LOWER MISSISSIPPI RIVER COMPREHENSIVE MANAGEMENT STUDY

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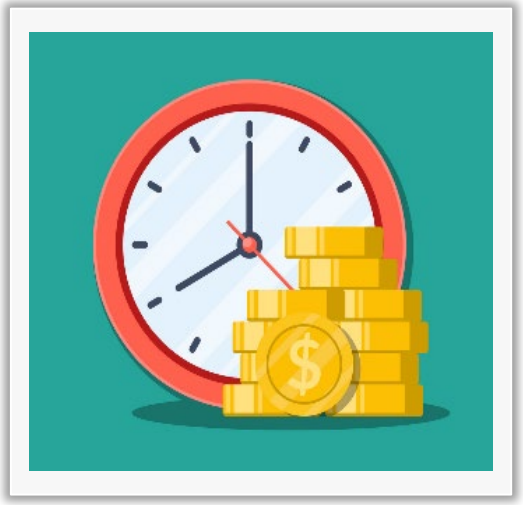
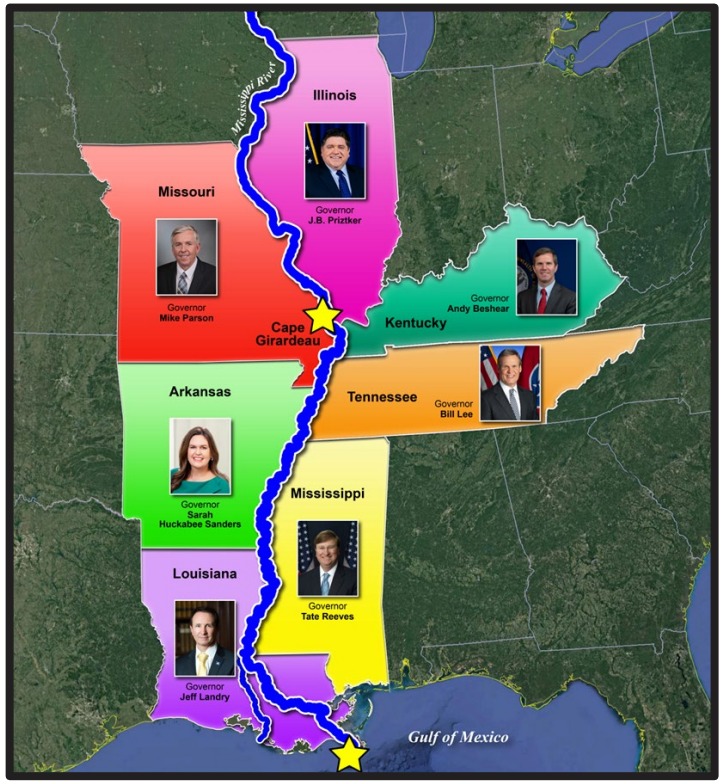
STUDY AUTHORITY

Lower Mississippi River Comprehensive Management Study was authorized in Section 213 of the Water Resources Development Act of 2020.



$25M
5 Years



7 States
Cape Girardeau, MO to Gulf of Mexico

Hurricane/Flood Risk, Navigation, Ecosystem Restoration, Water Supply, Hydropower, and Recreational Uses

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SECTION 213, WRDA 2020

The Secretary, in collaboration with the heads of other Federal agencies and pursuant to subsection (d)(1)(A), shall conduct a comprehensive study of the Lower Mississippi River basin from Cape Girardeau, Missouri, to the Gulf of Mexico, to identify **recommendations of actions** to be undertaken by the Secretary, **under existing authorities or after congressional authorization**, for the comprehensive management of the basin for the purposes of –

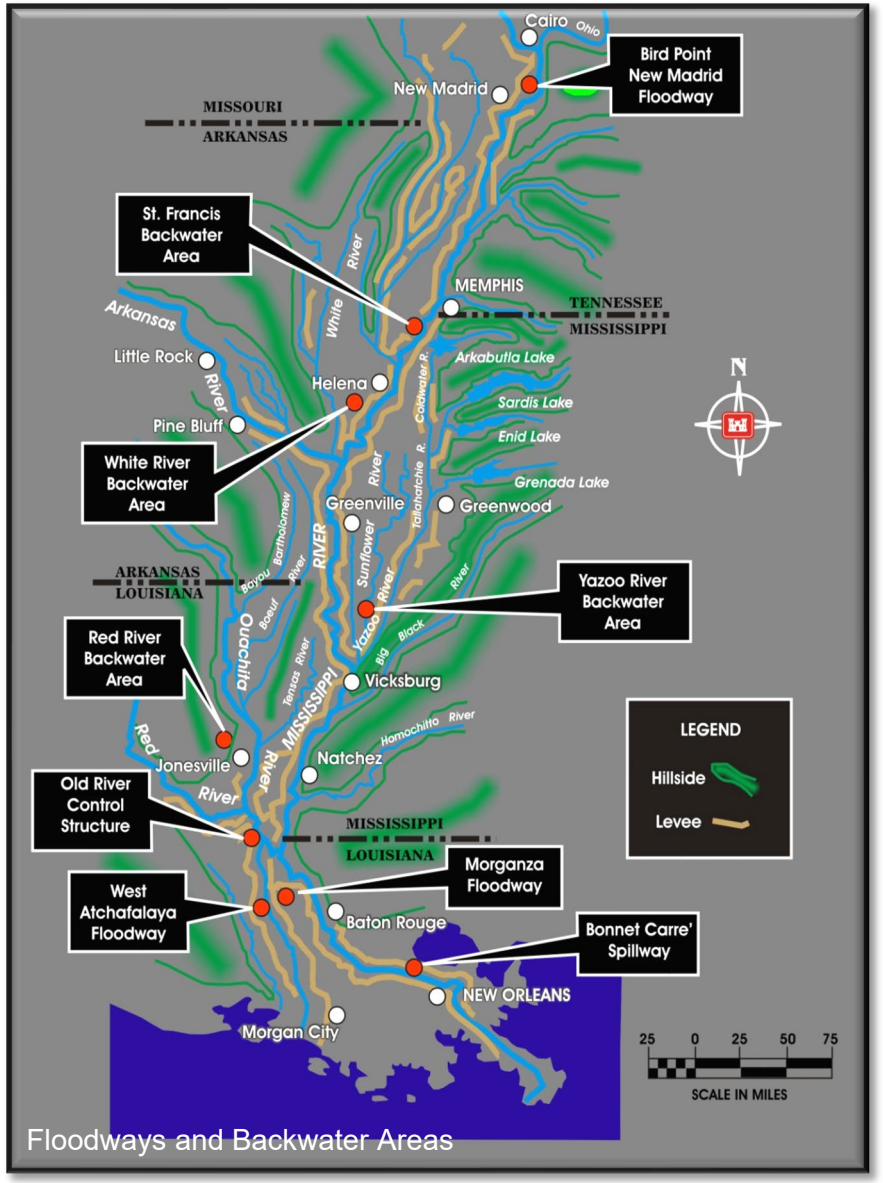
A. Hurricane and storm damage reduction, flood risk management, structural and nonstructural flood control, and floodplain management strategies; (***Priority Mission***)
B. Navigation (***Priority Mission***)
C. Ecosystem and environmental restoration (***Priority Mission***)
D. Water supply (***Explore when Compatible***)
E. Hydropower production (***Explore when Compatible***)
F. Recreation (***Explore when Compatible***)
G. Other purposes as determined by the Secretary

WHAT RECOMMENDATIONS MAY COME FROM THE STUDY?

1. Construction of new projects
2. Modifications to existing projects (structurally or operationally)
3. Monitoring of or adaptive management measures for existing projects to respond to changing conditions
4. Improving the efficiency of operational and maintenance dredging within the study area;
5. Whether changes are necessary to the Mississippi River and Tributaries (MR&T) Project within the Study area;
6. Other Federal and non-Federal action, where appropriate
7. Follow-up studies and data collection and monitoring to be carried out by the relevant Federal or State agency


Levee Setback (Source:TNC)


Old River Control Structure



Floodways and Backwater Areas

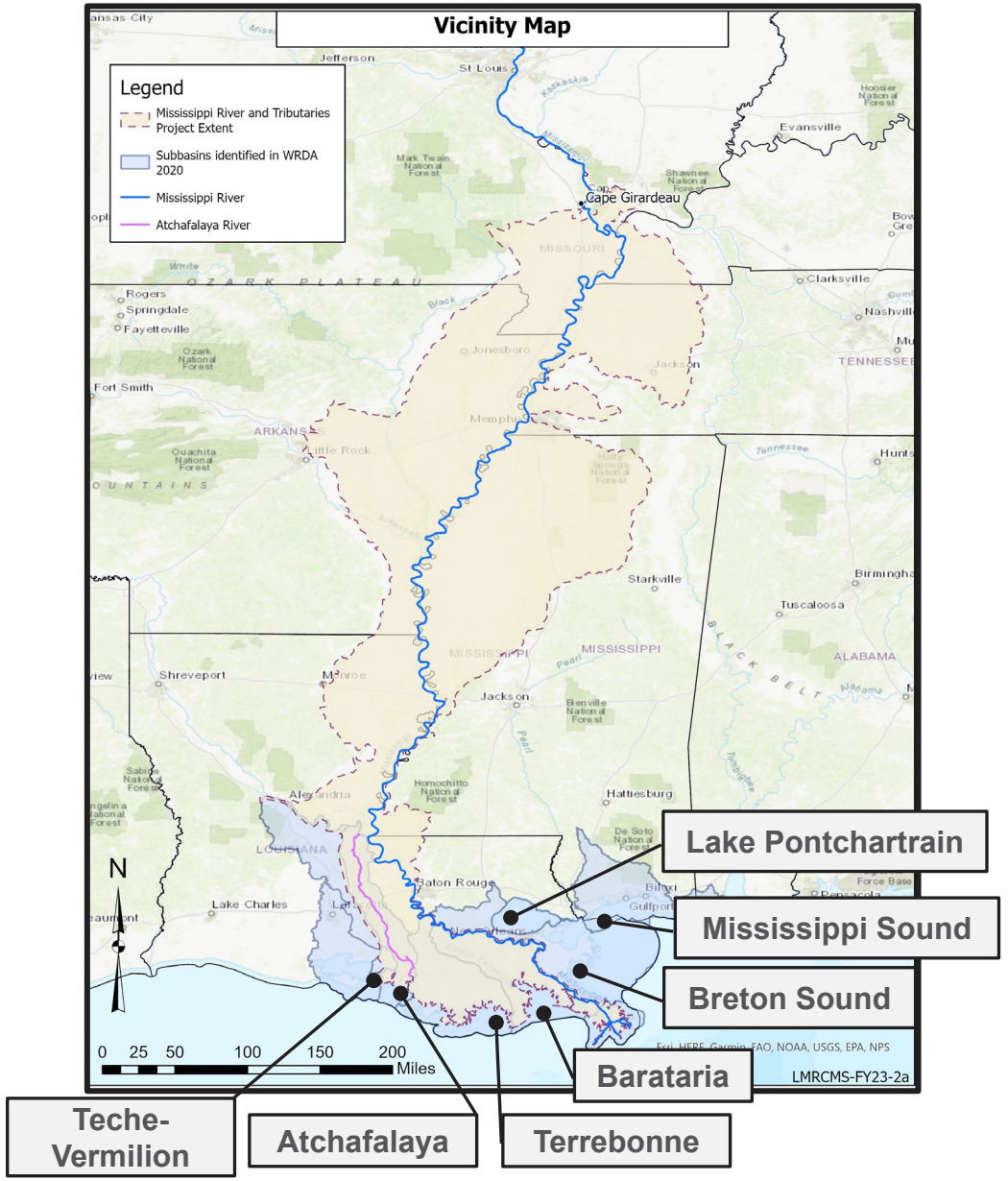
STUDY AREA BOUNDARY

The Lower Mississippi River Basin, from Cape Girardeau, Missouri, to the Gulf of Mexico

Includes portions of 7 states: Arkansas, Illinois, Kentucky, Louisiana, Mississippi, Missouri, & Tennessee

6 USACE districts: New Orleans, Vicksburg, Memphis, St. Louis, Little Rock, & Mobile

Incorporates the Mississippi River and Tributaries (MR&T) Project Area as well as the coastal subbasins mentioned in WRDA 2020.



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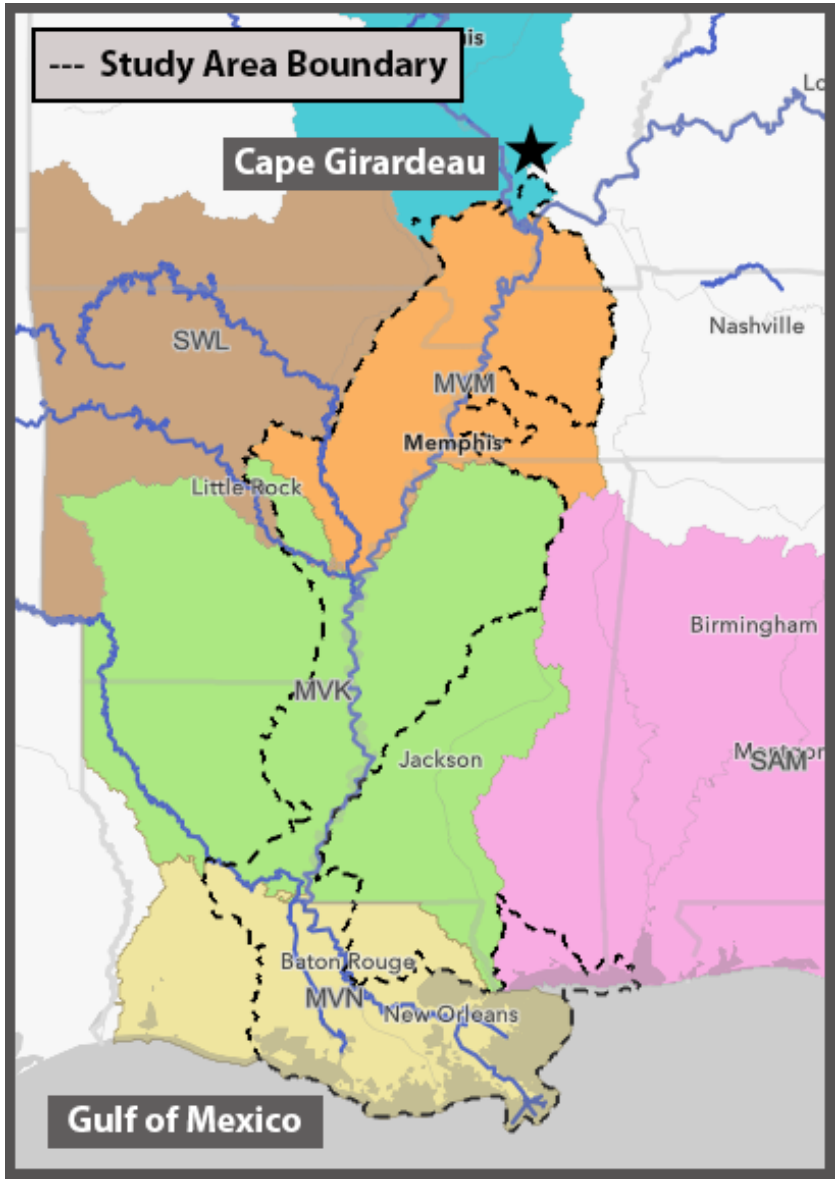
USACE DISTRICTS



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WHAT IS OUR STRATEGIC ENGAGEMENT PLAN?

Multi-District Coordination

- Capitalizing on Lessons Learned from other Districts and Studies
- Regionalizing Study Execution

Stakeholder Outreach

- Hosted Planning Charettes
- Participating as Guest Speakers at Stakeholder-led Events

Public Engagement

- Hosted Orientation Session
- Initiating Public Scoping (NEPA)
- Providing Quarterly Updates

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SCOPING

Problems, Opportunities, Constraints and Measures solicited from:

Phase 0
- Regional USACE (all Disciplines), ERDC, Technical Team

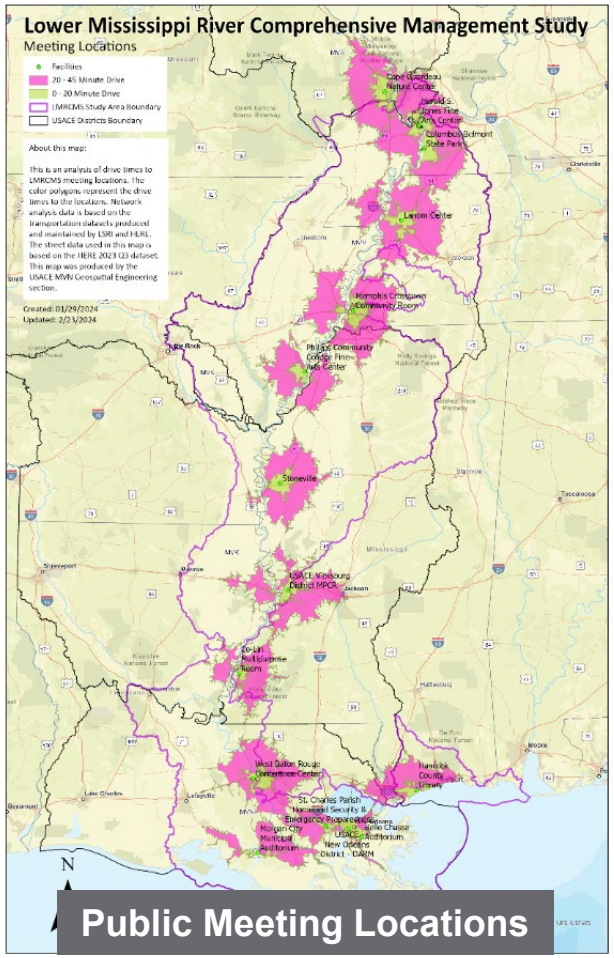
Charrettes - Memphis, TN; Vicksburg, MS; New Orleans, LA
- USACE, ERDC, Federal & State Agencies, Tribal Nations, Target Academia

Interagency Meetings
- Federal & State Agencies (30 Jan)

NGO & Academia Engagements (ongoing)

32 Public Meetings (Feb-Mar)
- 29 In-person Meetings in 15 Cities across 7 States
- 3 Virtual Meeting

Tribal Nations Meeting (scheduled 16 April)



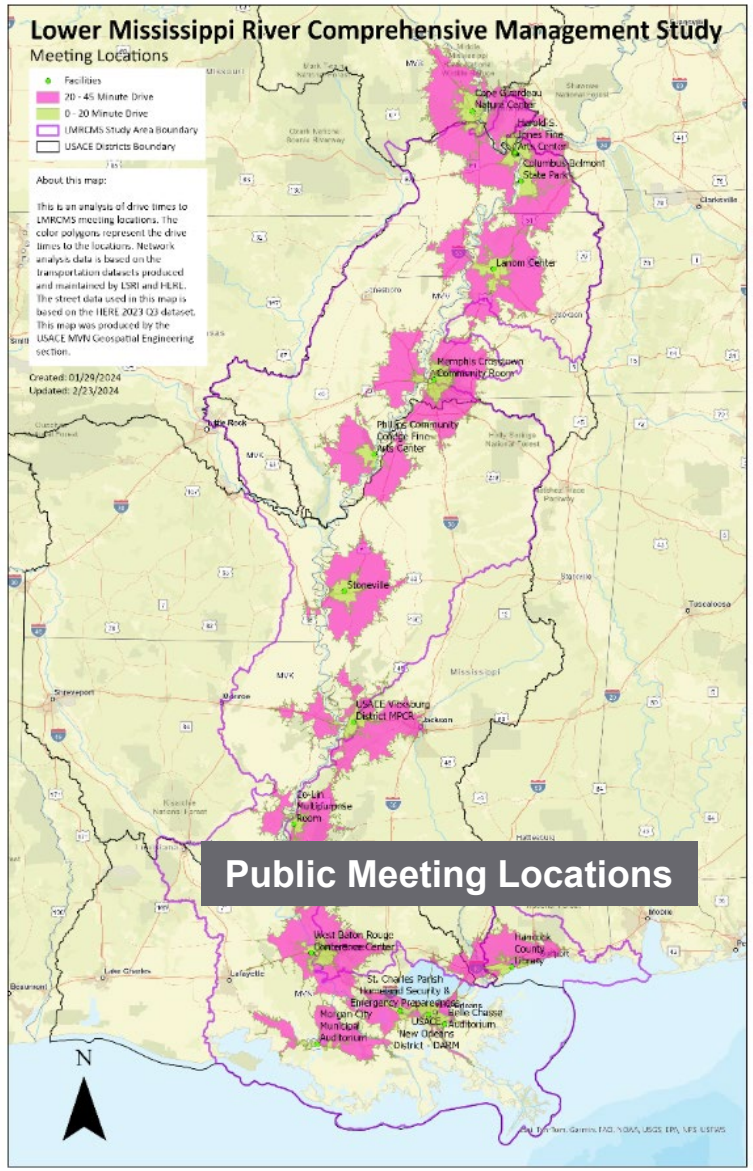
Public Meeting Locations

Where we started:
- **387 Problems**
- **147 Opportunities**
- **400 + Measures**
- Many more anticipated from Public and Tribal Nation meetings

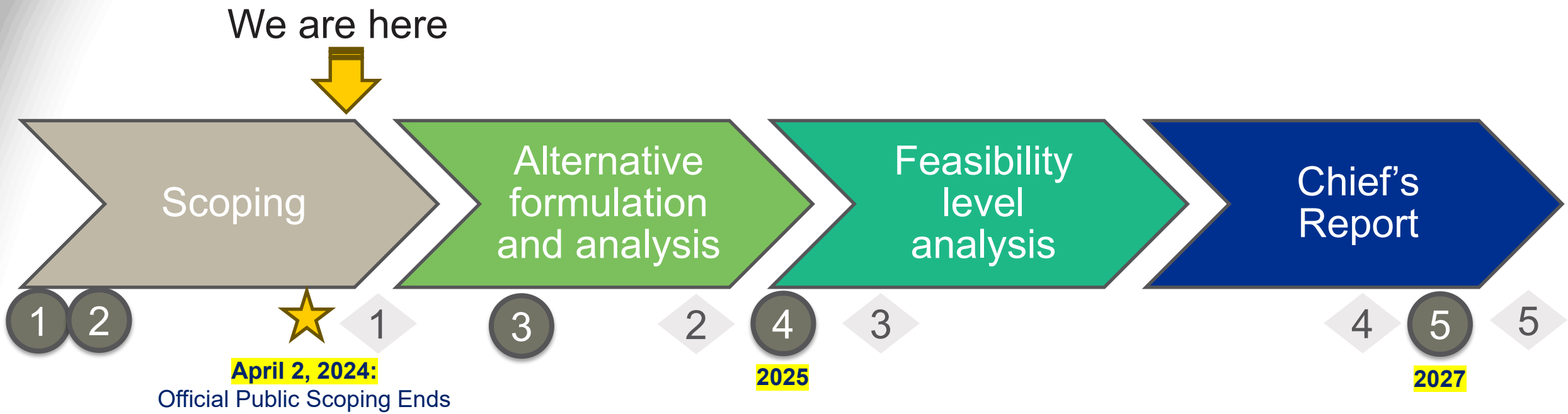
STAKEHOLDER ENGAGEMENT

Stakeholder Engagement: Last 6 Months

- 27 Oct-14 Nov 23: Charrette Series
- 14 Dec 23: Atchafalaya Basinkeeper Presentation
- 9 Jan 24: World Trade Center January Board Meeting
- 19 Jan 24: Coalition to Restore Coastal Louisiana Board Meeting
- 23 Jan 24: Virtual Public Orientation Session
- 30 Jan 24: Interagency Meeting
- 06 Feb 24: NGO Forum
- 08 Feb 24: Presentation to the Mississippi Valley Trade & Transport Council
- Feb 27-29th and March 5-7th 24: 32 Public Scoping Meetings
- 20 March 24: CCRE (Coalition for Coastal Resilience & Economy)
- 21 March 24: ASCE Louisiana Spring Conference
- 26 Mar 24: Center for Water Sustainability (CWS)
- 02 April 24: State Partnering Group Meeting
- 03 April 24: Atchafalaya Basinkeeper Presentation
- 05 April 24: Tulane MS River Science Symposium
- 11 April 24: Port Directors Brief (MVK)
- 08-12 Apr 24: MRC HW Trip
- 16 April 24: National Academies Marine Board Brief



HOW ARE WE CONDUCTING THE STUDY?



Feasibility Study Process

1. Alternatives Milestone
2. Tentatively Selected Plan Milestone
3. Agency Decision Milestone
4. State and Agency Review
5. Chief of Engineer's Report with Final NEPA Documentation

NEPA Process During Feasibility

1. Identify Need for Action
2. Begin Scoping
3. Begin Drafting NEPA documentation
4. Release Draft NEPA documentation for Public, Technical & Policy Review
5. Publish and Distribute Final NEPA documentation

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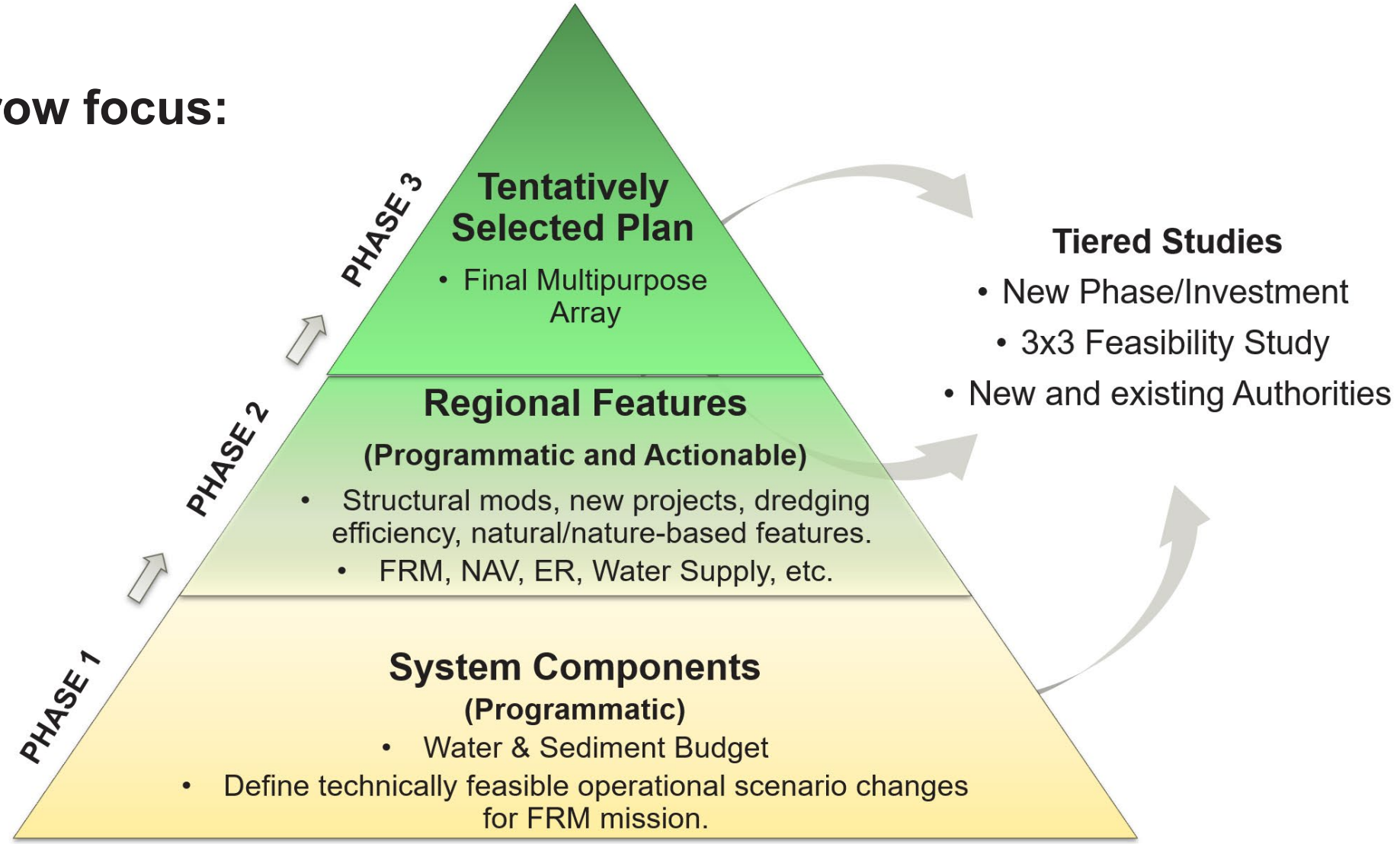
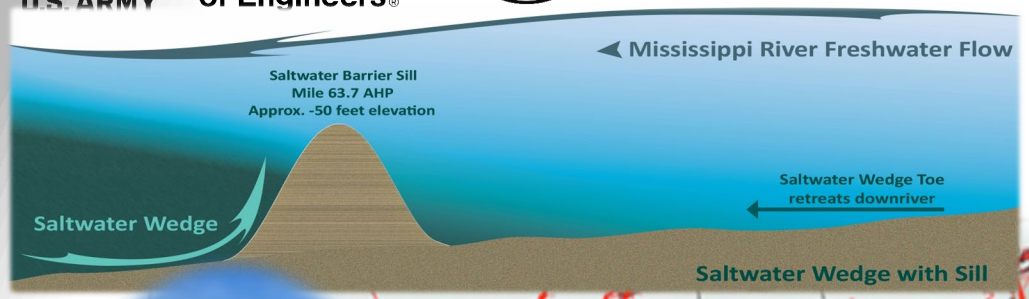
STRATEGY

Broad to narrow focus:



WHAT ARE WE HEARING THUS FAR?



- Insufficient funding impacts channel maintenance
- Hickman Control Point creating challenges for barges during low water
- Sedimentation occurring in anchorage areas, channel, ports and harbors
- Differences in authorized depths for different reaches and impacts access to interior ports
- In-channel dredged sediment impacts downstream navigation
- Continued and increased need to dredge the lower navigation channel may be unsustainable
- Saltwater sill construction impacts navigation efficiency

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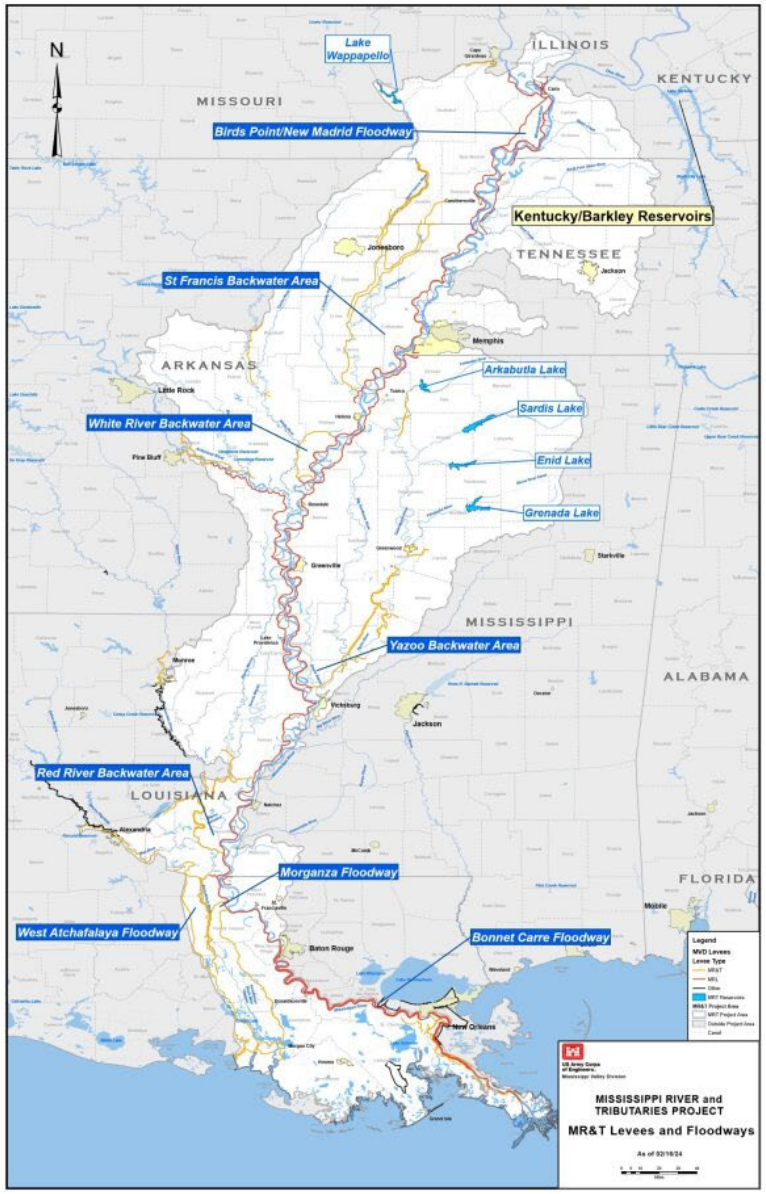
HERE'S WHAT WE'RE THINKING

- Find the right balance of water and sediment throughout the Mississippi River and Tributaries System
- Reconnect the river and the floodplain, where possible, to support ecosystems
- Stabilize channels and improve channel resilience
- Improve economic efficiencies in inland navigation
- Change how we operate existing structures to support multiple purposes, such as flood risk management, ecosystem restoration, and water supply
- Reduce flood risk to economically and socially disadvantaged communities along the Mississippi and Atchafalaya Rivers



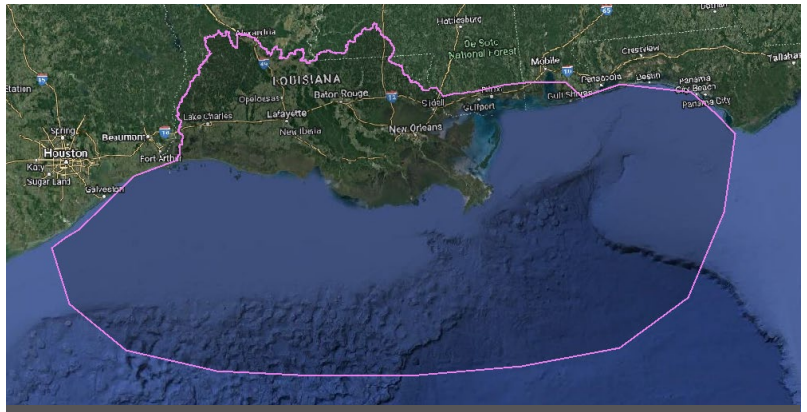
WHAT MODELING TOOLS ARE WE USING?

Systemwide Hydraulic Model

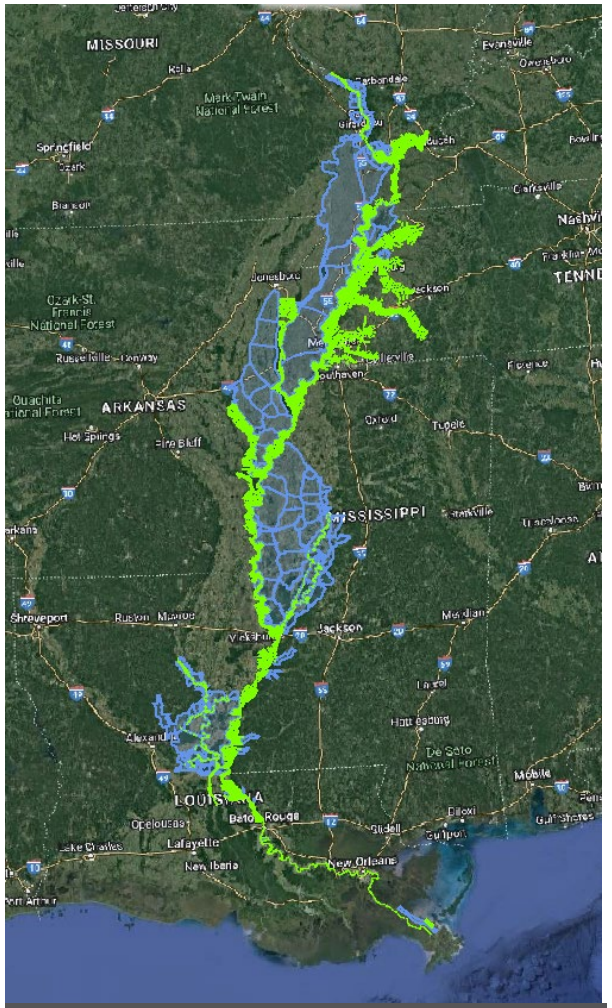
- Considering tools to estimate water levels, inundation, and basin-wide hydraulic responses to various environmental & management scenarios.

Geomorphology/Sediment Transport Modeling

- Developing plan for evaluating alternatives and feasibility-level designs related to sediment transport and long-term geomorphic change.



HEC-RAS 2D



HEC-RAS 1D (primarily)

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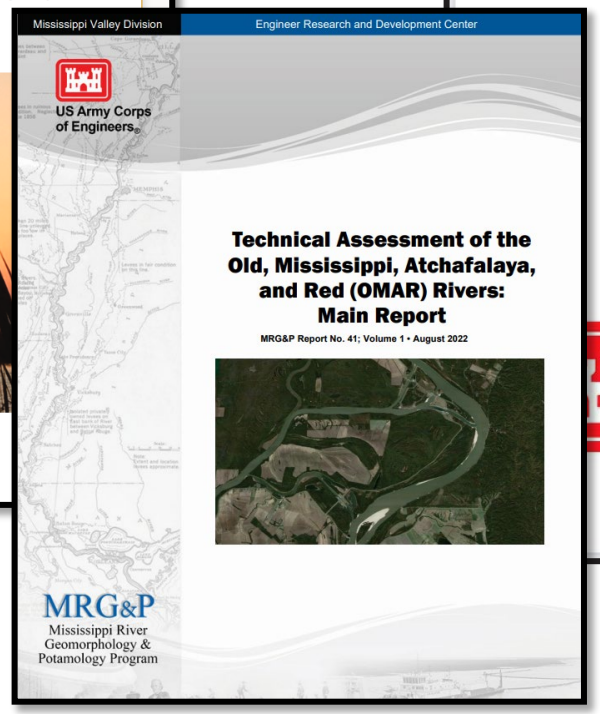
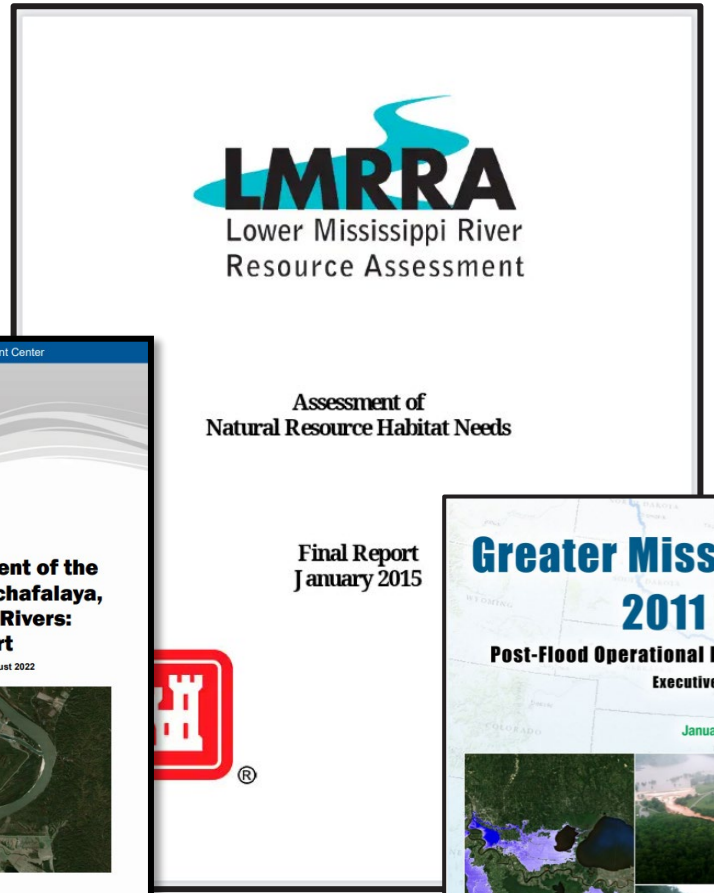
HAS USACE STUDIED THE RIVER BEFORE?

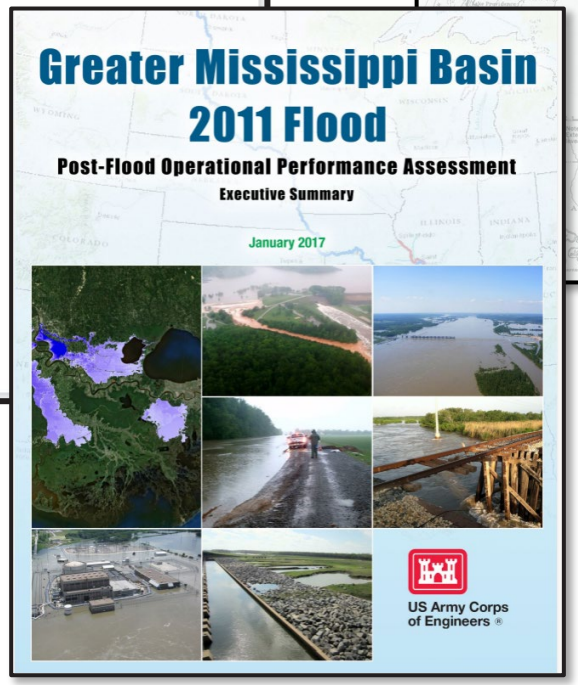
Hydro Delta Management Study, 2019



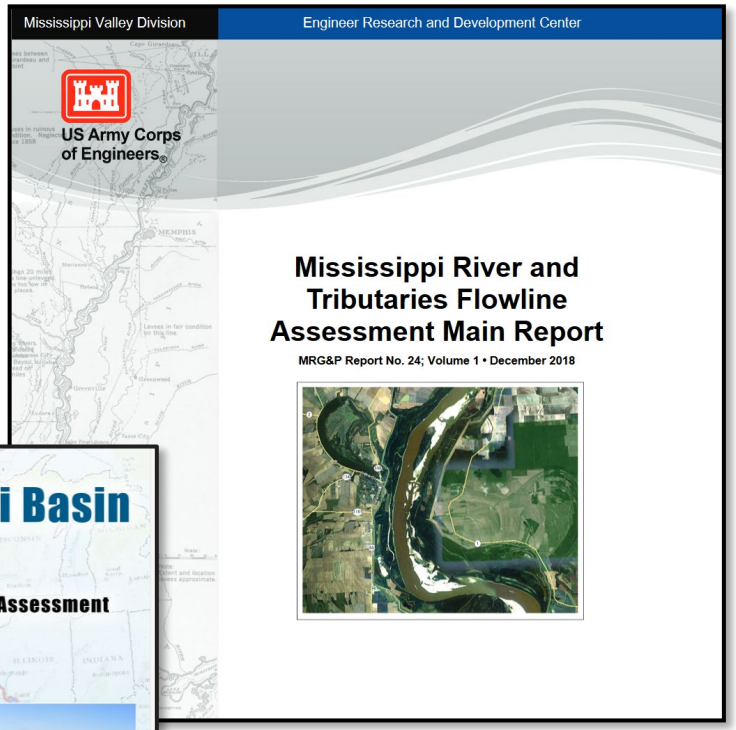
OMAR Report, 2022



LMRRA, 2015



2011 Post Flood Report, 2017



Flowline Assessment, 2018

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LOWER MISSISSIPPI RIVER TIMELINE

Mississippi River and Tributaries (MR&T)

- Flood Control Act of 1928
  - Larger levees and five floodways to safely pass the Project Flood (3,000,000 cfs)
  - ½ flow to pass down the Mississippi River through Baton Rouge; ½ to pass through the Atchafalaya Basin
- 1931: Bonnet Carre Spillway completed
- 1932: Birds Point New Madrid Floodway operational
- 1954: Morganza Control Structure completed
- Flood Control Act of 1954
  - "The distribution of flow and sediment in the Mississippi and Atchafalaya Rivers is now in desirable proportions and should be so maintained" - House Document 478
  - "Distribution of future total major flows in approximately the same proportions as occurred in 1950 is necessary if these objectives are to be accomplished." - House Document 478
- 1962: Old River Control Complex completed
- 1978: Yazoo Backwater Area Project completed with exception of pumping plant

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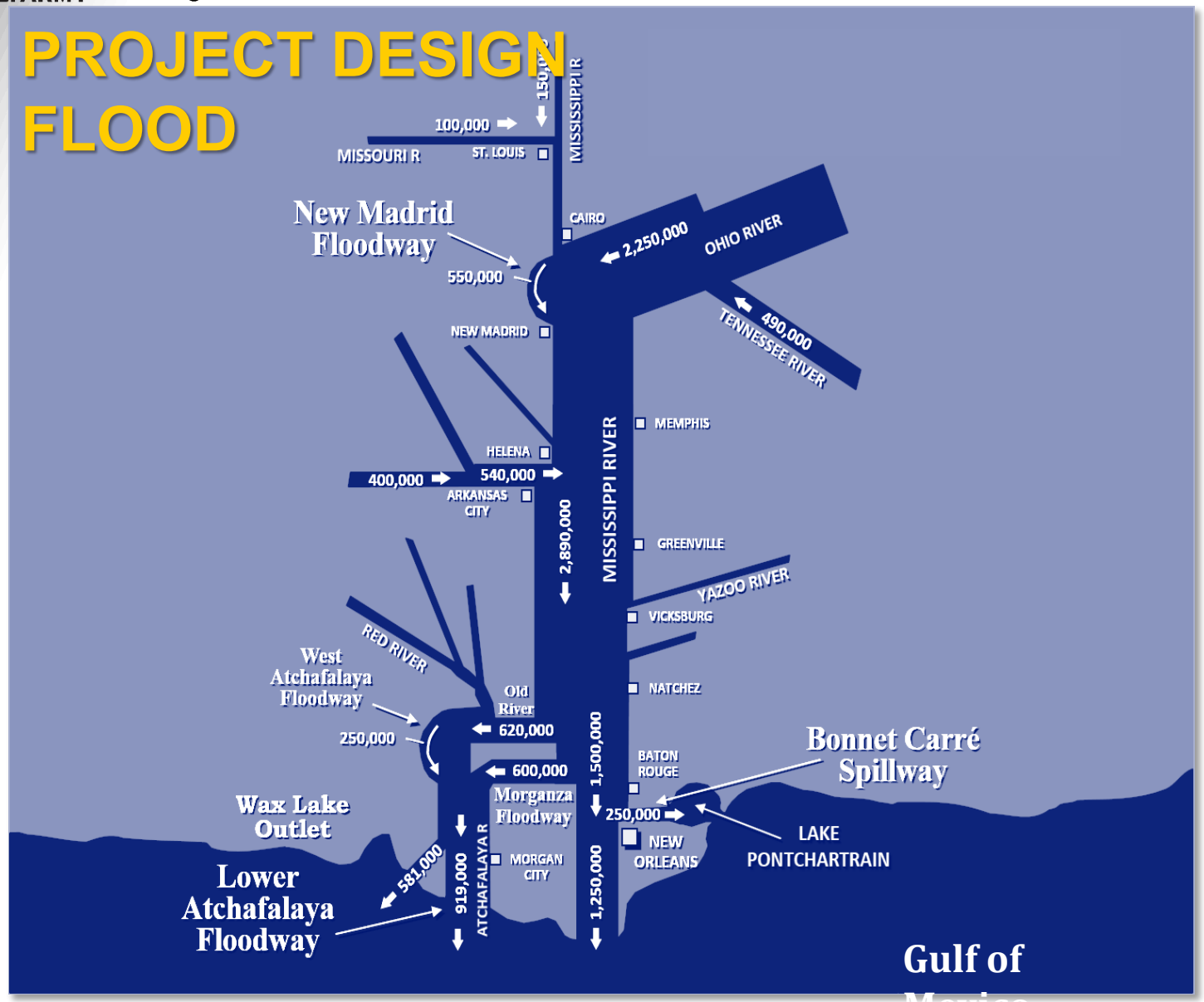
EXISTING SYSTEM



The MR&T project has four major features:
1. Levees / Floodwalls
2. Floodways / Backwater Areas
3. Channel improvement and stabilization
4. Tributary basin improvements

Floodways

1. Birds Point New Madrid	133,000 acres
(Used 2x in 1937 and 2011)	
2. West Atchafalaya Floodway	154,000 acres
(Never been/not likely to be used)	
3. Morganza Floodway	71,500 acres
(Used 2x in 1973 and 2011)	
4. Bonnet Carré Spillway	7,600 acres
(Used 14x since 1932)	
Total	366,100 acres

Backwater Areas

1. St. Francis	500,000 acres
2. White River	145,000 acres
3. Yazoo	634,000 acres
4. Red River	373,000 acres
Total	1,652,000 acres
Combined Total	2,018,100 acres

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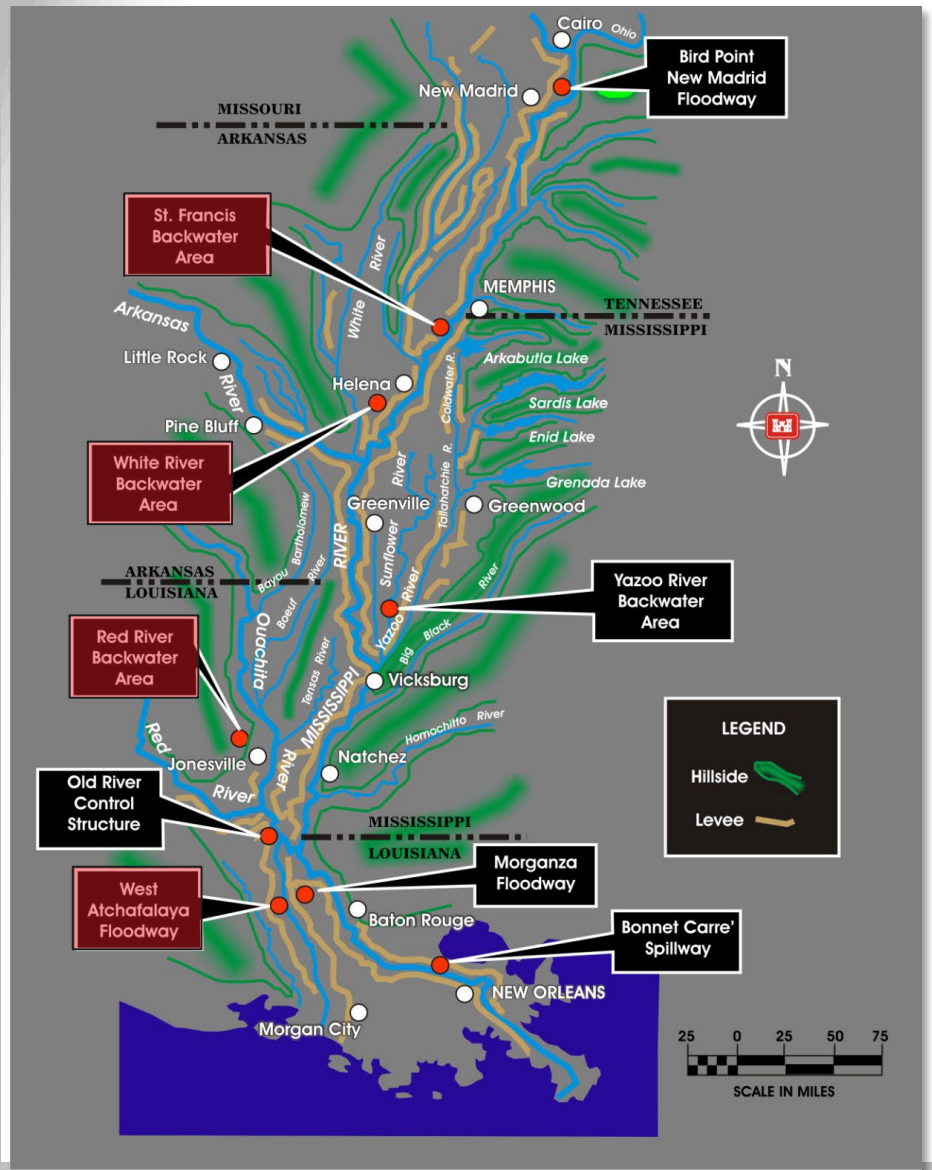
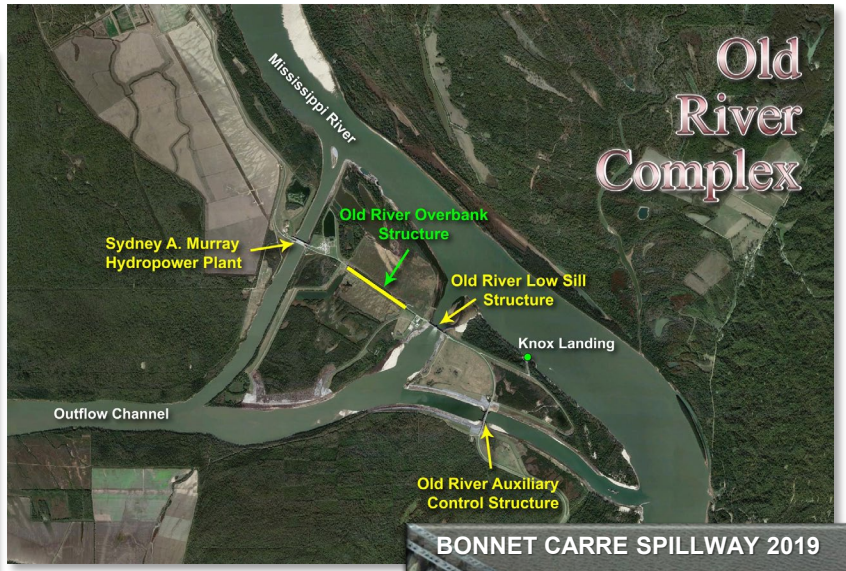
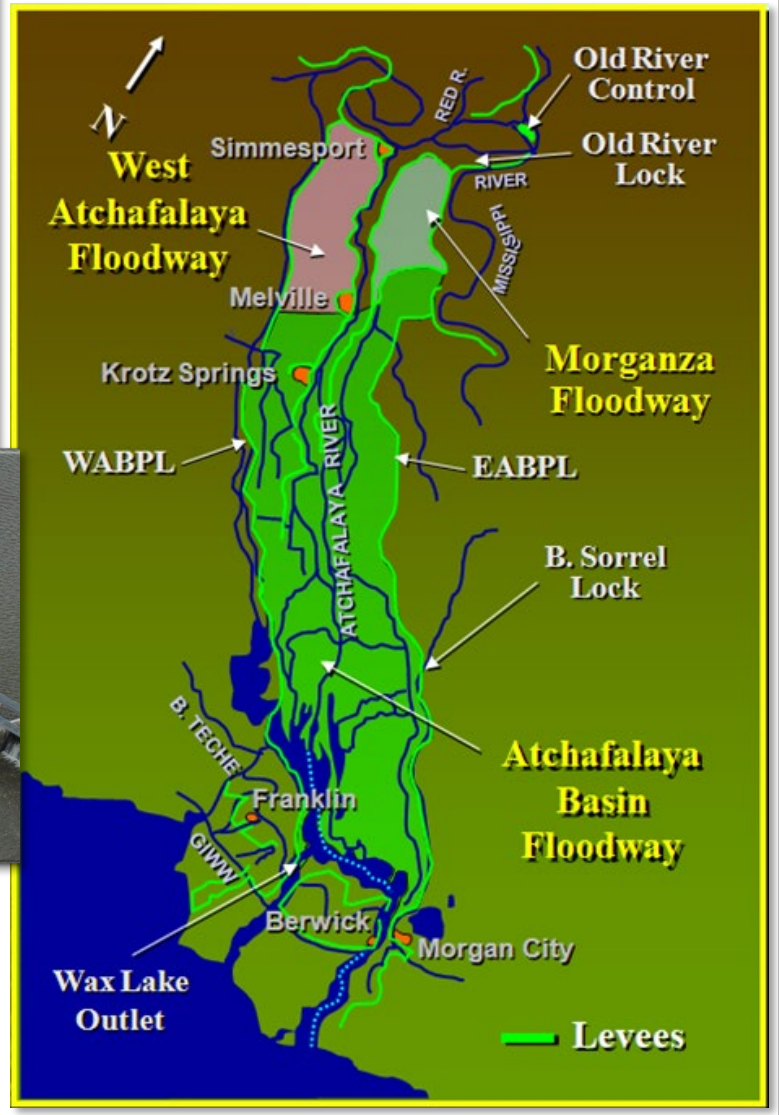
EXISTING SYSTEM

CHALLENGES OF OPERATING MR&T PROJECT FEATURES AS DESIGNED DUE TO CHANGING GEOMORPHIC CONDITIONS







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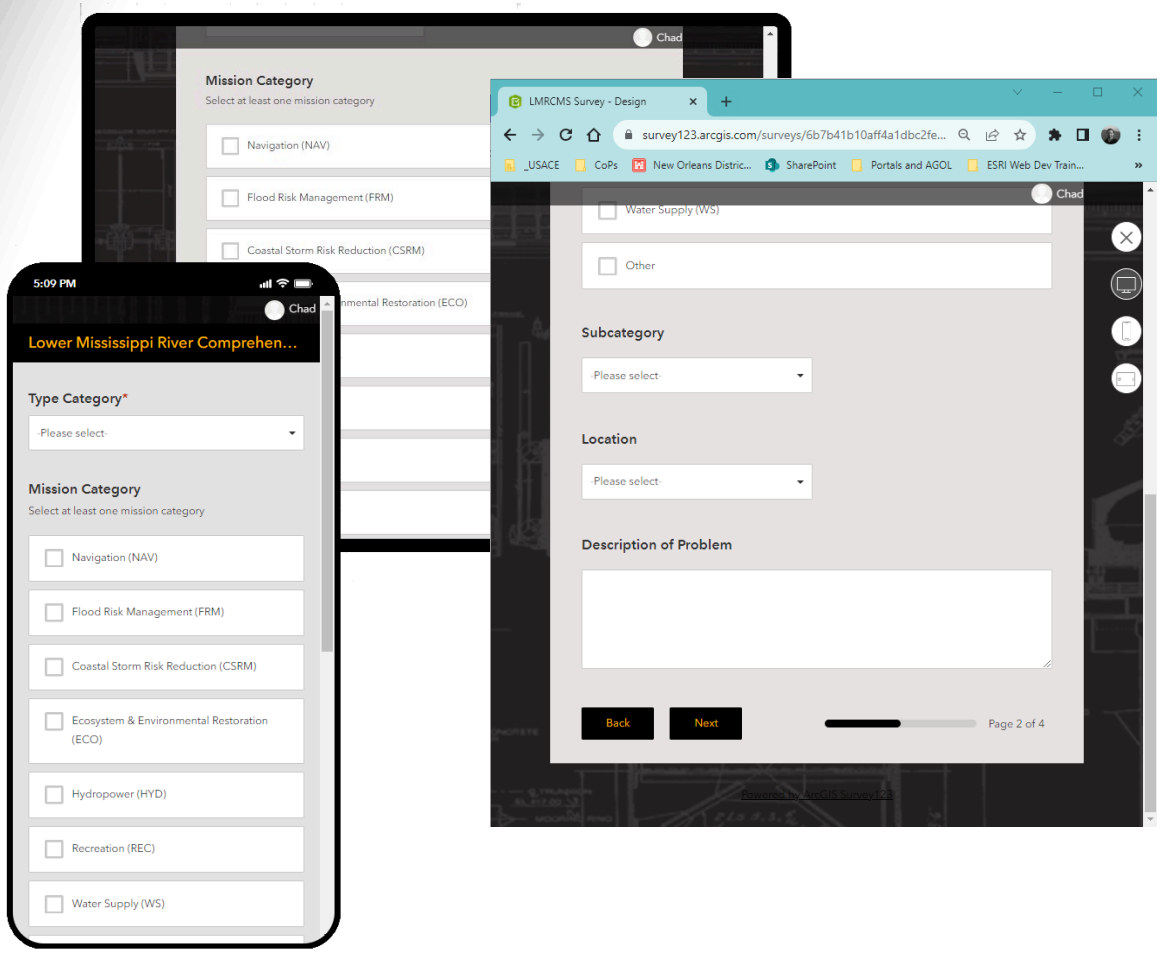
HOW CAN YOU CONTRIBUTE?



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QUESTIONS AND DISCUSSION

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