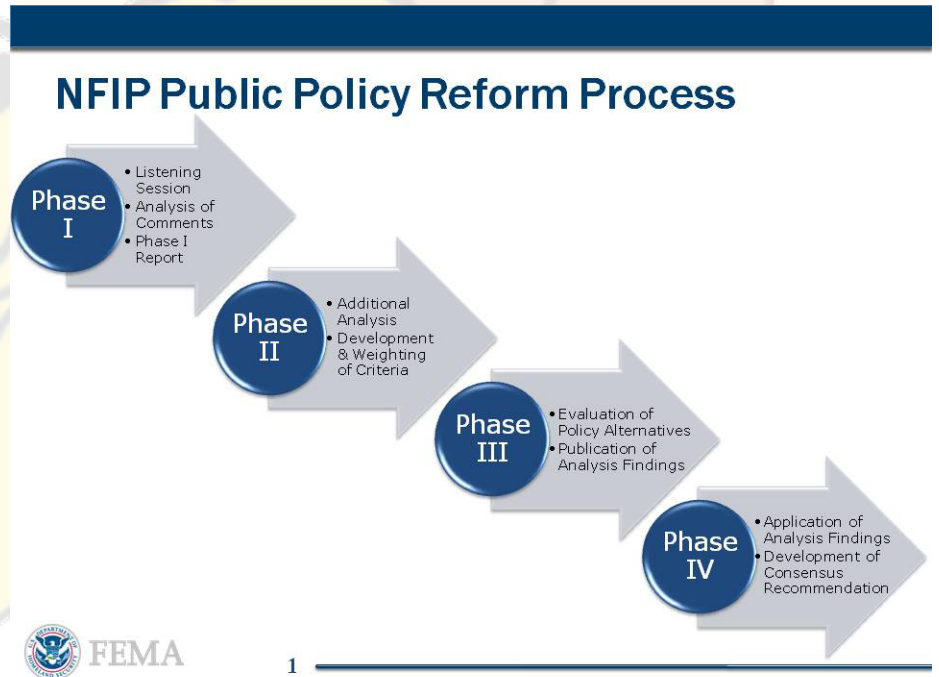
By Laurie Smith-Kuypers, FEMA

Congress established the National Flood Insurance Program (NFIP) in 1968 to develop and sustain a more comprehensive approach to flood risk management. Although the program has evolved through the years, the fundamental concept of the NFIP remains unchanged. This is why in the upcoming months the Federal Emergency Management Agency's NFIP will be considering a long-awaited and carefully designed transformation.

After more than a decade of seeking input, identifying issues, and conducting studies, FEMA is winding down a critical review of the NFIP. The official review began in November 2009, with the formation of a "Working Group" consisting of a cross-section of NFIP staff. Reform is never fast or easy, but this group of individuals came together to review, rethink, and reform the NFIP.

"FEMA has done an incredible job of leading an unprecedented initiative to seek input from stakeholders from across the spectrum of those involved or affected by the NFIP," said FEMA Deputy Associate Administrator of Mitigation, Sandra K. Knight. "The level of support and commitment from the agency to solicit input on the program and examine the changes that have been recommended, both internally and externally, has been remarkable."

In its reform efforts, FEMA is looking to address hot issues in the near term, while, at the same time, tackling some of the more long-term financial and programmatic guidance for a successful program. The end result should be a fiscally sound program that reduces flood hazard vulnerability by successfully utilizing programs that offer affordable flood insurance and encourage sound floodplain management practices.



Congress originally authorized the NFIP to offset the cost of flooding events, which are this county's most expensive natural disaster. The program was established to offer property owners a viable way to recover quickly from the economic impacts of flood events. The program also set out to educate communities about reducing their flood risk through the adoption and enforcement of local floodplain management regulations. Finally, in order to reduce and manage risk, Congress realized that flood hazards had to be identified through mapping and engineering studies.

The Working Group's "roadmap" for reform continues to be based on the belief that private individuals and local communities bear a responsibility to protect themselves from flood hazards. Yet, it also recognizes that government has a responsibility to ensure that its citizenry has access to the tools necessary to do so, including accurate flood risk information, affordable flood insurance, and effective floodplain management guidance.

Throughout the reform efforts, FEMA has kept key stakeholders apprised of its progress, while addressing issues of immediate concern and establishing a solid foundation for the NFIP's future. The Working Group has spent the last two years combing through analyses, Government Accountability Office reports, and other sources of input to come to its improvement recommendations. The team put forth a combination of accepted best practices, "hot" button issues, and ways to incrementally change and improve long-term policy direction. The entire process was divided into three phases: listening session and analyses, developing and weighting criteria, and evaluating practical policy alternatives.

The Working Group has recently completed its final phase and delivered its draft recommendations to FEMA leadership. The "roadmap to reform" will soon be vetted with the Administration and released. Ultimately, the solution will be used to implement internal policy changes in the NFIP and help support future legislation.



# A Risk Informed Approach in the USACE Levee Safety Program

Like the Dam Safety Program, the Levee Safety Program uses a risk-informed approach to understand and ascertain the best decisions about the portfolio of over 2,000 levee systems for which USACE has responsibilities. In risk-informed decision making, the risk (likelihood and consequences) of potential inundation of floodplain properties and occupants that may be associated with the presence of a USACE levee system is assessed and used to supplement historic practices of standards-based decisions. With this approach, USACE can then identify levee safety issues, assess the inundation risk, identify risk management options, and use this information to justify and prioritize the urgency of risk management decisions.

Central to this approach is how the inundation risk is assessed and quantified. Several questions need to be asked during this assessment. What is the range of possible undesirable events (flood, storm or earthquake, etc.)? How will the infrastructure perform in the face of these events? What are the consequences if the infrastructure doesn't perform well with loss of life of paramount concern? In other words, what are the likelihood and severity of undesirable or adverse consequences?

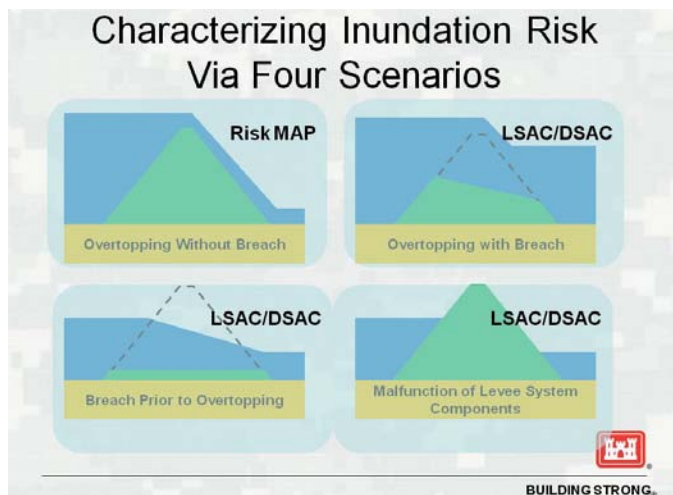
A successful safety program uses periodic and continuous assessments and inspections to inform risk management decisions. The screening level assessments take the next step beyond the routine annual and periodic inspection. It actually uses information from these routine levee safety activities.

The screening level assessment uses the following information in the context of the risk definition above:

- available information from completed inspections
- design and construction records
- a limited engineering assessment and other studies
- observations regarding performance of the levee system
- life safety, economic, and environmental consequences

USACE uses software developed for the levee safety program entitled "Levee Screening Tool" to assist in performing the screening level assessment. They have plans to screen its entire portfolio of levees to identify the highest risk systems first and then implement risk management decisions in such a way as to more efficiently reduce risk across the entire portfolio.

The screening level assessment results inform the Levee Safety Action Classification (LSAC). It is important to note that the LSAC is not a rating. It does not supplant inspections nor constitute a levee system evaluation for the NFIP, nor is it to be used to de-accredit a levee in the NFIP. The LSAC emphasizes the risks associated with the levee system's performance and consequences of potentially poor performance - as it presently exists (from the floodplain occupant perspective). The result is a preliminary, relative estimate of inundation risk associated with the presence of a levee system, which characterizes risk, determines next steps and urgency, prioritizes investments, and justifies actions to manage risk. It emphasizes life-safety risk first, while considering economic and environmental risk.



In making the LSAC assignment, USACE considers the incremental risk, which is defined as the inundation risk to floodplain occupants and properties that may arise due to the presence of a USACE levee system that may not perform as intended. This risk is estimated for the following inundation scenarios: levee breach prior to overtopping, levee breach after overtopping, system component malfunction, or misoperation.

However, an additional potential inundation scenario exists: the levee functions as intended under normal operation, but may experience overtopping without breach (no-breach risk) for events that exceed the containment capacity. No-breach risk and incremental risk equals residual risk, which is also assessed, emphasizing that levees do not completely eliminate inundation risk - an important aspect of levee safety programs.



# Natural Hazard Mitigation Association Practitioners Workshop

By Ann Patton, NHMA

Unprecedented currents of change are creating a “perfect storm” of challenges for disaster fighters in at least three areas: demography, climate, and economy. If we want to reduce losses that continue to spiral out of control, we must make dramatic changes in how we operate. We have to find new ways to work together holistically and create resilient communities from the bottom up. This was the urgent message from experts and front-line workers who attended the 2nd annual National Hazard-Mitigation Practitioners Workshop, “Mitigation on the Ground”, last July. The National Hazards Mitigation Association (NHMA) sponsored the meeting as an add-on to the Natural Hazards Center’s summer Colorado workshop. Speakers said trends are converging to bring rapid changes to the nation’s demographics, climate, and economy, making us more vulnerable to disasters.

## Demographics

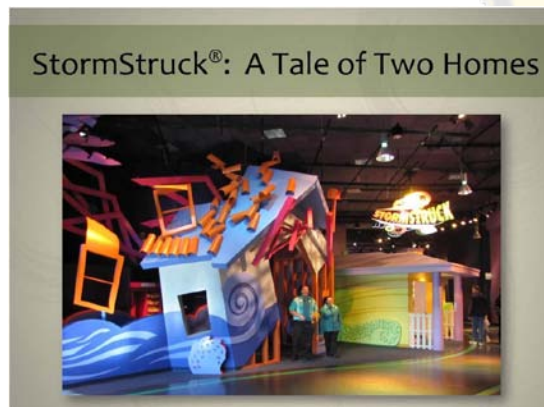
The face of the nation is changing rapidly with vast implications for disaster policies, said demographer Steve Murdock, former director of the U.S. Census. Minorities account for 92 percent of U.S. growth, as the nation’s middle class is eroding and the number of poor and under-educated is rising. These populations are the least able to prepare for and manage disasters, in part because they are consumed with day-to-day survival. Yet most education and outreach target the middle-class.

## Climate

We’re breaking all records for natural disasters across all continents said NOAA’s Margaret Davidson. “The trends and cycles we are seeing are not like anything we have seen in history.”

## Economy

The economy is in crisis, and distrust of government abounds. We cannot expect to free up new capital largess. The scope and frequency of disasters make big-government management problematic. “Nobody has any money now,” said Bill Becker of Natural Capital Solutions, “and we are apt to see programs cut, not started. All pollution is global, but localities will have to control their own destinies.” We must focus on building smarter and safer said FEMA’s Sandra Knight. Creative partnerships are more important than ever, demanding that organizations like NHMA bring together diverse and untapped champions for hazard mitigation.



Taken together, what these trends mean, said University of Colorado’s Dennis Mileti, is that, despite everything you or your agency have done, things will continue to get worse unless we change our approach. The climate is changing, we live in an era of “capitalistic globalization,” and the middle class is gone. We are swimming upstream against overwhelming odds if we fail to attack mitigation holistically and don’t see it in the context of the time. “Mitigation happens when you change the culture and value thinking in the long term,” Mileti said. “Mitigation spreads when people talk to each other. We once had a program in America to do just that, Project Impact, and we would be wise to bring it back – not necessarily by that name, but showing how mitigation can occur in a community when locals come to value it. We need to get the conversation going in America’s communities and get people talking to each other. It worked before, and it can happen again.”

Ed Thomas, NHMA President, urged the group to take the words “natural disaster” out of their vocabularies when they refer to damaging events. “There is no such thing,” Thomas said. “We need to remember what Gilbert White taught us: While hazards such as floods, wildfires, and earthquakes are acts of God, disasters are largely acts of men.”

The American Meteorological Society’s Bill Hooke, chairman of the NHMA Advisory Committee, said even though the problems look too big to solve, we can take hope from recent advances in aviation and population control. The aviation industry learned from experience and dramatically sliced its accident rate. A few years ago people thought population was headed for 15 billion at hopelessly unsustainable rates; but, through outreach and policy changes, the birth rate dropped significantly. Hooke said we now need to attack disaster mitigation with things that are fast, cheap, effective, based on facts, and scalable so communities can utilize them.



Among many successful models cited were:

- The Silver Jackets program of the U.S. Army Corps of Engineers, which is helping develop a more holistic vision for mitigation.
- FEMA's Risk MAP (Mapping, Assessment, and Planning) program, described by FEMA's Roy Wright as an opportunity to reduce the impact of disasters by making programs more usable for local communities.
- The Federal Alliance for Safe Homes (FLASH) is proving that mitigation is good business by building partnerships to bring mitigation to the public, said Leslie Chapman-Henderson, who heads FLASH as well as the International Code Council's foundation. Henderson described the 2,700-square-foot FLASH exhibit at Disney World named ***StormStruck®: A Tale of Two Cities***, which takes visitors through a perfect storm to help them better know their risks, understand their options, and feel empowered to take action.



Roy Wright, FEMA

NHMA is developing a proposed cooperative venture tentatively named NeighborNet to link together grassroots communities working on mitigation, disaster recovery planning, and resilience. The first local pilot using the NeighborNet concept to coordinate community planning and preparedness is Tulsa Partners, a corporate member of NHMA.

Proceedings of the 2011 Practitioners Workshop, including video of speakers and their presentations, are available at [www.NHMA.info](http://www.NHMA.info); the next NHMA Practitioners Workshop is planned for July 2012 in Broomfield, CO. NHMA membership is open to all who support hazard mitigation.

## Demonstrating Benefits of Silver Jackets Pilot Projects

### Background

The U.S. Army Corps of Engineers initiated 12 Silver Jackets pilot projects totaling \$1.14 million in Fiscal Year 2011. The pilot projects, which were coordinated through state Silver Jackets teams, help illustrate the benefits of inter-agency approaches, leveraging resources with partners, and flood risk reduction. A total of 35 proposals were received from 22 states requesting over \$4 million. Additional projects are being considered for Fiscal Year 2012 funding.

### Demonstrating Project Benefits

Each team selected for funding in Fiscal Year 2011, participated in a discussion of how the teams will quantify project benefits. Economic experts from the Institute of Water Resources and the Flood Risk Management Center of Expertise joined the calls and offered their assistance. The desired result to be achieved by the projects' completion is thoughtful documentation of project benefits: ideally, quantifiable benefits that will paint a compelling picture of the actions taken, the flood risks reduced, and the dollars saved (including future obligations) because of the projects. Results will be helpful both within and outside the flood risk management community to demonstrate the benefits achieved for the investment made and to set the stage for future projects.

Observations from the initial coordination calls are as follows:

- There is general recognition of the value of the effort and willingness to seek ways to quantify benefits, with the understanding that the effort is necessarily commensurate with the scope of the project and the funding provided.
- Quantifying reduced risks is not easy, particularly when the project focus is on the provision of information and when actions will be by others such as residents and community officials.
- No single methodology or measure is being promoted or will apply for all pilot projects.
- A wide-range of potential measureable benefits were discussed including: increased warning time, reduced life risk, increased access to information, increased audience receiving information, less risky emergency operations, reduced hours invested in emergency evacuation, increased community credit and/or reduced insurance premium costs through the Community Rating System, reduced disaster payouts through the National Flood Insurance Program, reduced disaster damages, and reduced future expenditures.
- Nearly all projects entail significant leveraging of resources that will be documented.
- Where important benefits cannot be quantified, teams will provide descriptions that "tell the story" of the benefits in reducing flood risk. These descriptions are intended to enhance, rather than replace, the focus on quantification.

Funding for additional pilot projects will be awarded on an ongoing basis. Please work with your Silver Jackets teams to develop and submit additional proposals at any time.



# FloodSmart Offers Tools and Resources to Help Communicate Flood Risk

By Bruce Bender, FloodSmart

As Silver Jacket teams progress with leveraging multiple agency resources to implement sound flood risk management, helping property owners understand their flood risk and getting them to take action to reduce it remains an ongoing challenge. Many citizens are not convinced that they could be susceptible to flooding due to misperceptions and miscommunications surrounding why they are at risk and what the financial implications are if they do flood.

Through FloodSmart, the National Flood Insurance Program's (NFIP) national marketing campaign, a variety of web-based tools and resources have been developed to help stakeholders, such as floodplain managers and other state and community officials, communicate flood risk. These tools and resources on [FloodSmart.gov](http://FloodSmart.gov) can help stakeholders better explain a community's flood risks and recommended actions, including flood insurance, to reduce the devastating consequences of flooding.

The FloodSmart website has several tools that can be downloaded, shared or posted on community websites for use by citizens. These tools help bring the flood story to life for residents and business owners. The shareable tools include:

- [Flood Risk Scenarios](#) -- This online tool illustrates common causes of flooding through animated scenarios. Users can click on a scenario to see examples of how and why it can flood.
- [Cost of Flooding](#) -- Users can interact with this tool by choosing how deep the flood waters could be in a home. This tool shows that all it takes is a few inches of water to cause major damage to a home and its contents. It is an excellent way to illustrate the financial consequences of a flood.
- [Widgets](#) -- During the year, FloodSmart creates and updates widgets as an interactive way to educate individuals about the risks of flooding and direct them to where they can learn more. Widgets have been created for a variety of seasons, including winter flooding and hurricane season. These and other widgets are available from FEMA's widget page.
- [Levee Simulator](#) -- This online educational tool helps explain in simple terms how levees work and how they can fail. Using illustrated scenarios, users can see different ways that a levee can fail (seepage, breaching) and overtop. It also offers tips on how property owners can mitigate against damage.
- [Testimonial](#) -- Online videos from people who have experienced flooding provide compelling, first-hand accounts of the consequences of flooding. These testimonials describe floods that occurred in different parts of the nation from a number of sources, including coastal storms and levee failures. They include home and business owners who did and did not have flood insurance.

FloodSmart has also developed a series of toolkits that community officials can use to promote flood insurance, to assist in communicating the changes in flood risk due to map changes, and to address levee issues. The mapping and levee toolkits contain template outreach materials and letters designed for communities to customize and use in local outreach. There is also a Spanish language toolkit for communities with Spanish-speaking populations. The toolkits are available for immediate use at [FloodSmart.gov/toolkits](http://FloodSmart.gov/toolkits).

Silver Jacket teams are an important resource in helping local citizens to better understand the risks and steps that can be taken to address them. For more information about using and downloading these tools to other sites, contact FloodSmart at [info@femafoodsart.com](mailto:info@femafoodsart.com).





# National Flood Proofing Conference Field Trip

By Judy Soutiere, USACE Sacramento District

The National Flood Proofing Conference held in Sacramento, CA, from November 28th to December 1st, culminated with a field trip to two sites: the challenging Natomas leveed area, and Roseville, which is the first community to achieve a Class 1 designation in the NFIP Community Rating System (CRS). Natomas, a large section of land with over 55,000 acres, is surrounded by 42 miles of weak levees on the north side of Sacramento, making it one of the most at risk areas in the nation. For many years, the FEMA flood maps showed the area as protected so no floodplain management regulation or flood insurance was required. However, re-examinations indicate that the Natomas levee system, originally built as an agricultural levee, is not adequate to protect to the 100-year flood. As a result, the area has been remapped as a Special Flood Hazard Area, making flood insurance and regulation required. The field trip participants observed the implication of these requirements firsthand while visiting the new city fire station within the area. The station was built to meet the flood standards with the base floor elevation approximately 20 feet high. All electricity for the bottom floor is totally separate from the upper floor and is built with flood vents to allow water to pass through the buildings. The work required to reduce the risk of flooding in the leveed area is complex and costly. The participants learned what is still needed to be done to reduce the risk and fix the levees. Eighteen miles of the levee system have been rebuilt with local funding to meet the 100-year standards. The state, USACE, and the Sacramento Area Flood Control Agency have been working on a solution for the remaining portions of the system.

Not far away is Roseville, which has a population of over 100,000 and is 15 miles northeast of Sacramento. The city is located within portions of two major drainage basins that eventually empty into the Sacramento and American Rivers. Damaging floods have occurred roughly every 3 to 5 years with the two largest recorded events in 1986 when 209 structures flooded and 1995 when 358 structures flooded. Roseville has responded aggressively to avert future serious flooding. The city implemented a multi-year flood control improvement strategy including detention basins, buying out repetitive-loss properties, elevating buildings at risk, excavating channels, replacing culverts, and constructing berms and floodwalls. In addition, Roseville installed an early warning system with 18 rain and 19 stream gages connected to a computer monitoring system. The city relies on a wide-range of activities to protect the residents from flooding. These include open space preservation, 2 feet of freeboard in and near the floodplain, strong building codes, and an all hazards, pre-disaster mitigation plan. In fact, Roseville receives CRS points in 16 of the 18 floodplain management activities which entitle the residents to a 45% reduction in flood insurance premiums. During the field trip it was noted that no structure built after 1980 has incurred flooding. In addition, the National Weather Service has designated Roseville as a StormReady Community. For more information about these field trip observations and [Roseville's floodplain management strategies](#), check out the web link.



Connie Perkins points to high water mark in the City of Roseville



Natomas Fire station that has the second floor elevated above BFE.



# 2012 Flood Risk Management-Silver Jackets Annual Workshop: Let the Planning Begin!



Following the highly rated 2011 Flood Risk Management-Silver Jackets Annual Workshop, energy to plan the 2012 workshop is running high. Reflecting our commitment to an interagency, state-focused event, representatives from at least seven state Silver Jackets teams and four partner federal agencies make up the planning advisory committee. First on the agenda are the call for abstracts, training and information session needs, and nominations for Flood Risk Management and Silver Jackets individual and team awards. Beginning in February, updates will be posted to the workshop website [www.nfrmp.us/frmpw](http://www.nfrmp.us/frmpw). Please take advantage of the opportunity to submit an abstract to share your story, help the planning committee design a workshop that will fit your needs, and, of course, nominate that previously unrecognized, but dedicated, team or individual who has moved us forward in managing flood risk.

Pending approval, the Workshop is scheduled for 20-24 August in Harrisburg, Pennsylvania.

## Useful Links

- ✦ **Low Impact Development:** At the Nashville Workshop, Ms. Lisa Hair from USEPA explained the Low Impact Development (LID) approach which EPA promotes for environmental protection and which also has benefits for flood reduction. LID reduces the volume of runoff after storms by capturing runoff from small storms at the source and either infiltrating it or otherwise using the first inch or two. Communities that use Low Impact Development are finding that it is cheaper, reduces flooding issues, and can reduce contamination. An article on the topic in the Nov/Dec 2011 issue of [Stormwater](#), a journal for surface water quality professionals, is now out and is available online.
- ✦ **New Silver Jackets Tri-Fold:** There is something reassuring and official about holding a brochure. It provides a lasting impression long after the presentation is over. Each agency has outreach opportunities that Silver Jackets can capitalize on with the right tools. The Virginia Silver Jackets set off to create just such a tool with two goals in mind: develop an outreach tool to be distributed by team members and their organizations in digital or hard copy form and develop a model that any Silver Jackets team could modify and use.

"This [brochure](#) clearly explains what the Silver Jackets Team is all about and how we can help communities struggling with repetitive losses due to flooding. I will be happy to distribute it at NWS outreach events," said Patti Wnek, Service Coordination Hydrologist, NOAA, NWS, Middle Atlantic River Forecast Center.

## Upcoming Events

### March

- [Virginia Lakes and Watershed Conference / Virginia Floodplain Manager's Association Conference](#), Richmond, VA, March 4 - 6, 2012.
- Region X Regional Interagency Steering Committee (RISC) Geospatial Subcommittee meeting, Boise, ID, March 20. HAZUS Training (tentative) to follow, March 21-23
- [USACE Learning Center Course 345 on Non-Structural Measures for Flood Risk](#), Reno-Sparks, NV, March 26-30, 2012. Participants will become familiar with the opportunities of nonstructural measures including how to formulate and implement them.

### May

- [Association of State Floodplain Management 36th Annual National Conference "Mission Mitigation"](#), San Antonio, TX, May 20-25.

### THE VIRGINIA SILVER JACKETS TEAM

A team of individuals from both federal and state agencies that come together to facilitate collaboration, share information, and leverage resources to identify and implement solutions to reduce flood risk in the State of Virginia.

### SILVER JACKETS IN VIRGINIA

- Charter was signed on December 22, 2010

### PRIMARY GOALS


- Better, collaborative solutions
- Improved risk communication
- Leverage information and resources
- Coordinated hazard mitigation assistance
- Identify gaps

### DESIRED OUTCOMES

- Reduced Flood Risk
- Better understanding of each agency's programs
- Interagency collaboration
- Multi-agency technical resource for state and local agencies
- Facilitate response and integrated post-disaster recovery

### WHY THE NAME SILVER JACKETS?

Traditionally, different agencies wear different colored jackets when responding to emergencies. For example, FEMA personnel wear blue and Corps personnel wear red. The name Silver Jackets is used to underscore the common mission of the diverse agencies involved.



### NATIONAL SILVER JACKET TEAMS PROJECT EXAMPLES

- Louisa County, Iowa, #11 Levee District, Example of Non-Structural and Natural Storage Project: Through the cooperation of Louisa County, state mitigation agencies, USACE and NRCS, 3,200 acres of floodplain were restored, gaining not only flood storage benefits, but improved environmental habitat.
- Real Time Flood Inundation Model, Indiana, Example of Outreach (Risk Communication) and Building a Tool to Facilitate Mitigation (Land Use and Non-Structural): Federal Agencies, the Indiana Department of Natural Resources, and Purdue University participated in developing a web based viewer for use by emergency management personnel and the public to view both real-time location and depth of flooding and predictions for future flooding.

Description of these and other project examples can be found on the Nation Silver Jackets Website:  
<http://www.nfrmp.us/state/bestpractices.cfm>

Contact Us at the Virginia Silver Jackets Webpage:  
<http://www.nfrmp.us/state/factVirginia.cfm>

**PHOTOS ON THE COVER:**  
 Top: Gloucester County after Hurricane Isabel (wave action) -- US Army photo  
 Bottom left: Buena Vista Floodwall during construction -- US Army photo  
 Bottom Right: City of Poquoson after Hurricane Isabel -- VA DCR photo




### WHAT IS THE SILVER JACKETS PROGRAM?


The Silver Jackets is an innovative program that provides an opportunity to consistently bring together multiple state, federal, and sometimes tribal and local agencies to learn from one another and jointly apply resources to reduce flood risk. The Silver Jackets teams are state-led interagency teams. Often, no single agency has all the answers, but often multiple programs can be leveraged to provide a cohesive solution.




### CURRENT PARTICIPATING AGENCIES:




The services provided by VDEM include emergency planning technical assistance, flood observation and warning information, disaster recovery assistance, and mitigation planning and project development.




The mission of DCR is to provide opportunities that encourage and enable people to enjoy, protect and restore Virginia's natural and cultural resources. And the mission of the Dam Safety & Floodplain Management Division is to protect life and property from the effects of natural and man-made flooding. These goals are achieved by the regulation of the safe design, construction, and operation of dams and by assistance to localities for floodplain management to meet the requirements of the National Flood Insurance Program.




NOAA's National Weather Service (NWS) provides weather, hydrologic, and climate forecasts and warnings for the protection of life and property and the enhancement of the national economy. Flood services include river forecasts, flood watches and warnings, flood inundation maps and extended streamflow prediction through the NWS's Advanced Hydrologic Prediction Services (AHPS) webpage <http://water.weather.gov>.




FEMA's mission is to support our citizens and first responders to ensure that as a nation we work together to build, sustain, and improve our capability to prepare for, protect against, respond to, recover from, and mitigate all hazards. FEMA Region III's jurisdiction includes Delaware, the District of Columbia, Maryland, Pennsylvania, West Virginia and Virginia.



The services provided by NRCS include the Emergency Watershed Protection (EWP) Program, which provides assistance to communities to relieve imminent hazards to life and property created by a natural disaster, the purchase of floodplain easements, and a Dam Rehabilitation Program for dams built with NRCS assistance.



The USGS provides realtime streamflow and water level data that is used to help predict flood timing and magnitude at numerous locations throughout Virginia and is actively involved in the development of flood inundation mapping products across the Nation. Working with fellow Silver Jackets agencies, the USGS is providing flood inundation mapping science resources to help build more resilient communities.



USACE provides support through special studies and general technical services, including, but not limited to flood plain mapping and analysis support, through their Flood Plain Management Services Program. Through the Planning Assistance to States Program, they form partnerships with localities for various studies. In addition, technical assistance for pre-flood preparation activities is provided through the Flood Control and Coastal Emergencies Program.

### VIRGINIA SILVER JACKETS MISSION STATEMENT

To function as a catalyst in the identification and resolution of flood hazards to support the reduction of flood risk within the Commonwealth to include such items as flood observation and warning systems, planning, flood hazard mapping, flood hazard mitigation, dams, as well as flood response and recovery activities.