

MINUTES

OF THE UPPER MISSISSIPPI RIVER SYSTEM FLOW FREQUENCY TASK FORCE MEETING 29 APRIL 1999 – ST. LOUIS, MISSOURI

The meeting began at 8:00 a.m. with welcoming remarks, introductions, and a discussion of the schedule by the Chairman, Mr. S. K. Nanda. A list of the attendees is provided in the transcript, which is available on request to the Rock Island District, Corps of Engineers.

Dr. David Goldman from the Hydrologic Engineering Center provided a summary of the status of his work. He emphasized that there is no significant difference between the LPIII and other methodologies evaluated. The TAG and IAG review remains yet to be accomplished. A final decision has not been reached regarding the treatment of historic information or low outliers. A method to develop regional smoothing has been recommended by the TAG. Mr. Nanda pointed out that all frequency related recommendations must be finalized in two months.

Mr. Rolf Olsen from the Institute of Water Resources (IWR) then spoke about risk and uncertainty related to climate change impacts on flow frequency relationships. IWR is studying global warming and land use changes with a report to be completed this summer. He indicated that the existing flow frequency methodologies are able to include impacts of El Nino floods. Circulation models seem to indicate that global warming and increased temperatures may result in decreased precipitation and increased evaporation. Although recent years have indicated increased precipitation the trends in increased flooding are not conclusive. Mr. Olsen concluded that land use is probably not a factor in any observed trends. He concluded by stating that based on the findings related to changes in climate there is no reason to reject using Bulletin 17B for flow frequency determinations.

Mr. Paul Soyke provided a summary of the views of the Public Involvement Group. The group has accepted Mr. Arlen Feldman as their technical advisor and has provided him a charter. They also see a need for more explanation as to the cause of trends that have been mentioned even though the trends may be of little consequence. The group also wants a clear understanding of all the assumptions involved in the study and an indication of the impacts of the assumptions. Mr. Soyke indicated the group is beginning to prepare for public meetings to be held during the summer of 2000 and wants to know how the results of the Flow Frequency Study will be used and how it will impact the public.

Mr. Dennis Morgan provided an update of the progress of the mapping efforts begun as a part of SAST and recently funded with an additional 5 million dollars. The goal being to acquire elevation data that would be suitable for engineers to evaluate flooding in the area. In other words high-resolution topographic maps are not the expected products. Elevation data will be gathered on the Missouri River at Yankton all the way down to the mouth at St. Louis. On the Mississippi data will be obtained from just above Hastings, Minnesota down to just below where the Ohio River empties into the Mississippi. And on the Illinois the area from just above Joliet down to the Mississippi River will be covered except the 40 mile reach immediately downstream from Meredosia, which could not be obtained due to the lack of funds. The accuracy is ASPRS Class I for 4-foot contours. The root mean square error is 0.67 feet for well-defined features and in general the contours are within 1.5 feet. The negatives have a scale of one inch equals 1,333 feet but there is not sufficient funding to collect full plan and topographic feature data.

Mr. Alan Johnson then discussed FEMA initiatives related to the mapping and the flow frequency study. He indicated that FEMA is undergoing a large reinvention of its mapping program. They will essentially replace existing maps with new digital mapping. This will require approximately 865 million dollars. Cooperating technical communities are being identified to help accomplish the work. Funding is a major concern and FEMA wants to cooperate with and take full advantage of the Flow Frequency Study. Mr. Johnson indicated that in his opinion the area inundation maps to be developed by the Flow Frequency Study may be similar to preliminary maps that could be put out for review and appeal. The appeal process would result in revised FIRMs and assure that coordinated best available data is used and supported by the local communities. Floodways are also an issue and existing floodways could also be coordinated through this appeal process according to Mr. Johnson. He recommended that a sub task force be established to coordinate and ensure public involvement is obtained. The sub task force would also assure that preliminary flood maps are produced from the flow frequency findings, assure public involvement, address policy issues about technical concerns such as certification of levees, and produce effective FIRMs. He implied that the floodway concerns might be simplified by using existing floodways where appropriate and acceptable or by agreeing that floodways are not necessary for some communities.

Mr. Earl Eiker from the Head Quarters Office of the Corps of Engineers commented on the value of coordinating the Flow Frequency Study with FEMA. Each of the involved Corps Districts then presented progress reports. In general each district has evaluated existing flow records and impacts due to local conditions to develop unregulated flows. Progress has been such that each District feels relatively confident that they can produce a consistent and meaningful set of data in a timely manner for the determination of flow frequency relationships according to the procedures to be recommended.

Mr. George Gitter introduced Mr. Dennis Hamilton, the Rock Island District project manager for the Flow Frequency Study. Mr. Hamilton expressed his intent to be helpful and his appreciation to be a part of the study. Then Mr. Gitter (study coordinator) indicated that about 30 percent of the money has been expended and about 30 percent of the work has been accomplished. However, according to the schedule about 45 percent of the work should be done by this time. Mr. S. K. Nanda then urged each District to pick up the pace and tell Mr. Gitter of additional funding needs.

Division comments were then made by Mr. Joe McCormick and Mr. Al Swoboda. Both commented on the fine work being accomplished and reiterated the need to get back on schedule. Mr. Swoboda noted that if the schedule is to be accomplish some decisions need to be made soon related to methodologies to be followed.

Each of the Federal Agency representatives present then provided their comments. Mr. Rick Hulzinga (USGS) pledged continuing support to the study. Mr. Donald Woodward (NRCS) commented on the interest and importance of this phase of the study and recommended patience and persistence. Ms. Lesley Julian (NWS) indicated her appreciation to be a part of the study and stated that though there seem to be changes in precipitation they do not seem to have a noticeable impact on flood flow frequency relationships. Mr. Ken Bullard (BOR) supported the use of EMA but admitted that much more work would need to be done before it could be used in this study. He also felt that the statistics must be smoothed so as to have consistency through out the study river reach. Mr. Alan Johnson (FEMA) commented on the technical aspects of the frequency analysis as a basis to be responsive during the appeals process. He went on to emphasize the importance to FEMA of how levees are to be treated and the mapping aspects of the study. Mr. Albert Schulz (FEMA-7) noted that this study is the basis for future studies and is paving the way

for major changes. Mr. Gregory Lowe (TVA) mentioned the value of the partnerships that have been formed due to the Flow Frequency Study and that the TVA is very glad to be a part of it. He discussed the changing emphasis from flood control to recreation for the reservoirs around Chattanooga and the resulting need for new studies related to the operation of the projects. Mr. Earl Eiker (COE) emphasized the need to make the necessary technical decisions so that the study can proceed and thanked all the meeting participants.

Mr. S.K. Nanda then invited any other comments from the labs and Mr. Gene Stakhiv made an observation related to opportunities for this study to open the door to a new period of data collection and research. Mr. Arlen Feldman mentioned that additional research efforts from Dr. Maidment related to spatial distribution of rainfall might be justified.

The representatives of the various States involved then make brief comments. Mr. Mel Allison (IL-DNR) is looking forward to implementation of the study and is impressed by the study to date. Mr. Dennis Lawlor (KS-Dept of Ag) expressed appreciation to be a part of the study and emphasized that as a regulatory agency the end results and mapping are very important. Mr. Dave Ford (MN-DNR) noted Mr. Feldman's outstanding job with the Public Involvement Group and emphasized the importance of explaining the study and results so that layman can understand everything clearly. He thought that a Web site may be a good way to get out more information to more people. Mr. George Riedel (MO-EMA) was pleased that efforts are underway to develop mapping in coordination with FEMA. Mr. Charlie DuCharme (MO-DNR) encouraged everyone to stick together since with such a large project and so much coordination required this will be difficult. Mr. Brian Dunnigan (NE-Natural Resources) also mentioned the value in coordination with all the states and the importance of having FEMA support the final products. Mr. Bob Watson (WS-DNR) emphasized the importance of the mapping indicating if a property owner is in the floodplain or not. He wanted to know even with limited FEMA resources if the Corps will produce a map that the communities can adopt without much change as a zoning overlay.

Mr. S. K. Nanda invited comments from anyone else at which time Mr. Bill Lay expressed his appreciation for everyone's efforts and his opportunity to attend. Then Mr. Nanda thanked Mr. Gary Dyhouse for serving as host and adjourned the meeting at 3:50 P.M.