

Impact of Levees on Mapping Flood Risk and the National Flood Insurance Program

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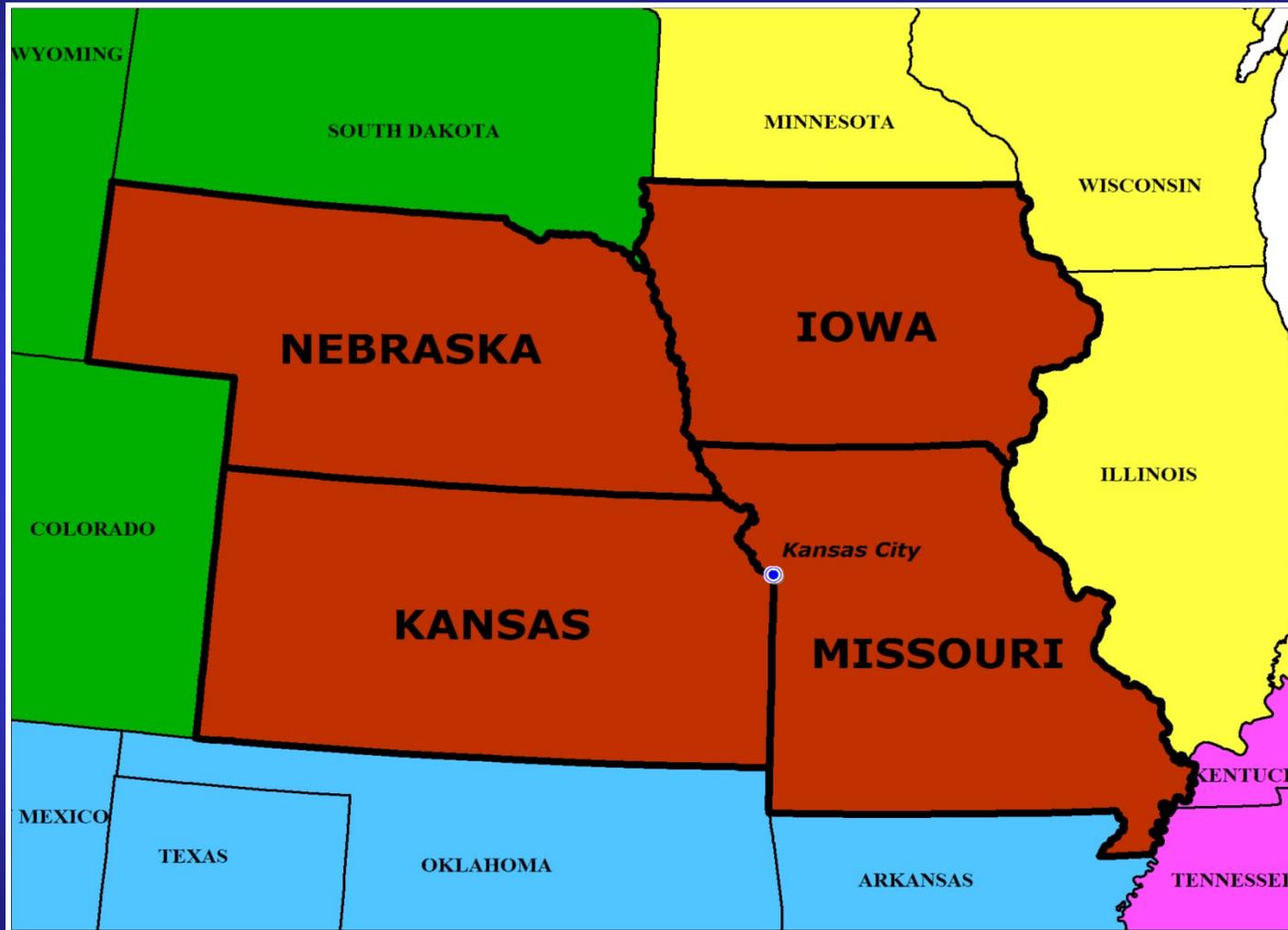
FEMA

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Overview

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- **National Flood Insurance Program (NFIP)**
- **Flood Insurance Rate Maps (FIRMs)**
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- **Mapping Existing Levees Under Map Modernization**
- **Accredited Levees in the St. Louis District**
- **Future Activities**

FEMA REGION VII



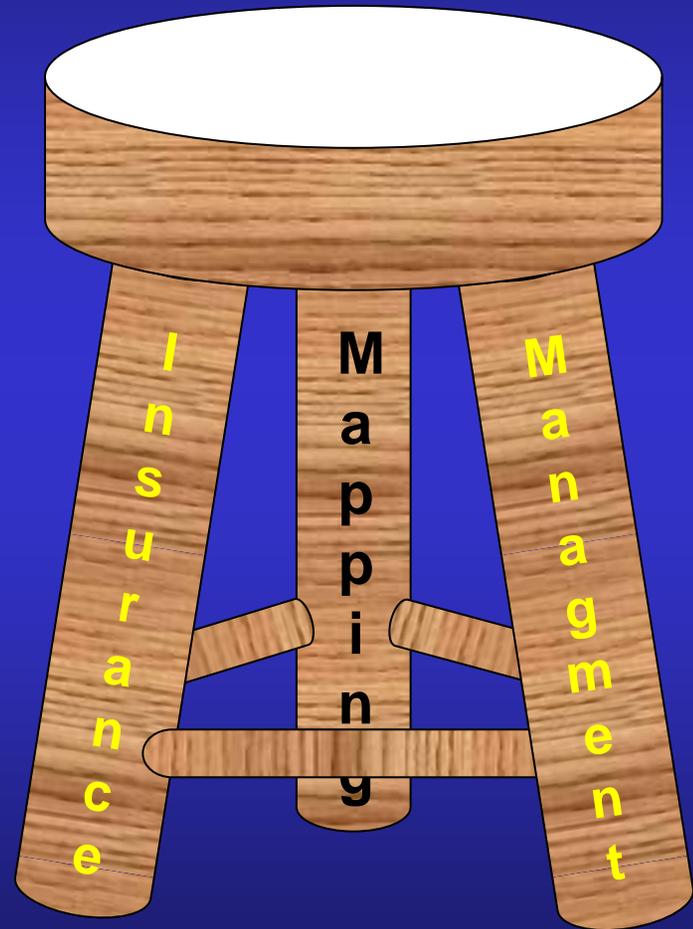
National Flood Insurance Program (NFIP)

- **The U.S. Congress established the NFIP with the passage of the National Flood Insurance Act of 1968**
- **The NFIP is a Federal program enabling property owners in participating communities to purchase insurance protection against losses from flooding**
- **Community participation is voluntary and requires each community to adopt and enforce floodplain management ordinances that meet or exceed FEMA's minimum requirements**

NFIP

■ Three key components:

- Flood Insurance
- Flood Risk Mapping
- Floodplain Management



Flood Insurance Rate Maps (FIRMs)

- **A FIRM is a product of a Flood Insurance Study and is used to show areas at risk to flooding and to manage development in the floodplain**
- **FIRMs are used to identify flood risk zones used for rating flood insurance**
- **The Special Flood Hazard Area (SFHA) is a high-risk area that would be inundated by a flood having a 1-percent-annual-chance of occurrence (base flood). Owners of insurable property located in a high-risk area backed by a federally regulated mortgage are required by law to purchase flood insurance.**
- **Map Modernization is a Multi-year, \$1-billion effort to transform the Nation's effective flood maps into more reliable, easy-to-use, and readily available digital FIRMs (DFIRMs). This fiscal year (FY2008) is the last year of funding for Map Modernization.**

FEMA Regulations & Policies for Mapping Levees

- **Many levees shown on effective FIRMs were mapped in the 1970's and 1980's, and have never been remapped by FEMA**
- **Prior to 1986, levees were shown on FIRMs as providing protection from the base flood (accredited) when they were designed and constructed in accordance with sound engineering practices**
- **Since 1986, levees are accredited on FIRMs when they meet the requirements of 44 CFR 65.10 "Mapping Areas Protected by Levee Systems", including certification by a registered professional engineer or a Federal agency with responsibility for levee design**

FEMA Regulations & Policies for Mapping Levees

- **FEMA is not authorized to:**
 - **Implement or fund the design, construction, certification, operation, or maintenance of levees or levee systems**
 - **Inspect or evaluate levees or levee systems**
 - **Determine how an individual structure or system will perform in a flood event**
- **Levees that do not meet the requirements of 44 CFR 65.10 can not be accredited on a FIRM. Areas behind the levee and at risk to base flood inundation are mapped as high-risk areas subject to FEMA's minimum floodplain management regulations and mandatory flood insurance purchase requirement.**

Mapping Existing Levees Under Map Modernization

- **Accredited Levee** - With the exception of areas of residual flooding (interior drainage), if the data and documentation specified in 44 CFR 65.10 is readily available and provided to FEMA, the area behind the levee will be mapped as a moderate-risk area. There is no mandatory flood insurance purchase requirement in a moderate-risk area, but flood insurance is strongly recommended.
- **Provisionally Accredited Levee (PAL)** - If data and documentation is not readily available, and no known deficiency precludes meeting requirements of 44 CFR 65.10, FEMA can allow the party seeking recognition up to two years to compile and submit full documentation to show compliance with 44 CFR 65.10. During this two-year period of provisional accreditation, the area behind the levee will be mapped as moderate-risk with no mandatory flood insurance purchase requirement.

Mapping Existing Levees Under Map Modernization

- **De-Accredited Levees** – If the information established under 44 CFR 65.10 is not readily available and provided to FEMA, and the levee is not eligible for the PAL designation, the levee will be de-accredited by FEMA. The area behind the levee will be mapped as a high-risk area subject to mandatory flood insurance purchase requirement.
- **Levees Engaged in Restoration** – For levee systems engaged in restoration activities compliant with 44 CFR 65.14 “Remapping of Areas for Which Local Flood Protection Systems no Longer Provide Base Flood Protection”, the area behind the levee may be eligible for a restoration zone designation (AR Zone). Restoration zones are considered high-risk areas subject to mandatory insurance purchase requirement, but at a reduced rate.

Mapping Existing Levees Under Map Modernization

- For levees that are currently accredited by FEMA but are not routinely inspected by the USACE (**PAL Scenario A**), FEMA will coordinate directly with the impacted community to confirm whether levees are eligible for PAL designation
- For levees that are currently accredited by FEMA and are also routinely inspected by the USACE (**PAL Scenario B**), FEMA relies on the expertise of the USACE in confirming whether levees are eligible for PAL designation
- For levees confirmed eligible for PAL designation, FEMA will send a PAL Letter of Agreement to be signed by the impacted community and levee owner, which will initiate the two-year period of provisional accreditation

Accredited Levees in the St. Louis District

- **For FEMA Region VII, the following counties have at least one levee currently accredited on an Effective FIRM that is also planned to receive a new county-wide DFIRM under Map Modernization:**
 - **Cape Girardeau County**
 - **St. Charles County**
 - **St. Louis County**
 - **Ste. Genevieve County**
 - **St. Louis City**

Accredited Levees in the St. Louis District

■ Cape Girardeau County

- PAL Scenario A - none
- PAL Scenario B - North Main Street Levee
- PAL Scenario B - Main Street Levee

■ St. Charles County

- PAL Scenario A - Duckett Creek Treatment Plant No.1
- PAL Scenario B - St. Peters Levee (11/27/02 Letter of Map Revision)
- Elm Point Levee

■ Ste. Genevieve County

- PAL Scenario A - none
- PAL Scenario B - Ste. Genevieve County Levee District No.3

PAL Scenario A: Levee is not inspected by the USACE

PAL Scenario B: Levee is routinely inspected by the USACE

Accredited Levees in the St. Louis District

■ St. Louis County

- PAL Scenario A - Maryland Heights WWTP
- PAL Scenario B - Chesterfield Monarch Levee
- PAL Scenario B - Earth City Levee
- PAL Scenario B - Howard Bend Levee
- PAL Scenario B - Riverport Levee
- PAL Scenario B - Valley Park Levee (08/29/07 Letter of Map Revision)

■ St. Louis City

- PAL Scenario A - none
- PAL Scenario B - St. Louis Flood Protection Project

PAL Scenario A: Levee is not inspected by the USACE

PAL Scenario B: Levee is routinely inspected by the USACE

Accredited Levees in the St. Louis District

With the exception of Elm Point Levee (City of St. Charles), all levees currently accredited on an Effective FIRM are presently considered eligible or confirmed eligible for PAL designation.

The Elm Point Levee does not provide base flood protection and is not eligible for PAL designation. The levee will be de-accredited on the new St. Charles County, county-wide DFIRM. The area behind the levee will be mapped as a high-risk area subject to floodplain management regulations and mandatory flood insurance purchase requirement.

Status of Region VII Mapping of Levees in the St. Louis District

The following estimated Preliminary and Effective map schedules are presented by Fiscal Year (i.e. FY2010 begins October 1, 2009) and Quarter:

<i>Mapping Project</i>	<i>Preliminary</i>	<i>Effective</i>
Cape Girardeau County	FY2010 Q1	FY2011 Q2
St. Charles County	FY2010 Q2	FY2011 Q4
St. Louis County	FY2010 Q2	FY2011 Q4
Ste. Genevieve County	FY2010 Q1	FY2011 Q2
St. Louis City	FY2009 Q1	FY2010 Q2

Status of Region VII Mapping of Levees in the St. Louis District

- **Potential impacts to issuing Preliminary maps include:**
 - **FEMA Region VII FY2008 Map Mod funding**
 - **Study-specific Scope of Work**
 - **Unforeseen technical and non-technical issues**
- **Potential delays to issuing Effective maps include:**
 - **Impacts on issuing Preliminary maps**
 - **Revisions to Preliminary maps (if any)**
 - **Appeals (if any)**

Future Activities

- **In the following months, FEMA will meet with community officials and levees owners to present and offer PAL Letters of Agreement, and to address project-specific questions**
- **FEMA has had communications with the City of St. Charles and will continue to work with the community and others on the de-accreditation of Elm Point Levee**
- **FEMA (in cooperation with the St. Louis District and the Missouri State Emergency Management Agency) is available to meet with community officials, levee owners, and others to further explain and discuss the PAL process. FEMA is also available to assist communities in developing and administering outreach strategies for addressing issues related to the impact of levees on mapping flood risk.**

For More Information

FEMA Web site

one-stop source for materials designed to inform both public and technical audiences about the NFIP and levees:

www.fema.gov/plan/prevent/fhm/lv_intro.shtm

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One Team: Relevant, Ready, Responsive and Reliable



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