**State Interagency Missouri River Authority (SIMRA) Meeting**
**Thursday, October 29, 2015; 10:00 a.m. – 3:00 p.m.**
**Riverton Community Building, 803 Summer Ave., Riverton, IA**

SIMRA member attendees: Bruce Trautman, Sharon Tahtinen (DNR); Sam Hiscocks (DOT); Amy Christensen Scott Bents (IUB); Jake Hansen (IDALS; Sherry Timmins (EDA - via phone)

Guests: Bill Cappuccio (DNR); Stu Maas; Marian Maas; Deb Kozel (LSA); Twila Larson (Fremont Co.); Cara Morgan (Fremont Co.); Donna Barry (Sen. Grassley); Emily Clark (Sen. Ernst); Rep. David Sieck; Charlie Johnson (Congressman Young); Colleen Horihan, Dave Crane, Randy Behm, Kevin Stamm, Ryan Buckley, Bryan Flere (USACE); Pete Hildreth, Matt Dollison, Chris Larson (DNR);Ken Pangborn (IA Farm Bureau); Randy Hickey (Fremont Co.); Mike Crecelius (Fremont Co.); Brad Buckingham, Zac Denton (Sapp Bros.); Chuck Morris (KMA Radio); Wayne Clark (Benton-Washington Levee District); Scott Belt (Pottawattamie Co.); Amber Carcel (SWIPCO); Bill Smith; Jake Hold (PF); Earl Hendrickson (Fremont Co.) Via Phone: Penny Loeb; Don Stevens (DOT); Brent Barnett (KMA Radio)

**AGENDA**
**Welcome – Cara Marker Morgan – Fremont County Supervisor**

**Introductions and Business Items – Bruce Trautman, Deputy Director – Department of Natural Resources**

--Approve Agenda – Approved Unanimously
--Approve Meeting Summary – June18, 2015 – Approved Unanimously

**Flood Control and Levee Accreditation – Bill Cappuccio, Environmental Engineer Sr., Flood Plain Management & Dam Safety Section, DNR**

As FEMA updates the Flood Insurance Rate Maps (FIRMs) for communities, it requires them to re-accredit any levees or floodwalls shown on previously published maps as providing protection from the 1% chance (i.e., 100-year) flood. FEMA's requirements for levee accreditation are outlined in 44 CFR 65.10. The costs associated with providing the documentation needed for accrediting a flood protection levee can be prohibitive for many communities. The expense is even greater where improvements to the levee are required in order for it to be accredited.

A number of Iowa communities – including Fremont, Mills and Pottawattamie Counties - are currently dealing with the possibility that their flood protection levees will be de-accredited and not shown as providing flood protection on new FIRMs. FEMA has developed guidance ("Analysis and Mapping Procedures for Non-Accredited Levee Systems", or LAMP) that outlines 5 different procedures that are to be used to analyze the flood risk for areas located behind de-accredited levees. The procedure used to analyze each levee reach depends on the degree to which it satisfies the requirements of 44CFR 65.10. That analysis will determine how the flood risk is identified on the FIRM for areas on the landward side of the levee; which could effect, not only the development regulations, lending requirements and flood insurance premiums for buildings located in those areas, but could also potentially affect crop insurance rates.

**Presentation on MINK Corridor, Inc. – Twila Larson, Executive Director, Fremont Co. Economic Development Corp. (FREDCO)**

The distribution of the history of the grassroots regional organization, was highlighted to inform those that did not already know, the origin. A "rural" region pulling together as a "Great Region" (designated as one of 64, in the US, by the White House in Sept. 2013).

- Being a "regional" corridor that shares in a desired collaboration among the four states (Missouri, Iowa, Nebraska and Kansas) and their agencies to help progress the corridor into a viable attraction to all aspects of economic and personal growth.

- Sharing in the strategic plans of the organization was presented to encourage credibility and interest in the efforts to demonstrate meaningful activity.

- Suggesting there might be a "footprint" to the SE Iowa region (The Great Rivers Region, Iowa, Illinois and Missouri) created, giving the state of Iowa a great boost of opportunity was also displayed.

The Transportation Committee (one of four, the others being Entrepreneurship, Tourism, and Housing) is focused on M-29, right now and welcome all four states to participate in encouragement for possible substantial outcomes. Not just in Transportation, but with any of the committees that are striving for the same participations among the states.

There was mention, from the attendees of SIMRA, about recreational and wildlife, as well. The Tourism Committee would be very receptive to projects of such kind.

**Missouri River Conditions Update and Plans for 2016, Kevin Stamm, Senior Hydraulic Engineer, U.S. Army Corps of Engineers**

The US Army Corps of Engineers (COE) presented its Fall 2015 Summary and Outlook at the October 29 SIMRA meeting in Riverton, Iowa. During that meeting, Summary Kevin Stamm, Senior Hydraulic Engineer with the COE reviewed 2015 runoff in the river basin, and provided outlooks for the rest of 2015 and into 2016. Key information from included the fact that all flood storage space will be available to start 2016 runoff season, all reservoirs should have near normal releases and levels, river basin runoff should end the year near its median level, and that good service is anticipated for all COE authorized purposes .

**Future Flood Concerns, William Smith, Sioux, City, IA**

A tour of the levee setback and the Copeland Project followed the meeting.

**State Interagency Missouri River Authority (SIMRA) Meeting**
**Thursday, October 29, 2015; 10:00 a.m. – Noon; Tour 1:00-3:00 p.m.**
**Riverton Community Building 803 Summer Ave, Riverton, IA 51650**

Conference Call Instructions:
Dial (866) 685-1580. When the call is answered follow the prompts by entering the conference code of **4510673319** followed by #.

## AGENDA

10:00 a.m. Welcome – Cara Marker-Morgan, Fremont County Supervisor

10:10 a.m. Introductions and Business Items – Bruce Trautman, Deputy Director – DNR
--Approve Agenda
--Approve Meeting Summary – June 18, 2015

10:20 a.m. Flood Control and Levee Accreditation – Bill Cappuccio, Environmental Engineer Sr., Flood Plain Management and Dam Safety Section, Iowa DNR

11:00 a.m. Presentation on Mink Corridor, Inc. (Missouri, Iowa, Nebraska, Kansas) and the M-29 Marine Corridor - Twila Larson, Executive Director, Fremont County Economic Development Corporation (FREDCO)

11:25 a.m. Missouri River Basin Conditions Update and Plans for regulating the reservoir system in 2016 - Kevin Stamm, Senior Hydraulic Engineer, U.S. Army Corps of Engineers

11:50 a.m. Future Flood Concerns, William Smith, Sioux City, Iowa

Next Meeting

Noon: Lunch - On-site lunch will be available to interested meeting attendees. It is a hot, 2 meat, buffet style lunch. **Cost:** $12 each, a receipt will be provided, if needed. Please RSVP to Sharon.Tahtinen@dnr.iowa.gov if you plan to participate in this luncheon option.

1:00 pm Tour: Levee Setback and Copeland Bend Project – DNR/COE Representatives

Rev. 10/16/15

# Missouri River Mainstem Reservoir System
# Basin and Reservoir Conditions
# Fall 2015 Update

October 29, 2015 SIMRA Meeting

Kevin Stamm, P.E.
Senior Hydraulic Engineer
Missouri River Basin Water Management Division
US Army Corps of Engineers, Northwestern Division
Omaha, Nebraska

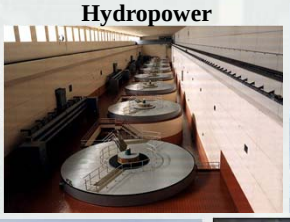
US Army Corps of Engineers
BUILDING STRONG®

# Our Mission

## Regulate Missouri River Mainstem Reservoirs to Support Congressionally Authorized Purposes

**Flood Control**

**Hydropower**



**Water Supply**

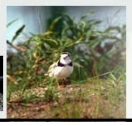
**Water Quality Control**

**Recreation**

**Navigation**

**Fish and Wildlife**
**Including Threatened and Endangered Species**

**Irrigation**



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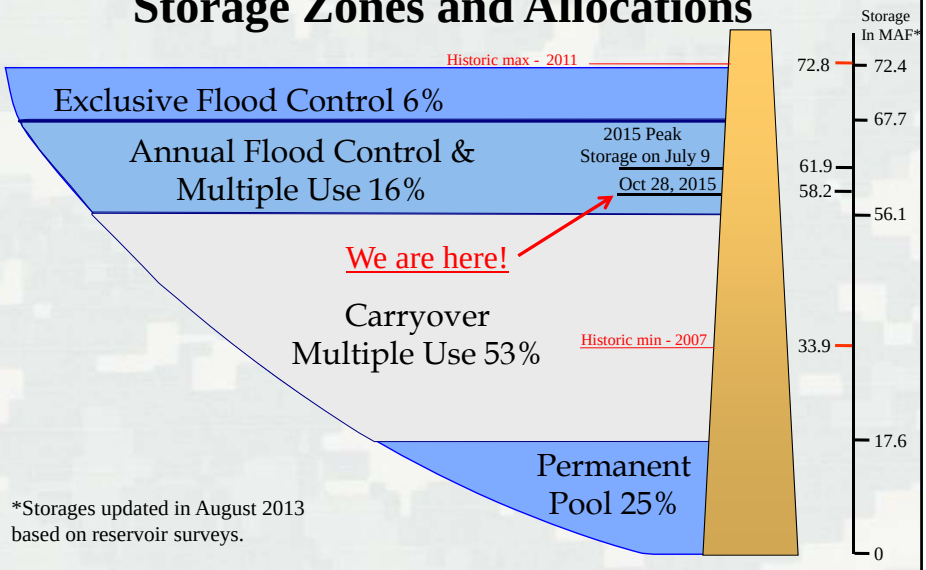
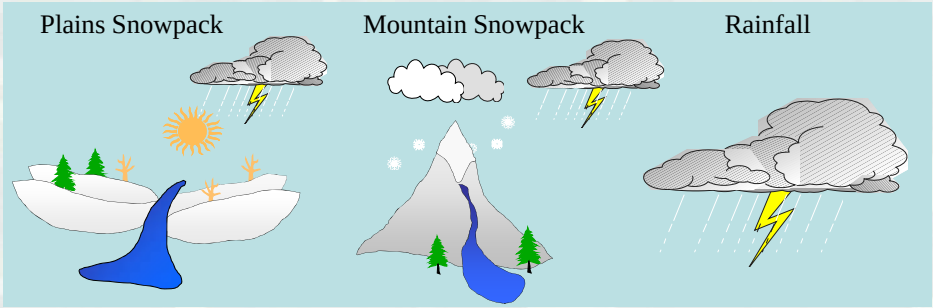
# Missouri River Mainstem System Storage Zones and Allocations




*Storages updated in August 2013 based on reservoir surveys.

3

# Runoff Components

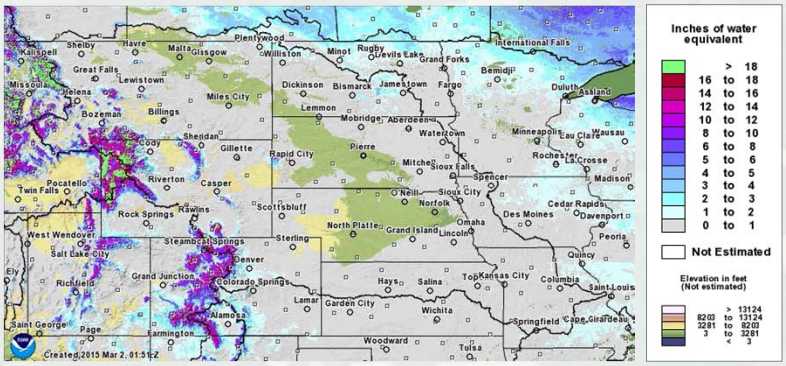



| March and April | May, June and July | March through October |
|---|---|---|

Long Term (1898-2014) Average Runoff = 25.3 MAF

4

# Plains Snowpack




March 1, 2015

Source: NOAA National Operational Hydrologic Remote Sensing Center (NOHRSC)

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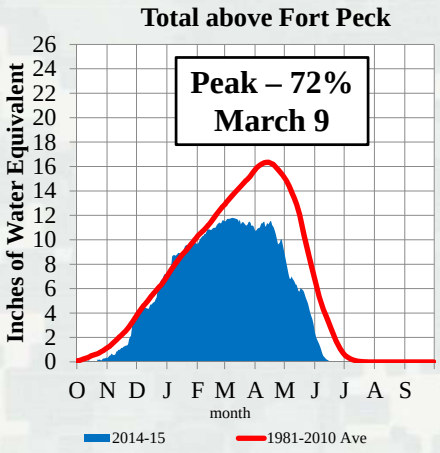
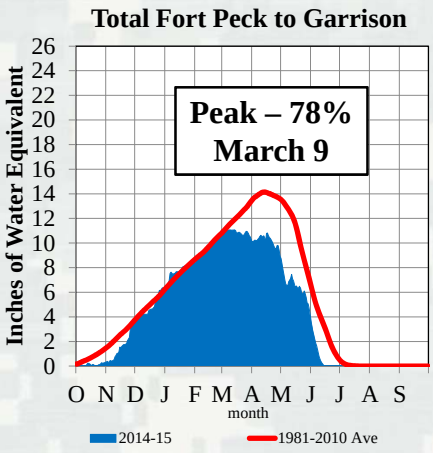
# Missouri River Basin 2014-15 Mountain Snowpack




Source: USDA National Resource Conservation Service (NRCS) Water and Climate Center

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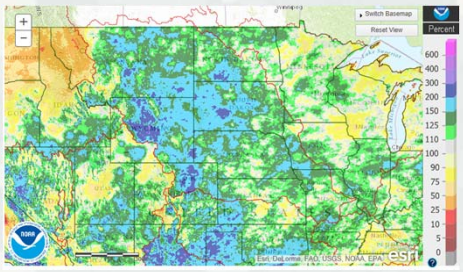
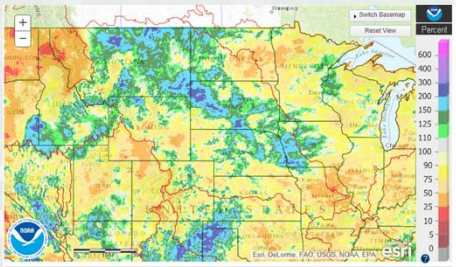
# Precipitation - Percent of Normal

## Previous 180 Days




## Previous 90 Days




Source: National Weather Service, Missouri Basin River Forecast Center (MBRFC)

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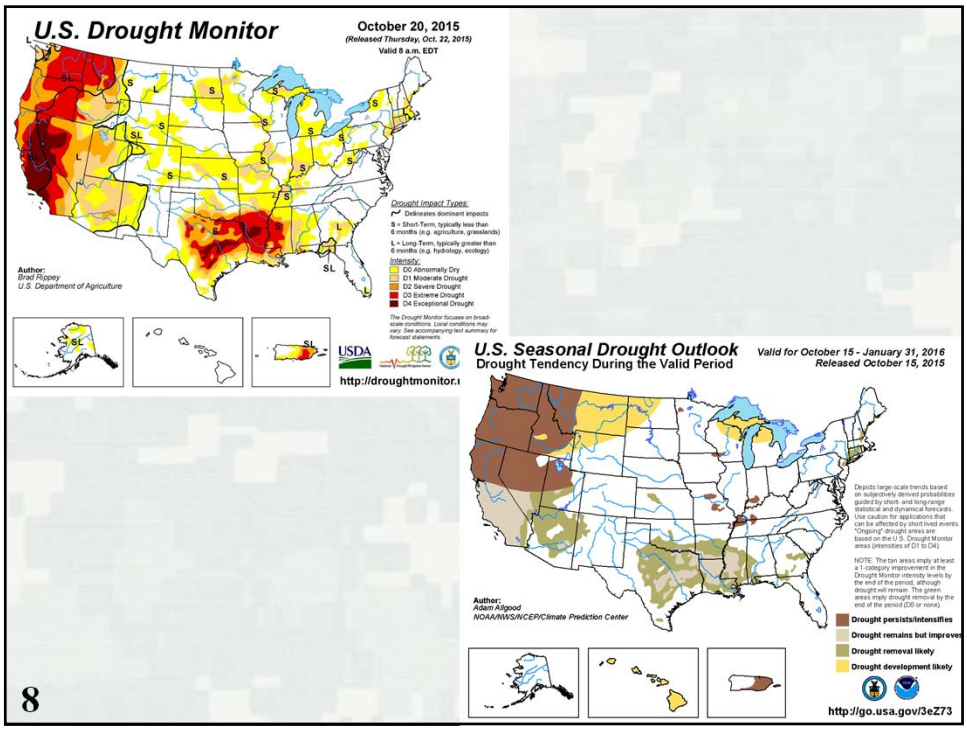


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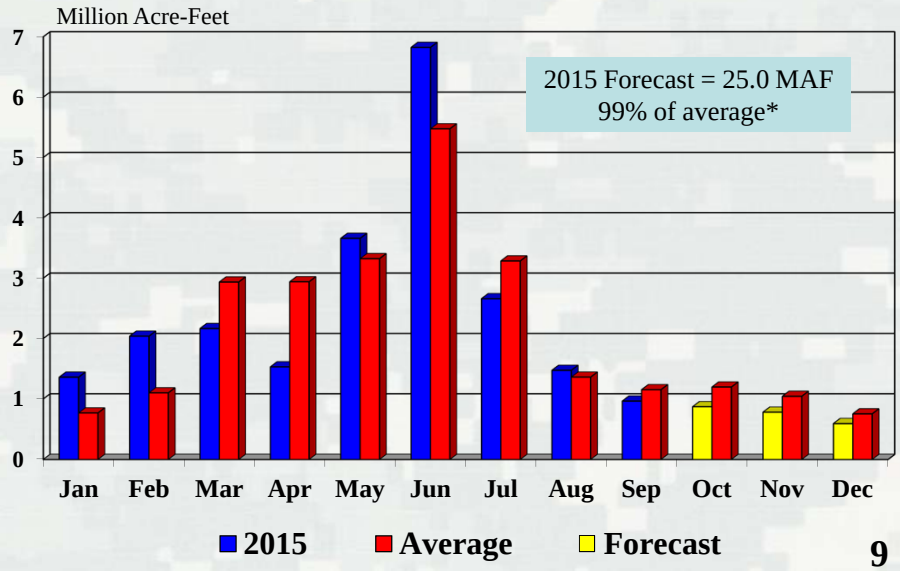
# Missouri River Runoff above Sioux City, IA 2015 Actual and Forecast

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# NOAA Outlooks for 2015-16 Winter/Spring Missouri River Basin

- The NOAA Climate Prediction Center - 95% chance that a strong El Niño will occur during the winter and last through spring 2016.
- El Niño impacts to Missouri Basin during the **winter** (Dec-Feb):
  - Upper basin
    - Temperature – higher probabilities for above normal
    - Precipitation – generally drier, especially in Montana
  - Lower basin
    - Temperature –slightly greater probabilities for above normal
    - Precipitation – slightly greater probabilities for above normal
- El Niño impacts to the Missouri Basin during the **spring** (Mar-May) are less predictable.

Source: Doug Kluck, Regional Climate Services Director, Central Region, NOAA

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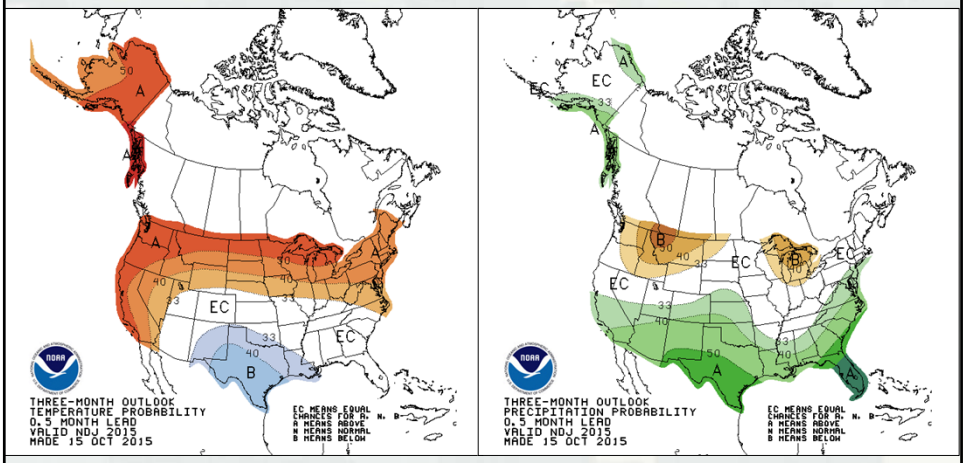
# Long-Term Outlooks
# Temperature and Precipitation

**Nov-Dec-Jan** | **Nov-Dec-Jan**




Source: National Weather Service, Climate Prediction Center (CPC)

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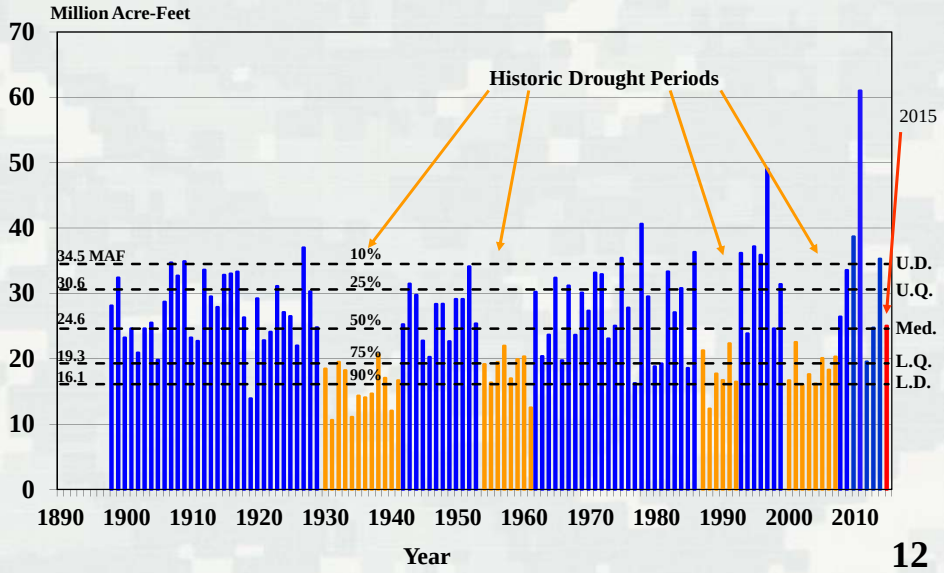
# Missouri River Mainstem System
# Annual Runoff above Sioux City, IA

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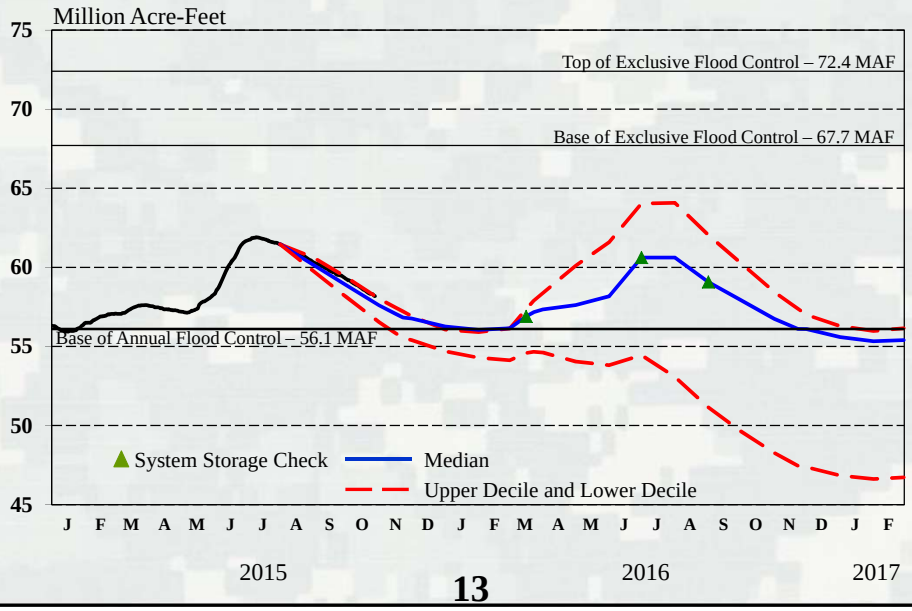
# System Storage
## 2015-2016 Draft AOP

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# Planned Operation for Fall 2015 – 2016

- Navigation
  - Season ending on December 1 at the mouth
  - March 15, 2016 storage check
    - Full-length/full service support anticipated
  - July 1, 2016 storage check
    - Full-length/full service support for median runoff and above
    - Flow support reductions of 1,300 and 2,400 cfs for lower quartile and lower decile, respectively

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## Planned Operation for Fall 2015 – 2016 (cont'd)

- Threatened and Endangered Species
  - Steady release flow-to-target for terns and plovers
  - Utilize Kansas projects to minimize take
  - Miss navigation targets if no commercial traffic
  - No bimodal spring pulse in 2016 while the Corps develops management plan

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## Planned Operation for Fall 2015 – 2016 (cont'd)

- Winter Releases
  - Gavins Point Dam winter release of 17,000 cfs to complete evacuation of stored flood waters
  - Adjustments during ice events
- Flood Control
  - In 2015 the System utilized 36% of total flood control storage
  - **All flood control storage** will be **available** (empty) at the start of the 2016 runoff season
  - Flooding can still occur due to downstream rainfall

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# Questions


| | | |
|---|---|---|
| Jody Farhat, P.E. | 402.996.3840 | jody.s.farhat@usace.army.mil |
| Kevin Grode, P.E. | 402.996.3870 | kevin.r.grode@usace.army.mil |
| Mike Swenson, P.E. | 402.996.3860 | michael.a.swenson@usace.army.mil |
| Kevin Stamm, P.E. | 402.996.3874 | kevin.d.stamm@usace.army.mil |


**Final Annual Operating Plan Meeting**
October 29, 2015 at 6 p.m.
Western Trails Historic Center
3434 Richard Downing Ave.
Council Bluffs, Iowa

website: http://www.nwd-mr.usace.army.mil/rcc/

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# Water Supply – Water Quality Irrigation – Recreation

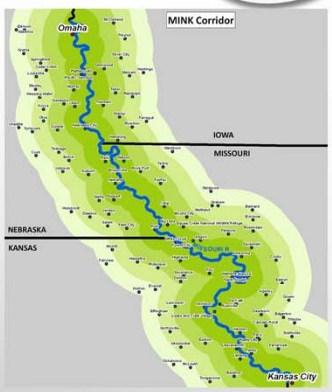
- **2015**
  - Near average releases and reservoir elevations
    - Water supply intakes, recreation areas, irrigation, and marinas
  - Gavins Point Dam winter releases of 17 kcfs
- **2016**
  - Near normal pool levels and releases
  - Gavins Point Dam winter releases of 17 kcfs under median runoff

29

## Fish and Wildlife

- Steady to rising levels at upper three reservoirs during forage fish spawn
  - Favor Garrison if runoff below normal
- Minimize periods of zero releases at Fort Randall
- Coldwater habitat will be monitored

30




# MINK MISSOURI RIVER CORRIDOR, INC.

## MISSOURI, IOWA, NEBRASKA, KANSAS

THE MINK CORRIDOR INCLUDES RURAL COUNTIES IN THE FOUR-STATE REGION FROM SOUTH OF OMAHA, NEBRASKA, TO JUST NORTH OF KANSAS CITY, MISSOURI.

## HOW WAS MINK ESTABLISHED?

- MINK WAS LICENSED AS A 501(C) (6) IN 2013 IN ALL FOUR STATES.
- IT STRUCTURED ITSELF AS A MEMBERSHIP, DUES-PAYING ORGANIZATION AND HAS SINCE ESTABLISHED STANDING COMMITTEES.
- THE MINK CORRIDOR WAS DESIGNATED A "GREAT REGION" IN 2013 BY USDA-RURAL DEVELOPMENT FOR WORKING IN REGIONAL DEVELOPMENT.
- MINK IS LOCATED WITHIN THE M-29 MARINE TRANSPORTATION CORRIDOR THAT WAS ESTABLISHED IN SEPTEMBER 2013.

## STRATEGIC PLANNING FOR THE MINK REGION

- **VISION:** OUR VISION FOR THE MULTI-STATE CORRIDOR IS WHERE MINK'S EFFECTIVE COLLABORATION IS FULLY UTILIZING ITS REGIONAL ASSETS, EXPANDING GROWTH OPPORTUNITIES AND CREATING VIBRANT ECONOMIES FOR ITS COMMUNITIES AND RESIDENTS.
- **MISSION:** MINK MISSOURI RIVER CORRIDOR, INC. WORKS AS A MULTISTATE COLLABORATION TO LEVERAGE RESOURCES AND SPARK NEW INVESTMENTS TO SUPPORT GROWTH AND OPPORTUNITY FOR RURAL COMMUNITIES IN THE AREAS OF HOUSING, ENTREPRENEURSHIP, TRANSPORTATION, AND TOURISM TO REVERSE THE DOWNWARD ECONOMIC AND DEMOGRAPHIC TRENDS.

## MINK VALUES

- WE VALUE DECISION MAKING THROUGH CONSENSUS BASED ON FACTS IN ORDER TO ACHIEVE THE HIGHEST POTENTIAL FOR POSITIVE IMPACTS, SO WE WILL WORK IN A FAIR AND TRANSPARENT MANNER AND BE DILIGENT TO PROVIDE TIMELY INFORMATION, OPPORTUNITIES FOR OPEN INTERACTION, AND EFFECTIVE REPORTING MECHANISMS.
- WE VALUE UNITY AND SUPPORTIVENESS FOR COMMON GOALS THAT ARE IN THE BEST INTEREST OF ALL THE COMMUNITIES WITHIN THE CORRIDOR SO WE WILL BE GUIDED BY OUR COMMON VISION AND MISSION AND ASK OURSELVES IF ACTIVITIES ARE INCLUSIVE AND EQUITABLE FOR THE MAJORITY.

## MINK VALUES, CONTINUED

- WE VALUE RESPECT AS WE WORK WITH ONE ANOTHER AS A BOARD, STAFF AND VOLUNTEERS AND PLEDGE TO VALUE INPUT AND BE SENSITIVE TO THE DIVERSITY OF TRADITIONS, CULTURES AND EXPERIENCES WITHIN THE CORRIDOR.
- WE VALUE THE WISE USE OF RESOURCES AND WILL WORK IN THE MOST EFFICIENT MANNER POSSIBLE WITH EXTERNAL PARTNERS TO MAXIMIZE IMPACTS AND OUTCOMES.
- WE VALUE OPTIMISM AND HUMOR IN THIS VERY DIFFICULT WORK WE DO SO WE WILL ENSURE THAT COMMUNICATION FLOWS FREELY TO REDUCE UNINTENDED TENSION OR MISPERCEPTIONS.

## MINK WORKING COMMITTEES

**TOURISM**

- EXPANDING AND PROMOTING WHAT IS ALREADY HERE, ALONG WITH CONSTANTLY DEVELOPING FURTHER ATTRACTIONS

**ENTREPRENEURSHIP**

- NEARLY EVERY GROUP RECOGNIZED THAT SMALL BUSINESS IS AN ESSENTIAL COMPONENT OF RURAL COMMUNITIES AND AS SUCH, MORE NEEDED TO BE DONE TO IMPROVE THE ENVIRONMENT AND CULTURE OF ENTREPRENEURSHIP

# WORKING COMMITTEES

**HOUSING**

- MOST OF THE GROUPS RECOGNIZED FROM THE DEMOGRAPHIC PROFILE THAT EXISTING HOUSING STOCK WAS AGING AND THAT NEW CONSTRUCTION NEEDED TO BE FOCUSED ON AFFORDABILITY, ENERGY EFFICIENCY AND IDENTIFIED NEED OF THE POPULATION.

**TRANSPORTATION AND THE M-29 CORRIDOR**

- IT WAS AGREED THAT THIS REGION HAS AN ABUNDANCE OF TRANSPORTATION OPPORTUNITIES WITH MANY TYPES OF CORRIDOR MOVEMENT TO INCLUDE, AIR, WATER, RAIL, AND HIGHWAY.

# A BRIGHT FUTURE FOR THE MINK CORRIDOR

AS A RESULT OF THE NOVEMBER 2014, STRATEGIC PLANNING CONFERENCE:

- MINK IS MOVING FORWARD IN A UNIFIED EFFORT
- COMMITTEES ARE NOW WORKING TO IDENTIFY SPECIFIC PROJECTS
- MINK BOARD MEMBERS ARE WORKING TO CREATE PARTNERSHIPS THAT WILL SUPPORT FUTURE PROJECTS THAT ARE IDENTIFIED BY THE WORKING COMMITTEES.

# FOR MORE INFORMATION

- WWW.FACEBOOK.COM/MISSOURIIOWANEBRASKAKANSAS
- WWW.MINKCORRIDOR.ORG

# Iowa Department of Natural Resources

Leading Iowans in caring for our natural resources

# Flood Control and Levee Accreditation

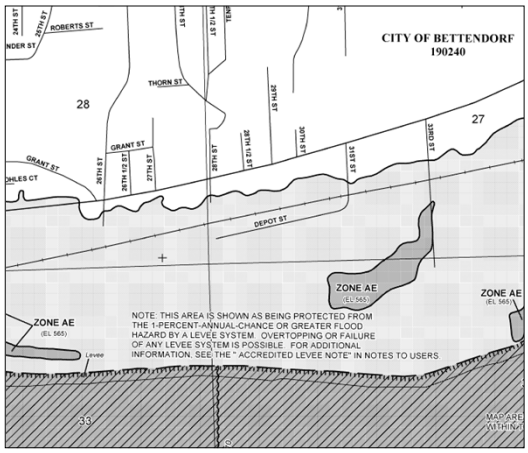
## Acronyms

- NFIP – National Flood Insurance Program
- FIRM – Flood Insurance Rate Map
- SFHA – Special Flood Hazard Area
- Map Mod – FEMA's Flood Map Modernization Program
- PAL – Provisionally Accredited Levee
- LAMP – Analysis and Mapping Procedures for Non-Accredited Levee Systems
- LLPT – Local Levee Partnership Team



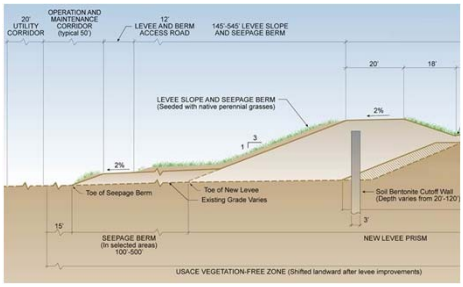
## Representation of Flood Control Levees on FIRM's

Since the mid-1980's, FEMA has required certification that a levee provides protection from the 1% annual chance (i.e., 100-year frequency) flood before mapping it as providing flood protection on a Flood Insurance Rate Map (FIRM).



## Representation of Flood Control Levees on FIRM's (cont.)

- Criteria for levee certification/accreditation is listed in 44 CFR 65.10
  - Design Criteria
    - Freeboard
    - Closures
    - Embankment Protection
    - Embankment & Foundation Stability
    - Settlement
    - Interior Drainage
  - Operations Plan
  - Maintenance Plan




- Documentation submitted must be certified by a registered professional engineer



## FEMA Requirements vs. Corps Levee Safety Program

- FEMA requirements for accreditation differ from those for USACE Levee Safety Program
  - FEMA requirements are intended to determine whether a levee is designed/constructed to provide protection from the 1% annual chance flood.
    - Determines how the area landward of a levee is mapped
    - Depends on documentation provided by others
  - Corps Levee Safety Program includes ~2000 levee systems nationwide (~14,000 mi.)
    - Inspections assess levee integrity and identify deficiencies
    - Determine if the levee is being properly operated and maintained
    - Determine eligibility for federal rehabilitation funding (PL 84-99)

## FEMA Requirements vs. Corps Levee Safety Program (cont.)

- Corps Levee Safety Program Inspections do not directly affect levee accreditation
  - An "Acceptable" inspection rating does not equate to levee accreditation.
  - An "Unacceptable" inspection does not automatically de-accredit a levee
- Information provided by Corps Levee Safety Program can supplement documentation submitted by community for levee accreditation.



## Map Modernization

- In 2003, Congress funded FEMA's Map Modernization Program (Map Mod)
- Tasked with remapping entire country
- Concerned with how to deal with levees/floodwalls shown on existing FIRM's as providing flood protection
  - Many had not been re-accredited for decades
- 2005 – flood protection levees failed at New Orleans

## Map Modernization (cont.)

- 2006 – FEMA informed communities being remapped that, in order for levees/floodwalls to be shown as providing flood protection, they must be re-accredited.
- Provisionally Accredited Levee (PAL) Agreement
  - Allows FEMA to continue a mapping project while community is collecting accreditation documentation
  - Allows community 2 years to provide accreditation documentation

## "Without Levee" Analysis

- Where a levee could not be accredited, FEMA mapped it as though the levee provided no protection at all (i.e., without levee)
- Implications for development located in the newly mapped special flood hazard area (SFHA) for the community:
  - Buildings located there would be subject to the Mandatory Purchase Requirement
    - Federally insured lenders must require the purchase of flood insurance as a condition of any loan for a building or contents
  - New development would be require local and state floodplain development permits
    - The lowest floors for new buildings must be elevated 1 ft. above the 1% annual chance flood

## "Without Levee" Analysis (cont.)

- February 2011 – 27 Senators and 49 Members of the House signed letters to the FEMA Administrator asking that he discontinue use of the "without levee" analysis for de-accredited levees

Congress of the United States
Washington, DC 20515
February 18, 2011

The Honorable W. Craig Fugate
Administrator
Federal Emergency Management Agency
U.S. Department of Homeland Security
500 C Street SW, Washington, D.C. 20472

Dear Administrator Fugate:

We write to urge you to use your current authorities to discontinue the Federal Emergency Management Agency's (FEMA) use of "without levee" analysis to determine new Flood Insurance Rate Maps (FIRMs) in cases where a final determination has not been made, and to allow affected community objects to such analysis in favor of more precise methods of flood modeling. "Without levee" modeling methods assume that a levee or flood control structure that exists in physical reality does not exist for the purposes of modeling, reducing the precision of flood maps and eroding public confidence in the mapping process itself.

We value the efforts of the National Flood Insurance Program to accurately reflect flood risk to the American public, but we also understand the negative impact the issuance of insufficiently accurate or insufficiently precise maps can have on communities at a time of economic uncertainty across our country. In investigating the methods and processes FEMA uses to make such flood hazard determinations, we have found that FEMA historically assumes that certain levees, which are not recognized under and creating public confidence in the

United States Senate
WASHINGTON, DC 20510

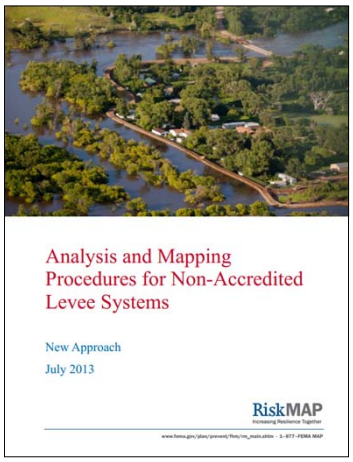
February 3, 2011

- FEMA Administrator halted progress for all mapping projects that involved de-accredited levees until new procedures for dealing with them could be developed



## Analysis and Mapping Procedures for Non-Accredited Levee Systems (LAMP)

- Finalized in July 2013
  - Stakeholder Engagement
    - Local Levee Partnership Team (LLPT)
  - More Robust Analysis and Mapping
    - Select analysis procedures that best reflect unique circumstances
  - Recognition of Uncertainty Associated with Levee Systems
    - Use "Zone D" designation on FIRM to identify areas of undetermined, but possible, flood hazards
  - Analysis of Levee Reaches
    - Apply appropriate procedure to individual reaches within the levee system

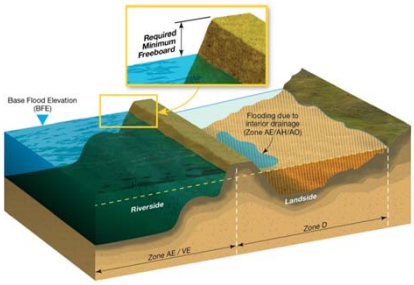


## Analysis and Mapping Procedures for Non-Accredited Levee Systems (LAMP)

- LAMP outlines 5 procedures that can be used to analyze/map unique circumstances for each individual levee reach
  - Sound Reach
  - Freeboard Deficient
  - Overtopping
  - Structural-Based Inundation
  - Natural Valley

## LAMP Procedures

1. **Sound Reach**
2. Freeboard Deficient
3. Overtopping
4. Structural-Based Inundation
5. Natural Valley

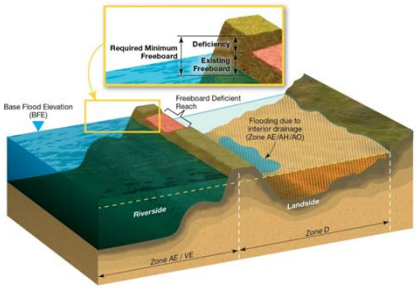



- Only applies where at least one reach satisfies CFR 65.10, but the entire levee system does not.*
- Mapped area behind the Sound Reach is based on a system-wide "Natural Valley" procedure and is labeled Zone D.

*If entire levee system met definition of Sound Reach, the levee system would satisfy CFR 65.10 and be accredited.

## LAMP Procedures (cont.)

1. Sound Reach
2. **Freeboard Deficient**
3. Overtopping
4. Structural-Based Inundation
5. Natural Valley




- Levee reach does not satisfy freeboard requirements of CFR 65.10, but does satisfy all other structural requirements of CFR 65.10 .
- Mapped area behind the Freeboard Deficient reach is based on a system-wide "Natural Valley" procedure and is labeled Zone D.

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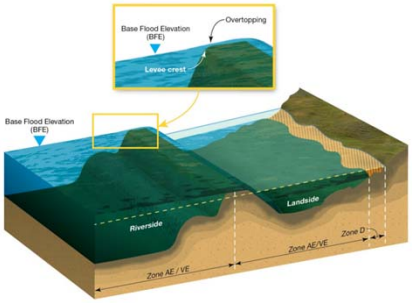
## LAMP Procedures (cont.)

1. Sound Reach
2. Freeboard Deficient
3. **Overtopping**
4. Structural-Based Inundation
5. Natural Valley




- Levee reach is overtopped in at least one location, but satisfies all other structural requirements of CFR 65.10 and is armored to withstand overflows.
- Mapped area behind the levee is based on routing only the overtopping flows and is labeled Zone AE.
- Land areas not included in the area affected by the overtopping but affected by the system-wide "Natural Valley" procedure are labeled Zone D.

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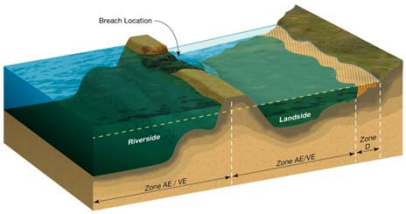
## LAMP Procedures (cont.)

1. Sound Reach
2. Freeboard Deficient
3. Overtopping
4. **Structural-Based Inundation**
5. Natural Valley

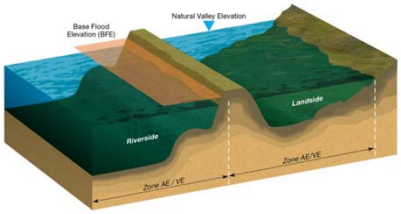



- Levee reach does not satisfy the structural requirements of CFR 65.10 and, in the case of overtopping, is also not armored.
- Mapped area behind the levee is based on breaching the levee at more than one location and is labeled Zone AE
- Land areas not included in the area affected by the structural-based inundation but affected by the system-wide "Natural Valley" procedure are labeled Zone D.



## LAMP Procedures (cont.)

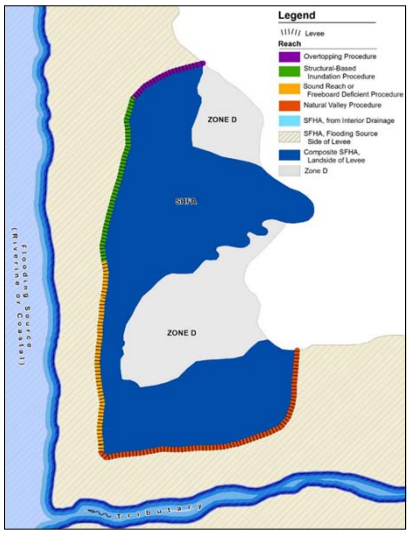
1. Sound Reach
2. Freeboard Deficient
3. Overtopping
4. Structural Based Inundation
5. **Natural Valley**




- Used for those non-accredited levee reaches where none of the other 4 LAMP procedures apply.
- Modeled by allowing the flood discharge to flow on both sides of the levee
- Mapped area behind the levee is labeled Zone AE
- Also used to determine the extent of the area landward of the non-accredited levee to be mapped as Zone D for other LAMP procedures.

## LAMP Procedures (cont.)

Use of more than one LAMP procedure within a levee system will result in a composite map








## Advantages/Disadvantages of Zone D

- Advantages
  - No local Floodplain Development Permit required
  - Lenders are not required to make the purchase of flood insurance a condition of a loan for a building and/or its contents
- Disadvantages
  - Cost associated with providing documentation needed for levee to qualify for Freeboard Deficient procedure
  - Lenders have option to require purchase of flood insurance for loans involving buildings and/or their contents
  - Cannot lower flood insurance rates by elevating/floodproofing a building
  - Zone D rates are increasing by as much as 25% annually (as per NFIP reform legislation passed by Congress in 2012 & 2014)



Iowa Department of Natural Resources
Chuck Gipp, Director

## LAMP Process

- FEMA has so far met twice with the 3 Left Bank Missouri River Local Levee Partnership Teams in Iowa:
  - Hamburg – May 4th & August 13th
  - Glenwood – May 5th & August 13th
  - Council Bluffs – May 5th & August 14th



## Left Bank Missouri River Meeting

- Levee districts, communities and landowners requested a meeting to discuss questions resulting from the initial May 4th & 5th LLPT meetings
- Held on July 6th, AgriVision Building, Glenwood.

## Left Bank Missouri River Meeting (cont.)

- Issues discussed included:
  - What are the impacts of levee de-accreditation on:
    - Land use development
    - Agricultural insurance (e.g., crops, machinery, outbuildings)
    - Flood Insurance (NFIP)
    - PL 84-99 eligibility



## Future

- FEMA planning to initiate a floodplain mapping project for Fremont, Mills and Pottawattamie Counties
  - For Fremont and Mills Counties:
    - Use "seclusion mapping" (i.e., FIRMs will show levees as providing protection form 100-year flood)
    - FEMA will also continue with LAMP process
    - Results for the selected LAMP procedures will be incorporated into the FIRM at a later time
  - For Pottawattamie County
    - Results from selected LAMP procedures will be included in upcoming mapping project

## Other Communities Involved With LAMP Process

- Currently Involved with LAMP Process
  - Guttenberg
  - Lee County (Green Bay Levee)
  - Marengo
  - Marshalltown
  - Sabula
  - Waterloo (Virden Creek)
- Soon To Be Involved in LAMP Process
  - Decorah
  - Harrison County



## Communities Currently Dealing With Levee Accreditation

- Des Moines*
- Ottumwa*
- Red Oak

## Communities That Have Provided Accreditation for Flood Protection Levees

- Bettendorf
- Cedar Falls
- Clinton
- Des Moines County
- Dubuque
- Evansdale
- Louisa County
- Muscatine/Muscatine County
- Sioux City
- Waterloo



# Questions?

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**MRRIC Report to SIMRA – October 2015**

I regret that I will not be able to meet with you in person at this meeting, but offer this brief summary of the Missouri River Recovery Implementation Committee (MRRIC) activity.

The MRRIC met in August at Omaha and will meet next month in Rapid City. The U.S. Army Corps of Engineers has committed to completing the draft Environmental Impact Statement for their river recovery program by the end of 2016. As part of this impact statement, they must define and evaluate potential management actions (likely six alternatives) in order to comply with the National Environmental Policy Act (NEPA). From these potential actions, a preferred alternative will be chosen for inclusion in their Missouri River Management Plan.

Alternatives will include creation of emergent sandbar habitat for the Tern and Plover, built mechanically in natural parts of the river channel, and created by temporary (about 5 weeks) increased flows (pulses) from Garrison and Gavins Point dams in the spring or fall. Alternatives will also include construction of Interception and Rearing Complexes (shallow water habitat) for the Pallid Sturgeon along the banks of the river and in connected chutes and backwater areas, such as the ones you viewed north of Omaha at your last meeting. Additionally, slightly larger spring pulse releases from Gavins Point dam intended to provide spawning cues for the sturgeon will be considered.

Interception and Rearing Complex construction would involve purchase of, construction on, and management of lands in Iowa. You will see and discuss this kind of construction at this SIMRA meeting. The emergent sandbar habitat creation is primarily upstream of the Iowa border. The pulse releases from Gavins Point would impact river stages and flows in Iowa. Pulses would not occur every year, but would be attempted as often as once every three to four years and as reservoir levels and downstream flood control constraints allow.

It is noteworthy that in order for river management rules to allow the pulse flows, the downstream flood control targets would have to be relaxed. The resulting minimum service flood target flows would increase by 25,000 cubic feet per second (cfs) to 71,000 cfs at Omaha, 82,000 cfs at Nebraska City and 126,000 cfs at Kansas City. Flood control rules would still be applied, but at the revised flow levels during the temporary flow pulses.

I will be contacting representatives from your agencies to solicit your thoughts about the potential positive and negative impacts of these alternatives. It is my goal to represent the views of your agencies and the State as a whole in the MRRIC discussions and recommendations.

As always, please contact me if you have any questions or input. Thank you.

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