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## A Wish List for Risk MAP

**M**ap Modernization is dead, long live Risk MAP. So said a colleague while discussing the future of floodplain mapping in the United States. What he meant was that FEMA is finishing up its final year of Congressional funding for the Flood Map Modernization Program and has begun the transition toward its new Risk MAP (Mapping, Assessment, and Planning) strategy. While Map Mod tried to bring our flood mapping program into the digital age, Risk MAP is meant to capitalize on the fruits of that program to better reduce flood losses.

FEMA published its multi-year plan for fiscal years 2010 through 2014 in March of 2009, listing five overarching general goals and objectives, which can be briefly summarized as (1) addressing gaps in flood hazard data, (2) improving public awareness and understanding of flood risk management, (3) encouraging mitigation at all levels of government, (4) improving digital resource sharing, and (5) improving decision-making regarding flood risks. Anyone who uses flood data of any sort that is based in the National Flood Insurance Plan (NFIP) will agree that these are lofty goals, and the full 42-page plan (available through FEMA's website and referenced below) is well worth reading, if for no other reason than to have a guideline by which to assess the agency's progress.

But clearly there is much latitude in how to best accomplish these objectives, and that gave rise to much discussion with my local colleagues as to specifics that could make our lives easier while achieving the goals of Risk MAP and promoting the objectives of the overall NFIP. Perhaps the following thoughts will generate discussion in other parts of

the country as well. As technical users of FEMA-issued data, study contractors developing that data, and citizens relying on the data in attempts to best protect our property, we have both a right and responsibility to assess FEMA's guidance and activities, and to provide input as to their effectiveness. Here is part of our wish list (it won't all fit into this article).

Let's begin with the general misconception that the NFIP is only about insurance, while we know that it is about land use and public safety as well. Perhaps it is finally time for FEMA to consider renaming the Flood Insurance Study Report and the Flood Insurance Rate Map, since the

A simpler format could be better received by non-technical users and could communicate risk more effectively—perhaps even as “high”, “medium”, and “low” risk. Data quality and understandability rather than cartographic presentation should be guiding us in new directions away from the present and vastly misunderstood FIRMs and DFIRMs.

The wealth of digital data resulting from Map Mod means that more complete digital data should be made more readily available to the technical users who need to work in the same system as original mapping to improve or expand upon it. Currently, the Flood

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term “Insurance” misleads the general public as to their contents and applicability.

Map Mod brought FEMA into the digital age, although the “digital conversions” (scanning) of some old paper maps to provide computer-ready versions was not a sound move. However, for new and updated studies, Map Mod did provide digital data at all levels of the mapping process (data collection, data analysis, etc.). This allows a variety of presentations of the same data in different formats for different users, and perhaps it is time to move beyond current FIRMs and DFIRMs to better communicate flood risks to the general public and to help communities better plan land use and emergency response.

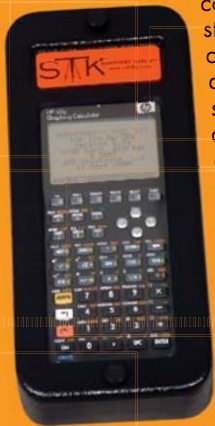
Insurance Study Reports do not provide a complete background, and obtaining information from the study contractors' studies is lengthy and expensive, even more so for archival study information.

To facilitate proper land use regulation, community planning, and updating of flood data, why not include information in the study reports about the methodology employed for each mile of stream reach or coastal study as well as the methodology and criteria for areas mapped as Approximate Zone A? Definitely this is information that the study contractors have, and it should be made available to all who try to follow in their footsteps.

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And while we are at it, why not make access to current information faster and easier? Long ago, the Technical Mapping Advisory Council discussed the possibility of interactive mapping, in which passing a cursor over an image would bring up Letters of Map Change and study information, eliminating the need to search in multiple places to pull such information together. Even if we are not at the point where FEMA can deliver this high-tech solution, its current digital map and data viewer through the Map Service Center has not been updated for years, and its archaic cumbersome nature makes it time consuming and difficult for all users, both general and technical. At the very least, this software has to be improved.

Elevation matters, and good elevation data is worth every penny invested. No new mapping or engineering should be initiated without good terrain data. But terrain changes. New studies should include coastal, riverine, and legacy sediment erosional patterns. We may need to compare current and historical terrain (some of which may be available from USGS or other agencies) to best assess erosion risks related to flooding. And for a fully comprehensive approach to risk management, flooding analyses should incorporate stormwater management considerations as well as erosional concerns.

A watershed approach to engineering analysis is a long-needed and sensible improvement over studies that ended at arbitrary jurisdictional boundaries that left us with "edge matching" problems. But there are sometimes smaller studies needed to correct and update mapping, and these should be continued in the manner of the former Limited Map Maintenance Studies, rather than waiting for a restudy of the entire watershed.

This leads to today's final point, which is that each community's flood study needs may differ, and the comparable value of various levels of limited detail versus detailed study should factor into local scoping decisions regarding the best expenditures of finite funds and resources.

## Reference:

"Risk Mapping, Assessment, and Planning (Risk MAP) Multi-Year Plan: Fiscal Years 2010-2014, Fiscal Year 2009 Report to Congress", March 16, 2009. Available for downloading through <http://www.fema.gov/library/viewRecord.do?id=3587>