"Do Communities Dream of Electric Maps: FEMA's All Digital Vision"

**2012
Illinois Association for Floodplain and Stormwater
Management Conference**

March 15, 2012

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Agenda

Introduction
      Map Mod
Digital Products
      Genesis of the tools
      Advantages
      Accessing the tools
Digital Tools
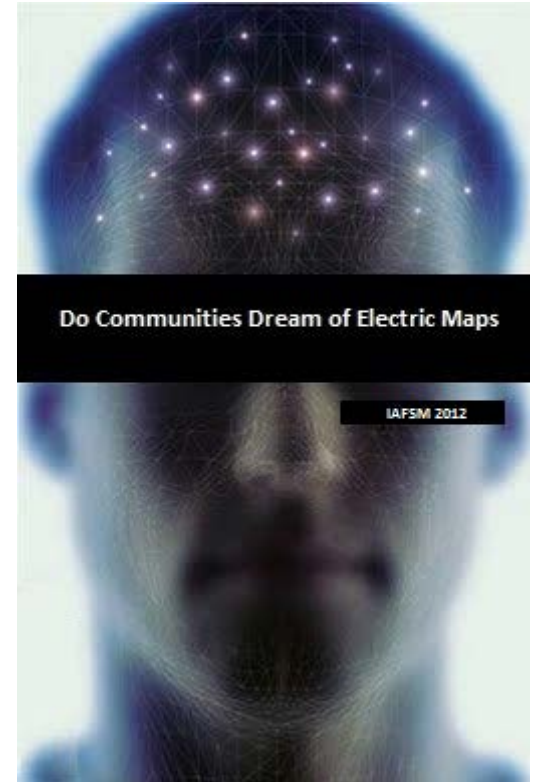   Map Service Center
      FIRMette – Web/Desktop
      MapViewer – Web/Desktop
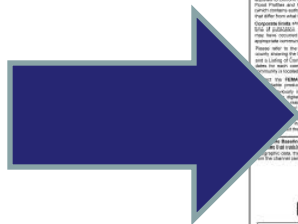   National Flood Hazard Layer (NFHL)
User Resources

Do Communities Dream of Electric Maps

IAFSM 2012

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Map Mod

- ~~**FHBMs\FIRMs**~~

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L_COMM_INFO
L_PAN_REVIS
L_POL_FHBM
L_STN_START
S_BASE_INDEX
S_BFE
S_FIRM_PAN
S_FLD_HAZ_AR
S_FLD_HAZ_LN
S_GEN_STRUCT
S_LABEL_LD
S_LABEL_PT
S_PERM_BMK
S_PLSS_AR
S_PLSS_LN
S_POL_AR
S_POL_LN
S_QUAD_INDEX
S_RIV_MRK
S_TRNSPORT_LN
S_WTR_LN
S_XS
STUDY_INFO

s_wtr_ln
s_xs
study_info

Genesis of the Digital Tools

- **Map Mod Goal:**
  - Create Digital Data
  - Make more accessible
  - Reduce Paper distribution by 50-75%
- **Digital Vision**
  - Plan to limit paper map distribution (Oct 2009)
  - Identified user needs for accessing digital data
    - New products created - e.g., National Flood Hazard Layer
    - New tools developed - e.g., MapViewer – Web

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Digital Products

- **Products Delivered:**
  - CDs
    - GIS CD
      - Shapefile/MIF/MID
    - Image CD
      - FIRM Scan -- PNG/TIF
    - FIS
      - PDF
- **Recommendations:**
  - Move the data off the CD to use
    - On-site file server
    - Network computer
  - Locate Readme.txt
  - Open With → Microsoft Picture Manager

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Digital Tool Advantages

- **FREE**

- **Greater accessibility to digital map products**
  - Tools available 24 / 7
  - Able to access the most current effective data

- **Features not available on paper**
  - Geocoding/point identification
  - LOMC identification
  - Reporting
  - Measuring
  - Flexible (e.g., turn layers on and off with GIS products)

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Accessing the Digital Tools

- Most tools are accessible from MSC Web site home page (http://msc.fema.gov)
  - FIRMettes
  - EDDie
  - NFHL and Google Earth™
- Downloadable fact sheets and user resources are also available

EDDie

- **Available to government agencies** (Community officials at local, county and state levels)
- **Permits finding and downloading of MSC products significantly faster**
  - Bypasses the shopping cart and checkout process on the MSC Web site
- **Intuitively designed for ease of use**
  - View products at either the county or community level
  - Search using map panel ID or LOMC case number
  - Various filters: FIRMs, world files, LOMC types
  - Historic products available

EDDie (cont.)

FIRMette -- Web

- Online tool for free viewing of FIRM/DFIRMs

- Enables FIRMette creation; 1.5 million created annually

- First of the online tools; debuted in 2002

FIRMette -- Web

- Identify FIRM to view

- Make a FIRMette

- Choose Paper size.

- Move to desired area

- Create FIRMette
  - Adobe PDF

- Save FIRMette

FIRMette -- Desktop

- Tool downloadable from MSC website.

- Same functionality as web version

- Not reliant on web connection

MapViewer -- Web

- Web App – Standard DFIRM layers

- Ability to Query Attributes: Identify a Zone Type/specific LOMCs

- Generate/Print Reports

MapViewer -- Desktop

- Add DFIRM Database

- Ability to Query Attributes: Identify a Zone Type/specific LOMCs

- Generate/Print Reports: SCREEN CAP

- Add comments and points in a GIS shapefile

National Flood Hazard Layer (NFHL)

- **Background**
  - Spatial database of flood hazard information from FEMA's Map Modernization & Risk MAP programs

- **Benefits**
  - Convenience: One integrated dataset
  - Completeness: Includes all effective and available digital data as of the dataset release date including LOMRs
  - Scalable: Integrate the NFHL with other map data

NFHL GIS Data

- Three Digital Formats:
  - kmz file (Google Earth)
  - ESRI Shapefile Format
  - Web Mapping Service (WMS)
- Updated Monthly
- Organized on State-by-State basis
- Spatial analysis & custom maps
- Order a DVD copy from Map Service Center website
  http://msc.fema.gov

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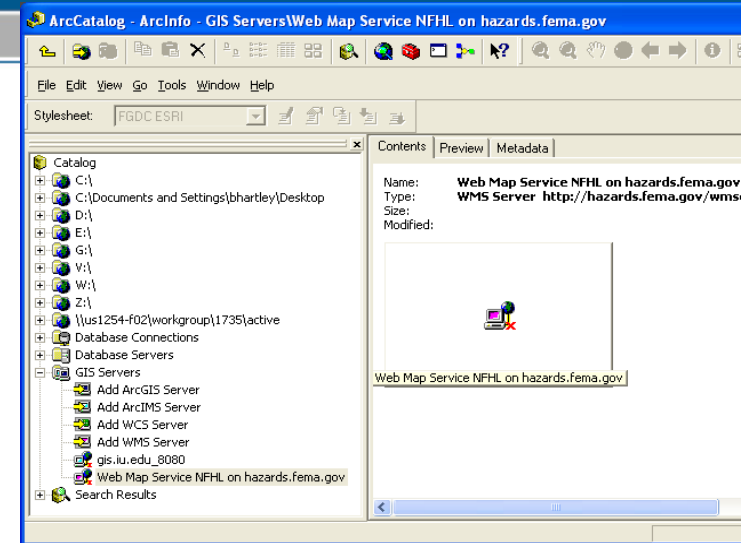
NFHL Web Map Service
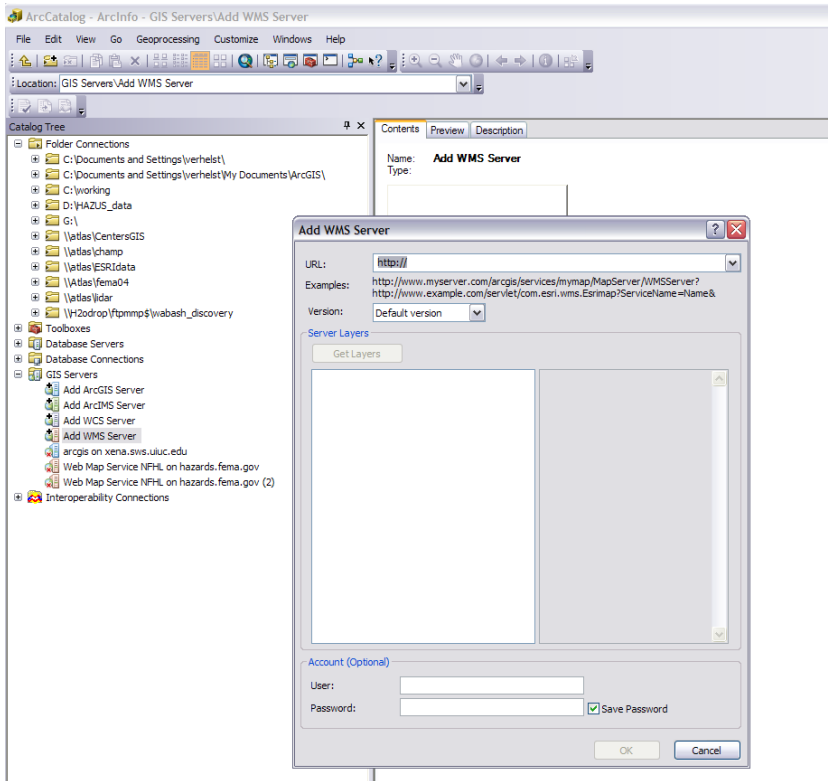
- Connect to WMS server, able to add in layers or all layers

- Layers appear using same symbolization on NFHL Web Viewer

- Tips
  - Layers have a scale range set – do not display above/below certain scales
  - Layers will not draw if ArcMap window is maximized

- Can turn layers on/off, query for attributes

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Digital Product Matrix

DIGITAL FLOOD HAZARD PRODUCT OR TOOL	WHO CAN USE THIS PRODUCT	WHAT IS IT? WHAT DOES IT DO?	AVAILABLE COVERAGE	WHAT DO I NEED TO USE IT?	SUITABLE FOR...	LEARN MORE
Digital Flood Hazard Maps						
FIRM Scans	NFIP Community Officials, Technical Collaborators, Investment Professionals, Property Owners with Access, Property Owners with No Access, Primary/Secondary Educators, Media and Congressional Staff	Image data that provides a picture of an entire FIRM or FHBM	Everywhere FEMA has mapped flood hazards	Software, such as FIRMette - Desktop (or F - MIT), that lets you view and print TIFF or PNG-formatted image files	Viewing flood hazard maps, printing your own flood maps for an area of interest.	http://msc.fema.gov. Follow the link "Product Information," and then "NFIP Flood Maps."
Digital Flood Insurance Rate Map (DFIRM) database	Technical Collaborators, Primary/Secondary Educators, Media and Congressional Staff	The initial flood hazard GIS data for a community or county	Only where FEMA has modernized maps	Software, such as MapViewer - Desktop or GIS or other mapping software	Creating custom maps, viewing attribute data, and incorporating flood hazard data into custom software applications	http://msc.fema.gov. Follow the link "Product Information," and then "DFIRM databases."
National Flood Hazard Layer (NFHL) GIS data	Technical Collaborators, Primary/Secondary Educators, Media and Congressional Staff	Flood hazard GIS data for a state	Only where FEMA has modernized maps. Includes changes from Letters of Map Revisions (LOMRs)	Software, such as MapViewer - Desktop or GIS or other mapping software	Creating custom maps, viewing attribute data, and incorporating flood hazard data into custom software applications	A user guide is available at http://www.fema.gov/library/viewRecord.do?id=3291
NFHL Web Map Service	Technical Collaborators, Investment Professionals, Primary/Secondary Educators, Media and Congressional Staff	Web service that makes map overlays and lets users view attribute data from the NFHL	Only where FEMA has modernized maps. Includes changes from LOMRs and locations of Letters of Map Amendment (LOMAs) and Letters of Map Revisions Based on Fill (LOMR-Fs)	Internet connection and GIS or other mapping software that lets you use a web map service	Creating custom maps, viewing attribute data, and incorporating flood hazard data into custom software applications	A user guide is available at http://www.fema.gov/library/viewRecord.do?id=3292
FEMA-Provided Tools For Digital Flood Hazard Maps						
FIRMette - Desktop (or F-MIT)	NFIP Community Officials, Technical Collaborators, Investment Professionals, Property Owners with Access, Primary/Secondary Educators, Media and Congressional Staff	Desktop software to create a map from a portion of a FIRM scan	Works with FIRM Scan data on your computer	Firm Scan data copied to your desktop and ability to view and print PDF files	Viewing flood hazard maps and printing an area of interest	Download the software under "FIRMette - Desktop (F-MIT)" at http://msc.fema.gov. The software includes a tutorial
FIRMette - Web	NFIP Community Officials, Technical Collaborators, Investment Professionals, Property Owners with Access, Primary/Secondary Educators, Media and Congressional Staff	Internet software to create a map from a portion of a FIRM scan	Everywhere FEMA has mapped flood hazards	Internet connection, web browser software, and ability to view and print PDF or TIFF files	Viewing flood hazard maps and printing your own flood maps for an area of interest	FIRMette tutorial at http://msc.fema.gov
MapViewer - Desktop	Technical Collaborators, Primary/Secondary Educators, Media and Congressional Staff	Desktop software to make maps and view attribute data	Works with DFIRM database and NFHL GIS data on your computer	DFIRM databases or NFHL GIS data on CD or copied to your desktop	Viewing custom flood hazard maps and attribute data. Making comments on preliminary DFIRMs	Download the software under "MapViewer - Desktop (beta)" at http://msc.fema.gov
MapViewer - Web	Technical Collaborators, Primary/Secondary Educators, Media and Congressional Staff	Internet software to make maps and reports from the NFHL	Only where FEMA has modernized maps. Includes changes from LOMRs, and locations of LOMAs and LOMR-Fs.	Internet connection, web browser software, and ability to view and print PDF files	Creating custom maps and reports, and viewing attribute data	A user guide is available at http://www.fema.gove/library/viewRecord.do?id=3290
NFHL Google Earth™ utility (kmz) files "Stay Dry" and "FEMA NFHL"	NFIP Community Officials, Technical Collaborators, Investment Professionals, Property Owners with Access, Primary/Secondary Educators, Media and Congressional Staff	Files that allow the viewing of the NFHL Web Map Service in Google Earth™	Works with the NFHL Web Map Service	kmz files, Internet connection, and Google Earth™ viewer software	Quick looks at NFHL flood hazard data. Dynamic visualizations of flood data	User guides are available at http://www.fema.gov/library/viewRecord.do?id=3289 and http://www.fema.gov/library/viewRecord.do?id=3293
Flood Insurance Study (FIS) Reports						
FIS Report File	NFIP Community Officials, Technical Collaborators, Investment Professionals, Property Owners with Access, Property Owners with No Access, Primary/Secondary Educators, Media and Congressional Staff	A book that contains information about flooding in a community. It is developed in conjunction with the FIRM.	Available for most areas. Generally, wherever FEMA has published Base Flood Elevation information	FIS report file and ability to print and view PDF files	Reading about the flood study for a community or county and related engineering data	FIS report tutorial at http://www.fema.gov/plan/prevent/fhm/ot_fisr.shtm

Stakeholder Groups	Definition
NFIP Community Officials =	Floodplain management stakeholders, NFIP community Chief Executive Officers (CEOs), and Members of Tribal Communities
Technical Collaborators =	Community emergency management officials, GIS managers and specialists, community and economic development planners, regional planners, and state and federal agencies in charge with the development or stewardship of water resources, also, University-level collaborators and Academic-sponsored Institutes.
Investment Professionals =	Insurance and Risk Management professionals, land use developers, construction industry representatives, realtors, and lenders
Property Owners with Access =	Individual property owners with access to internet, including small businesses
Property Owners with No Access =	Individual property owners with limited or no access to internet
Primary/Secondary Educators =	Educators looking for activities inside the primary and secondary school classroom
Media and Congressional Staff =	

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User Resources

- **Important URLs**
  - MSC**:** http://msc.fema.gov
  - EDDie: http://edd.msc.fema.gov
  - MIP: http://www.hazards.fema.gov

- **FEMA Map Information eXchange**
  - E-mail: FEMAMapSpecialist@riskmapcds.com
  - Phone: 1-877-FEMA MAP (336-2627)

- **MIP Help**
  - E-mail: miphelp@riskmapcds.com