# **ILLINOIS SILVER JACKETS UPDATE**



"The views, opinions and findings contained in this report are those of the authors(s) and should not be construed as an official Department of the Army position, policy or decision, unless so designated by other official documentation."





## **ILLINOIS SILVER JACKETS**

- State-wide Interagency group focused on Flood Risk Management (Rita Lee, Chair)
- Silver Jackets Program Provides annual funding through a proposal process for USACE to participate in collaborative projects
  - MICA program [Mobile Information Collection Application 3 year project]
  - Map Book Project [Beardstown Regional Flood Prevention District]
  - Flood Zone Alliance [Template from Senate District 38 (Ottawa) applied to Senate District 37 (Peoria)]
  - Rock Island Levee Breach Analysis [inundation, depth grids, flood wave travel time]
  - City of Rock Island Structure Damage HAZUS Assessment [extending project to un-leveed portions of Rock Island County]
- Priority is given to localities that contribute in-kind services to solving the problem <u>ELINOIS</u>













## **GOALS OF SILVER JACKETS**

- Collaboratively identify, prioritize, address risk management issues and implement solutions
- Increase / improve risk communication through an interagency effort
- Leverage information and resources to develop new tools in reducing flood risk and damage
- Provide coordinated hazard **mitigation assistance** in implementing highpriority actions (identified by state mitigation plans)
- Identify gaps among agency programs and/or barriers to implementation, and recommendations.





## MAP BOOK PURPOSE AND GOALS

- Intended audience: new personnel USACE, state, county, city, levee district
- Quick reference guide for technical system info and flood response
- Digital Template for other system
- Shared resource for stakeholder risk communication tool
- Long term risk informed community members







## **MAP BOOK CONTENTS**

- **Emergency Contacts**
- Gages, Stage Impacts, and Historic Flood Profiles
- Levee Infrastructure Data
- Pertinent Data for Flood Response and Evacuation
- Soils
- **Close-up Maps** 
  - Aerial imagery •
  - Transportation •
  - Levee features
  - Topography
  - As-built Drawings •

#### USACE

- Emergency Operations Center (309) 794-5325
- Lead Flood Area Engineer
  - · Anthony Heddlesten
  - (309) 794-5886 (Office)
  - (309) 429-0348 (Cell)

#### State of Illinois

- Illinois Emergency Management Agency **Region 6 Coordinator** 
  - (217) 782-7860 (Emergency) (217) 782-0922 (Office)
- Illinois State Police District 9 (217) 786-7107



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**Typical Section** 

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# MOBILE INFORMATION COLLECTION APPLICATION (MICA)

- Existing software limited utilization in MVR
- Facilitates data collection/sharing w/ USACE approved mobile devices
- Near real-time viewing of collected data
- Digitally entered data saves time/money of manually entering data after the fact (handling data twice)
- Flexible to fit many missions without requiring new code
- Doing trials now on ESRI Collector as well





## MICA TIMELINE

- Phase I Started April 2015 –
- July 2015 near record flood event along Illinois River
- Phase II October 2015 -
- Incorporation of software tools
- suggested by partners
- December 2015 record floods along Mackinaw / Sangamon Rivers, nr record flood along Illinois River (data collected on MICA 2.0 & 3.0)
- Phase III 2017 –
- Develop software for IDNR and state partners access to collected data points





Map last updated on: 2/3/2016



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## **Overview**

- April 2013 flooding along the Illinois River.
- Communities in Bureau, Grundy, Kendall, LaSalle, and Putnam Counties suffered major damage.
- Senator Sue Rezin (Illinois District 38), organized these communities to work together to create a more flood resilient region.
- The Illinois Valley Flood Resiliency Alliance (IVFRA) has identified needed steps for communities to be better prepared for future floods, and to implement measures to reduce flood damage
- It is the intention of Senator Rezin that the regional alliance formed throughout her Senate district can be replicated in other districts to create a more flood resilient State of Illinois

## **Project Goals**

This Interagency Flood Risk Management Project will:

- 1. Create an Action Plan for the Illinois Valley Flood Resiliency Alliance that documents the coalition's work to date and identifies next steps
- 2. Create a template from IVFRA's success and lessons learned that other communities can use to form regional flood coalitions





## SET STRATEGIES



The Interagency Flood Risk Management Project will **build on IVFRA's mission points** and review mitigation strategies to strengthen the coalition:

1. Preventative Measures

Consideration of codes, regulations, and higher standards

### 2. Property Protection

Review of elevation, acquisition, flood proof existing buildings

### 3. Structural Projects

Evaluation of flood control needs, protect infrastructure

#### 4. Resource Protection

Attention to shorelines, wetlands protection, environmental concerns

### 5. Emergency Services

Assessment of flood warning, response needs for critical facilities and people

### 6. Public Information

Identification of regional outreach and public information needs



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# ALEXANDER COUNTY FLOOD PREPAREDNESS PLAN

- Analyzed levee breach scenarios
- Travel time for water
- Critical infrastructure
- Critical Facilities nursing homes, schools
- Identified the stage where roads were closed
- Developed warning system and stage to implement
- <sup>,</sup> Identified responsibility during a flood







## **EVACUATION ROUTE FOR CAIRO**

### **Public Notification**

- NWS send out flash flood alert
  - IEMA Springfield contact television media to issue alert
  - City tornado siren/police-fire sirens.
  - City issue social media alert

# The notification of the evacuation should include the following:

- > Move quickly once mandatory evacuation is ordered.
- Monitor local media for important flood and evacuation route information.
- Select destination before leaving and notify family of your route.
- Do not drive thru water greater than 1' deep.
- Water will be cold. Hypothermia will occur within 15 minutes.
- Take an adequate supply of food and water.
- Have sufficient cash to meet your needs.







# **DES PLAINES RIVER INUNDATION MAPPING**

- Chicago District ACOE and IDNR Office of Water Resources have partner with Lake Co SMC and looking for a partner in Cook Co.
- Develop inundation mapping on the Des Plaines River from State Line to former Hoffman Dam.
- Create incremental, depth inundation maps based on a reference gage.
- Add surveyed residential and commercial structure data to the maps.
- Determine the structures impacted or damaged at each stage for each gage.
- Develop a web application to serve the inundation mapping only.







# **IOWA SILVER JACKETS**







**FEMA** 

## Iowa Flood Risk Data Inventory

#### Purpose

This lowa Flood Risk Data inventory compiles Federal and state agency flood risk models and metadata into a single easily accessible source. For each model, the posted information includes: 1) Project name and site description; 2) Type of Model [hydrologic, hydraulic 1D, 2D]; 3) Model level of detail [model/mapping]; and 4) Agency name, point-of-contact, date of model data and model properties (datum, etc).

#### What is Available

This inventory of Hydraulic models can be used for Floodplain Management. Experience in computational hydraulics is necessary for the use of these models.

Maintaining an up-to-date lowa Flood Risk Data Inventory, all governmental participating partners benefit from sharing the responsibility of posting recently completed model metadata to the platform. This site Identifies models that can be leveraged in a timely manner for additional applications, analysis, and expedited flood risk response.

River flooding has been identified as #1 of the prioritized hazards in the Hazard Analysis and Risk Assessment (HARA) for 2013. Intergovernmental capability to query a flood source inventory of documented hydraulic model availability quickly during times of impending flood threat will reduce and prevent increases in flood risk and increase resiliency.

#### What is NOT Available

The inventory includes only detailed hydraulic models and does not replicate the FEMA map service center or the lowa Department of Natural Resources Iowa Flood Maps websites. While some of the products created may be adopted by FEMA and become regulatory, maps provided at this link are not regulatory maps. The products are being provided on this site for informational purposes. Iowans interested in map information for flood insurance purposes should visit the FEMA Map Service Center or contact local officials to view the current regulatory map for their jurisdiction.

### Keep in Mind

All models are provided "as is" without any kind of guarantee as to their accuracy or applicability for a particular purpose. Even though every effort is made to provide accurate information, the user assumes all risks concerning the suitability and accuracy of the models from this web site. These models may contain technical inaccuracies or typographical errors. The model providers assume no responsibility for and disclaims all liability for any such errors in the models.

#### How to have a hydraulic model added to the inventory website?

If you have a hydraulic model you would like to make available to other agencies, please contact Anton Stork Anton.J.Stork@usace.army.mil.

#### Partners



### HYDRALILIC MODELS

#### r 7 20 Stockton 1.1 203 zabeth Iowa Flood Risk Data Inventory Browse Models (84) Main Watershed V View By: Sav Iowa River • Select a Watershed OF View As: Cedar River Des Moines River -67 East Nishnabotna River Iowa River Little Sioux River Clinton ixon Morri Maqouketa River 52 Mississippi River Rock River Salvesen Creek 88 Amboy (26) Skunk River Proph Turkey River Wapsipinicon River Winnebago River Ohio (92) WAIHUL













### **U.S. Army Corps of Engineers**

#### Site Information

#### Project Name:

Iown River CWMS

Model Type: Hydraulic

Model Software: HEC-RAS

#### Model Scope:

Hydraulic model for Corps Water Management System (CWMS) Modeling for water surface profile and flood inundation computations.

#### Model Notes:

The CWMS model includes the existing HEC-RAS models of the Coralville Dam EAP Modeling and Iowa Flood Center Model created by USACE and the Iowa River Low Flow Model created by the Iowa Flood Center.

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Last Revision:

Main Watershed: Jown River

Sub Watershed: Jown River

Georeferenced: Yes

Horizontal Coordinate System: USA Contiguous Albers Equal Area Conic USGS version

Vert Datum: NAVD 1988

Units: U.S. Fort

Staff: Thomas Kirksong

Point of Contact:

Rock Island District, Hydrologic Engineering Chief; 309-794-5222



## Walnut Creek Flood Loss Avoidance Analysis

# **Project Goals**



Advancing the floodplain protection goals of the Walnut Creek Watershed Master Plan through the development of a multi-jurisdictional watershed scale non-structural flood loss avoidance strategy that balances the need for upstream development with the mitigation of downstream impacts.

Represents a truly innovative approach to watershed planning and management within lowa.

Clearly establishing the connection between the benefits and costs of appropriate watershed management practices within a transitioning agricultural to urban land-use provides an opportunity to advance the state of practice to other similar urbanizing areas within lowa.







Using USACE CWMS models and subsequent inundation mapping for display on the Iowa Flood **Center Iowa Flood Information** System platform, communities and stakeholders downstream of the reservoirs will be informed of inundation extents and depths for various reservoir releases.

 Major downstream population centers include the cities of Des Moines, Tracy, Ottumwa, Keosauqua, Iowa City, Lone Tree, and Wapello, Iowa. Des Moines River Annual Chance Exceedance Map - 2010 FFS 0.1%, 0.2%, 1%, 2%, 2008 Flood, and 40K Release



# **Upper Wapsipinicon River Collaborative Flood** Mitchell Howard Allamakee Winneshiek **Forecasting Tools** Chickasa Fayette Clayton Delaware Black Hawk chanan

Red dots indicate approximate locations of current gages.

 The scarcity of rainfall and river level data in the Upper Wapsipinicon River upstream of Independence, Iowa presents an ideal opportunity for interagency resource leveraging.

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 Installing automated weather stations and bridge sensors upstream of Independence (on the main stem and contributing tributaries) will assist in flash flood and river forecasting.

## **HAVE IDEAS?**

- Proposals are accepted annually for Silver Jackets partnership opportunities
- <u>https://silverjackets.nfrmp.us/</u> Visit the website
- Talk to Silver Jackets members
  - Rita Lee OWR
  - Chris Haring USACE Rock Island
  - Imad Samara, USACE Chicago
  - Shawn Sullivan, USACE St. Louis



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## CIVIL WORKS POLICY GUIDEBOOK (LEFT) NATIONAL LEVEE DATABASE (RIGHT)



Scan me

**Did you** know your **IAFSM** mobile App has a QR Code Scanner in it???



Scan me





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## FLOOD RISK MANAGEMENT PROGRAM (LEFT) EMERGENCY MANAGEMENT PROGRAM (RIGHT)



Scan me

Tap the 3 bars in the upper left hand corner and select QR Scanner







## UMR HYDRAULIC MODEL

The scanner is three up from the bottom







## SILVER JACKETS PROGRAM



These codes & handouts are available at the **USACE** booth... come say hello!





File Name

## **QUESTIONS?**

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