Iowa Floodplain Mapping Program:
Insuring Delivery of Regulatory and Risk MAP Products
June 13, 2013

Scott Ralston, P.E., CFM – Iowa DNR
Tadd Henson, P.E., CFM – Stantec
Outline

• Establishment of the Iowa Floodplain Mapping Program

• Iowa Floodplain Mapping Program Goals

• Iowa Floodplain Mapping Program Status

• Alignment with FEMA Risk MAP Program
Project History

1993 Floods
- Major flooding in Midwest

Statewide LiDAR Project: 2005-2010
- Floodplain mapping was not primary impetus for LiDAR
- Small Areas (5 small HUC 12 Watersheds): $1/Ac; $640/SM = $36 Million for State
- Contract with USGS for $0.12/Ac ($76/SM) = $4.3 Million
  Four Partners Shared Cost (Vendor was Sanborn)

2008 Floods
- Only 15 years since last widespread flood event (1993)
- Flood of record in many parts of state (more acute)
- Flood risk awareness rose significantly

State Response
- Rebuild Iowa Advisory Commission
- $640 Million Statewide Disaster Relief CDBG Grant

Federal and State Mapping Investment
- $4.3 Million for LiDAR (State & Federal Agencies)
- $15 Million in CDBG Funds ($150k / County)
- $2.2 Million in ACOE Section 22 Planning Assistance to States (PAS) Funding

Iowa Flood Center (U of I)
Floodplain Mapping Program Background

- $15M HUD CDBG grant
- Administered by (Iowa Economic Development Administration) IEDA and DNR
- Supports floodplain mapping in the 85 counties declared federal disaster areas
- “...to produce floodplain maps that meet FEMA technical standards and can be published as Digital Flood Insurance Rate Maps (DFIRMs).”
Iowa Floodplain Mapping Program Partners

- **IDNR / Consultants**
  - Manage CTP Program & Grants & Administer CDBG $15 Million Grant
  - Align Iowa Floodplain Mapping Program With Risk MAP
  - Regulatory Products

- **FEMA Region VII**
  - Risk MAP Guidance & Some Regulatory Mapping Funding

- **Iowa Flood Center**
  - Approximate H&H by watershed
  - Iowa Flood Information System (IFIS)

- **U.S. Army Corps of Engineers**
  - Non-declared counties using Section 22 PAS

- **Iowa Homeland Security and Emergency Management Division (HSEMD)**
  - Provide Mitigation Information and Assistance to Stakeholders
Iowa Floodplain Mapping 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.
December 2009:  IOWA - FLOODPLAIN MAP STATUS

Hazard Mitigation Technical Assistance Program (HMTAP)

LiDAR Utilized

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

DFIRM Production Status
City Status
- No Activity (367)
- Data Development (205)
- Preliminary FIS/DFIRM (213)
- Effective FIS/DFIRM (164)

County Status
- No Activity (44)
- Data Development (21)
- Preliminary FIS/DFIRM (19)

Levee Note - Per procedure memo 34 and 43, the level of protection of accredited levees 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.
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.*
Risk Mapping, Assessment, and Planning (Risk MAP) Multi-Year Plan: Fiscal Years 2010-2014

**Risk MAP Goals**

**Goal 1: Data Gaps**
Address gaps in flood hazard data

**Goal 2: Awareness & Understanding**
Measurable increase of public awareness & understanding

**Goal 3: Mitigation Planning**
Lead effective engagement in Mitigation Planning

**Goal 4: Digital Platform**
Provide an enhanced digital platform

**Goal 5: Synergize Programs**
Align Risk Analysis programs and develop synergies

**Risk MAP Measures**

- Ensure 80 percent of the Nation’s flood hazards are current by 2014 – the flood hazard data are new, have been updated, or deemed still valid through Risk MAP review and update process

- Increase State, local, and Tribal officials’ level of understanding of flood risk

- Ensure 80 percent of the U.S. population (excluding territories) is covered by a Local or Tribal hazard mitigation plan that is approved or approved pending adoption

- Percent of Local hazard mitigation plans approved using quality Risk MAP data or better

- Establish a culture of continuous improvement and executing projects aimed at reducing process cycle time and improving the quality of Risk MAP products and services

**Vision**
Risk MAP will deliver quality data that increases public awareness and leads to action that reduces risk to life and property

**RiskMAP**
Increasing Resilience Together
Goal 1 - Data Gaps

- **RiskMAP**: Address gaps in flood hazard data to form a solid foundation for risk assessment, floodplain management, and actuarial soundness NFIP.

- **Iowa**
  - Seamless flood hazard layer throughout the State
  - Use LiDAR
  - All new engineering
  - Flood hazard identified for all flooding sources with DA>1 sq mile
Goal 2 – Awareness and Understanding

- **RiskMAP**: 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)
  - Meeting with each county at least once.
  - Flood hazard identified for all flooding sources with DA>1 sq mile
Goal 3 - Mitigation Planning

- **RiskMAP**: 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**:
  - The IDNR has 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

- **RiskMAP**: 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 45 un-modernized counties
  - IFIS
  - All digital data produced to FEMA spec
  - CSLF and depth grids produced and available
Goal 5 – Synergize Programs

- **RiskMAP**: 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 affect flood hazard management, which will further promote 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
THANK YOU

HTTP://WWW.IOWADNR.GOV/INSIDE DNR/REGULATORY LAND/FLOODPLAIN MANAGEMENT/FLOODPLAIN MAPPING.ASPX

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

Scott Ralston
Scott.ralston@dnr.iowa.gov
515-281-8121