

MISSOURI RIVER RECOVERY PROGRAM

STATE INTERAGENCY MISSOURI RIVER AUTHORITY

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Acting Implementation Program Manager
Missouri River Recovery Program

7 October 2010



US Army Corps of Engineers
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Missouri River Background

- Corps charged by Congress to manage the river for social and economic benefits

(Pick Sloan Act 1944):

- ▶ Remove snags
 - ▶ Protect river banks
 - ▶ Create a navigation channel
 - ▶ Build flood management structures
- Environmental Consequences
 - ▶ 3 million acres of natural river habitat altered
 - ▶ 76% of native species decreasing or uncommon
 - ▶ Aquatic insects, a key link in the food chain, reduced by 70%
 - ▶ Cottonwood reproduction, historically a dominant floodplain tree, has ceased in areas



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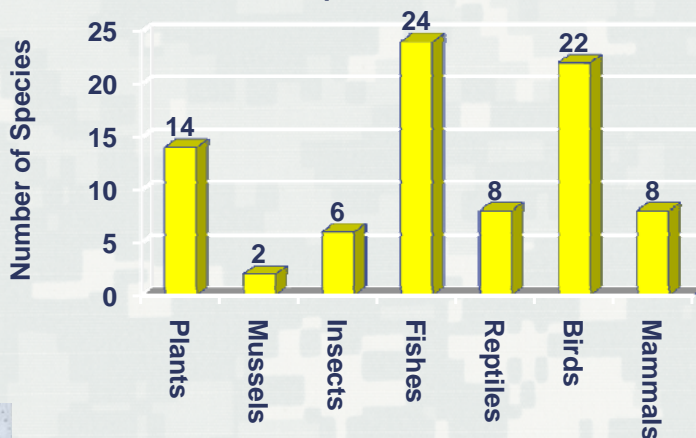
Authorized Purposes

- Irrigation
- Water Supply
- Hydropower
- Navigation
- Flood Control
- Water Quality
- Recreation
- Fish and Wildlife



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84 Species at Risk



National Research Council 2002. The Missouri River Ecosystem. National Academy Press.
Appendix B: State & Federal Rare, Threatened or Endangered Species of the Missouri River Floodplain.



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Threatened & Endangered Species



Interior Least Tern



Piping Plover

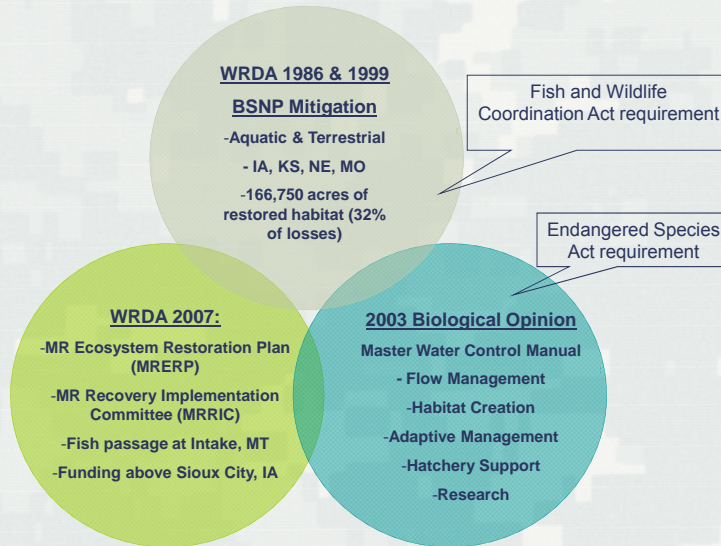


Pallid Sturgeon



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Missouri River Recovery Program



Missouri River Recovery Program

- MRRP Vision
 - ▶ A sustainable ecosystem supporting thriving populations of native species while providing for current social and economic values.

- MRRP Mission
 - ▶ Implement actions to accomplish Missouri River ecosystem recovery goals in coordination and collaboration with agency partners and stakeholders.



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Habitat Creation

- Shallow Water Habitat (SWH)
- Emergent Sandbar Habitat (ESH)
- Cottonwoods
- Yellowstone Intake



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In Channel SWH Construction

- Dike notching
- Dike lowering
- Chevron Construction



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Off Channel SWH Construction

- Chutes
- Backwaters



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Shallow Water Habitat

- Habitat Creation
 - ▶ 2 – 4 habitat creation projects in FY 2011
 - ▶ Projects located in Iowa, Nebraska, and Kansas
 - ▶ Potential for project in Missouri (disposal methodology to be resolved)
 - ▶ Construction awards value ranges between \$1M to \$6M



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Emergent Sandbar Habitat



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Emergent Sandbar Habitat

- Mechanical Creation
 - ▶ 3 – 4 sandbar complexes in FY 2011
 - ▶ Below Gavins Point Dam
 - ▶ Within Lewis and Clark Lake
 - ▶ Potential vegetation removal in North Dakota
 - ▶ Construction awards value ranges between \$500K to \$4M



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Cottonwood Plan



- Biological Opinion
 - ▶ map the health of the remaining
 - ▶ create a cottonwood regeneration plan
 - ▶ ensure that no more than 10 percent of the cottonwood forest that is suitable bald eagle habitat is lost as eagle habitat
- Cottonwood Management Plan
 - ▶ living document that preserves, creates, or enhances cottonwood habitat
 - ▶ landscape-level cottonwood riparian community model (USD)



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Intake Diversion Dam



- Biological Opinion
 - ▶ Restoration of fish passage
 - ▶ Eliminates entrainment
 - ▶ Opens up more than 150 miles of aquatic habitat for the pallid sturgeon
 - ▶ Headworks contract awarded July 2010
 - ▶ Rock Ramp construction contract to be awarded FY 2011



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MRRP Point of Contacts


- MRRP
 - ▶ Teresa Reinig, 402-995-2721
 - ▶ Teresa.A.Reinig@usace.army.mil
- MRRP Habitat Creation
 - ▶ Matt Krajewski, 402-995-2716
 - ▶ Matthew.S.Krajewski@usace.army.mil
- MRRIC
 - ▶ Mary Roth, 402-995-2919
 - ▶ Mary.S.Roth@usace.army.mil



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MISSOURI RIVER AUTHORIZED PURPOSES STUDY

October 7, 2010




US Army Corps of Engineers
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Presentation Outline


- History of 1944 Flood Control Act
- Study Authority, Guidance & Products
- Communications & Public Involvement
- Scoping Meetings
- Looking ahead

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MRAPS 3 Presented by Omaha & Kansas City Corps of Engineers Districts **BUILDING STRONG**


The Pick-Sloan Plan 1944 Flood Control Act



Developed out of a Depression Era,
Industrial Recovery &
Post World War II Framework

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Canyon Ferry, Montana




Cemetery Island

Original location of the dam is shown in the bottom right corner of this page.

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Missouri River Purposes

- Section 9 of the 1944 Flood Control Act, as amended, authorized the System for:
 - flood control
 - navigation
 - fish and wildlife
 - irrigation
 - power
 - recreation
 - water supply
 - water quality



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Changing Times

Pick Sloan 66 years later

<ul style="list-style-type: none"> ▪ Flood Control ▪ Navigation Development ▪ Control The River ▪ Little Concern for Tribal Issues ▪ Major Irrigation Vision ▪ Non-Collaborative Governance ▪ Recreation Potential ▪ Power Potential ▪ Sediment Effects not fully Considered 	<ul style="list-style-type: none"> ▪ Continued Flooding Concern ▪ Navigation Use ▪ Restore The River ▪ More Emphasis on Tribal Issues ▪ Water Supply ▪ Focus on Collaborative based Governance ▪ Impacts to Recreation Potential ▪ Power Production ▪ Sediment Concerns
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Study Authority

- Omnibus Appropriations Act of 2009, Title I, Sec. 108:
- Study the Missouri River Projects within the Missouri River basin
- Cost of \$25,000,000
- Review original project purposes
- Determine if changes to authorized purposes and existing Federal water resource infrastructure may be warranted
- 100% Federal expense.

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Implementation Guidance Highlights

- Geographic region
- Work collaboratively
- Inventory, forecast and evaluate current needs and problems
- Evaluate an array of alternatives to determine if changes are warranted

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Implementation Guidance Highlights (2)

- Evaluate effects on the Mississippi River from Missouri River alternatives.
- Incorporate climate change
- Evaluate alternatives on 5 accounts:
 - National Economic Development
 - Regional Economic Development
 - Environmental Quality
 - Other Social Effects and Public Safety
- Target completion time is 5 years

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PLANNING PROCESS

Planning CoP Website:
<http://www.usace.army.mil/CECW/PlanningCOP/Pages/ArticleTemplate.aspx>

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Products

- Summary Public Scoping Report
- Inventory of Existing Purposes/Conditions and Forecast of Future Conditions
- Descriptions of Alternative Measures
- Draft feasibility report and anticipated integrated Environmental Impact Statement (EIS)
- Final feasibility report and anticipated integrated EIS for Chief of Engineers Report to Congress.

Note that Congress will decide on whether to implement any major changes.

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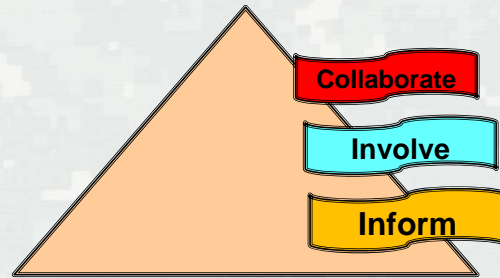
Regional Study Management

- Omaha District Program Manager
 - Mark Harberg, Senior Planner/PM
- Kansas City District Program Manager
 - Lamar McKissack, Senior Planner/PM

- ❖ Mississippi Valley Division → St. Louis District Planning.
- ❖ Bureau of Reclamation → Grand Island Office



Outreach & Coordination

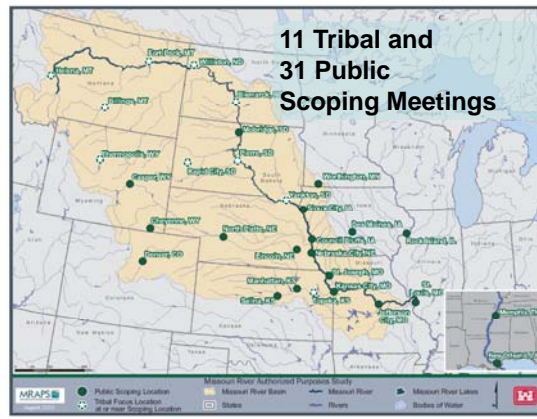


Stakeholders

- Tribal Governments
- Basin Organizations
- State Governments
- Local Governments (utility and levee districts)
- Non-governmental organizations
- General Public



11 Tribal and 31 Public Scoping Meetings




Scoping Meetings in 2010

- May 25-27- *Mobridge, Pierre*, Rapid City**
- June 1-3- *Jefferson City, Kansas City, St. Joseph*
- June 15-18- *Ft. Peck*, Williston*, Bismarck*, Fargo**
- June 22-24- *Council Bluffs, Nebraska City, Lincoln*
- July 7-9- *New Orleans, Memphis, St. Louis*
- July 13-15- *Topeka*, Salina, Manhattan*
- July 27-30- *Rock Island, Des Moines, Sioux City, Yankton**
- Aug 3-5- *Cheyenne, North Platte, Denver*
- Aug 17-20- *Helena*, Billings*, Thermopolis*, Casper*
* Tribal meetings held nearby on same day
- September 7 – *Worthington, MN*



Comment Opportunities





- Snap Surveys
- On line


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Formal Comments



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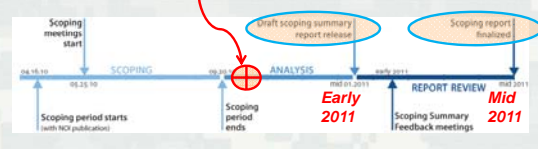
Passion For The River



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Analysis Goes Into 2011

Study scoping is roughly half complete... remaining scoping steps are shown in this timeline



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Ongoing Coordination

- In-progress reviews
- Public meetings
- Web site
- Public information notices
- E-newsletters

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MRAPS Website

- Public meeting announcements
- General descriptive information and documents available for download
- Progress and status information as study moves forward

www.MRAPs.org

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Thank You

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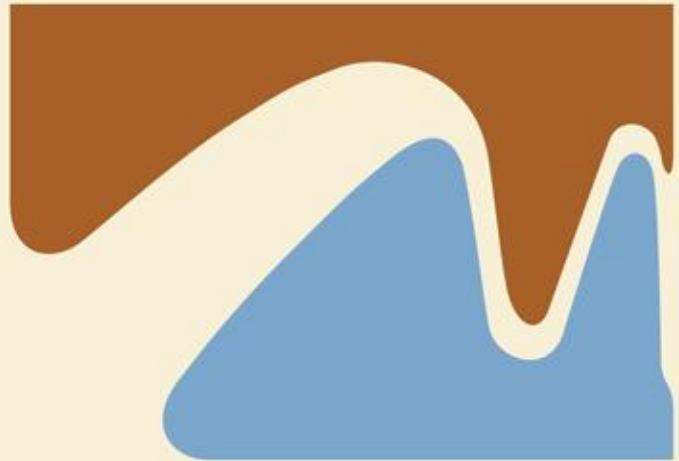


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MISSOURI RIVER



ECOSYSTEM
RESTORATION PLAN

WELCOME

MISSOURI RIVER ECOSYSTEM
RESTORATION PLAN AND
ENVIRONMENTAL IMPACT
STATEMENT

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BASIN-WIDE PUBLIC SCOPING MEETINGS

Missouri River Basin Facts

- **Second Largest River Basin in the United States**
- **530,000 Square Miles, Including Ten States, Two Canadian Provinces, and 29 American Indian Tribes**



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BASIN-WIDE PUBLIC SCOPING MEETINGS



Missouri River Facts

- Longest River in the United States
- One of the Most Regulated Rivers in the United States
- Largest Series of Impoundments and More Than 700 Miles of Largely Regulated, Stable, and Uniform Channel
- River Management Under Multiple Programs and Jurisdictions

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BASIN-WIDE PUBLIC SCOPING MEETINGS

Human Changes to the Missouri River

- 1832 – Snag removal
- 1902 – Federal financing for irrigation
- 1912 – Navigation channel authorized
- 1917 – Flood control programs authorized
- 1937 – First main stem reservoir constructed navigation
- 1944 – Pick/Sloan Plan authorized construction of five dams
- 1945 – Additional length, width, and depth authorized for navigation channel

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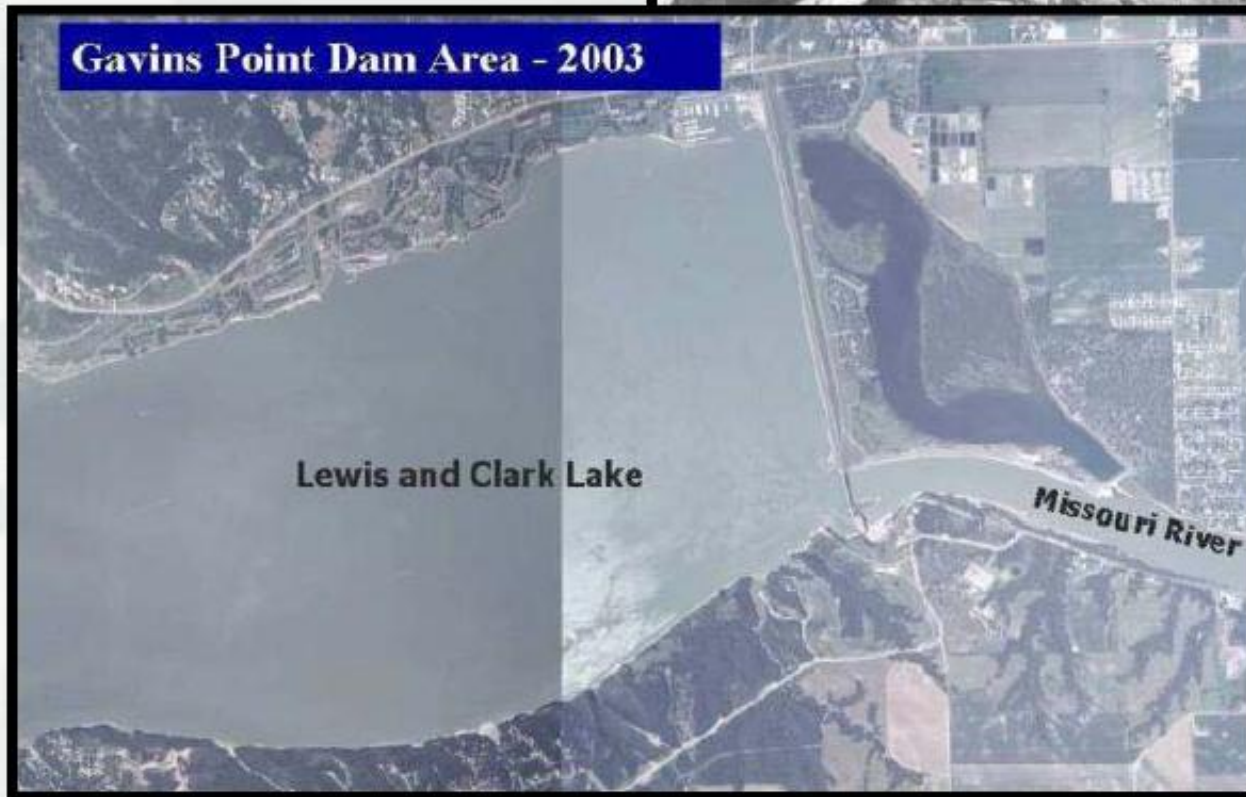
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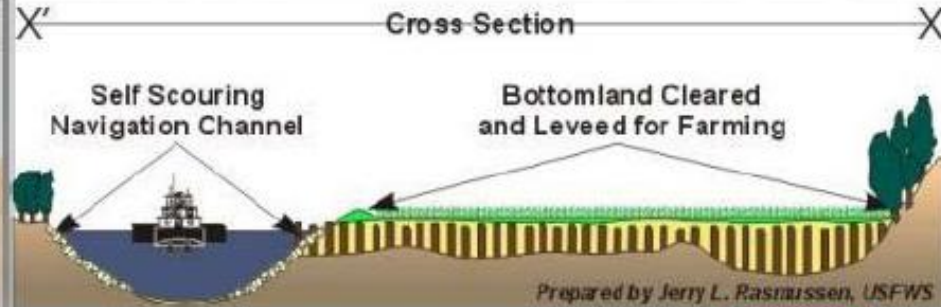
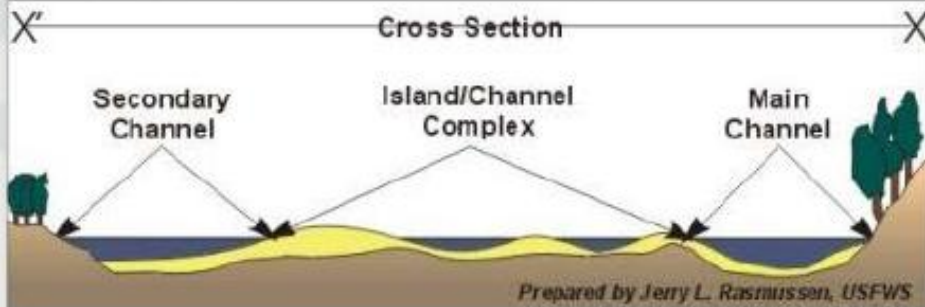
River of Thirds



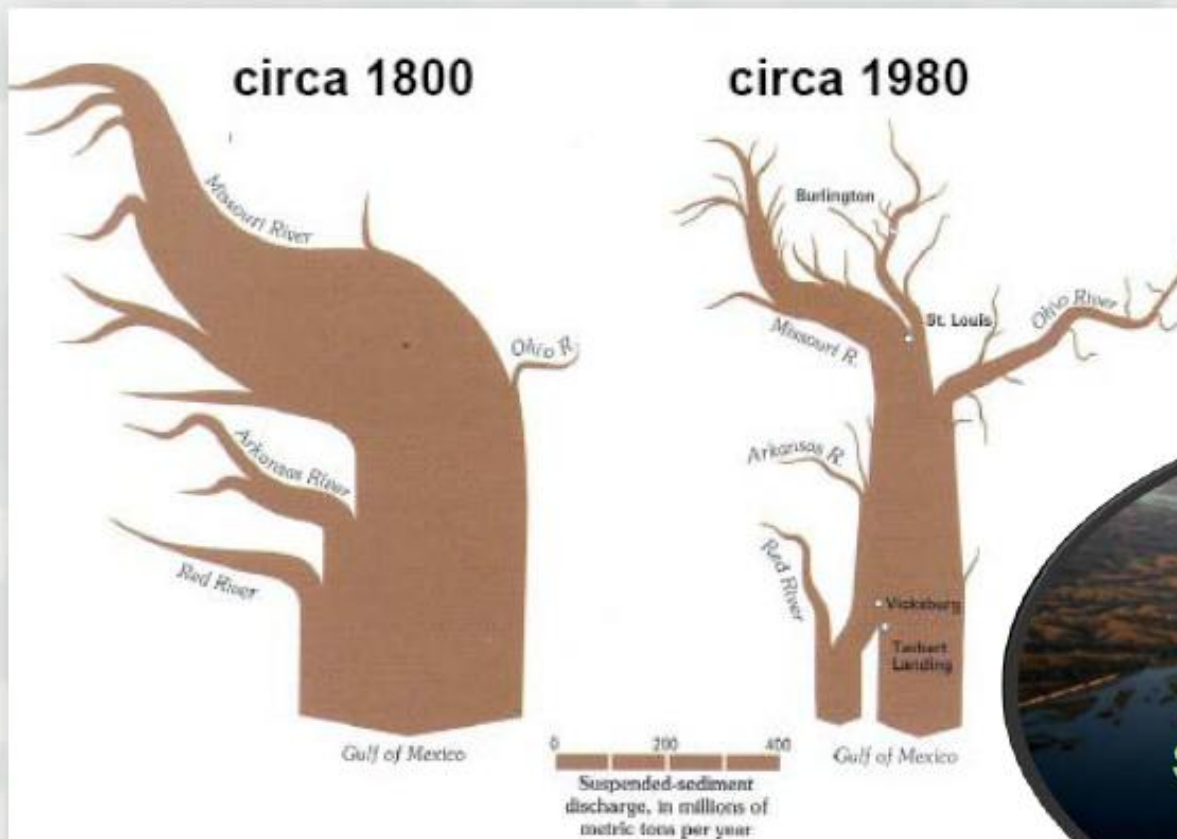
Reservoirs



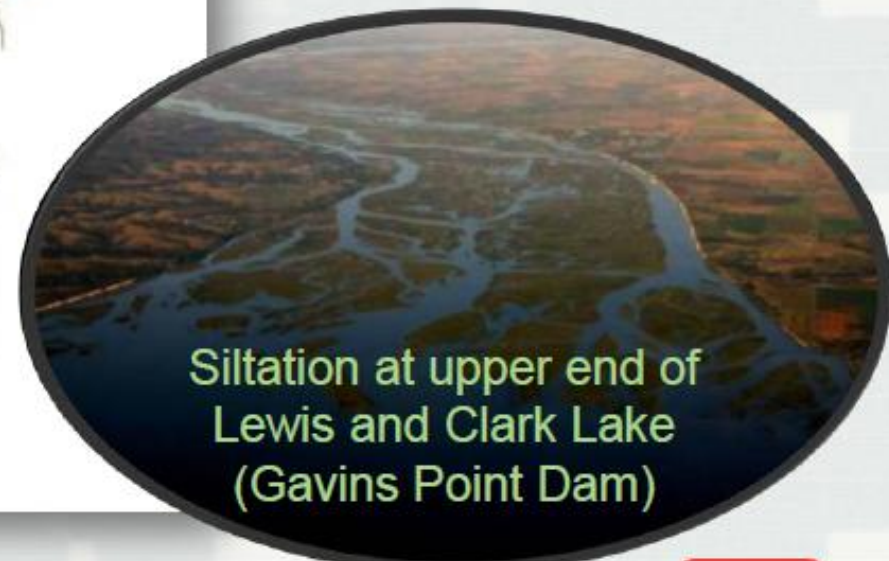
Self-Scouring Channel



Suspended Sediment Changes

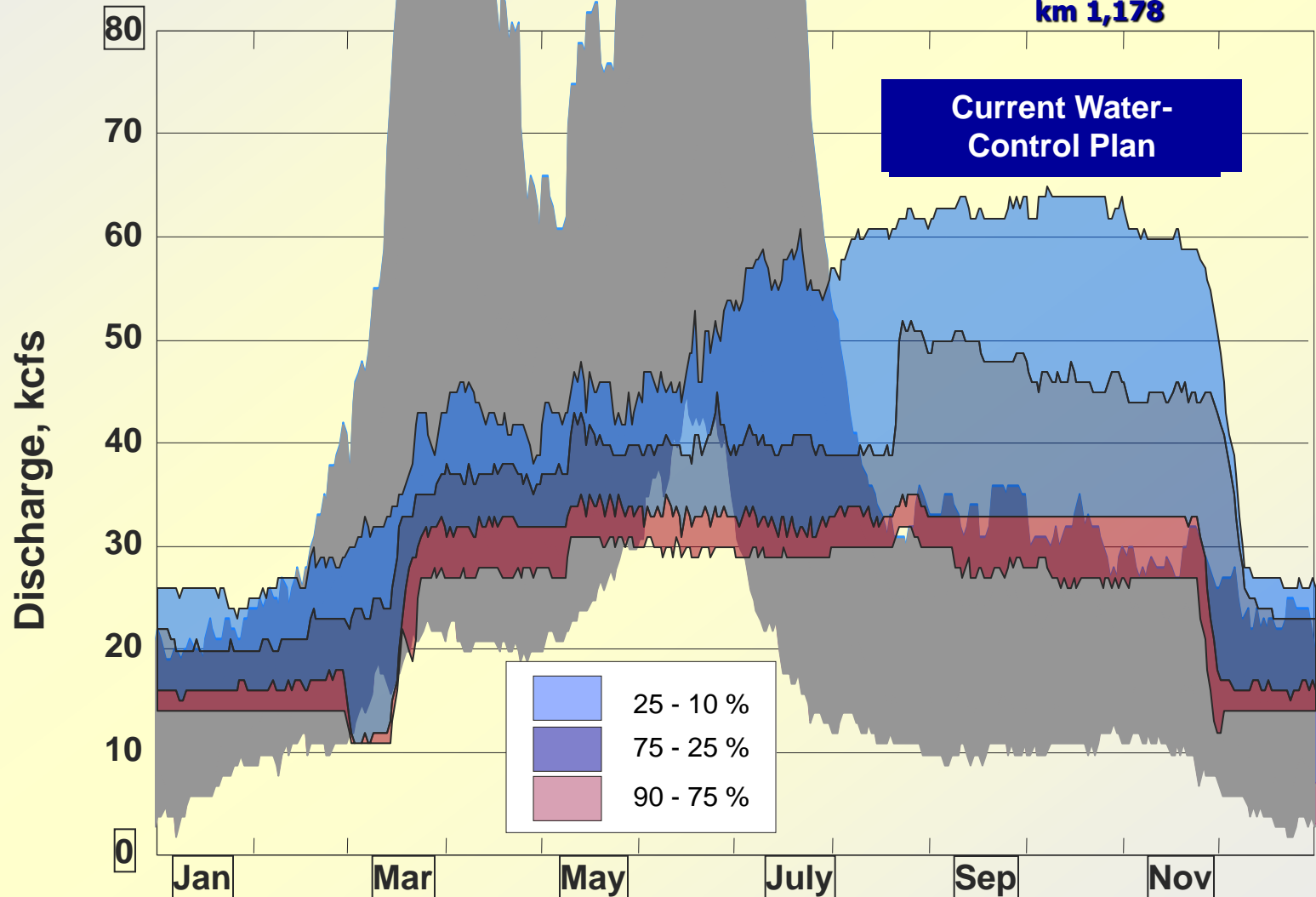


Meade & Moody 2008



Hydrologic Alteration, Sioux City, Iowa

km 1,178





Identified Natural Resource Concerns

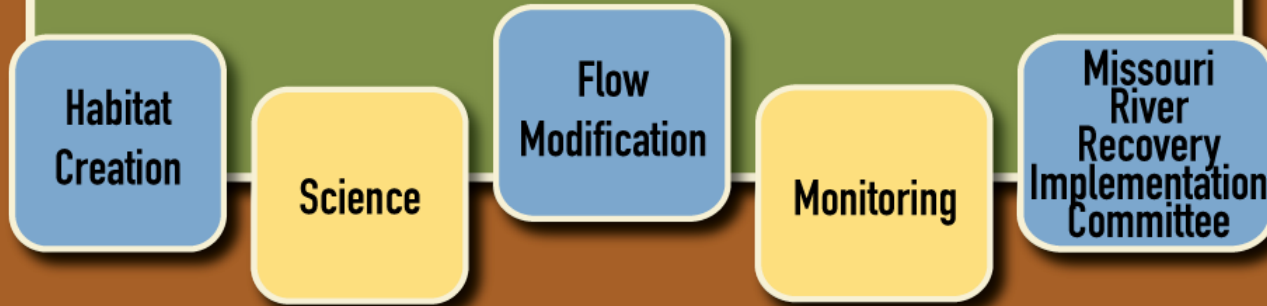
2002 National Research Council
findings:

- Nearly 3 million acres of natural habitat altered
- Nonnative fish dominate many river reaches
- 51 of 67 native fish species listed as rare or decreasing
- Native fish food resources reduced by about 70%



BASIN-WIDE PUBLIC SCOPING MEETINGS

CURRENT MISSOURI RIVER RECOVERY PROGRAM ACTIVITIES



**MISSOURI RIVER ECOSYSTEM RESTORATION PLAN
&
Potentially Other Studies and Plans**

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BASIN-WIDE PUBLIC SCOPING MEETINGS

2007 Water Resources Development Act

- The Missouri River Ecosystem Restoration Plan is authorized by the 2007 Water Resources Development Act (WRDA) Study
- The Secretary of the Army, in consultation with the Missouri River Recovery Implementation Committee, shall conduct a study of the Missouri River and its tributaries to determine actions required –
 - To mitigation losses of aquatic and terrestrial habitat
 - To recover federally listed species and;
 - To restore the ecosystem to prevent further declines among other native species.

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BASIN-WIDE PUBLIC SCOPING MEETINGS

The Plan will...

- Consider ongoing programs and actions related to mitigation, recovery, and restoration
- Identify priorities for mitigation, recovery, and restoration throughout the Basin
- Outline a long-term adaptive management approach for restoration of the river
- Guide future program and site-specific action development to ensure that the overall goals of MRERP are met in the long term

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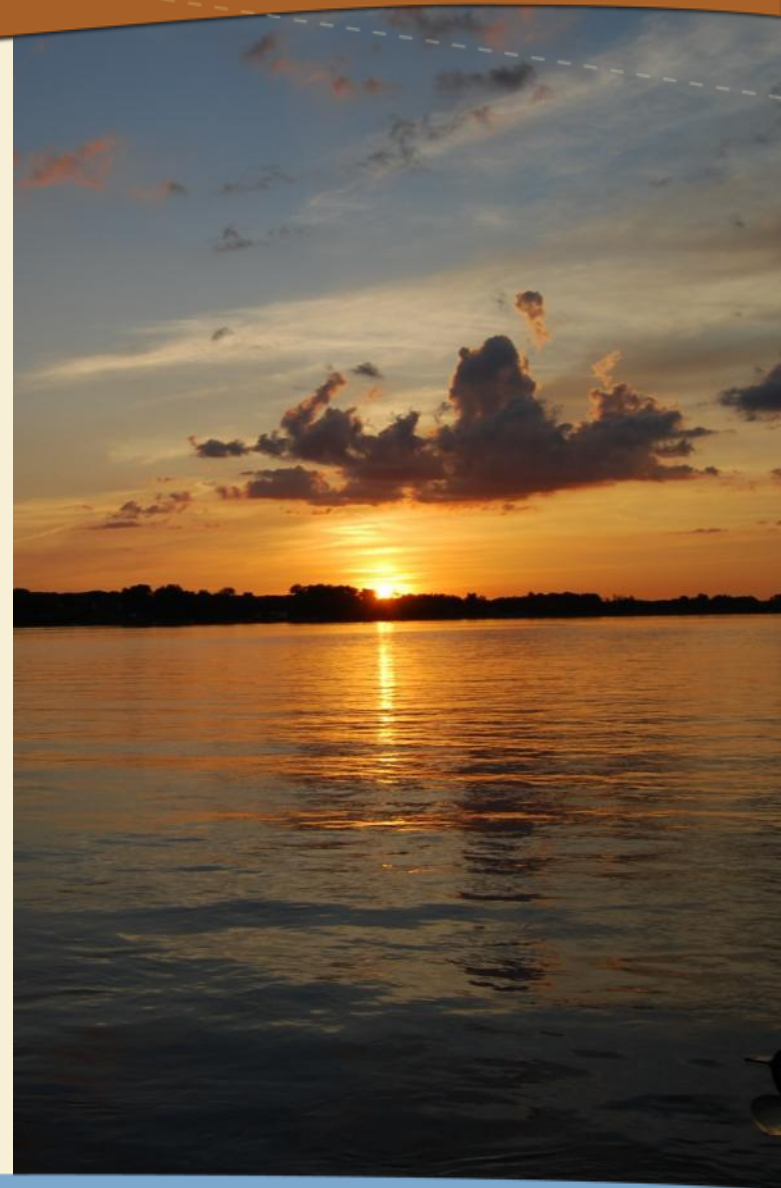


BASIN-WIDE PUBLIC SCOPING MEETINGS

Draft Purpose Statement

To determine the actions required:

- to mitigate losses of aquatic and terrestrial habitat
- to recover federally listed species under the Endangered Species Act
- to restore the ecosystem to prevent further declines among other native species, while seeking to balance with social, economic, and cultural values for future generations.



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BASIN-WIDE PUBLIC SCOPING MEETINGS



Draft Need Statement

The Plan is needed to fully implement the direction received in Subsection (a) of Section 5018 of the Water Resources Development Act of 2007; and address current trends indicating:

- diminished natural habitat;
- reduced populations of native species and communities;
- and reduced variability of physical processes such as flows, flooding, and sediment erosion/deposition.

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Plan Scope

- Long-term, large scale strategy vs. short-term, site-specific actions
- Mainstem and tributaries (ecological nexus)
- Planning for 30-50 years into the future



Plan Participants

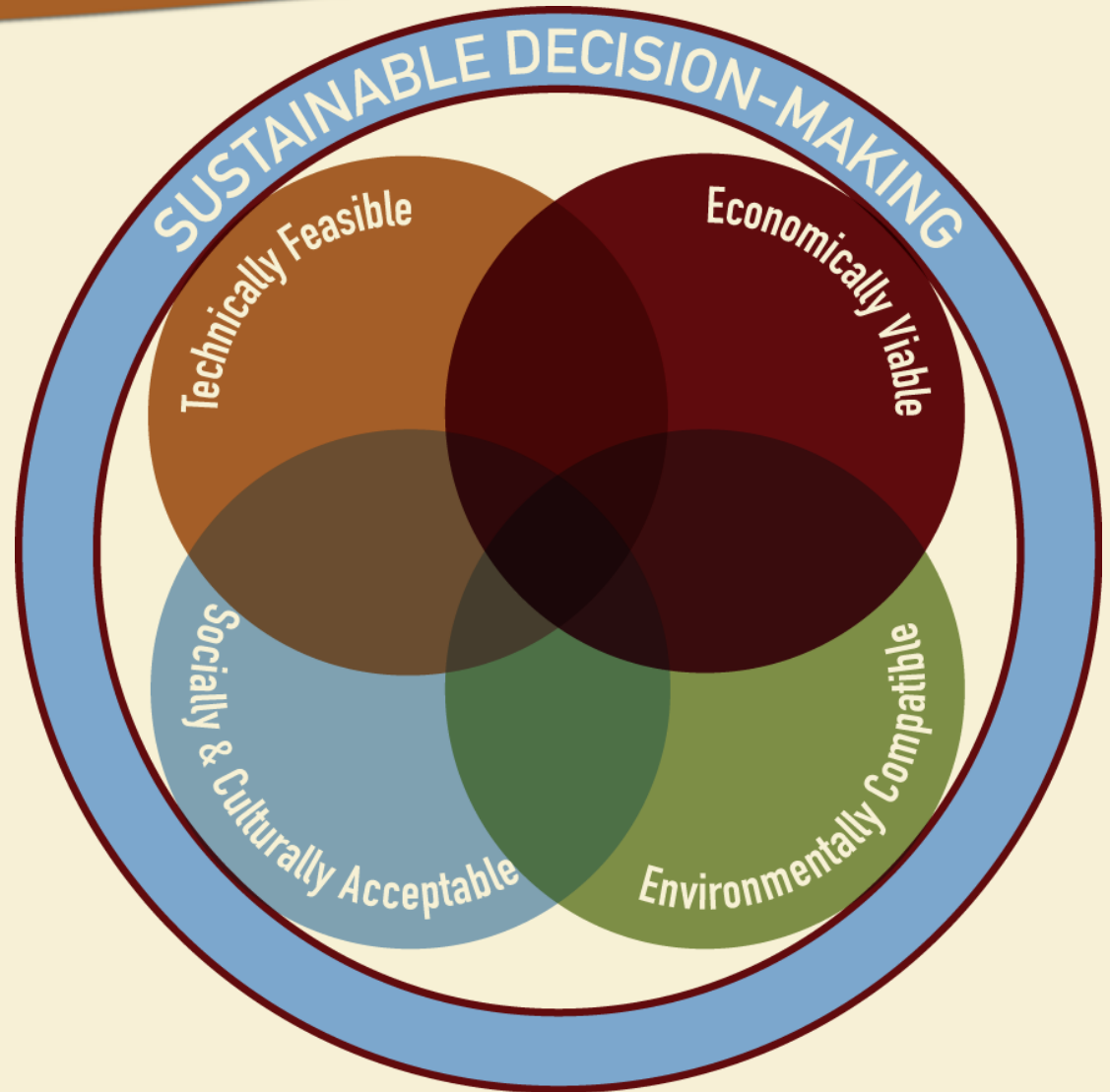
- US Army Corps of Engineers & US Fish & Wildlife Service
- Cooperating Agencies
- Public
- Tribes
- Missouri River Recovery Implementation Committee (MRRIC)





BASIN-WIDE PUBLIC SCOPING MEETINGS

GOAL:
Sustainable
Decisions



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BASIN-WIDE PUBLIC SCOPING MEETINGS

**GOAL:
Sustainable
Decisions**



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BASIN-WIDE PUBLIC SCOPING MEETINGS



Future Vision

What is Your Vision of the Missouri River in the Future?

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BASIN-WIDE PUBLIC SCOPING MEETINGS

MRERP Points of Contact

- **USACE**

- Randy Sellers, randy.p.sellers@usace.army.mil, phone 402.995.2689
- Jennifer Switzer, jennifer.l.switzer@usace.army.mil, phone 816.389.3062

- **USFWS**

- Wayne Nelson-Stastny, wayne_nelsonstastny@fws.gov, phone 402.667.2884

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MISSOURI RIVER



ECOSYSTEM
RESTORATION PLAN

THANK YOU

MISSOURI RIVER ECOSYSTEM
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