Missouri River Flood Task Force

Marriott Regency Circle, Omaha NE

May 24, 2012

Meeting Summary

Meeting Objectives:

1. Discuss the status of flood recovery efforts
2. Present final work group accomplishments and receive feedback from the Task Force
3. Learn from each other about ways to improve communications for flood preparedness and flood response in the Missouri River Basin.
4. Close-out the Missouri River Flood Task Force (MRFTF)–
    a. Present Work Group transition plans and how MRFTF work will be archived for future use
    b. Confirm activation plan for any future MRFTF
    c. Debrief the 2011 flood recovery efforts and the MRFTF

Click on the below link to move directly to the section:

Welcome and opening remarks

Co-chair Ms. Beth Freeman, Administrator for the Federal Emergency Management Agency (FEMA) Region VII opened the meeting and thanked all for their participation and hard work over the past eight months. Co-chairs Brigadier General McMahon, Commander of the Corps Northwestern Division, and Mr. Tom Christensen, Regional Conservationist, Natural Resources Conservation Service (NRCS) Central Region, U.S. Department of Agriculture (USDA), echoed Ms. Freeman's remarks and discussed the benefits of the group such as the development of relationships and connections, and plans for future flooding events. Mr. Christensen also thanked the Co-chairs for their leadership throughout the effort.

Introductions and Plan for the Day

Following the opening remarks, the Facilitator, Sheila Shockey introduced herself and her team and outlined the agenda for the day. Attendees, including people who are not members of specific task force work groups, introduced themselves and the organizations that they represent. Approximately 75 people participated in person and virtually.

Status of Flood Recovery

The first substantive session of the meeting was information sharing by the Federal Agencies on the climate outlook and status of flood recovery. All presentations are posted on the MRFTF website under "MRFTF Final Meeting" at www.nwd-mr.usace.army.mil/rcc/MRFTF/meetings.html. The below notes capture key presentation points, discussion, and questions.

Federal Emergency Management Agency (FEMA)

Beth Freeman, FEMA Region 7, and Roger Jones, FEMA Region 8, provided an overview of the 2011 disaster and emergency declarations throughout FEMA Regions 7 and 8.

- There were seven declarations and of the federal dollars expended,
  - $396 million was for Public Assistance (7,800 requests)
  - $119 million for Individual Assistance in 6 states.
- There was much assistance in Minot, North Dakota due to flooding of the Souris River.

Ms. Freeman and Mr. Jones continued by discussing the challenges and lessons learned from the response and recovery. They stated that there is a need to seek new opportunities and turn actions into opportunities.

Challenges

- Availability of flood insurance and the decision to use the same incident period start date regardless of when the water actually impacts the individual states.
- Would have been helpful if FEMA had been allowed to close the incident period on a county-by-county basis as needed rather than leaving it open longer than was necessary in some areas.
- Communication challenge with Council Bluff residents who were provided housing by FEMA for several months

Lessons learned

- Advance notice of flooding provided many benefits- allowed households to move personal property and also allowed for removal of hazardous agricultural products resulting reduced environmental impact.
- Coordination between tribes, FEMA inspection services and the National Processing Service Center proved essential to addressing the needs of multi-generational households.

USDA- National Resources Conservation Service

Verlon Barnes gave an update from USDA- NRCS. He stated that the Emergency Watershed Protection Program has provided funding and recovery assistance for 100 Projects totaling over 9 million. An examples of a project is the Musselshell river diversion and canal that provides water for 52 farms

In addition, in partnership with the Nature Conservancy, a new five state Wetland Reserve Enhancement Program was implemented May 3, 2012. The program is a voluntary-based program using long-term or permanent easements to restore wetlands on agricultural lands along the Missouri River in the states of IA, KS, MO, NE, and SD. Currently 29 applications covering 4,300 acres are undergoing eligibility determination.

NRCS is also implementing a national Soil Health Initiative. Some benefits from the initiative include:

- Increased rain infiltration into the soil
- Increased water-holding capacity within the soil profile
- Reduced runoff of rainfall and snow melt

USDA- Risk Management Agency (RMA)

Rod Sebastian gave an update for RMA. He stated that $280 million in crop insurance indemnities was paid to producers due to the 2011 floods. The land flooded by breached levees in 2011 is insurable for 2012 crops. Crop insurance should not increase for areas where levees have been repaired. 70 percent of lands are not subject to increased rates due to critical repairs being completed. 2012 rates are expected to increase for areas where the levees have not been repaired. Since the last MRFTF meeting there has been a tremendous amount of communication including 13 memos and numerous presentations.

> **Question (BG McMahon):** Referred to slide 32 and the questions regarding the insurability of the lands impacted by the 2011 floods? Is this a good thing?
>
> **Response (farmer attendee):** 70% of the crop land flooded will not experience an increase in costs. 30% of land owners may experience an increase in cost. The numbers provide may be off due to good weather and improvements so those experiencing an increase is most likely lower than 30%.
>
> **Response (Rodney Sebastian):** Near Percival and Hamburg, IA areas are not subject to increased rates, however, it will take much work to get the land back in production.

USDA- Farm Services Agency

Doug Klein gave an update from the Farm Services Agency. The Emergency Conservation Program is for short and long-term recovery of agriculture land. Approximately $40 million has been made available in funds for this cost-share program. Strengths noted were:

- Many producers were able to get their croplands ready for 2012 – some of them in an incremental process.
- The current network across the Ag sector makes available the ability to provide key information for different groups. One of the later programs available for 2011 crop losses is the Supplemental Revenue (SURE) program which opens in October or November. Applications will be taken until spring 2013

A listening session is scheduled on June 7th in Iowa and Nebraska allowing producers an opportunity to provide feedback and ask questions about what worked and what didn't. This will include a field trip to two sites.

National Oceanic and Atmospheric Administration (NOAA)

Doug Kluck gave an update regarding current conditions and forecasting in the basin. He compared temperatures from last year to this year. This year is significantly warmer.

Current conditions

- ENSO-neutral (no El Nino/La Nina but historically would move to El Nino)
- Mountain snowpack mostly below average
- Warm conditions continue

Predictions

- Likely warmer in lower basin
- Precipitation more likely to be dry-far upper basin
- ENSO Neutral through the summer-El Nino return fall?

NOAA is currently watching closely how far we may fall into drought. The soil moisture is worse this week than last. Regarding the mountain snow comparison, last year the snow was way above normal. In 2012 some areas this year were even 0% of normal.

Review of the weather over the next few weeks reveals that warm temperatures and dry weather is projected in this region.

June outlook: A large portion of this region can expect above normal l temps. There is an equal chance for precipitation.

Summer months: Above normal temps without increased precipitation could lead to crop trouble

Drought monitor: Most of Kansas and western Missouri is teetering on the edge of a drought. Persistent drought remains through ¾ of Kansas. ENSO outlook indicates fall and winter will either be neutral or influenced by El Nino.

Question (BG McMahon): Is there a correlation between precipitation and El Niño?

Response (Doug Kluck): El Nino- warmer temps; La Nina-colder temps. It's a neutral situation- could be a coin flip! Precipitation does not really have an impact on this.

Response (Stu Moss): There seems to be more wind this year. Not a lot of ground cover and soil is blowing. When will the wind stop?

Response (Dennis Todey, South Dakota State): There may not be more wind currently, just turning up more of the silt deposited by the flooding. Do not believe wind is tied to El Niño or La Niña.

Response (Doug Kluck): There is a trend up for heavy rainfall, meaning when it does rain there seems to be one cell after another. We should train for this.

NOAA and the Corps are going to work together on predicting future regional concerns. Dennis Todey stated that we need to focus more on regular events not just 100 and 500 year floods.

US Army Corps of Engineers

Jody Farhat presented the runoff forecasted:

- To-date runoff has been 87% of normal.
- 21.6 million acre feet (MAF) of runoff above Sioux City, IA is currently forecasted which is approximately 1/3 as much runoff as last year.
- Full flood control storage is available.
- Current total System storage is 56.9 MAF.
- Planned operation for 2012 is to provide full support for navigation, near normal reservoir levels and releases.
- May need to reduce service level for navigation depending on the July 1 System storage check.
- Cancelled bimodal spring pulse release from Gavin's Point Dam.
- Favoring Fort Peck and Oahe reservoirs during the forage fish spawn.
- Water levels will provide good support to all authorized purposes.

The carryover multiple use zone serves as the "bank account" to serve authorized purposes during droughts. If dry weather continues we expect to be at 53 MAF of storage which is in the carryover multiple use zone.

In response to a question by Diane Mann-Klager regarding the minimum total System storage level the reservoir System had ever reached , Ms. Farhat indicated the historic minimum was in 2007 and was 33.9 MAF and the historic high was last year at 72.8 MAF.

John Leighow gave an update on the rehabilitation of the levees:

All levee rehabs projected to be completed by end of calendar year 2012. The supplemental that came in December provided the needed funding to get the levee rehabs started.

Mr. Leighow continued by discussing the flood vulnerability of the levees:

- *NWO- Gavins Point to Rulo*

  1 red risk (L594) (levee has breaches or major scouring such that levee will not provide flood protection; it is not flood fightable.)

  18 amber risk (seepage issues) (levee substantially whole with critical sections returned to design height; levee is flood fightable.

- *NWK- Rulo south to STL*

  2 red risk (Holt #10; Grape-Bollin-Schwartz)

  1 amber (Holt #9)

  45 green (levee substantially whole, capable of meeting its designed purposes, could still need sod/seeding.

Mr. Leighow discussed the post-flood efforts. The key vulnerabilities include:

- Increased flood damage risks until all repairs are completed.
- Increased flood damage until existing systems are restored.
- Residual risk remains even with a repaired and restored levee system.

Measures to improve flood risk reductions beyond current system design include:

- Work with sponsors to build resiliency into low profile levees that overtop at events greater than 50 year frequency. (Designed failure sections as opposed to uncontrolled overtopping)
- Work with sponsors to remove restrictions/setback levees where possible to open up the floodway
- Work to modify PL 84-99 authorities to provide additional flexibility in repairing levees.
- Evaluate, design and build features to provide increase flood storage and conveyance systems addressing the multipurpose use of water within the Missouri River Basin.

Question (Verlon Barnes): What type of construction material was used for repairs?

Response (Kim Thomas, Corps): About 3 million cubic yards of sand (reclaimed from where it had been deposited on land) and then encased that sand in clay.

Levees that experienced damage "not" on federal lands are only tracked if they are in the PL 84-99 Program. Tom Oswald (IA Silver jackets) indicated that FEMA is providing public assistance for a few levees north of Council Bluffs, IA that are not in the PL 84-99 program . These levees must be maintained to qualify for the PL 84-99 Program.

<u>John Remus (Corps) discussed levee setbacks being considered</u>.

Mr. Remus indicated historic flooding of a long duration occurred along the Missouri River producing excessive damage, levee erosion and breaches, large discharges and recurring damage at many of the same locations as previous years, and particularly where the channel is constricted.

Conceptual Levee Setbacks are viewed as an alternative to repairs in-place and are determined relevant based on risk based assessments.

Flood risk considerations include:

- Reduced damages
- Sustainable
- Reliable

Levee setbacks are a localized realignment using risk based levee design. They are not the complete removal of, or realignment of, levee systems.

While levee setbacks would be a more expensive alternative to repair in place, all levee setback options result in a positive benefit-cost ratio and would be a worthy consideration of federal investment. Setbacks studied would result in 50 to 100% increase in level of flood protection. The study did not take into account the benefits of the protection to power plants (Cooper etc.) or reduced agricultural use in the cost-benefit analysis.

Question (BG McMahon): Must levee setbacks be agreed to by the landowners and the Corps?

Response (Mr. Remus): Most of the land used for setback is agricultural and should not have a negative impact on crop usage but the landowners must agree.

Mr. Leighow discussed the constraints of taking concepts to reality:

- Higher cost, takes longer
- Authorities: PL 84-99 program relies on sponsor for real estate; generally levee repairs require little land
- Benefit to Cost Qualifications: current methodology inhibits innovation; impact on habitat, adjacent systems, critical facilities; and frequency of recurring damages to the levee systems.
- Societal Concerns: an unfamiliar process, initial concerns of "not on my land"

Question (Randy Asbury, Coalition to Protect the Missouri River): What consideration is given to the landowners to the higher risk they would take being in front of, rather than behind of, the levee if the levee were setback?

Response (Mr. Remus): PL 84-99 does not currently have a way to address this but levee setbacks are to be implemented; it is recommended that this be discussed.

Response (BG McMahon): There are many parties involved in levee setback projects and compensation discourse needs to be explored. We need to continue to work together to realize the reality of the situation and the hard choices ahead. Need to determine what "looks right" to everyone. It needs to be taken to the next level and engage in the difficult discussion to set the ground work to move forward.

Response (Kara Morgan, Corps): One of their objectives is to explore non-structural alternatives. Look at the pinch points along the river. We are considering a setback that explores acquiring ground that has little private impact.

Comment (Verlon Barnes, NRCS): Encourage folks to explore a system wide approach. 40% of the basin is controlled by 6 main stem structures. 60% not controlled by the 6 main stem structures. We can move buildings, increase utilization of flood insurance, etc. Many parts of the basin can increase their usage by utilizing private lands to absorb water.

Comment (Brian Rast, Corps- by phone): We have identified land use between levees as an issue for levee setback projects.

Question (Mr. Bill Lay, farmer): I would like to have a copy of the Corps Design /Discharge report that will be completed in summer of 2012.

Work Group Accomplishments

Two work groups presented information on their final accomplishments. All presentations are posted on the MRFTF website under "MRFTF Final Meeting" at www.nwd-mr.usace.army.mil/rcc/MRFTF/meetings.html. The below notes capture key presentation points, discussion, and questions.

Flood Risk Identification Toolbox: USDA-NRCS

Richard Sims, NRCS State Conservationist, and Gregg Hadish, NRCS GIS Specialist, gave an update on the flood risk identification toolbox.

A tool has been created utilizing GIS systems to prioritize with limited funds. This is a high level cut tool and not intended to be used for detailed analysis. The tool is for use beyond this event and the 502 data layers can be used for several types of projects including prioritizing program use and study. The focus area were soils data and the floodplain map from soils. This is a spatial database utilizing unit boundaries to summarize the information. HUC- 12 modeling was uses to normalize the data. It is a web-based interaction map tool developed with the Corps' Engineer Research and Development Center (ERDC) using SimSuite.

Comment (BG McMahon): The tool puts the basin at a much higher level of analysis and needs to be taken to the next level.

Response (Mr. Hadish): New databases can be plugged in.

Question (Verlon Barnes, NRCS): How long would it take to develop the tool for the entire Basin?

Question (Tom Christensen): How will the tool be shared outside of the Missouri River Basin?

Response (Mr. Hadish): The Iowa Silver Jackets have shown adeptness at using the tool and it would be marketed by state Silver Jacket organizations. While the tool has been used locally it has not been marketed nationally.

Flood Risk Mitigation Toolbox

Hector Santiago, National Park Service, gave an update on the flood risk mitigation toolbox. The focus area is on the development of a potential mitigation toolbox. He provided a mission statement identifying the promotion of gathering, sharing and dissemination of information associated with the Missouri River floodplain. To achieve the mission this group will develop a toolbox to include resources, best practices and lessons learned for utilization by its stakeholders.

Benefits of this toolbox include:

- Updateable: A one stop shop of links to potential technical and financial resources
- Proactive: Opportunities to cooperatively address and actively mitigate flood risk before a flooding event
- Accessible: List of resources, programs, and practices that can be used as part of a coordinated response to a flooding event.

Question (Maria Placht, Corps Institute for Water Resources): How will this tool be shared?

Response (Beth Freeman): It is being uploaded to the FEMA Region VII website and being provided to State Silver Jacket organizations.

River Management Work Group

Kevin Grode, Corps, and Jim Pennaz, Corps, gave an update on the river management work group.

Funded by the Missouri River Recovery Program, the Missouri River Flow Corridor Study will locate constriction points, other areas of other lost conveyance, study levee setbacks, examine environmental /flood risk reduction benefits versus economic costs and conclude with the development of a tool to establish shallow water habitat priorities on public lands and identify future habitat sites. The Study will be complete in March of 2013.

The group has also developed a proposal for a plains snow and basin conditions network to improve river inflow forecasting. This network would be developed in cooperation with numerous entities that would collect and contribute data regarding plains snowpack levels.

Improving Flood Risk Communications – Brainstorming Session

Meeting attendees participated in a brainstorming sessions targeted at ways to improve communications related to 1) the ramifications of living in a floodplain; and 2) the risk associated with an impending flood. These ideas are compiled with additional ideas collected via email and can be found in a separate document on the MRFTF website at: http://www.nwd-mr.usace.army.mil/rcc/MRFTF/meetings.html

The attendees were asked to identify who has flood risk information. The responses included:

- NOAA-NWS alerts and data
- FEMA, City, County, Government
- USGS Stream gauge info
- CORPS-monitoring
- IA Flood center
- Websites, consolidated flood pages, flood maps

They were then asked to state whose information is trusted.

- Local sources, state government, some feds (information better accepted from locals)
- Some people don't trust anyone.

They were asked to identify methods of communications. Response included:

- radio
- internet
- social media (Facebook, twitter, etc.)
- mailings

- local community leaders
- community groups
- conference calls

The attendees stated that the following messages need to be given:

- Keep telling the message.
- Make the message consistent.
- Build effective communication in small positive steps for long-term solutions.
- Promote awareness that all levees will eventually fail.
- Take advantage of May as flood prevention month to increase awareness.
- Get and keep their attention by delivering consistent, timely and accurate messages.
- Utilize 1% data as opposed to 100/50 year risk to deliver message.
- Incorporate climate patterns, wet cycle in message.
- Translate the data to impacts on a real-time basis.
- Articulate range of risk and determine if it is projected to be catastrophic or something less.
- Be sure to target communications to those who live or operate in a floodplain.
- Make the message proactive rather than reactive.
- Educate the potentially impacted areas on flood awareness, how to prepare for, and mitigate the impact of flooding.
- Find the way to make them care!
- Tell it local and tell it often.
- Address personal responsibility.
- Start to focus on the younger kids. Kids will learn and share what they learned to develop a future of prepared members of the community.

Work Group Transition Plans

The work groups presented information about their transition plans, including what actions they will finalize, what actions they will continue, and what actions they may transfer to Silver Jackets or the Missouri River Basin Interagency Roundtable. All presentations are posted on the MRFTF website under "MRFTF Final Meeting" at www.nwd-mr.usace.army.mil/rcc/MRFTF/meetings.html. This link provides information on the transition plans for the following work groups: Communications, River Management, Floodplain Management, Regulatory and Permitting, Tribal Outreach, Agricultural, and Levee Repair.

Debrief 2011 Flood Recovery Efforts and MRFTF

Meeting attendees broke into groups to discuss what worked well during the MRFTF effort and what could be improved upon in future task forces.

What worked well?

- Communications, calls, webinars, climate forecasts
- Fed/state cooperation was great
- Missouri Levee and Drainage District Association (MLDDA) did a good job
- Relationship building, contact building

- Interaction with a "common theme"
- Communication – agency to agency; Silver Jackets
- Inundation mapping
- The structure/org of MRFTF,
- Establishment of work groups
- Key players were in place
- Interests were met with cooperation
- Transparency was maintained
- Realistic expectations were set

What needs to be improved?

- Recommend an annual meeting for flood/drought
- Should have more state, tribal and local government participation
- More "grassroots" communication
- A quick startup process for task force
- Identification of what needs to be changed for the better.
- A plan for addressing complacent groups
- Recognition of the "natural benefits" of flooding
- Develop a way to communicate the various needs at differenct local levels
    - What works for city/county X may not work for city/county Y
- Inundation mapping accuracy and a general understanding of map content
- Social media has limitations- face to face/verbal communication is vital
- Develop trusting relationships "before, not during" times of crisis
- Develop consistent terminology
- Identify the coordination between the federal and the state
    - Who is responsible for what"
    - Who is leading "this" action vs. "that" action?
- This group should not be "only" event driven
- Would benefit from documented policy-guidance-requirements
- Funding stream flexibility

Draft Activation Procedures

Ms. Beth Freeman presented the draft procedures for future activation of a MRFTF or similar task force. There were no comments and the final plan can be found on the website at www.nwd-mr.usace.army.mil/rcc/MRFTF/meetings.html.

Closing Ceremony

The meeting concluded with a closing ceremony to recognize the hard work, commitment, leadership, and participation of all involved in the MRFTF effort, including the Co-chairs, Work Group leads/sub leads, coordinator, facilitators, and all those who spent a considerable amount of time during the past 8 months on the Missouri River flood recovery effort.