Flood Risk Management Newsletter

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CWG Annual Meeting Report

Greg Mausolf, LRE

The US Army Corps of Engineers' Annual Coastal Working Group (CWG) was held in Boston, MA, 5-7 June 2012. The 60 attendees represented all coastal Divisions, most coastal Districts within the Corps, civilian Coastal Engineering Research Board (CERB) members, and Headquarters.

Day 1 of the Coastal Working Group featured several presentations on Flood Risk Management. Ray Alexander, Deputy Chief for the USACE Office of Homeland Security, presented on the Corps approach to flood risk management and linking coastal activities to FRM and a systems approach. New CERB members were introduced to the CWG and a status report on the CERB was given. Several presentations on Climate Change summarized some of the work in which the Corps is involved. The CWG was given an update on the future of the Coastal Engineering Manual and the CWG Knowledge Hub Pilot. Adaptive Management, Sustainable Coastal Systems, Coastal Ecosystems, and Project Policies & Procedures were also presented on during Day 1 of the annual meeting.

Day 2 featured Civil Works Research Area updates from the Navigation Research, Flood Research, Environmental Research, and the FY13 Civil Works Strategic R&D priorities. The Corps is maintaining a Coastal Experience list throughout all Districts and Divisions. One future key is to maintain Technical Competence, and several presentations were given in regards to how the Corps can assure continuing coastal engineering expertise in the future. Regional Approaches to coastal engineering projects were also presented that included Coastal Mapping Products from JABLTCX, the Coastal Systems Portfolio Initiative, and Evaluation of RSM actions. Several Navigation presentations were given in regards to Asset Management, the Marine Transportation System, and the Navigation Strategic Vision Workshop. The USACE Coastal Division Blitz was held with a new, more open and interactive format this year. All Divisions presented on key projects or issues they have been facing over the past year. Strategic Community Roundtables were held at the end of Day 2

that included Coastal Flood Risk Management, Navigation Planning Tools, Data Management/Data Integration, Coastal Technical Competence, Environmental Ecosystems and Wetlands, Coastal Modeling, and CWG Strategic Vision & Framework.

Day 3 was filled with technical presentations on several key coastal engineering topics including the Wave Plan 2.0, GENCADE, Hydro Survey, FEMA Risk Mapping, ADH-ICM, MICA Smart Phone Apps, Nearshore Berms, Long-Shore Transport Fate of a Nearshore Mound, Ship Island Restoration Project, and Assessing Coastal Flood Hazards in South San Francisco Bay. The Annual CWG meeting ended with an update of Action Items from the three days and attendees providing meeting feedback in order to make the next CWG meeting even better. About one-half of the attendees participated in the half-day field trip to Corps coastal projects in the Boston District, including the Plum Island, Newburyport Harbor, and Merrimack Estuary projects. (POC: Greg Mausolf, USACE Detroit District (LRE), Gregory.M.Mausolf@usace.army.mil)

WEBINAR: Non-Structural Techniques for FRM – 19 July 2012

John Ortlieb, MVR

Thursday, 19 July 2012 from 1030-1130 CDT, the Plan Formulation Sub-CoP is offering a webinar by Randy Behm and Keven Lovetro of the National Nonstructural and Flood Proofing Committee, bios below. This webinar will provide a basic overview of non-structural techniques for FRM and general information on using these techniques in planning studies. This introductory webinar will be one of a series from the Nonstructural and Flood Proofing Committee. Other more advanced webinars will follow in later months and will be advertised through the PCoP.

To access this webinar:

AUDIO CONFERENCE ACCESS INFORMATION:
* USA Toll-Free: (877)336-1839
* PARTICIPANT CODE: 3176596

WEB MEETING ACCESS INFORMATION:
* Web Meeting Address: https://www.webmeeting.att.com
* USA Toll-Free: (877)336-1839
* PARTICIPANT CODE: 3176596

The first time you use the Web Meeting Service, you will need to download the client software. Web Meeting HELP & Software Downloads can be found at: https://www.webmeeting.att.com

AT&T WEB MEETING TRAINING:
Training URL: http://attwebtrain.123attend.com Password : Webtrain

Randy Behm is the Chief of the Flood Risk and Floodplain Management Section for the US Army Corps of Engineers, Omaha District. This is a stand-alone office of a team of seven engineers totally dedicated to identifying and reducing flood risk, formulating nonstructural

mitigation measures, and supporting sound floodplain management. Mr. Behm has been in this position since July 2001. He is also the Committee Chairman for the Corps' National Nonstructural Flood Proofing Committee. The committee consists of 7 members and several technical advisors who advocate a complete set of nonstructural tools for reducing flood risk. Prior to these current positions, Mr. Behm has served as a Program Manager, a Hydraulic Design Engineer, and a Project Manager. He has been an employee of the Omaha District for 27 years.

Keven Lovetro currently serves as a supervisor in the Economic and Social Analysis Branch in the New Orleans District of the U.S. Army Corps of Engineers. He leads a team of regional economists who conduct economic feasibility analyses for proposed flood risk management projects. These projects range from multi-million dollar coastal storm surge protection structures and urban drainage systems to local public works involving structure-raising, buy-outs, and ring levees. While the calculation of economic benefits reflecting a reduction in flood risk, and choosing among alternative solutions, is the primary focus of work, an evaluation of the social effects of flooding is also incorporated into each analysis. A Certified Flood Plain Manager, and a Corps employee since 1984, he currently serves on the Corps' National Nonstructural/Flood Proofing Committee. Mr. Lovetro earned his M.A. Degree in Economics and Finance from the University of New Orleans in 1985 and an M.A. Degree in International Affairs from the George Washington University in Washington, D.C. in 1979. For information on the Planning Community of Practice, see "http://www.corpsplanning.us" or www.corpsplanning.us (POC: John Ortlieb, John.T.Ortlieb@usace.army.mil).

MICA – ERDC-developed application simplifies field data collection and analysis

Megan Holland, ERDC

Researchers at the U.S. Army Engineer Research and Development Center (ERDC) in Vicksburg, MS have created a faster, more efficient way for collecting and managing field data using one of the most common technologies in today's market – smartphones. Using the ERDC-developed Mobile Information Collection Application (MICA) software, data can be captured digitally, saving hours of writing forms and inputting data into spread sheets.

A USACE Emergency Operations worker uses the MICA application to capture levee data. Photo by U.S. Army Corps of Engineers.

Thanks to the progression of technology, today's phones do much more than make calls – most come equipped with cameras, GPS, compasses, WiFi and computer

processing. ERDC researchers began investigating the usage of smartphones as data collection devices in 2009, in hopes of harnessing that "all-in-one" aspect for an efficient and cost effective collection method.

The technology was being utilized as an Operation Blue Roof Field Management System following natural disasters when the need for the MICA format arose. "In late May [2011], we received a call from a fellow ERDC employee who observed teams reporting field images and notes that were 24-36 hours old in daily briefings while assigned to Mississippi River flood duty with the Corps' Memphis District. He asked us if there was a better way," said Robert Walker, Computer Scientist for the Information Technology Lab within ERDC. "Within 48 hours, we had a version of MICA ready to go for flood fighting. "

Fifty smartphones installed with ERDC's MICA software were deployed to seven flood affected cities, resulting in over 12,000 pictures, videos and notes, along with the latitude and longitude for each piece of information, being transmitted from the field directly to command centers, thus allowing critical data to be reviewed immediately. The historic flood data covered everything from sandboils to homeowners digging next to levees, and is now safely stored on ERDC's servers to be reviewed in the future if needed.

This technology eliminates the need for field personnel to return to computers during or at the end of a long day to type and organize field notes, a previously necessary precursor to the decision-making process. It also eliminates the need to carry a backpack full of equipment – everything needed for collection can be found on the phone. "If someone in the field sees something they need to report back, they pull out their phone, open the MICA software and begin collecting data," said Walker. "Once the data has been captured, they hit the sync button and it is sent instantly. MICA provides a new capability that field personnel have never had before."

Though many were initially wary of the introduction of a new technology in the midst of the crisis, Walker said, they welcomed the advance with open arms after seeing what the technology could do. Commander of the Corps of Engineers Omaha District Col. Robert Ruch called MICA a great application. "It helps us know what's been done on the ground, it helps us when we see a boil or something similar to get people and resources to the right place," said Ruch. "It's a great application and great work by the folks at ERDC."

Looking ahead, ERDC researchers plan to expand MICA's use beyond blue roofs and flood fighting efforts. Because the software can be customized with a variety of categories including recreational area inspection, slope failure and debris clean-up, the possibilities are endless. ERDC is also working on a suite of complimentary smartphone applications for use with other portable devices. "We took an ERDC technology and joined the fight, helping commanders make decisions to keep citizens safe, and we've proven to Emergency Operations teams around the country that MICA would be a great asset to their mission," said Walker. "We hope now to make this product available worldwide to our districts and our Soldiers." (POC: Robert Walker, Robert.S.Walker@usace.army.mil)

ERDC assists Mississippi Valley Division flood preparedness

Patrice Creel, ERDC PAO

Flood control planners will soon be privy to detailed information on the Mississippi Valley region's flooding potential and current priority repairs. Named "Operation Watershed-Recovery," this compilation showcases the tremendous efforts of the Corps' Mississippi Valley Division (MVD) experts, with ERDC team members as major contributors. USACE regional flood preparedness teams carefully analyzed damage assessments from last spring's massive flooding in developing plans for risk reduction measures and ranking of most-needed repairs. These assessments centered on flood-damaged structures, navigation channels and levees along the Mississippi River. "Each damaged location has been characterized by its likelihood of failure and potential consequences if there is a failure," said Scott Whitney, MVD's regional flood risk manager, as quoted in a *Mississippi Business Journal* article (January 2012). "This information will be communicated through information papers and via a Web-based mapping application called CorpsMap."

Whitney recognized ERDC team members' accomplishments in various phases of this important focus on flooding and public preparation. One team, the Damage Assessments Oversight Team, helped develop the regional prioritization process under the leadership of Dr. James Valverde, special assistant to the Environmental Laboratory Director, stationed at USACE Headquarters. Team members focusing on prioritization and producing the report, "Assets Ranking Methods for Operation Watershed," included Dr. Igor Linkov, Zachary Collier, Matthew Bates, Dr. Todd Bridges, ERDC-EL, and Fausto Morales, a Massachusetts Institute of Technology intern. Linkov explained, "In order to prioritize repairs to damaged infrastructure in the wake of the historic floods of 2011, MVD organized the Damage Assessment Oversight Committee (DAOC), tasked with compiling a ranked list of repairs. The resulting rankings were based on expert judgments regarding the likelihood and consequences of asset failure and considered risk criteria such as potential loss of life and economic damages." He added that ERDC recommended the use of formal decision analytical tools in follow-up analysis and prioritization refinement, and that these tools can efficiently augment the prioritization of damaged assets with results that are transparent, scalable, analytically rigorous, and defensible.

Whitney said several other ERDC scientists and engineers provided major contributions in assessing potential spring flood concerns, inundated locations, priority repairs and vulnerability of various flood-risk reduction systems by assisting with the MRT post flood report and flood season preparedness. Whitney praised the decision to develop CorpsMap for public access in order to make available the damage and risk information papers and construction fact sheets. He commended ERDC-CRREL Mike Smith with the Remote Sensing/GIS and Water Resources Branch, for his vital role as the responsible contributor "for the ability to host this publicly. I had the idea for the external access to CorpsMap, but he provided the means and expertise to do it. He also has helped in creating layers, getting the National Levee Database (NLD) data, troubleshooting issues, data management advice and, most importantly, programming in CorpsMap." Whitney said CRREL Bryan Baker, also with the Remote Sensing/GIS and Water Resources Branch, was involved in providing MVD NLD data, "and these are just some of the ERDC personnel that have provided valuable service to our teams on various components of Operation Watershed – Recovery." (POC: Scott Whitney, Scott.D.Whitney@usace.army.mil)

USACE Involvement in PPD-8

Pete Rabbon, IWR

On 30 March 2011 the President signed Presidential Policy Directive 8 (PPD-8), which focuses on National Preparedness. This directive recognizes that national preparedness is a shared responsibility, much as USACE recognizes flood risk management as a shared responsibility. PPD-8 requires the involvement of everyone, both government and non-government representatives, in a systematic effort to keep the nation safe from harm and resilient when struck by hazards. This Policy Directive is organized around six key elements.

The first of these is the National Preparedness Goal, released on October 7, 2011. This goal states the ends to be achieved as "A secure and resilient nation with the capabilities required across the whole community to prevent, protect against, mitigate, respond to, and recover from the threats and hazards that pose the greatest risk." The second element is the National Preparedness System, released in December 2011, which describes the means to achieve this goal. The National Preparedness System is a series of actions that should be taken to help move the nation toward the National Preparedness goal.

The next two elements are the National Frameworks that were submitted in June 2012 for acceptance and the Federal Interagency Operational Plans (due in September 2012). The fifth key element is an annual National Preparedness Report. The first of these is dated 30 March 2012 (http://www.fema.gov/library/viewRecord.do?id=5914). Further reports are due annually thereafter to document the progress toward achieving the National Preparedness Goal. The final key element is an ongoing national effort to build and sustain preparedness. There will be five total documents for each key element, explaining the delivery of the National Preparedness Goal and how the nation will use the resulting products. The five topic areas are prevention, protection, mitigation, response, and recovery. The recovery aspect is covered under the National Disaster Response Framework, which was released in September 2011.

This interagency effort is being coordinated by the Department of Homeland Security/Federal Emergency Management Agency. This effort is including representatives of the whole community – individuals, local, tribal, state, and Federal government representatives, non-governmental organization representatives, and representatives from the private sector. The USACE has been involved in the writing teams and oversight teams to ensure that the flood risk reduction is properly addressed in this all-hazards, whole community approach. (POC: Pete Rabbon, Peter.Rabbon@usace.army.mil)

ASFPM Conference Highlights

Lauren Leuck, IWR

The Association of State Floodplain Managers (ASFPM) Conference was held May 20-25 in San Antonio, TX. The USACE had robust participation from Headquarters, Districts, Divisions, and the Institute for Water Resources. Many USACE flood risk managers presented on lessons learned from flood risk management projects, gathered input on ongoing activities, and discussed the successes of the Flood Risk Management (FRM) and Silver Jackets programs. Major themes

of the conference agenda included the shared responsibility of floodplain management and disaster recovery; the National Disaster Recovery Framework and National Mitigation Framework and the implication of these policies on flood events and response and recovery; the natural beneficial functions of floodplains; and the importance of risk communication and mitigation activities in addressing flood risks.

Ms. Karen Durham-Aguilera, HQ, presented in a well-received Plenary Session on "A Watershed Approach to Flood Risk Management: Challenges and Opportunities Watershed-Wide," along with Dave Miller, Associate Administrator of FEMA and Steve Bednarz of the Texas NRCS. The USACE held a showcase session on levee safety entitled "Shared Understanding, Shared Responsibility: Managing Risks and Benefits in the USACE Levee Safety Portfolio." Speakers for this session were Michael Bart, MVP, Levee Safety Policy and Procedures Team; Maria Wegner-Johnson, HQUSACE Planning; and Ceil Strauss, Minnesota State NFIP Coordinator and Minnesota Silver Jackets Lead. Jennifer Dunn, IWR, Silver Jackets Program Manager, moderated the session. The Levee Safety Engineer Circular and Interim Risk Reduction Measures were discussed as well as the primary focus of the USACE Levee Safety Program on life safety. The Levee Safety Program also seeks to reduce economic and environmental risks from levee structures. The National Flood Risk Management Program and National Nonstructural/Floodproofing Committee had booths in the exhibit hall which provided opportunities for USACE to share information on our programs and projects.

USACE leadership used the opportunity provided by the conference to have informal meetings with FEMA, ASFPM, and National Association of Flood and Stormwater Management Agencies (NAFSMA) and discussed further collaboration and communication among the organizations, particularly on pertinent issues like risk communication. ASFPM and conference participants celebrated the career of Larry Larson who is retiring as ASFPM Executive Director this year. Chad Berginnis, current Associate Director, will become Executive Director, and Larry Larson will remain with the Association as a Policy Advisor. (POC: Lauren Leuck, Lauren.Leuck@usace.army.mil)

Preview of the Upcoming 3rd Annual Flood Risk Management and Silver Jackets Workshop

Stephanie Bray, HQ

The 3rd Annual Flood Risk Management and Silver Jackets Workshop is scheduled to be held 20-24 August 2012 in downtown Harrisburg, PA. The Harrisburg area was severely impacted by Hurricane Irene and Tropical Storm Lee in the fall of 2011. The Director of the Pennsylvania Emergency Management Agency will open the Workshop, and Ms. Durham-Aguilera (USACE) and Dr. Knight (FEMA) will provide their perspective on issues confronting the Flood Risk Management community. MG Walsh (USACE) has been invited to provide his perspective on flood risk management in the Nation during a lunch presentation, and to present the awards for Flood Risk Manager of the Year, Silver Jackets Coordinator of the Year, and Silver Jackets Team of the Year.

Two exciting field trip opportunities will be offered to workshop participants. The first option will focus on flood risk management experiences and highlights in the Harrisburg area. This will include highlights of the preparation, response, and recovery experiences to the events of fall 2011 as well as an example of how a major facility has consistently met higher standards in flood risk management. The second option will explore the Pennsylvania State Emergency Operations Center (EOC) and Joint Field Office (JFO). Workshop participants will also be offered the opportunity to take the exam to become a Certified Floodplain Manager (CFM).

Training sessions will be offered throughout the day on Monday, 20 August, before the Workshop opening plenary. A CFM Refresher training session will be offered, as will sessions on non-structural alternatives, flood risk communication and flood warning systems. A number of technical tools will be showcased over lunch sessions, potentially including the National Levee Database, SimSuite, the Water Infrastructure Systems Data Manager, the Floodplain Management Database Program, and the Dams Sector Analysis Tool. A variety of networking opportunities will be available for Silver Jackets teams, including a Networking Blitz. Each team will be invited to briefly explain their current or recent activities, followed by an informal session where participants may talk amongst themselves to exchange ideas and strategies.

Sessions will highlight the benefits of mitigation, provide information on new USACE policies and how they can better support flood risk management, current Silver Jackets pilot projects, integration of Silver Jackets teams into the JFO following disasters, recovery from the many flood events of 2011, improving coastal resilience, an example of community peer mentoring, and improving the implementation of multi-objective projects. Concurrent break-out sessions will focus on several key themes. These will be risk communication leading to changed behavior; development and use of flood inundation mapping tools and products; mitigation and mitigation planning; new tools in development for flood risk management; and a variety of perspectives on the experiences of the 2011 flood events. Please join us in Harrisburg for another action-packed week of sharing experiences, perspectives, challenges, and successes in flood risk management. For information on the Workshop, see http://www.nfrmp.us/frmpw/ . (POC: Stephanie Bray, Stephanie.N.Bray@usace.army.mil)

Other Links – Information, Newsletters, Fun Stuff

Silver Jackets newsletter is available on the **Silver Jackets** website – http://www.nfrmp.us/state/

CIRP Newsletters are available at http://cirp.usace.army.mil/news/

1 More Webinar This FY

The Coastal Inlets Research Program (CIRP) has one planned training webinar remaining this fiscal year: GenCade, a regional shoreline and inlet shoal evolution model in the SMS. The webinar will be 11-13 September, from 1-3 pm CDT each day. Please register on the CIRP website to receive more information as these dates approach – http://cirp.usace.army.mil/webinars/ : POC: Ashley Frey, Ashley.E.Frey@usace.army.mil

Subscribe – Unsubscribe – Feedback

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.

FY12 PROSPECT Courses

Course Title	Location	Start Date	End Date
Flood Frequency Analysis	Davis, CA	23-Jul-12	27-Jul-12
Wetlands Development and Restoration	Olympia, WA	10-Sep-12	13-Sep-12
For more information: http://ulc.usace.army.mil			

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.

20 – 24 August 2012 – 2012 USACE Flood Risk Management - Silver Jackets Workshop – Harrisburg, PA – www.nfrmp.us/frmpw

17 –19 September 2012 – 2nd International Conference on Island Sustainability – Croatia - http://www.wessex.ac.uk/islands2012rem2c.html

19 – 21 September 2012 – Risk Analysis 2012 – 8th International Conference on Simulation in Risk Analysis and Hazard Mitigation – Croatia – http://www.wessex.ac.uk/risk2012cfpc.html

20 – 23 September 2012 – Ocean-2012 – Dalian, China – http://www.bitconferences.com/wco2012/fullprogram.asp

26 – 28 September 2012 – FSBPA Annual Conference – Naples, FL – www.fsbpa.com

9 – 12 October 2012 – ASBPA National Coastal Conference – San Diego, CA – http://asbpa.org/conferences/conferences.htm

14-19 October – Oceans 2012 MTS/IEEE – Hampton Roads, VA – http://www.oceans12mtsieeehamptonroads.org/

17 – 19 September 2012 – 2nd International Conference on Island Sustainability – Island of Brac, Croatia – http://www.wessex.ac.uk/islands2012rem4.html

18 – 20 October 2019 – ASCE 142nd Annual Civil Engineering Conference – Montreal, Quebec, Canada – http://content.asce.org/conferences/annual2012/index.html?utm_campaign=Annual%202012%20Montreal%20-%20Call%20for%20Papers&utm_medium=email&utm_source=Eloqua

22 – 25 October 2012 – Dredging 2012 PIANC-COPRI-ASCE Conference – San Diego, CA – http://www.asce.org/copri/News/Headlines/2011/PIANC-USA-and-COPRI/ASCE-Announce-Dredging-2012/

23 – 26 October 2012 – ATC and SEI of ASCE "Advances in Hurricane Engineering Conference" – Miami, FL – www.atc-sei.org

20 – 24 October 2012 – Restore America's Estuaries (RAE) – 6th National Conference on Coastal and Estuarine Habitat Restoration – Tampa, FL – https://www.estuaries.org/conference/

4 – 7 November 2012 – 10th International Conference on Hydroscience and Engineering – Orlando, FL – http://iche2012.org

20 – 22 November 2012 – FLOODrisk 2012 – The 2nd European Conference on Flood Risk Management – Rotterdam, The Netherlands – www.floodrisk2012.net

10 – 13 December 2012 – ACES and Ecosystem Markets 2012 – Ft. Lauderdale, FL – www.conference.ifas.ufl.edu/aces

11-13 December 2012 – 4th International Conference on Sustainable Irrigation and Drainage: Management, Technologies and Policies – Adelaide, Australia – http://www.wessex.ac.uk/irrigation2012rem3.html

21 – 23 May 2012– 7th International Conference on Sustainable Water Resources Management – New Forest, UK – http://www.wessex.ac.uk/wrm2013cfp.html

22 – 24 May 2013 – 7th International Conference on River Basin Management including all aspects of Hydrology, Ecology, Environmental Management, Flood Plains and Wetlands – New Forest, UK – http://www.wessex.ac.uk/rbm2013cfp.html

11 – 13 December 2012 – Sustainable Irrigation 2012 – Adelaide, South Australia, Australia – http://www.wessex.ac.uk/irrigation2012rem1.html

21-24 January 2013 – Gulf of Mexico Oil Spill & Ecosystem Science Conference – New Orleans, LA - http://www.gulfresearchinitiative.org/news-and-events/gulf-of-mexico-oil-spill-ecosystem-science-conference/

9 – 14 June 2013 – ASFPM 37th Annual National Conference – Hartford, CT – http://www.floods.org

23-27 September 2013 – PIANC – SMART Rivers Conference – Maastrict, The Netherlands, http://smartrivers2013.org/home

1 – 6 June 2014 – ASFPM 38th Annual National Conference – Seattle, WA – http://www.floods.org