Flood Risk Management Newsletter

June 2014 • vol 7 no 3

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Connecting Flood Risk, Emergency Managers and Silver Jackets: Annual Spring Flood Assessment

Karen Durham-Aguilera, HQ

Every spring, we conduct our annual Spring Flood Assessment and brief to the Deputy Commanding General for Contingency and Emergency Operations (DCG-CEO) (currently MG John Peabody). We base this assessment on your input; each Division has a command responsibility to provide an assessment of their regional flood risk for the coming flood season, and update of their planned or ongoing readiness and preparedness activities. Also as part of the preparation for the Spring Flood Assessment, our Staff Weather Officer coordinates with the NOAA's National Weather Service (NWS) to obtain their national spring flood assessment. Thank you for your efforts! This flood assessment is essential to assure we are evaluating risk and vulnerabilities, and working both internally and externally to assure we are postured to respond to the consequences of flooding.

The NWS spring flood assessment serves as our base estimate. The NWS assessment for this year indicated minor to moderate flood risk in relatively small areas of the country. At the time of the Spring Flood Assessment briefing, we had updated information about potential increased flood risk in a few areas, due to higher snowpack or rainfall than previously anticipated. This was offset in some areas by the abnormally persistent drought that is still affecting many parts of the country. Each Division provided an overview of areas of concern within their AOR. Some of

these areas of concern were attributed to remaining damages from previous flood events. In rolling up the input provided by each division, several areas of concern emerged within Mississippi Valley Division's AOR, within Northwestern Division's AOR where heavier than anticipated snowpack existed, and within a small area of Southwest Division's AOR. The briefing concluded with a review of the flood fight materials on hand, and an assessment if greater supplies were needed. Looking back, for the majority of the United States, our flood assessment aligned well with the prediction offered by NWS. Overall, LRD, MVD, and NWD have been engaged in flood fight/flooding response so far this calendar year.

The Spring Flood Assessment is an excellent opportunity to bring together our internal partners for flood risk management with input from our external partners to ensure we all share a common understanding of the challenges and risks we face during the flood season. The Spring Flood Assessment effort is led by the Emergency Management Community of Practice in support of the Commanders, but I encourage all of the Flood Risk Management Program Managers and Silver Jackets Coordinators to participate! This is an excellent opportunity for the Flood Risk Management and Silver Jackets Programs to engage and help us further connect the Flood Risk Management and Emergency Management efforts. I would also encourage Silver Jackets interagency teams to be engaged to assure you are familiar with the assessments as part of our flood preparation efforts. You can make us better!

FRM RARG 2014 Meeting

Meg Jonas, CHL

The Flood Risk Management (FRM) Research Area Review Group (RARG) meeting was held 14-15 May in Alexandria, VA. The RARG annually reviews and prioritizes R&D statements of need (SoNs) submitted by USACE personnel through the Flood Risk Management Gateway (http://operations.usace.army.mil/flood.cfm). This year, in a collaborative effort with HQUSACE, RARG members were selected to better engage the Civil Works Communities of Practice (CoPs) that contribute to the FRM mission of USACE with the R&D process. Flood Risk Management covers multiple Communities of Practice in three HQ Directorate of Civil Works Divisions: Office of Homeland Security (OHS), Engineering and Construction (E&C), and Planning and Policy. Prior to the RARG meeting, a series of 14 webinars (reaching over 350 people) was held with the CoPs to raise awareness of the USACE FRM research area and associated R&D process. Working through the CoPs, field personnel were encouraged to submit SONs for consideration by the RARG in the R&D program development process. During the RARG meeting, Mark Roupas (OHS), Bob Bank (E&C), and Bill Curtis (CHL) gave opening statements. Drs. Mike Sharp (GSL) and Jeff Waters (CHL) provided programmatic overviews, which were followed by discussion of strategic research topics, and review of over seventy-five SoNs submitted to the Gateway. Outcome of the RARG's prioritization of research requirements will directly support development of the Civil Works R&D program work plan for FY15 and beyond. (POC: Dr. Cary Talbot, Cary.A.Talbot@usace.army.mil)

No Community Left Behind

Lanora Wright, SWD

No community left behind seeks to close the gaps in communication by uniting all national organizations, private sector associations and government at all levels to develop a shared vision for flood risk management. Collaboration and leveraging are essential to integrating the goals, resources and capabilities of local, State and federal agencies to reduce flood risks using a "bottom-up" outreach approach that aims to leave no community behind.

The Silver Jackets, Floodplain Management Services, and Planning Assistance to States programs meet critical objectives of the USACE Campaign Plan and the Southwestern Division (SWD) Implementation Plan (iPlan). The Corps' commitment to collaboration pays off through interagency partnerships and consistent participation in regional, state and local groups focused on reducing flood risks. Collaboration creates visibility, opens avenues that inform the public, and creates mutual, synergistic partnerships. Leveraging produces cost savings by eliminating duplication of efforts, thereby increasing the number of objectives that can be accomplished through each project. The partnership between USACE and FEMA established through the Silver Jackets program leverages the information and resources of each agency by providing access to such national programs such as FEMA's Risk Mapping, Assessment, and Planning (Risk MAP) program and USACE's Levee Inventory and Assessment Initiative. The Southwestern Division's regional FRM PDT includes state Silver Jacket leads from Texas, Oklahoma and Arkansas. Each team evolves based on the needs of the participating local communities within the state.

The Texas Silver Jackets Charter, signed in 2010, includes the Texas Department of Public Safety, Division of Emergency Management, the Texas Water Development Board, FEMA Region 6 and the Fort Worth, Galveston and Tulsa District of USACE Southwestern Division (SWD) and the Albuquerque District in South Pacific Division. The Texas Silver Jackets team submitted a 2014 Interagency FRM Proposal to develop a comprehensive web-based mapping system of all flood risk identification efforts and mitigation activity in Texas. The mapping system, named Texas Flood Resiliency Activity Tracker (TxFRAT), will facilitate coordination of the 50 on-going federal and state flood risk management projects. Completion of the database will promote informed decision making, reduce duplication of efforts and funding among agencies, define high-risk flood areas, and unite and prioritize objectives across the State.

The Arkansas Silver Jacket Charter, signed in 2012, includes FEMA Region 6, the Arkansas Department of Emergency Management, the Arkansas Natural Resources Commission and the Little Rock, Memphis and Vicksburg Districts of the Corps. This Silver Jackets Team received 2013 funding for a nonstructural assessment for Shannon Hills, AR to develop a comprehensive nonstructural assessment of repetitively damaged structures along the Otter Creek and the Shannon Hills Tributary. This assessment identifies and prioritizes mitigation options, and provides flood risk reduction guidance to individual homeowners. The final results of this effort will be incorporated into a community education and outreach effort, and provide a template for utilizing nonstructural mitigation in other communities throughout Arkansas.

The Oklahoma Silver Jackets team, led by the Tulsa District, was formed in 2012. The 2014 nonstructural FRM proposal submitted will develop a Flood Evacuation Plan for High Risk Levees along the Arkansas River which reduce flood risks for about 9,000 residents. Upon completion the project will minimize loss of life risks through public involvement and education; help reduce property losses through early warning systems; and produce flood evacuation maps and plans to increase resiliency. Many project activities are associated with application of nonstructural communication measures to reduce the risk of flooding along the Arkansas River and tributaries downstream of Lake Keystone Dam in Tulsa County, Oklahoma area.

A critical component of the Resilient Neighbors Network and FEMA model is to assist with the development of collaborative information sharing and mentoring programs to increase effective risk reduction actions. Essential to this collaboration is the creation of a functional network by which "bottom-up" innovation meets "top down" support while connecting communities to facilitate learning from each other. Without collaboration, critical opportunities to identify and implement flood reduction measures are lost. Without leveraging, efforts to abate human suffering, economic damage and environmental degradation are diminished. A collaborative and leveraging effort magnifies visibility, educates the public, and produces a multiplier effect in the realization of national benefits by reducing flood risks. This synergistic effect of sharing information, sharing data collection and analysis tools, and leveraging financial resources produces win-win results, fostering the mind-set of "no community left behind." (POC: Lanora Wright, Lanora.Wright@usace.army.mil)

New Guidance for Incorporating Climate Change Impacts to Inland Hydrology in Civil Works Studies, Designs, and Projects


US Army Corps of Engineers

ENGINEERING AND CONSTRUCTION BULLETIN

No. 2014-10 Issuing Office: CECW-CE Issued: 2 May 2014 Expires: 2 May 2016

USACE policy requires consideration of climate change in all current and future studies to reduce vulnerabilities and to enhance the resilience of Corps water-resource infrastructure. The Engineering and Construction Bulletin (ECB) 2014-10 provides USACE with initial guidance for incorporating climate change information in hydrologic analyses in accordance with this policy. It outlines concepts and goals and provides guidance for incorporating climate change information in hydrologic analyses. It also provides an example to support incorporation of new science and engineering products and other relevant information about specific climate change and associated impacts in hydrologic analyses for new and existing USACE projects.

The ECB establishes a procedure to perform a qualitative analysis of potential climate threats and impacts, and applies to all hydrologic analyses supporting planning and engineering decisions having an extended decision time frame. The method consists of a two-phase process that first conducts an initial screening-level qualitative analysis to identify whether climate change is relevant to the project goals or design. If climate change is relevant to the project goals or designs, the second phase requires an evaluation of information gathered about impacts to the important hydrologic variables and the underlying physical processes such as changes in

processes governing rainfall runoff or snowmelt. This information should help identify opportunities to reduce potential vulnerabilities and increase resilience as a part of the project's authorized operations as well as to identify any caveats or particular issues associated with the data. The information gathered in the second phase can be included either in risk registers or separately in a manner consistent with risk characterization in planning and design studies, depending on the project phase.

The guidance applies to all Civil Works hydrologic analyses supporting planning and engineering decisions having an extended decision time frame, except for operational hydrologic studies for water management or for dam safety. Changes other than climate threats that affect inland hydrology will continue to be evaluated in accordance with current USACE guidance. This ECB is available at http://www.wbdg.org/ccb/ARMYCOE/COEECB/ecb_2014_10.pdf

Interagency Flood Risk Management Project Workshop – Focusing on Successes, Challenges, Lessons Learned

Katie Noland, IWR

The Silver Jackets and Flood Risk Management programs will be hosting a face-to-face working meeting 19-21 August 2014in Southbridge, MA. This year's meeting differs from previous workshops since it will be much smaller and focuses on successes, challenges, and lessons learned from past and ongoing Silver Jackets and interagency flood risk management projects. District and Division representatives have been invited to attend. State, other federal, and local representatives will also participate.

The Interagency Flood Risk Management Project Workshop will include detailed discussions of project topics such as common challenges and opportunities to improve how projects are identified and developed by teams for successful implementation through timely completion.


Southbridge Meeting Facility

Currently, the agenda for the meeting includes multiple panel discussions and group activities. One panel discussion will include subject matter experts speaking on several trends, drivers and developments that impact future projects and programs and sharing information that will enhance project collaboration and encourage leveraging of participant resources. Another example is a session that will invite participants to discuss assessing interagency project outcome metrics for communicating program accomplishments.

Additional sessions during the meeting will include interagency discussions on how agencies have benefited or could benefit from involvement in the Silver Jackets and other interagency flood risk management efforts. The working meeting attendees will also consider what factors contribute to projects providing positive impacts throughout the flood risk management lifecycle. There will be an agency resource roundtable during the meeting to discuss available resources

from agencies for interagency projects, as well as time where attendees will prioritize obstacles and challenges to project implementation as a group.

In addition to discussion on these topics for the workshop, attendees will participate in efforts to develop materials that will communicate key take-aways from the meeting to Districts and Divisions. Developing back-brief materials for attendees is particularly important given the limited attendance for the workshop meeting this year. U.S. Army Corps of Engineers employees who attend are expected to report back to their home Division, District and project team on discussions, lessons learned and similar topics. Key lessons learned will also be shared in a future edition of the Flood Risk Management Newsletter. (POC: Katelyn Noland, Katelyn.M.Noland@usace.army.mil)

Revision of ER 500-1-1 and 33 CFR Part 203 – Changes Underway for Public Law (P.L.) 84-99

Stephanie Bray, HQ

Engineer Regulation (ER) 500-1-1, Emergency Employment of Army and Other Resources Civil Emergency Management Program, the regulation implementing P.L. 84-99, has been undergoing revision to synchronize with the changes occurring within the Flood Risk Management Program and the Levee Safety Program, as well as to comply with evolving national emergency management efforts. Over the past several years, the U.S. Army Corps of Engineers (USACE) has reviewed components of its Flood Risk Management and Levee Safety programs to clarify or improve existing policies and, in some cases, implement new ones. In particular, these programs have emphasized risk-informed decision making, transparent communication, and long-term sustainability. The complete ER 500-1-1, dated September 2001, is available at available at http://www.publications.usace.army.mil/Portals/76/Publications/EngineerRegulations/ER_500-1-1.pdf. The interim policy can be found on the NFRMP website (http://www.iwr.usace.army.mil/Missions/FloodRiskManagement/FloodRiskManagementProgram/NewsandEvents/IntheSpotlight.aspx).

As part of this effort, USACE is reviewing and revising the criteria used to determine eligibility for rehabilitation assistance under the USACE Rehabilitation Program in accordance with P.L. 84-99 (33 USC 701n). The Rehabilitation Program is the voluntary program by which USACE will assist in repairing levee systems and other flood risk management projects after a flood event if the projects meet the required eligibility criteria. Review of this program seeks to ensure it is synchronized with USACE's approach of sharing responsibility for flood risk management. This new program direction is being developed through a two-step process. Step one was to issue

interim policy to be implemented while developing final policy. Step two is to develop the new eligibility criteria and solicit feedback for how it will affect the Rehabilitation Program.

The interim policy, developed by an interdisciplinary team, was issued on 21 March 2014. It contains revised criteria that will be used to make eligibility determinations for levee systems until final policy guidance is issued. Eligibility determinations for all other types of flood risk management projects will remain unchanged until the final policy is issued. Eligibility determinations for Coastal Storm Damage Reduction (CSDR) projects will still be made based on current policy. Other P.L. 84-99 emergency management activities, such as preparedness activities, response operations, and flood fighting efforts, will continue in accordance with existing policy.

The final policy for eligibility criteria is now being developed. It will consider broader concepts of flood risk management, risk communication and risk-informed decision making rather than simply a strict adherence to standards. An interdisciplinary PDT is currently working to develop revised eligibility criteria which will be included in Chapter 5 of ER 500-1-1. Ideas for new eligibility criteria are being solicited through four listening sessions to be held across USACE in June 2014. Participants at these listening sessions will represent the Emergency Management, Flood Risk Management, and Levee Safety communities of practice, and will provide broad feedback to the PDT. External feedback on new eligibility criteria will be solicited through an Advanced Notice of Proposed Rulemaking in the Federal Register. This notice will alert non-Federal stakeholders and partners, including public sponsors of flood risk management projects, of our intent to revise the eligibility criteria for the Rehabilitation Program and seek feedback on what should be included in the final policy. This notice will also advise stakeholders and partners of other changes anticipated in the revision of ER 500-1-1 beyond Chapter 5.

Final eligibility criteria will be developed and issued as part of the larger comprehensive effort to revise the regulation covering Civil Emergency Management and the associated Code of Federal Regulations (CFR) for emergency management/P.L. 84-99. The entirety of ER 500-1-1, including Chapter 5 focused on the Rehabilitation Program, has been under revision for several years. Before issuing the final policy, USACE will go through the public rulemaking process for the changes to the CFR. (POC: Stephanie.N.Bray@usace.army.mil)

USACE National Hurricane Program

Christopher Penney, USACE NHP Manager

The National Hurricane Program (NHP) is a multi-agency Federal partnership between the Federal Emergency Management Agency (FEMA), the USACE, and the National Oceanic and Atmospheric Administration (NOAA) National Hurricane Center (NHC). This long standing program partnership, in place since 1985, has three main goals: 1) provide tools and resources to plan, prepare for and protect against hurricanes at the local, state, regional and national levels; 2) deliver comprehensive hurricane evacuation training and technical support to state and local emergency managers (EMs) and to Federal agency partners; and 3) provide real-time information and technical assistance to support Federal/State/Local hurricane decision making.

One of the primary products of the NHP is the Hurricane Evacuation Study (HES). The HES identifies areas that have a risk of storm surge inundation from hurricanes (Hazards Analysis); identifies the people and infrastructure in those risk areas and develops evacuation zones for various scenarios (vulnerability analysis); conducts public surveys to gather information on how people are likely to respond to a hurricane threat (behavioral analysis); reviews potential sheltering demand (Shelter Analysis); and conducts transportation modeling to determine the evacuation clearance time - the time that it will take to evacuate the population from the established evacuation zones to an identified point of safety (Transportation Analysis). The evacuation clearance time is a key output of the HES.

Another key product of the NHP is the HURREVAC Decision Support Software program. HURREVAC provides a common operating platform for EMs to monitor tropical systems and view forecast information from the NHC in graphical/report format. HURREVAC also uses the forecast data from the NHC, along with the evacuation clearance times from the HES, to provide guidance on the time when an evacuation would need to start in order to complete it prior to the arrival of tropical storm force wind conditions. HURREVAC is available free of charge to government emergency managers (http://hurrevac.com/).

USACE participation in the NHP falls under the North Atlantic Division Planning Center of Expertise for Coastal Storm Risk Management (PCX-CSRM). The Program Manager at USACE Baltimore District oversees the program on behalf of the PCX, and work is distributed to a national team consisting of USACE staff from coastal Districts. The USACE role in the program includes conducting HES; responsibility for the operation, maintenance and modernization of HURREVAC; coordinating with FEMA and NHC to set program policy and develop a strategic program plan; providing technical assistance and operational support to program stakeholders; leading program stakeholder coordination efforts through the Interagency Coordinating Committee on Hurricanes (ICCOH); supporting the NHP training program for emergency managers; and conducting Post Storm Assessments of the performance of NHP products and services during a hurricane event.

USACE funding for the oversight and execution of the NHP comes from Interagency Agreements with FEMA through the Interagency and International Services (IIS) program, and a contribution of USACE funds through the Floodplain Management Services (FPMS) program. For more information contact Christopher Penney, USACE NHP Manager, at 410-962-2941, or at christopher.penney@usace.army.mil

Introducing: Risk Communication

Stacy Langsdale and Katelyn Noland, IWR

Given the importance of risk communication, this newsletter intends to present articles on the subject on a regular basis, covering topics such as lessons learned, challenges, strategies and provide useful information on upcoming training and available resources for practitioners.

One resource currently available to U.S. Army Corps of Engineers (USACE) employees is the Corps Risk Analysis Gateway (http://corpsriskanalysisgateway.us/). This website is a training resource that covers risk analysis, risk assessment, risk management and risk communication in ½- to 1-hour on-line modules. The Silver Jackets website, http://www.nfrmp.us/state/, also has many resources available related to risk communication, including webinars (see "Risk Communication and the Nebraska Silver Jackets Team" under the 'Webinars' link on the left of the page), tip sheets, and outreach materials. Such resources are useful for considering how communication practice is a part of risk analysis.

For those seeking more in-depth, classroom training, consider registering for the three-day Risk Communication and Public Involvement course (PROSPECT #104 - http://ulc.usace.army.mil/) to be held 3-5 September 2014 in Huntsville, AL, which is available to all USACE employees. Course objectives include helping students: (1) improve their ability to communicate risk; (2) understand and engage stakeholders in risk-informed decision-making processes; and (3) learn to use public participation methods.

At the Association of State Floodplain Managers' Conference in early June Dr. Langsdale led a training workshop "Communicating Flood Risk: Interagency Perspectives and Approaches." The conference schedule also included a track on Education and Outreach with sessions on Coastal Risk Communication and Web-based Risk Communication, as well as others. Look for some of these topics in future editions of this column.

Hopefully this column will appear fairly regularly, featuring projects and lessons learned related to risk communication as well as training and events. If you are interested in contributing an article on this topic for future editions, please contact Katelyn Noland (Katelyn.M.Noland@usace.army.mil).

ASCE Committee Considers Changes since Katrina

Katelyn Noland, IWR

In 2007, the American Society for Civil Engineers (ASCE) issued a set of recommendations and actions that could be taken to address increasing flood risks and losses following Hurricane Katrina. In January 2012, ASCE established the Task Force Committee on Flood Safety Policies

and Practices (TCFSPP) to examine what progress has been made in the more than eight years since Katrina. The Committee worked with communities, governmental and non-governmental organizations; hosted a flood risk summit; and pursued other efforts to examine whether the nation had truly improved, based on recommendations from the original report. Several U.S. Army Corps of Engineers employees participated in the TCFSPP workshops that will be used to inform the Committee's final report. ASCE has released an article that provides an overview of findings and suggestions for agencies to consider for further improving the nation's flood risk management and communication practices, increasing resilience, and reducing vulnerabilities to future and more frequent events. The ASCE article abstract is available at http://cedb.asce.org/cgi/WWWdisplay.cgi?316980. The full report is not yet available.

CBRA Maps

Lauren Leuck, IWR

Congress enacted the Coastal Barrier Resources Act (CBRA) in 1982 to address unsustainable development of low-lying coastal areas. The Secretary of the Interior is responsible for administering CBRA, accomplished through the US Fish and Wildlife Service (USFWS). The Coastal Barrier Resources System (CBRS) was established through the CBRA and is comprised of more than 3.2 million acres of relatively undeveloped coastal barrier habitat covering 2,500 miles of shoreline along the Atlantic and Gulf coasts, Great Lakes, Puerto Rico, and U.S. Virgin Islands coasts. CBRA encourages the conservation of coastal barriers and their associated aquatic habitat by restricting federal development subsidies within the CBRS, including but not limited to, new federal flood insurance; development grants; funding for infrastructure; and dredging and beach nourishment projects. Areas within the CBRS can still be developed as long as private developers or other non-federal parties bear the full risk.

Revised maps were released in April for all CBRS units in Delaware, South Carolina (including one unit that crosses the state boundary into North Carolina), Texas, and one unit in Florida. These maps are available at http://www.fws.gov/CBRA/Maps/Mapper.html. The updated maps were produced through a digital conversion project, as most of the existing CBRS maps were created more than 20 years ago and are technologically outdated and difficult to use. The digital conversion project was undertaken in partnership with the Federal Emergency Management Agency (FEMA) to bring the CBRS maps into the 21st century, improve CBRA compliance and outreach, and improve government efficiency and customer service by providing more reliable and user-friendly CBRS maps and digital data to the public. The digitally converted maps for the CBRS include changes to the units that have occurred as a result of natural forces, and in some cases voluntary additions, and the addition of excess federal property.

The USFWS plans to complete digitally converted maps for all units in Maine, Maryland, New Jersey, North Carolina, Virginia, and one unit in New York City, by the end of 2014. Updated maps for the 19 out of the 23 states and territories containing CBRS units are scheduled to be completed by the end of 2016. The updated CBRS boundaries produced through this digital conversion effort will also be shown on FEMA's Flood Insurance Rate Maps.

In addition to the digitally converted maps, the USFWS will also be comprehensively remapping CBRS units in the eight states along the Atlantic coast most affected by Hurricane Sandy, from Massachusetts to Virginia. This effort will go beyond the digital conversion project in that it will also correct mapping errors that negatively affect property owners, and propose additions of undeveloped coastal barriers and other vulnerable coastal areas that qualify to the CBRS. This project will help improve the integrity of the maps and increase the resiliency and capacity of coastal habitats and infrastructure to withstand future storms and to reduce the amount of damage caused by such storms. USFWS plans to have the revised draft maps prepared through this effort ready by the end of 2017. However the recommended changes to the CBRS (including proposed removals and proposed additions) will only become effective when the revised maps are enacted into law by Congress. Additional information about the CBRS can be found on the USFWS website at www.fws.gov/cbra . (POC: Lauren Leuck, Lauren.Leuck@usace.army.mil)

Sustaining SMART Government through Interagency Projects

Jeff Morris, SAS

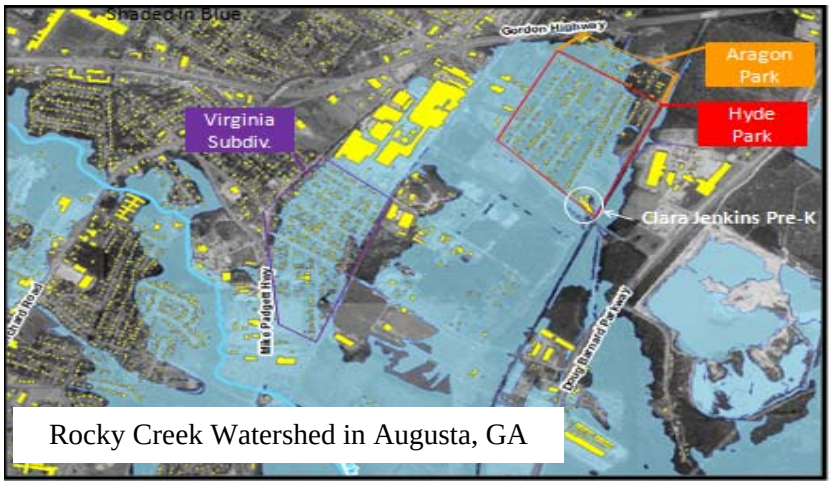
SMART (Specific, Measurable, Attainable, Risk-Informed and Timely) government refers to effective and efficient execution and delivery of interagency projects through collaboration. For the Georgia Silver Jackets it also means the integration and synchronization of federal, state, regional, city and county governments' authorities, programs, and projects that inform and engage the public. The concept works well for the Georgia Silver Jackets Team because there is a willingness and an ability to unify efforts between government agencies to share the responsibility of driving down the risks associated with floods.

The Georgia Silver Jackets Team maintains SMART government throughout the lifecycle of flood risk management in order to drive down flood risks in the state. This is accomplished through the integrated interagency flood risk management team by leveraging the authorities, funding, talents, and information of multiple federal and state agencies, regional commissions, cities, counties and private organizations while working together on interagency flood risk management projects.

An example of such an effort includes the collaboration of the National Oceanic and Atmospheric Administration (NOAA), the U.S. Geological Survey (USGS), the U.S. Army Corps of Engineers (USACE), the Federal Emergency Management Agency (FEMA), the Federal Highway Administration (FHWA), Georgia Emergency Management Agency (GEMA), Georgia Department of Natural Resources (GANDR), and counties and cities to develop interactive flood forecast inundation mapping tools for multiple communities in Georgia. The Georgia Silver Jackets team developed the flood forecast inundation mapping tools for several areas, including the Ocmulgee River and the Chattahoochee River. The team collaborated with local cities to create a library of flood inundation maps that predict the area and depth of forecast flooding. This easily accessible and readily available library will aid emergency managers, county managers, and the general public in managing risks before, during, and after a flood event. The interactive, near-real time, detailed maps will be displayed on the NWS Advanced Hydrologic Prediction Service (AHPS) and USGS websites.

Another Georgia Silver Jackets team project that contributes to the idea of SMART government is the Macon Levee Safety Study. This project was structured to address the fact that the non-accredited Macon levee was not included on FEMA's Flood Insurance Rate Maps (FIRMs). The Silver Jackets Team collaborated with the City of Macon/ Bibb County, answering many questions about different federal and state flood policies and regulations. Discussions are ongoing. It has been pointed out that the FEMA Levee Assessment and Mapping Procedure (LAMP) for Non-Accredited Levee Systems cannot recognize the flood protection the non-accredited Macon levee system currently provides because that structure does not provide protection against the 1 percent chance exceedance plus 3 ft of freeboard storm event. However, the Georgia Silver Jackets Team will consider local risk management strategies, create an opportunity to better communicate flood risks behind the Macon Levee, and synchronize interagency methodologies while advancing a consistent federal message by examining non-structural alternatives to determine the best way to reduce flood risks. It is thought that Macon's best option to reduce flood insurance rates is by starting the Community Rating System program.

A third project is the Rocky Creek Watershed in Augusta, GA, which has experienced numerous floods due to the large watershed draining into and through Hyde Park. The purpose of this non-structural flood risk management interagency project is to prepare an analysis to determine if USACE could assist the City of Augusta in removing structures and relocating residents from Hyde Park.



Rocky Creek Watershed in Augusta, GA

Integration and synchronization of flood risk management efforts is also evident in the Georgia Silver Jackets ongoing Coastal Hurricane Evacuation Public Awareness Study. This study requires close collaboration among multiple federal, state, and county emergency management agencies and private consultants who participated in the preparation of the 2013 Georgia Hurricane Evacuation Study. It also utilizes talents and available programs of other partners involved in the effort. The results of the study are used by counties in Georgia to prepare their communities for the 2014 Hurricane Season and beyond. One product that will reach the public in June 2014 is "The Official Georgia HURRICANE Guide," produced in collaboration with NOAA National Weather Service (NWS) and available to the public at Wal-Mart.

It is through projects and efforts such as these that the Georgia Silver Jackets Team has been striving toward SMART government in order to drive down flood risks throughout the state. The state still has much to do to manage flood risk with the goal of increasing resiliency, but it is evident that interagency projects have been beneficial to communities and many agencies at multiple levels of government. It is also evident that the people who work for the government care for and about those people whose lives and property are at risk of flooding. Jeff Morris is Georgia Silver Jackets Team coordinator. (POC: Jeff Morris, Jeffrey.S.Morris@usace.army.mil)

NWF Peer-reviewed Climate Publication

This peer-reviewed publication was developed by an expert workgroup convened by the National Wildlife Federation that included individuals from: Desert Research Institute, EcoAdapt, Environmental Protection Agency, Florida Fish and Wildlife Conservation Commission, Geos Institute, Maryland Department of Natural Resources, National Oceanic and Atmospheric Administration, National Park Service, Point Blue Conservation Science, The Nature Conservancy, U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service, U.S. Forest Service, U.S. Geological Survey, and Wildlife Conservation Society. A training course based on the guide is being offered by the U.S. Fish and Wildlife Service's National Conservation Training Center. *Climate-Smart Conservation* is available at: www.nwf.org/ClimateSmartGuide.

Announcing a new course " Water Temperature Impacts Under Climate Change" from COMET, USBR, and USACE in August 2014

The COMET Program, the U.S. Department of Interior's Bureau of Reclamation, and the U.S. Army Corps of Engineers are pleased to announce the first Water Temperature Impacts Under Climate Change (WTIUCC) course under a jointly developed Professional Development Series – Assessing Natural Systems Impacts under Climate Change.

When: Tuesday, 12 August through Thursday, 14 August 2014, 8AM-5PM MDT daily

Where: University Corporation for Atmospheric Research, Boulder, Colorado

Lead Instructor: Dr. David Yates, the National Center for Atmospheric Research

Other Instructors: Drawn from the research and operational hydrology communities

Description: In this three day, instructor-led, in-classroom course, participants will explore methods to scope, conduct, and document an assessment of impacts (with uncertainty) from a changing climate on water temperature. Lessons in the course will focus on the water temperature in inland streams, rivers, and reservoirs. Students will examine climate-induced trends and projected changes for surface water hydrology and water temperatures. The learning environment will contain a mix of classroom lecture and discussion and hands-on activities led by experts in water temperature processes.

For more information see http://courses.comet.ucar.edu/course/info.php?id=136 .

Other Links – Information, Newsletters, Fun Stuff

FRM Statements of Need: Submitting "Statement of Need" is the first step in the process of a concept becoming a requirement for research and development. If USACE District personnel have problems or situations they feel should be addressed by research, the Flood Risk

Management Gateway, http://operations.usace.army.mil/flood.cfm , is the place to submit these research Statements of Need (SoNs).

Past issues of this newsletter, various links, news items, and presentations, are all available on the Flood Risk Management Gateway, http://operations.usace.army.mil/flood.cfm. Check it out!

New Newsletter: In December 2013, the USACE Climate Preparedness and Resilience Steering Committee released the inaugural issue of its newsletter, "Climate Change." This is an online newsletter produced by the U.S. Army Corps of Engineers as an unofficial newsletter under the provisions of AR 360-1, to provide information about USACE climate change adaptation issues, policies, tools, and methods. It is available at http://www.corpsclimate.us/cca.cfm. Click on the 'Latest News' in the left column, then look in the right-hand column for the newsletter link.

CIRP Newsletters are available at http://cirp.usace.army.mil/ under the "Publications" drop-down.

The Silver Jackets website, with newsletters – http://www.nfrmp.us/state/.

Flood Risk Management Program (FRMP) –
http://www.iwr.usace.army.mil/Missions/FloodRiskManagement/FloodRiskManagementProgram.aspx

CEIWR-HEC newsletter
http://www.hec.usace.army.mil/newsletters/HEC_Newsletter_Fall2013.pdf

The National Ocean Council's portal for data, information and tools supports planning for the future of the ocean, our coasts, and the Great Lakes. This site hopes to become a one-stop hub to support planners and to provide useful information to the public – http://www.data.gov/ocean

The U.S. Department of Interior periodically releases its newsletter, "Newswave." The Spring 2014 issue has just been announced. The site also contains archived issues. All are available on the DOI Ocean, Coasts & Great Lakes Activities homepage at –
http://www.doi.gov/pmb/ocean/news/Newswave/index.cfm .

FY14 & FY15 SELECT PROSPECT COURSES

FY14 Prospect Courses		
Risk Communication & Public Participation	Huntsville, AL	3 September 2014 – 5 September 2014

FY14 and FY15 Purple Book course listings and schedules – http://ulc.usace.army.mil/

FY15 Prospect Courses		
Streambank Erosion and Protection	Vicksburg, MS	20-24 October 2014
Water and the Watershed	Davis, CA	17-21 November 2014
Corps Water Management System Modeling	Davis, CA	1-5 December 2014
Risk Analysis for Flood Damage Reduction Projects	Davis, CA	26-30 January 2015
Dam Safety	Grenada, MS	2-5 February 2015
Wetland Development and Restoration	Apalachicola, FL	23-26 February 2015
Dam Safety	Grenada, MS	2-5 March 2015
Streambank Erosion and Protection	Vicksburg, MS	23-27 March 2015
Dam Safety	Grenada, MS	30 March-2 April 2015
Coastal Project Planning	Duck, NC	27 April-1 May 2015
Coastal Project Planning	Duck, NC	4-8 May 2015
Dam Safety	Branson MO	4-7 May 2015
Dam Safety	Royal, AR	8-Jun-15
Wetland Stream Ecology Basic	Kalispell, MT	17-20 August 2015
Wetland Development and Restoration	Olympia, WA	31 August-2 September 2015
Wetland River Function/Ecology	Kalispell, MT	6-9 October 2015

CS15 Call for Abstracts – Understanding and Working with Nature

2-page abstracts are being solicited for the 8th Coastal Sediments Conference (CS15), to be held 11-14 May 2015 at the Hyatt Regency, Mission Bay, CA. Abstracts are due 1 September 2014 and authors will be notified of acceptance by 15 November 2014. Full papers are due 1 February 2015.This conference provides an international forum for exchanging information among coastal engineers, geologists, oceanographers, and others interested in the physical processes of coastal sediments and morphology change. The Coastal Sediments conference series began in 1977. This year's theme is "Understanding and Working with Nature."

An abstract template and instructions for authors can be found on the CS15 website: http://coastalsediments.cas.usf.edu/authors.html . Abstract authors should indicate the primary and secondary topic area of the abstract in the top-right corner of the abstract as indicated on the template. Full-time undergraduate and graduate students can compete in the Student Paper Contest which will provide cash awards for three outstanding papers. Student submissions should also list "Student Paper Contest" in the top-right corner if entering the student paper contest. For more information, visit the website: http://coastalsediments.cas.usf.edu/index.html

Conferences

This listing is for information only and is not a complete list of FRM-related meetings. These meetings are not endorsed by the Corps of Engineers unless specifically stated. If we have failed

to list a conference/meeting/symposium that would be of interest to the Flood Risk Management community, please forward the conference details to us.

11-13 July 2014 – Society for Conservation GIS Conference – Monterey, CA - http://www.scgis.org/conference

28 July - 1 August 2014 – Conference on Ecological and Ecosystem Restoration – New Orleans, LA – www.conference.ifas.ufl.edu/CEER2014

14-19 September 2014 – Oceans 2014 MTS/IEEE – St. John's, Newfoundland and Labrador, Canada – www.oceans14mtsieeestjohns.org

16-18 September 2014 – 6th International Conference on Flood Management (ICFM6), "Floods in a Changing Environment" – São Paulo, Brazil – http://icfm6.com/index.php

2-5 September 2014 – Floodplain Management Annual Conference – Santa Clara, CA – http://floodplain.org/pages/annual-conference

17-18 September 2014 – Northeast Shore and Beach Preservation Association Conference – Taunton, MA - www.NSBPA.org

21-25 September 2014 – Association of State Dam Safety Officials Dam Safety 2014 – San Diego, CA – http://www.damsafety.org/conferences/?p=8faca187-a4b0-406d-b9d6-f71c8ba9d192

23-25 September 2014 – Sustainable City 2014 – 9th International Conference on Urban Regeneration and Sustainability – Siena, Italy - http://www.wessex.ac.uk/14-conferences/sustainable-city-2014.html

24-27 September 2014 – FSBPA Annual conference – Bonita Springs, FL – www.fsbpa.com

30 September-2 October 2014 – 2014 America's Watershed Initiative Summit – Louisville, KY - www.conference.ifas.ufl.edu/awi

14-17 October ASBPA National Coastal Conference – Sheraton Virginia Beach Oceanfront – Virginia Beach, VA - http://www.asbpa.org/conferences/2014ASBPACallforPapers.pdf

21-23 October 2014 – Meteorological Technology World Expo 2014 – Brussels, Belgium - http://www.meteorologicaltechnologyworldexpo.com/

1-6 November 2014 – 7th National Summit on Coastal and Estuarine Habitat Restoration – Washington, DC – http://www.estuaries.org/conference/

8-11 December 2014 – ACES (A Community on Ecosystem Services) 2014 – Washington, D.C. – http://www.conference.ifas.ufl.edu/aces/

16-18 December 2014 –5th International Conference on Energy and Sustainability 2014 – Putrajaya, Malaysia – http://www.wessex.ac.uk/14-conferences/energy-and-sustainability-2014.html

27-28 February 2015 – 7th World Water Forum – Gyeongju, Republic of Korea – worldwaterforum7.org

19-23 April 2015 – SEDHYD 2015 – 10th Federal Interagency Sedimentation Conference & 5th Federal Interagency Hydrologic Modeling Conference – Reno, NV - http://www.sedhyd.org/2015/

11-14 May 2015 – Coastal Sediments 2015 – San Diego, CA – http://coastalsediments.cas.usf.edu/

12-14 May 2015 – 2nd National Adaptation Forum – St. Louis, MO – http://ecoadapt.org/programs/awareness-to-action/national-adaptation-forum

3-5 June 2015 – 10th International Conference on Ecosystems and Sustainable Development – Valencia, Spain – http://www.wessex.ac.uk/15-conferences/ecosud-2015.html

15-17 June 2015 – Water Resources Management 2015 - 8th International Conference on Sustainable Water Resources Management, A Coruña, Spain – http://www.wessex.ac.uk/15-conferences/water-resources-management-2015.html

17-19 June 2015 – River Basin Management 2015 – 8th International Conference on River Basin Management including all aspects of Hydrology, Ecology, Environmental Management, Flood Plains and Wetlands - A Coruña, Spain – http://www.wessex.ac.uk/15-conferences/river-basin-management-2015.html

7-9 July 2015 – Coastal Cities 2015 – International Conference on Coastal Cities and their Sustainable Future – New Forest, UK – http://www.wessex.ac.uk/15-conferences/coastal-cities-2015.html

15-17 July 2015 – Water and Society 2015 – 3rd international Conference on Water and Society – A Coruna, Spain – http://www.wessex.ac.uk/15-conferences/water-and-society-2015.html

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To subscribe/unsubscribe: *http://operations.usace.army.mil/flood.cfm*

We would love your input – recommended article length is ½ to 1 page. Articles should be submitted to Doyle L. Jones, Canvassing Editor, Doyle.L.Jones@usace.army.mil.

We would also appreciate your feedback. Contact Dinah McComas, Managing Editor, Dinah.N.McComas@usace.army.mil or Doyle Jones.