



MAP MODERNIZATION WORKSHOP

MARCH 14-15, 2006



**WORKSHOP REPORT
MAY 12, 2006**

DRAFT

Summary

A workshop was held on March 14 and 15, 2006 to discuss the impact of FEMA **Flood Map Modernization Program (MapMod)** and related floodplain issues on the Commonwealth of Pennsylvania and its municipalities. Sponsored by the Pennsylvania Department of Community and Economic Development (DCED), the PA Mapping and Geographic Information Consortium (PaMAGIC) and FEMA, a cross-section of interested parties participated in a strategic planning session to develop an enhanced approach to MapMod.

The decision to hold the workshop was prompted by a number of the individuals and organizations that recognized the opportunities presented by the MapMod program. Funded at almost \$250 million per year nationwide, the Federal Emergency Management (FEMA) offers the most benefits to states with capacity and having well-documented and supported plans. Federal guidance for MapMod is broad and far-reaching having the following goals:

- Establish and maintain a premier data collection and delivery system
- Achieve effective program management
- Build and maintain mutually beneficial partnerships
- Expand and better inform the user community

The session's primary goal was to develop a set of recommendations for the enhancement of Pennsylvania's role in the FEMA Map Modernization Program. Workshop participants were to consider the goals contained in the Commonwealth's Plan for Map Mod and the question, "Could Pennsylvania's current MapMod Business Plan and program benefit from the involvement of statewide groups and/organizations?" The specific goals in the Business Plan were as follows:

- Develop a statewide community mapping priority list
- Establish a statewide floodplain mapping advisory committee
- Partner with other state agency groups to gather GIS data
- Develop a floodplain inventory that includes all Federal, state and local data

During the workshop, each participant briefed the rest of the group on their perspective on one (1) of five (5) pre-selected floodplain mapping topics. A professional facilitator from the Dering Consulting Group then guided the group through the various stages or phases of the visioning process. The process resulted in key visioning elements being identified, the listing of obstacles and opportunities, and followed by goals being set and prioritized. One of the top five goals was then assigned to each of five breakout groups who then completed a goal planning worksheet. The completed goal planning worksheet identified action steps, resources and requirements for achieving that goal.

The remainder of the report is a listing of the key themes that were generated from the discussions during the different phases of the workshop. More importantly, the major recommendations from the work groups are highlighted with the current status of implementation provided. Finally, a list of workshop attendees and related contact information is included in Appendix A.

Policy, Planning and Permitting for Map Modernization Implications

- *Target counties that need to be scoped in state business plan—MHIP*
- *There is a need to move from “fast, fuzzy maps”(30 years old) to good quality DFIRM*
- *What are the Pennsylvania’s new flood map priorities for the 67 counties?*
- *Flood studies (Detailed cross sections) from late 70’s and early 80’s are best studies out there (SRBC)*
- *Should rethink the FEMA decision to continue recent Western Pa flood studies w/o Lidar*
- *Highlight/emphasize the benefits of state participation and leveraging multiple programs*
- *LiDAR is currently being developed in 21 counties this year; will expand to all 67 eventually*
 - *Helpful in mitigation planning and floodplain zoning*
- *PennDOT – PEMA – PA DEP-DCED*
 - *Must identify the lead team; FEMA needs a single point of contact*
 - *Must coordinate efforts here*
- *Must consider smaller areas/watersheds as well as large area/watersheds*

Societal Perspectives for Map Modernization Implications

- *Use visualization data to inform and motivate the public; it’s dramatic and has impact*
- *“Political will” plays a critical role given the difficulty of breaking the “ damage-rebuild-redamage” cycle since it costs \$10,000/mile for detailed study where no detailed data exists*
- *Local level must examine land use practices, hazard mitigation, tax dollars are down; there is currently no plan that emphasizes mitigation; must not regulate hazard mitigation a little bit here*
- *DEP and PEMA mitigate vs. DCED—these often have competing interests that may require political and societal reform*
- *Need to communicate more effectively with elected officials at the local, state and federal levels about the cost savings associated with implementing map modernization; appeal on the basis of long term savings*
- *Must provide technical training especially given the high turnover of elected officials*
- *There are disconnects between state and local levels regarding technology—must extend support at local level to use digital data*

Technology – Modeling Implications

- *It’s hard to translate flood stage maps to language understandable to communities*
- *What standards adopted by other states is most useful? Examine:*
 - *Hydrology models*
 - *Accepted models listed by FEMA*
 - *Used to use Pennsylvania State model, but it has not been updated*
- *How can the local level get assistance to access data for EMA stations for evaluation and preparedness that is better than the 1972 data, such as:*
 - *Crest data*
 - *Time predictions*
 - *Visual and 3D*
 - *Database access and/or software for computers*
- *Consider SRBC’s strengths and its ability to define and secure money; secured funds based on projected ROI*
- *Need consistency and interface; must update data for digital elevation models*
- *New modeling technology offers potential for \$500/mile basic cost in some areas*

Technology-Mapping and Data Implications

- *Need a focused and coordinated effort across Pennsylvania to avoid duplication; the data available is massive (even storage and access are problematic)*
- *The Commonwealth's goals should be ambitious, but not "pie in the sky"*
- *Can't be a one-shot deal; must be sustainable and updated regularly*
- *Is there a need for a coordinator or some centralized plan; is MHIP an answer?*
- *What about using a Governor-sponsored inter-agency approach, similar to the land use planning initiative*
- *Must consider NDEP and NOAA Height Modernization*
- *Commonwealth should provide input to Federal level decisions to inventory, prioritize, and leverage resources*
- *How does this interface with land use planning and watershed management that goes beyond one community/one state?*
- *Stop blaming upstream—look at the bigger picture including townships, boroughs, regions, and multiple counties to achieve consensus*
- *Prepare to sell it via an ROI-based cost/benefit analysis*

Institutional Perspective Implications

- *Flood inundation map provide the ability to forecast damage relative to property insurance*
- *SRBC can help with training and information dissemination about the value of map modernization*
- *How can FEMA best (with efficiency and effectiveness) get information out there?*
- *Who are the "right people?" (i.e., planners, township officials)*
- *Maybe involve county planners and county seats earlier in the process*
- *Use "Madison Ave" advertising techniques to convince participants and public*
- *Tie in with map adoption process; be sensitive to historical structures in river towns*
- *Tie in with 9-1-1 system*
- *Thirty-day notification to county (planners, commissioners, clerks) prior to product release*
- *Community must change to recognize that FEMA county flood mapping drives its ordinance revisions*

Goals Established

Based on visioning discussions, the consensus priorities were determined as follows:

1. Integrate map modernization process with PA MAP, storm water management planning, flood warning, and storm water plan. (25)
2. Form a board (ongoing, but temporary for now). Start by reviewing MHIP and providing comments to FEMA before June 2006. After that, address DFIRM flood plain management and criteria for setting priorities. (25)
3. Secure stable funding from legislature through lobbying and outreach by end of map modernization phase I (2009). (24)
4. Organize a Pennsylvania conference on flood plain management (perhaps a PASFPM chapter?). (17)
5. Provide outreach to the local level. (6)
6. Achieve accurate and detailed flood mapping and studies across Pennsylvania by December 2016. (6)

Goals Established (continued)

7. Quantify current spending on flood plain management in Pennsylvania. Identify what needs to be spent to improve mapping. (5)
8. Develop a single data needs and tools process to transfer information up and down. (4)
9. Create a long-term (20 year) plan for mapping activities. (1)

Note: *The number in parentheses is the number of votes received for each goal.*

To conclude the session, the participants broke out into five (5) separate groups with each group being assigned one of the top five goals for which a goal planning worksheet was completed. The planning worksheet provides guidance to the group by identifying action steps, resources and requirements for achieving that goal. The entire group achieved consensus after a discussion on the individual group presentations of the completed worksheets took place.

Major Recommendations and Post-Workshop Activities

Given the size of the task involved in achieving any one of the top five (5) goals, it has been decided to focus on the top four (4) goals. The status of that effort is as follows:

Goal #1 - Form an Advisory Committee (temporary for now) to review and lightly revise the PA MHIP plan and to define more formally the formation of a permanent Advisory Panel.

Self-identified Team – Kerry Wilson, Kim Dunn, Doug Diehl, Lee Brancheau, Eric Jespersen

Progress/Activity – Short PaMAGIC/DCED meeting on 3/22 to assess data needs for review of MHIP; DCED gathering in-house data to support review. Brief on PAMAP LiDAR sequencing and other available high-resolution topography data sent to FEMA on 3/24. FEMA team meeting held on 3/27 to review projects and plan; decision made to coordinate with the Commonwealth's PAMAP LiDAR Program in 21 County study area. Region 3 Mapping Center sending updated project status info to DCED. Community Report ready for Summer 2006. MHIP Review Meeting to be held before 6/30/06.

Still Needed – Final date and location for review meeting, additional data to support review, assurance that all interested parties to the review have replied.

Goal #2 - Integrate MapMod with PAMAP, State Water Plan, Stormwater Planning, Flood Warning, and Height Modernization

Self-identified Team – David Terrell, Bob Hainly, Jim Knudson, Paul DeBarry
Progress/Activity – Request for Height Mod white papers from DOT (Foltz), request from Kentucky GIS Coordinator for Height Mod guidelines used in funding their program, discussion with chair of agency GT Advisory Committee (Knudson) for MapMod integration as GTAC agenda item. Initial discussion with DCNR TopoGeo Director (Parrish) about MapMod/PAMAP data coordination and prioritization.

Still Needed – Contact with State Water Plan manager, assurance that all interested parties to this goal have replied.

Recommendations (continued)

Goal #3 - Organize a Flood Plain Management / Mapping Conference for PA

Self-identified Team – Doug Diehl, Kim Dunn, Paul DeBarry

Progress/Activity – Targeted for Fall 2007

Still Needed – Information about other states' conferences, more interested parties on team.

Goal #4 - Secure stable funding by 2009

Self-identified Team –

Progress/Activity –

Note: Individuals and groups interested in assisting with any of the goals established should contact either:

Eric Jespersen
PaMAGIC
ecj@epix.net or 717-475-7869

or

Kerry Wilson
DCED – Governor's Center for Local Government Services
Kerwilson@state.pa.us or 717-720-7445

Appendix A
List of Invitees and Opening Topics

Mr. Dante C. Accurti
Pennsylvania DOT
“National Trends in Floodplain Management”

Lee Brancheau
Senior GIS Analyst
Michael Baker Inc/ FEMA Region III RMC
“Status of Technical Information and Tools for MapMod in PA”

Dave Bollinger
State Hazard Mitigation Officer
Pennsylvania Emergency Management Agency
“PEMA Hazard Mitigation Activities – 1995-2006”

Paul A. DeBarry P.E.
Hydrology / Hydraulics / GIS
Borton-Lawson
“Technical Advances in Hydraulic Modeling”

Doug Diehl
Borough of Milton
“Coordination among Local, State, and Federal Governments – Municipal Perspective”

Andrew DeHoff
Susquehanna River Basin Commission
“Susquehanna Basin – Activities and Interest in Flood Modeling”

Kim Dunn
Dewberry
“Evolution of DFIRM Products”

Dan Fitzpatrick
Department of Community & Economic Development
“Outreach to PA Municipalities – Status and Plans”

L. Brad Foltz
PennDOT
Chief - Photogrammetry and Surveys Section
“Height Modernization and its Relation to Map Modernization”

Martin Frengs, P.E.
Mitigation Engineer
US Department of Homeland Security - FEMA
“FEMA Region III Current Plans for Map Mod in the Commonwealth”

Robert Hainly
Assistant Director
US Geological Survey WRD - New Cumberland
“USGS Modeling Activities”

Keith High, C.F.M.
PBS&J
“HAZUS and Map Mod – Present and Future”

Eric Jespersen
PaMAGIC/RETTEW
“Breadth of Planning Framework Needed”

Fran Jones
Flood Hazard Specialist
County of Lycoming
“Flood Hazard Mitigation – Impact of Individuals and Communities”

Dave Kolojejchick
PA Department of Environmental Protection
Bureau of Waterways Engineering
“DEP Design and Permitting Activities – 1995-2006”

Jim Knudson, OCP
State Geospatial Technologies Director
“Data Access Policies and Plans for the Commonwealth”

Shawn McLaughlin
Union County Planner
“Coordination among Local, State, and Federal Governments – County Perspective”

Jason F. Miller
US Army Corps of Engineers - Philadelphia
“USACE Supported Flood Studies – 1995-2006”

Tim Murphy
E911/GIS Coordinator
Columbia County
“Technical Comparison – Phase 1 and Phase 2 DFIRM’s”

Jay Parrish
State Geologist
DCNR Bureau of Topographic and Geologic Survey
“High-resolution Imagery and Elevation Data – Status and Plans”

Dave Reed
Conservation Program Specialist
PADEP Bureau of Watershed Management
“Role of Conseravtion Districts in Floodplain Management”

Curtis Schreffler
US Geological Survey
“USGS Activities in Flood Modeling in PA – 1995-2006”

Paul Weilage, PLS
Planning Director Wyoming County
“Coordination among Local, State, and Federal Governments – Municipal Perspective”

Kerry Wilson
Department of Community & Economic Development
“FEMA’s Cooperating Technical Partners in PA – Present and Future”

Laura Tessieri
Delaware River Basin Commission
“MapMod Activities within the Delaware River Basin 1996-2006”

David Terrell
Liaison to PA Topographic and Geologic Survey
USGS Geospatial Program Office