Testimony of
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Good morning Chairman Ney, Ranking Member Waters, and Subcommittee Members. I am David Maurstad, the Mitigation Division's Acting Director within the Department of Homeland Security's Emergency Preparedness and Response Directorate, which includes the Federal Emergency Management Agency (FEMA). I appreciate the opportunity to appear today before the Subcommittee on Housing and Community Opportunity.

First, I would like to thank the Subcommittee for its support of FEMA's Flood Map Modernization program – a program to modernize the Nation's flood insurance rate maps over a five-year period. The resources Congress has provided are resulting in products that increase flood risk awareness, stimulate dialog among various levels of government and industry, and help communities mitigate against flood losses. As a result, we will continue to make this Nation less vulnerable to flooding.

Background and Benefits

FEMA's Mitigation Division manages the National Flood Insurance Program (NFIP) – the cornerstone of the Nation's strategy to prepare communities for flood events. The NFIP was created to reduce our Nation's vulnerability to flooding by identifying flood risks, encouraging sound floodplain management practices, and providing a mechanism through which people can insure their investments.

FEMA and its partners provide flood hazard maps and data to support flood insurance and community floodplain management activities. Flood Map Modernization uses state-of-the-art technology, on-the-ground intelligence, and a strong set of mapping guidelines, specifications, and standards to deliver reliable data and maps in geographic information system (GIS) format.

Digital flood maps provide many benefits. They provide a uniform structure for assessing our Nation's ever-changing vulnerability to flooding – allowing us to monitor flood mitigation's effectiveness. The digital data, along with a platform to store, maintain, and distribute the information, also can be used to support other activities such as preparedness, response, recovery, and local planning. Lastly, digital maps are easier to maintain and keep current.

The Map Modernization Vision and Status

Flood Map Modernization is well underway. Since 2003, Congress has appropriated $550 million for the Program. In addition, under our Cooperating Technical Partner (CTP) initiative, we expect, by the end of FY05, our 212 active State, regional, and local community mapping partners will have added over $100 million in data and other resources. The CTP program has been very well received and continues to yield both short- and long- term benefits. As an example, many of our partners, like Licking County, Ohio, are contributing both data and in- kind resources toward current mapping projects. For many of them, this partnership is resulting in a motivation to stay involved and provide long- term support for maintenance of the maps, which is the case for the Ohio Department of Natural Resources, Maricopa County, Arizona, North Carolina, and many others. The CTP program also enables us to leverage Federal dollars and helps communities take ownership of the flood maps.

We have also engaged industry to help us develop solutions. That is, we have presented them with objectives and asked them how best to meet them rather than the more traditional government approach of mandating a solution and asking them to work within it. This is being accomplished through issuance of performance-based contracts both at the national and regional level. We also regularly meet with industry to share ideas, stimulate growth, and collect feedback on technical procedures and practices.

Using these practices and through these partnerships we have completed mapping projects in nearly 1,000 of our most “at-risk” communities, and Flood Mapping Modernization projects are underway in over 2,100 other communities.

Our goal is to have the Nation’s flood map inventory modernized by 2010, with all maps in a GIS format and available online. Equally important, we will have a comprehensive and robust risk identification and assessment system, allowing us to more readily track – over time – the Nation’s ability to reduce flood vulnerability.

Making Flood Maps – One Size Does Not Fit All

There is no “one size fits all” solution to identifying the Nation’s flood hazards. The risks, and the people they impact, are diverse. For example, in the arid West, streambeds can lay dry for years, yet these innocuous features can release torrents of water, without warning, after a brief thunderstorm.

On the other hand, in the East, where it rains regularly and vegetation is thick, rivers that flow year-round tend to take days before reaching their peak.

Along our coasts, the hazards also vary widely. In the South Atlantic and Gulf, hurricanes strike quickly compared to long, drawn out, extratropical storms that can pound the northeastern shores for days.

In the Pacific, long, high waves tend to elevate water levels through processes that are entirely different than those of hurricanes.

The Nation's variability in landscape and flooding characteristics requires State, tribal, and local governments to use a variety of floodplain management approaches to make their communities safer places to live, work, and do business. As such, communities require and use different tools to collect the data needed to properly analyze their flood risks.

Obviously, the Nation cannot resolve its natural hazard issues with a single, universally applied approach. This country's geographic diversity – combined with its variety of natural hazard threats – requires us to apply, mix, and match a series of processes to effectively identify hazards, communicate risks, and reduce vulnerability.

Partnerships

State, tribal, and local officials, with their knowledge and experience, are a necessary and valuable component of a comprehensive flood study. For example, through planning and project scoping processes, State, tribal, and local officials help us identify areas where flood risk is greatest, and they direct and point us to data and analyses that can increase quality, reduce costs, and ensure that flood hazard data is effectively used in daily decision making. State, tribal, and local officials also help communicate risks to citizens threatened by flooding, thereby stimulating action and influencing decisions regarding insurance purchases, new development, and the strengthening and elevating of existing homes and buildings. Ultimately, the

role of State, tribal, and local officials in the flood map production process leads to more informed decisions and stronger communities.

At the national level, we have developed a comprehensive set of guidelines, specifications, and standards that enable us to collect data and produce information that is easily shared, maintained, and improved. Further, we have engaged our Federal counterparts at the U.S. Geological Survey, the U.S. Army Corps of Engineers, and the National Oceanic and Atmospheric Administration, and our digital data specifications comply with Federal Geographic Data Committee recommendations. We are active members of the National Digital Elevation and Orthophoto Programs. Through these and other federal partnerships we are sharing data, eliminating redundancies, and taking advantage of similarities in mission.

Quality

We understand the ramifications of producing flood maps which do not accurately reflect the risk. Inferior products or miscommunication can have devastating impacts on families, businesses, and communities that rely on the information produced through the Flood Map Modernization Program. We realize there are concerns regarding the use of ground elevation data and other information that is potentially inaccurate. To offset the risk of error, we have implemented a risk-based approach to ensure quality, leverage industry best practices and lessons learned, and foster opportunity for community involvement.

In areas of high risk, we utilize data that has been field-checked and coordinated closely with local officials to ensure results are accurate, meet professional standards, and have the appropriate certifications on all engineering and survey data. Because of the tremendous value of ground elevation data for a variety of other purposes, in these high-risk areas, we tend to find and use a significant amount of current, detailed, good-quality data that has been produced by others.

In moderate and low-risk areas we use aerial photographs to identify potential problem areas, spot check data, and perform field reconnaissance at suspect sites, but rely more heavily on the professional certification and community coordination aspects of the process. When errors are found, we work with our partners to resolve the issues and explore cost-sharing avenues when the data needed to correct the problems has significant benefits beyond the mission of flood hazard identification.

This approach has been applied and proven successful in many areas around the nation. For example, in our partnership with the State of Nebraska, U.S. Geological Survey topographic data are utilized in conjunction with field reconnaissance to develop flood hazard maps and data. In North Carolina, we utilized detailed ground elevation information generated by the State's own laser technology. This data in conjunction with automated hydraulic modeling techniques helped to identify flood risk in moderately developed areas. In Licking County, Ohio, we partnered with the county to produce draft flood maps using aerial photographs, topographic data, and flood hazard information developed using local and State resources.

We have firmly committed to a clear quality standard for modernized maps to make sure that poor quality hazard information is not simply digitized from an old map. Developed with the support of our key stakeholders, this standard requires that at a minimum all the flood hazard boundaries on our modernized maps will be evaluated and adjusted as necessary.

Conclusion

Overall, this program's ability to meet the unique and diverse risks faced by a variety of stakeholders relies on a sound balance between efficiency and flexibility. We have done this by performing much of the work associated with flood hazard identification at the local level in a decentralized fashion, while managing the work centrally using technology, earned value management techniques, and integrated performance teams.

Striking this balance comes with its own set of challenges. Too much flexibility can lead to complacency and a lack of accountability. Conversely, not enough can lead to maps and data that are unreliable which leads to improper or poor decision making. Further complicating the mission is the fact that technology, the hazards themselves, and the built environment are constantly in motion, thus requiring continuous care to ensure our processes, data, and products stay relevant and reliable.

Although we have a long way to go to modernize the Nation's flood map inventory, our progress to date shows we have focused initially on areas where there is the greatest flood risk, we have hit the ground running, and that our solution strikes a good balance between efficiencies through

standardization and flexibility by allowing industry and State and local governments to tailor solutions to suit unique situations.

I again want to thank this Subcommittee for its support of Flood Map Modernization. We are well underway and we look forward to making this Nation more disaster-resistant and better equipped to deal with the ever-present danger of floods. I would be happy to answer any questions that you may have.