

Technical Mapping Advisory Council 1999 Annual Report

January 31, 2000

Foreword

Congress passed the National Flood Insurance Reform Act in 1994. As part of the Act, Congress directed the Federal Emergency Management Agency (FEMA) to establish the Technical Mapping Advisory Council for the express purpose of providing recommendations on ways to improve Flood Insurance Rate Maps and the mapping process. The driving force behind the formation of the Council was constituent complaint about the poor quality of maps being used for both flood insurance and floodplain management.

The Council met for the first time in May 1996 and has submitted recommendations to the Director of FEMA in each of its three previous Annual Reports. FEMA has responded to many of the Council's recommendations and has produced a plan to modernize both the maps and the mapping process. FEMA has already implemented recommendations possible within its current funding authority and limits. While these steps are important, they alone will not correct or update the current stock of maps used for floodplain management and flood insurance. To correct or update those maps will require implementation of the entire modernization plan FEMA has developed. Without adequate funding, major improvements to the 100,000 map panels already in existence will be many years in the future.

The plan developed by FEMA, if implemented, will result in greatly improved maps and, over time, reduce expenses to the nation by curbing the ever-increasing costs for flood-related disaster relief. Property damage from flooding in the U.S. now totals over \$4 billion each year. FEMA has analyzed the cost-benefit ratio and estimated that the proposed Map Modernization Plan (MMP) will avoid flood losses of \$26 billion over a 50-year period beyond those which would be avoided with the current mapping program. Each year of delay in implementing the MMP reduces the program's long-term benefits by approximately \$1.5 billion while also adding approximately \$17 million to the cost of the plan.

Citizens deserve the protection of life and property intended by the National Flood Insurance Act of 1968, as amended. FEMA and this Council together have developed an important cost-effective plan to provide that protection. The program to modernize the maps must be funded if the desired benefits of saving lives and property are to be realized.

Mark A. Riebau, Chairman
Technical Mapping Advisory Council

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Executive Summary

In 1994 Congress passed the National Flood Insurance Reform Act and directed the Federal Emergency Management Agency (FEMA) to establish the Technical Mapping Advisory Council. Congress' direction to the Council was to provide recommendations to FEMA on ways to improve Flood Insurance Rate Maps (FIRMs) and the mapping process. The Council began its work in 1996 and has produced three previous Annual Reports for the Director of FEMA. Each report has included recommendations to improve maps and the mapping process.

In its 1996 Annual Report to the Director, the Council recommended that FEMA establish an archival system for maps; improve the distribution of Letters of Map Change (LOMCs); distribute in electronic format forms necessary to process map corrections; and discontinue use of outdated methods of creating and correcting maps.

FEMA's response has been to establish an archival system; develop a plan to improve the distribution of LOMCs; provide an electronic version of forms necessary to request map corrections and make the forms available over the Internet; and has begun moving to a digital product. However neither the plan to improve the distribution of LOMCs nor a complete change to digital maps can be implemented with funding currently available.

In its 1997 report the Council recommended that FEMA shorten the time for restudies; take steps to improve base maps; pursue partnerships to produce and update maps with other federal agencies and state and local governments; use exclusively digital techniques for maps; and take steps to assure greater involvement by state and local government in the development of maps.

FEMA responded by developing an optimized study process, revising base map specifications, participating in the USGS National Digital Orthophoto Partnership (NDOP) Program, and initiating design of standards for Digital Flood Insurance Rate Maps (DFIRMs).

In its 1998 report the Council recommended that FEMA implement programmatic changes that will improve accuracy, reliability, and availability of map data; institutionalize the 5-year mapping needs assessment process; increase efforts aimed to inform the public about the potential for flooding; support the need to improve the national streamgaging network; collaborate with the U.S. Army Corps of Engineers to expedite the permit process to comply with Section 404 of the Clean Water Act for maintaining federally-recognized flood-control projects; and focus more attention on the state and local involvement in the mapping process.

FEMA has, in response to these recommendations, explored advanced remote sensing technologies to improve maps, taken steps to institutionalize the Mapping Needs Assessment Process, expanded FEMA's web site and established the Map Assistance Call Center, continued efforts to improve the national streamgaging network, and designed the Cooperating Technical Communities (CTC) initiative.

Executive Summary

The Council, in this the fourth of five Annual Reports, is recommending that FEMA take the following steps. Each will result in improved maps for all floodplain stakeholders.

- Encourage and support use of future land-use conditions in calculating floods and delineating floodplain limits;
- Strive to improve floodplain delineations that were derived by approximate study methods and mapped as Unnumbered A-Zones;
- Support the use of the recently-issued study guidelines for mapping alluvial fans;
- Develop and implement procedures for including data in DFIRM products about multiple hazards that pose flood risks, and continue to participate in the Open GIS Consortium to provide links to other sites containing retrievable data affecting flood risks; and
- Establish an indexing and retrieval system for archived data.

The Council feels confident FEMA will respond as promptly as possible to implement the recommendations that it can, and incorporate those it can not currently act upon into the Map Modernization Plan.

The Council's 1998 and 1999 Annual Reports, minutes of all 1998-1999 meetings, and other related materials can be found on FEMA's website at:

http://www.fema.gov/mit/tsd/tmc_main.htm