"It Takes a Village for a Successful CTP Program"
- The Iowa CTP Experience

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Outline

• 2008 Floods – A Call to Action!
• Iowa Floodplain Mapping Program
• Iowa CTP and Risk MAP
• CTP Program & Local Capabilities
• It Takes a Village…
• Data Dissemination
• Conclusion
2008 Floods – A Call to Action!

- 1993 Flooding – Previous major flooding
- 2008 Floods
  - 15 years since last widespread flooding
  - Flood of record in many parts of state
  - Flood risk awareness rose significantly
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• Cedar Rapids
  • 31.12 Ft. – Record-setting crest of Cedar River on Friday, June 13, 2008 (Prev: 20.00 Ft. 1851 & 1929)
  • More than 10 square miles (14%) of the City impacted by floodwaters
  • 1,126 city blocks impacted (561 severely damaged)
  • 41,771 tons of flood debris removed
  • 0 - Amazingly there were ZERO flood-related deaths
Iowa Floodplain Mapping Program

- State and Federal Mapping Investment:
  - $4.3M for LiDAR (State & Federal Agencies)
  - $15M in HUD/CDBG Funds ($150k / County)
  - $2.2M in USACE Section 22 Planning Assistance to States (PAS) Funding
  - Portion of $2M Floodplain Management (SFY 2010 though 2016)
Iowa Floodplain Mapping Program

• Statewide Mapping Mandate
  - $15M HUD CDBG grant
  - Administered by Iowa Economic Development Administration and DNR
  - “…to produce floodplain maps that meet FEMA technical standards and can be published as Digital Flood Insurance Rate Maps (DFIRMs).”
Iowa Floodplain Mapping Program

• Goals
  • Statewide modernized FIRMs;
  • New/Updated Zone A analyses for State;
  • Provide accurate and useful products to aid in floodplain management decisions;
  • Align Iowa’s Floodplain Mapping Program with Risk MAP;
  • Assist communities with mitigation planning and promote actions to reduce risk.
Floodplain Mapping Program Status

Iowa Floodplain Mapping Sequence
Schedule For Delivery of Iowa Draft Flood Hazard Products
January 2013

*Watersheds with CROSSHATCH denote U.S. Army Corps of Engineers Section 22 agreement projects. Those not crosshatched represent Iowa Flood Center projects.*
Floodplain Mapping Program Status

December 2009: IOWA - FLOODPLAIN MAP STATUS

- County with Levee
  - Not (Levee)
  - Levee(s) subject to PM43

DFIRM Production Status
- City States
  - No Activity (361)
  - Data Development (206)
  - Preliminary FIS/IFIRM (213)
  - Effective FIS/IFIRM (164)

- County States
  - No Activity (44)
  - Data Development (21)
  - Preliminary FIS/IFIRM (19)

No Activity - FEMA does not have a DFIRM planned for the county/community.
Scooping - FEMA is developing a Statement of Work to fund a project in the current fiscal year.
Data Development - FEMA has contracted for approximate and detailed analysis, resimulation and digital conversion (where required); and DFIRM production. Preliminary FIS/IFIRM - A preliminary FIS/IFIRM is available for community and public comment. May be in 90-day appeal or 60-month compliance period.
Effective FIS/IFIRM - FIS and DFIRM are effective and available from Map Service Center.
Levee Note - If procedures mean 34 and 43, the level of protection of annotated levee is required to be verified before a new IFIRM may be released. In some cases, a community and levee owner will be allowed a 24 month period to provide certification documents.
Floodplain Mapping Program Status

May 2015: IOWA - FLOODPLAIN MAP STATUS

FEMA - U.S. Dept. of Homeland Security
FEMA - Region VII
MapMod all states status war
May 18, 2015.

Other Projects
- Lenses Analysis & Mapping (5)
- Physical Map Revision (2)
- PMS - Countywide (4)

Iowa Mapping Program

FIRM development (21)

Watershed Project
- Discovery
- Discovery & Topo Data
- Topographic Data
- Data Development

Countywide Projects

City Status
- No Activity (234)
- Data Development (55)
- Preliminary FIS/FIRM (96)
- Notice of Final Determination (21)
- Effective FIS/FIRM (542)

No Activity
- Data Development
- Preliminary FIS/FIRM
- Notice of Final Determination
- Effective FIS/FIRM

FEMA Note: FEMA does not have a DFRM planned for the county/community.

Discovery - FEMA is developing a Statement of Work for a future Risk MAP project.

Data Development - FEMA has contracted for basic and enhanced analysis, resampling, and digital conversion (when needed). DFRM, production, and Risk MAP products can be ordered.

Preliminary FIS/FIRM - A preliminary FIS/FIRM is available for community and public comment.

Notice of Final Determination - Effective date determined, communities have 6 months to adopt revised FIS/FIRM.

Effective FIS/FIRM - FIS and FIRM are effective and available from Map Service Center.

Lenses Note - Per procedure memo 34 and 43, the level of protection of accredited levels is required to be verified before a new FIRM may be released.

In some cases, a community and levee owner will be allowed a 24 month period to provide certification documents.
Floodplain Mapping Program Status

April 2015

[Map of Iowa showing county status]
Goal 1: Data Gaps

- **Risk MAP**: Address gaps in flood hazard data to form a solid foundation for risk assessment, awareness and floodplain management.

- **Iowa**
  - Seamless statewide flood hazard layer
  - Use LiDAR
  - New Valid Updated Engineering (NVUE)
  - Flood hazard for DA >1 sq mile
Goal 2: Awareness & Understanding

- **Risk MAP**: Ensure that a measurable increase of the public’s awareness and understanding of risk results in a measurable reduction of current and future vulnerability.

- **Iowa**
  - Working with Iowa State and IFC on outreach
  - Iowa Flood Information System (IFIS) Web Portal
  - Meeting with each county multiple times.
Goal 3: Mitigation Planning

- Risk MAP: Lead and support States, local, and Tribal communities to effectively engage in risk-based mitigation planning resulting in sustainable actions that reduce or eliminate risks to life and property from natural hazards.

- Iowa
  - Engaged the Iowa Homeland Security and Emergency Management Division (HSEMD). This important partnership directly links the IDNR Floodplain Mapping Program with HSEMD’s mitigation planning.
  - Mitigation stressed during all community meetings
Goal 4: Digital Platform

- **Risk MAP**: Provide an enhanced digital platform that improves management of Risk MAP, stewards information produced by Risk MAP, and improves communication and sharing of risk data and related products to all levels of government and the public.

- **Iowa**
  - Modernizing 44 un-modernized counties
  - IFIS
  - All digital data produced to FEMA requirements
  - CSLF and depth grids produced and available
Goal 5: Synergize Programs

- **Risk MAP**: Align Risk Analysis programs and develop synergies to enhance decision-making capabilities through effective risk communication and management

- **Iowa**
  - IDNR is working to bring all parties together who effect flood hazard management, further promoting enhanced decision making
Iowa Contribution to Risk Map

• Iowa Providing:
  • New and updated Zone A’s delineated on LiDAR
  • Depth Grids for all profiles for all Zone A streams
  • Changes Since Last FIRM (CSLF) type product
  • Flood Risk Review type meeting (FSR)
  • Mitigation communication & Seek Out Actions

• FEMA Providing (For Deployment Metrics):
  • Watershed Discovery (done in many watersheds)
  • Flood Risk Report, Map and Database
CTP Program & Local Capabilities

- CTP Program

- Local Capabilities
  - Iowa DNR: Outreach & Community Engagement
  - Iowa Flood Center at U of Iowa
    - 10 Engineers
    - 8 GIS Specialists
    - Increasing capabilities in flood hazard analyses and mapping
It Takes a Village...

- Iowa DNR (PM & Outreach)
- Program Management Contractor
- Iowa Flood Center
- NFIP & Risk MAP
- FEMA Region 7
- RSC 7
- USACE
- H&H & Mapping Contractors
- Program Management & Outreach & Community Engagement
- Data Development
- Map Production & Post Preliminary Processing
- FEMA Experienced National Contractors
- Stantec
- Iowa Flood Center
- AECOM
- Atkins
- Michael Baker International
- Dewberry
Data Dissemination

- Ability to serve depth grids to the public through IFC’s web portal (Beta)

- Unique protocol for reducing the size of 1-meter depth grids (6 GB to 400 MB)
Depth Grids (1-Meter)
Depth Grid (1% Annual Chance)
Conclusions

- To date new flood hazard mapping developed for 30 counties (of 99)
- IFC online data dissemination – cost effective flood awareness
- Alignment with Risk MAP and focus on mitigation during community interactions
- Clear path forward on Data Development, Regulatory and Non-Regulatory Products
THANK YOU


http://www.iowafloodcenter.org/maps/

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