After Action Review

9/10/2012

In order to reflect upon the establishment and utility of this Task Force, and to prepare for a future reinstatement of this group, the Missouri River Flood Task Force Co-chairs and Work Group Leads have prepared an After Action Review (AAR) in the format of Sustain, Improve, Dismiss. Members of the Work Groups participated in the review as did participants at the final MRFTF meeting. The Co-chairs, Work Group leads, and Task Force participants have consolidated their reflections in this document to inform the establishment of future task forces. For specific details on MRFTF work visit the archived website at: http://www.nwd-mr.usace.army.mil/rcc/MRFTF/default.html.

SUSTAIN (What worked well)

1. Building Relationships

The establishment of the Missouri River Flood Task Force (MRFTF) enabled relationships to form among and between many levels of governments and communities. Communication channels have been established that helped this recovery effort and will help a variety of future efforts. People were able to identify key contacts for their respective needs, and communicated, coordinated, and learned from each other. These relationships and communications channels were enabled by both the greater MRFTF meetings and the eight individual Work Groups that brought together those with similar issues, concerns, and areas of expertise.[1] Networking among federal agencies and federal/state cooperation was especially successful. Many Working Group Points of Contacts/List of Participants will continue to be utilized and maintained by Working Group Leads.

The strongest relationships were built in person during the four MRFTF meetings. The first meeting to stand up the Task Force occurred in Denver, Colorado, October 21, 2011. Additional meetings included one in Kansas City, Kansas on December 12, 2011; a third in Omaha, Nebraska, February 28, 2012; and a final meeting also in Omaha, May 24, 2012.

2. Exchanging Information

The MRFTF created a venue for all to keep each other informed about flood recovery needs and efforts. It allowed participants to maintain transparency and set realistic expectations for the recovery process. Getting involvement from all agencies at all phases is important to facilitate the recovery process. Information provided during Working Group calls and the broader MRFTF meetings was timely and useful and was helpful in keeping other agencies informed. For example, all involved were able to monitor the status of repair work being completed through the U.S. Department of Agriculture (USDA) Emergency Conservation Program (a program of the Farm Services Agency) and Emergency Watershed Protection Program (a program of the Natural Resources Conservation Service) via the Agriculture Working Group. The U.S. Army Corps of Engineers (Corps or USACE) also provided continuous updates on the funding status of levee repairs via the Levee Repair Working Group which was invaluable to local communities and other federal agencies whose programs depend on that information, i.e. the Risk Management Agency (an agency within USDA) which used the information to establish crop insurance rates. Interested parties could ask questions or provide further details in their area for the benefit of all.

The Corps of Engineers information technologists, public affairs officers, and the MRFTF coordinator teamed to develop a website for the effort: http://www.nwd-mr.usace.army.mil/rcc/MRFTF/default.html. Each work group had a page within the website to post their information. The entire site included many useful links and beneficial information related to flood recovery, as well as materials relating to the MRFTF, such as press releases and meeting presentations. Also, weekly updates of the Corps' levee repair efforts were posted, which greatly facilitated the flow of information out to the public.

Regular calls and webinars helped to frame the discussions and provide information. Some flood/drought impacts were not always obvious and, from a regional level, not noticed. Utilizing

[1] Working Groups included: Communications, River Management, Floodplain Management, Regulatory and Permitting, Tribal Outreach, Agricultural, Levee Repair, Navigation, and Hydropower.

state, federal, tribal and private sources for that type of impact information was useful. Both the Corps and the National Oceanic and Atmospheric Agency (NOAA) had calls every other week and monthly, respectively, to keep the basin informed of runoff and climate outlooks.

The MRFTF also created a venue where those impacted could raise issues and concerns for discussion and action. It was valuable to have input from a number of groups on what their needs were. Some agencies need this feedback to know how to best provide information and clarify what resources exist to address stakeholder needs. The discussion topics and issues raised by stakeholders were, for the most part, addressed in the conference calls and larger task force meetings.

3. Leveraging Capabilities to Respond to Those Impacted

Bringing people together around topical areas of focus allowed for the sharing of resources like data and technical tools, both to respond to those impacted by the flood and to address more long-term challenges relating to flood risk management. People were able to tap into various resources and data of the MRFTF participants to help with their particular efforts. This process resulted in various activities and products that assisted those impacted by the flood and those working on floodplain and flood risk management in the Missouri River Basin and include the following:

- Proposal for improving snowpack and soil moisture monitoring
- Missouri River Flow Corridor Study – Ongoing study to locate constriction points, examine environmental and flood risk reduction benefits versus economic costs, and build a tool to establish shallow water habitat priorities on public lands and to identify future habitat sites
- River Management Work Group webinars addressing river conveyance capacity and improving accuracy of runoff forecasts, among other topics
- U.S. Fish and Wildlife Service (FWS) 2011 Flood Recovery Guidance
- National Environmental Protection Act (NEPA) Categorical Exclusions List by Agency for each type of recovery activity
- USACE district by district post flood Fact Sheets for Section 404 Permits
- NPS Wild and Scenic Rivers Act Guidance
- Natural Resources Conservation Service (NRCS) 7-state Wetlands Compliance Guidance document
- Wetlands Reserve Program Fact Sheet
- Regulatory/Permitting Contact Sheet that provides public with federal and state contacts within each state for IA, KS, MO, & NE
- Farming After the Flood Factsheets - archived on the UNL Extension website: http://flood.unl.edu/web/flood/FloodFactSheets
- Flood Recovery Options for Agricultural Land Factsheet - provided on Nebraska NRCS website: http://www.ne.nrcs.usda.gov/
- *Farming After the Flood* Webinar-archived on the UNL Extension website: http://flood.unl.edu/.
- Ag Land Working Group Producer Meeting and Flood Tour
- Omaha Tribe flood recovery meeting
- Tribal Summit on Flood Disaster Response (September 5-6, 2012)

- Missouri River Flood Risk Identification Toolbox - Floodplain Assessment Decision Support Tool
- Flood Mitigation Toolbox (including Land Acquisition & Easement Programs)
- Multi-agency collaboration on Technical/Geospatial Data Exchange

Due to coordinated MRFTF efforts and individual agency and company efforts, most needed emergency repairs were made to levees by March 1, 2012; much of damaged cropland was repaired by April 1, 2012; major road repairs were completed by May 1, 2012; and most damaged railroad infrastructure were repaired by May 1, 2012.

4. MRFTF Structure

The MRFTF structure consisted of three co-chairs from the Federal Emergency Management Agency (FEMA), USACE, and the Natural Resources Conservation Service (NRCS); and nine working groups. Membership was made up of designated representatives from federal agencies, state agencies, and tribes. This prevented the group from triggering the requirements of the Federal Advisory Committee Act. Others participated as contributors or observers. Each work group had a lead or co-leads who were MRFTF members and mostly staff from the three co-chair agencies. Work Group participants included MRFTF members, contributors, and observers.

MRFTF co-chairs conducted teleconferences once a week for the first four months, followed by every other week for the remaining four months. Work Groups conducted teleconferences and webinars once a week for the first three months and every other week, or once a month, for the remaining five months. Work Group leads participated in most co-chair calls as well, which allowed the work groups to stay abreast of, and coordinate, their respective activities, and enabled the co-chairs to provide guidance to the entire effort. The MRFTF held four face to face meetings over the course of the eight-month effort. The MRFTF also had a support team that was comprised of a coordinator, external facilitation team, and several additional USACE staff. This team helped get the task force off the ground and provided logistical and facilitation services to the co-chairs, work groups, and four Task Force meetings.

This structure was very helpful for communication. It was also extremely beneficial for the gathering and distribution of information across the basin and for asking pertinent questions, which allowed the work groups to explore issues to a deeper level. Having the three agencies most active in flood recovery co-chair the MRFTF greatly assisted the recovery process and allowed for innovative thinking. The teleconference/webinar approach was a good way to have continued connection from a geographically dispersed group and to provide high quality data and information. From a logistical standpoint, there was no way to physically bring the group together as often as was needed to move forward. It was important to have such frequent calls due to the urgency of the recovery effort. Excellent leadership was exhibited through the work group leads and those with co-leads were the most effective for handling the large amounts of work associated with running the workgroup and facilitating its activities.

IMPROVE (What would you change?)

1. MRFTF Participation

While many diverse groups participated in the MRFTF, more involvement of upper basin states and tribes would have improved the effort. None of the four face-to-face MRFTF meetings were held in the upper basin and that likely impacted their participation. Regarding the tribes, two MRFTF meetings had some tribal participation, but it was fairly limited. Extensive attempts were made to invite and involve the tribes, but without providing funding or holding meetings near reservations, it was difficult for many to participate. The Tribal Support Work Group was able to reach out and assist impacted tribes, and plans to hold a flood preparedness and response summit to learn from and improve on the 2011 flood response and recovery as it related to tribes.

Participation varied from work group to work group. Many work groups would have benefited from greater member participation both in work group management and work group products. Better support for work groups (i.e. note takers, coordination), either from members or facilitators, would have assisted the effort. There was very little funding for the effort so more assistance from those involved would have been helpful. Increased federal agency leadership support for their participating staff may have improved the level of participation.

Given the range of participation, it was important for work groups to set realistic goals about what they could accomplish in the short time frame. It was best to aim for a couple of objectives and build on them later if there was time and interest. As the flood recovery effort evolved and the system was repaired many lost interest towards the end of the eight-month effort. The professional staff involved was critical, but had their regular workload and commitments to return to. More focused face to face discussions may have helped, but were unrealistic due to the size and geographic dispersal of the group and budgetary constraints.

2. Sustain the Effort

If a community truly wants to reduce flood risk, it needs to engage continuously throughout all phases of flood risk management – respond, recover, mitigate, prepare. MRFTF collaborated during the recovery phase only. The most important work a task force can accomplish is between the extreme events, not after, i.e. a proactive approach versus reactive.

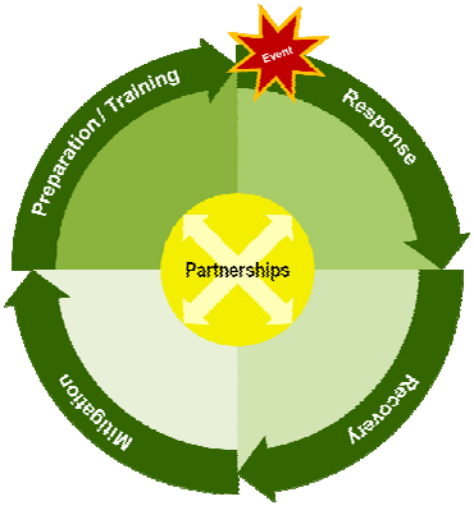

Figure 1: Life Cycle Risk Management

A sustained effort would also allow future Task Forces to address more long-term challenges related to flood risk. There is no time during the urgent preparation for the next runoff season to think beyond immediate repairs to a more holistic approach to the flood risk management system. This type of thinking and planning must be done in advance and then implemented during the flood

recovery phase. For example, many levees were repaired to original specifications even though they have failed many times. There was a desire to do something different but no time to define what that "something" should be. Consequently, a holistic flood risk management plan is needed for the basin along with specific plans for reaches of the river that have repeated problems. During a disaster recovery a community can then work towards that plan instead of doing repairs in a piecemeal, isolated approach. For example, before the 2011 flood the Missouri River Basin community had not identified the basin bottlenecks to river flow, did not have time to do so during the recovery phase, and thus was not able to specifically address them during the recovery effort. With this realization the Corps has now initiated a study (Flow Corridor Study) to do just this, which will inform future recovery efforts on the river between St. Joseph, MO and Omaha, NE (RM 448 and 615). Many goals related to flood risk management require extensive analysis and community conversations to achieve, which is not possible during a six month recovery time-frame.

3. Specific Issues to Address

Specific issues the MRFTF encountered as obstacles are listed below, along with suggestions for how to address them in future efforts.

3.1 Integrated Damage Assessments

Total cumulative flood damages by event and location (basin, state, county), were generally unknown during the 2011 flood recovery effort. Several federal agencies account for specific damages within their authority, however, integrated assessments from all federal agencies are needed to make informed immediate and future flood risk and floodplain management decisions. These assessments should be done by jurisdictional districts (Reservation, State, and County), and include damages to crops, agricultural land (i.e. sediment deposits/contamination/erosion), property (i.e. buildings, homes, silos), roads, rail lines, energy pipelines, and bridges. This would require the utilization of various tools, databases, and methodologies. Essentially, a single reporting format will allow the jurisdictions to easily report information and the various response agencies would be informed about other impacts thus increasing the potential for coordination and collaboration.

The Federal Interagency Floodplain Management Task Force should oversee the development of an integrated damage assessment process involving various federal agencies (FEMA, DoA/RMA, Corps, FHWA, FSA, NRCS, others) to coordinate, support, and track each segment for which they are responsible. This process should include more flood products (inundation maps) for specific areas of the basin and other ways to communicate cumulative impacts to local decision-makers.

3.2 Integrated USACE-FEMA Flood Response

FEMA has an expedited process, referred to as Hazard Mitigation Teams, which allows their technical personnel to conduct immediate flood forensics and initiate flood recovery measures independent of, and in advance of, their USACE partner. Deploying USACE technical experts to flood damaged areas is unlikely unless there is an emergency declaration and existing USACE projects have incurred damage. By not placing USACE structural and nonstructural advisors into the field immediately after the occurrence of urban or suburban flood damage, USACE misses opportunities to effectively develop timely flood risk information in partnership with FEMA and advance interagency risk reduction measures (which usually require independent processes to occur). Both agencies and the impacted communities would benefit from integrated USACE-FEMA collaboration

in the field during flood recovery processes. Thus, USACE requires an expedited process and the funding vehicle to support deployment of structural and nonstructural advisors to flood damaged areas in a timely manner. USACE should work to identify and remove fiscal constraints which preclude them from collaborating in an expedited manner with FEMA personnel in the field following urban and suburban flooding. This could include leveraging emergency response and/or Civil Works program funds to support collaboration with FEMA's Hazard Mitigation Teams for effective flood risk reduction opportunities after the floodwaters have receded.

3.3 Restrictive Interpretations of PL-84-99 for Levee Repair

Better federal investments in levee repairs are needed to reduce longer term risks and future damages. As an example, re-alignment and/or setbacks to allow greater conveyance, reduced stages, and lower risk of levee overtop and failure should be considered. There are several components of Corps policy that relate to innovative repair options:

- Emergency nature of rehabilitation funding
- Flexibility for "strengthening, raising, extending or other modification"
- By policy, Flood Control and Coastal Emergencies (FCCE) funding is precluded for use in purchasing land interests for structural repairs (setbacks, re-alignments)
- For nonstructural alternatives, FCCE may be expended to acquire land

The following ideas would enable better federal investments:

- The federal community must work harder with levee districts to reduce longer-term risks and future damages.
- USACE should clarify/remove constraints (policy interpretation) which limit flexibility of USACE in implementing PL84-99 repairs.
- There needs to be funding for multi-agency pre-planning of future setback or realignments, i.e. the above-mentioned Flow Corridor Study.
- Develop expedited land acquisition authority for emergency repairs; FEMA/States should assist in buy-out of improved properties affected by realignments; USDA should assist with easements of farmland affected by realignments; collaboration is needed with sponsors, FEMA, and states on potential to use expedited buy out authorities.
- Pursuit of required real estate authorities and actions to support future actions

3.4 Missouri River Basin Tribal Challenges

Relationships between federal agencies and tribes are improving, but history is difficult to overcome. The tribes attribute poor water quality, increased trespassing and theft or damage to cultural resources, artificial sediment deposits that impact water infrastructure, harmed fisheries, loss of traditional vegetation, damaged riparian habitat, and increased recreational traffic and its associated impacts to the operation of the Missouri River system. Furthermore, the Missouri River basin is so large that significant resources are required for minimal engagement. Tribes are spread throughout the basin and are mostly located in remote rural areas that are difficult to reach. Missouri River basin tribes have limited resources and limited staff making travel throughout the basin for multiple meetings cost prohibitive. Additionally, tribes feel disenfranchised and believe what they have to say is not considered important or valued.

Tribes have significant issues and concerns related to Missouri River tributaries. In order to hear and address these concerns, federal agencies need to have adequate resources to consult with tribes (some tribes need financial support to get to meetings and federal agencies need funding to

get to tribal offices). Missouri River sub-basins in which there are significant tribal interests need to be identified by the federal agencies. The Missouri River Basin Interagency Roundtable (a collaborative group of federal agencies who play a role in managing the Missouri River Watershed) should establish a tribal support sub-group focused on collaboration, coordination, and communication regarding tribal issues/concerns among the federal agencies and with the tribes. This could be undertaken by the MRBIR committee for tribal support.

3.5 LiDar & Geospatial Data Sharing

During the 2011 Missouri River flood, federal, state and local agencies cost-shared the collection of LiDAR (Light Detection and Ranging) covering 85 percent or more of the Missouri River floodplain. This was a successful partnership yet there is room for improvement across federal, state, tribal, and local governments to avoid collecting data that is redundant, or could be bundled with other partners to collect larger areas more efficiently. There is also a need to better share GIS (Geographic Information System) data and an appropriate online platform to enable this sharing. To resolve these issues, participating agencies need to formalize points of contact (POC) to ensure data collection can be shared when feasible. The USGS should host annual stakeholder meetings of these POCs to collaborate on overlapping data collection priorities. Missouri River Basin agencies should also consider designating an agency to house and disseminate data between agencies. Finally, the agencies should consider the use of NEPAssist and/or other similar GIS tools to develop a GIS system to aid in the collecting, storing, and sharing of data.

3.6 Improving Risk Awareness

One of the issues highlighted by the 2011 Missouri River flood and raised by various MRFTF Work Groups is the need to communicate better about the ramifications of living in a floodplain and an impending flood – the shared risk concept. In 2011, some people were not aware and were consequently not prepared for flooding. There is a general lack of understanding of what it means to live and operate within a floodplain and a lack of correct information. To address this issue the MRFTF conducted a brainstorming conversation about how to improve communications from all sources that provide flood-related information. The final MRFTF meeting included time to discuss ways to improve communications related to preparing for, and responding to, floods.

The MRFTF collected input regarding how to improve flood risk awareness, including where people get their flood-preparedness information from and how the sources of flood-related information can communicate more effectively with those who live in the floodplain. The ideas collected have been compiled here:
http://www.nwd-mr.usace.army.mil/rcc/MRFTF/docs/ImprovingFloodRiskCommunications.pdf
The various parties involved in raising risk awareness in the floodplain should consider the ideas compiled in this document.

3.7 Reducing Flood Risk using Land Management Practices

The Missouri River Flood of 2011 was primarily the result of heavy rainfall across a widespread area in the upper basin above the Missouri River main stem reservoirs. Preventing this water from reaching the Missouri River, or slowing down its path via increased infiltration rates, would reduce flood risk and future flood damages. Increasing infiltration of rainfall into the soil is a relatively easy and low cost method to reduce flooding, and should be encouraged and promoted with more investment by the NRCS, with support from USACE, FEMA, Bureau of Land Management, Bureau of Reclamation, and the National Association of Flood and Stormwater Management Agencies. Types

of support needed include education, outreach, and technical and/or financial assistance or incentives, on both private and public lands, to encourage land users to implement land management practices that will increase the infiltration of rainfall into the soil, increase the water-holding capacity of the soil, and thereby reduce rainfall runoff. Less surface water runoff will also help restore lost and pre-settlement ecosystem functions and processes, including restoration of basin hydrology.

DISMISS

There were no actions taken by the MRFTF that should not be repeated in future efforts.