LOWER MISSISSIPPI RIVER COMPREHENSIVE MANAGEMENT STUDY

QUARTERLY PUBLIC UPDATE
JANUARY 28, 2025

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New Orleans District

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Regional Planning and Environment Division South
New Orleans District

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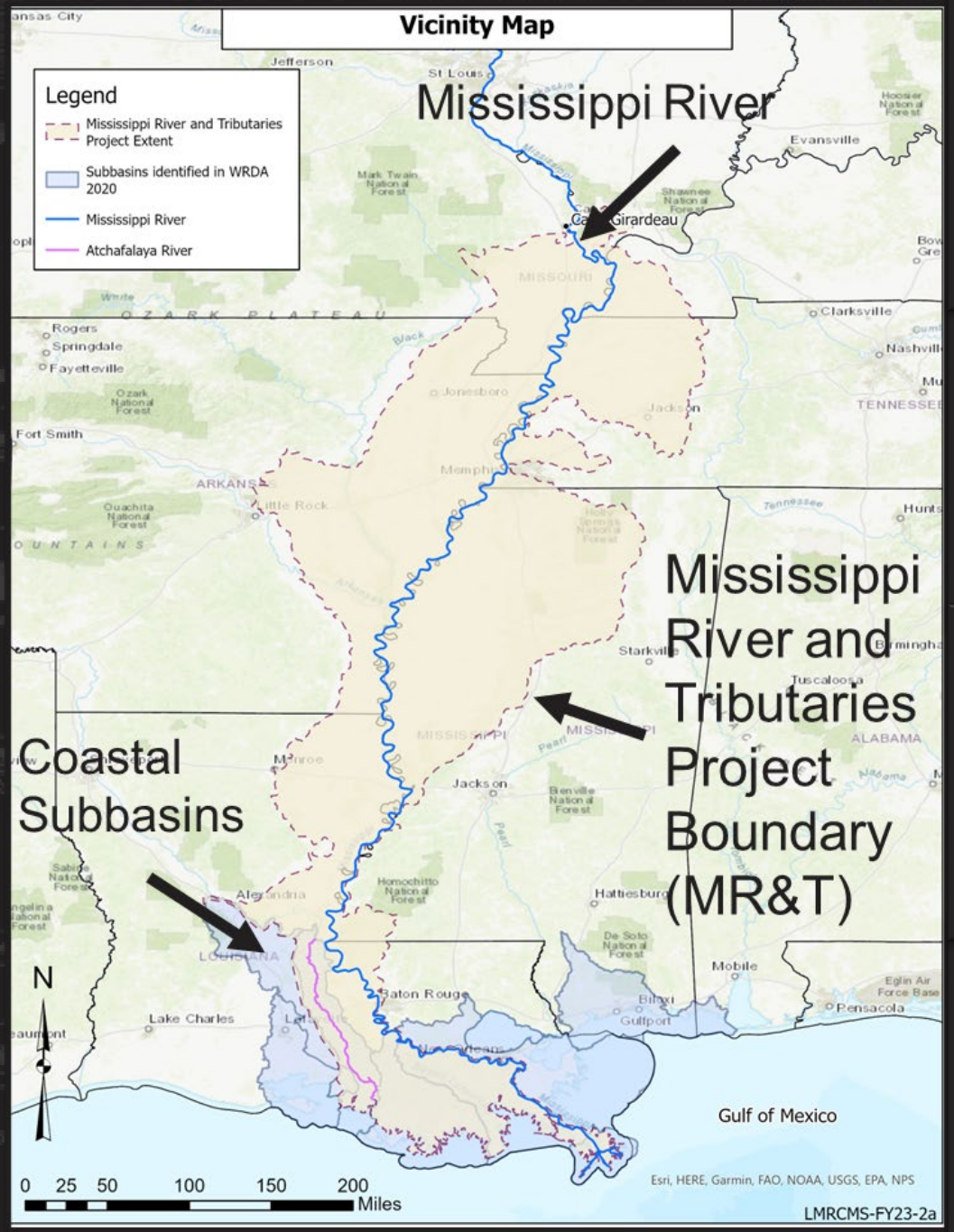

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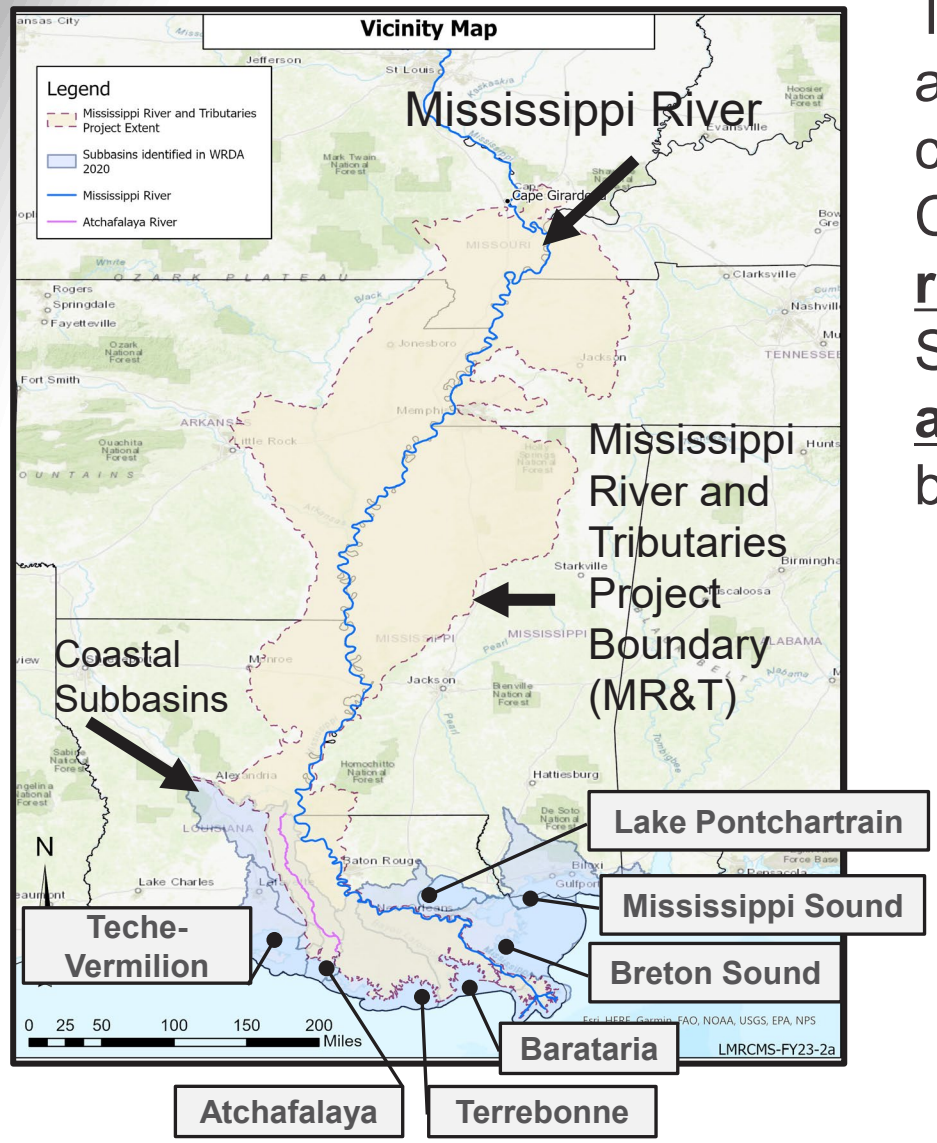
AGENDA

- What is the study purpose (Recap)
- Where are we in the study process?
- Screening, Modeling Updates
- Stakeholder Engagement
- Comments from Stakeholders and Public
- Next Steps
- Questions and Comments
- Feedback on this webinar

2 MIN BREAK

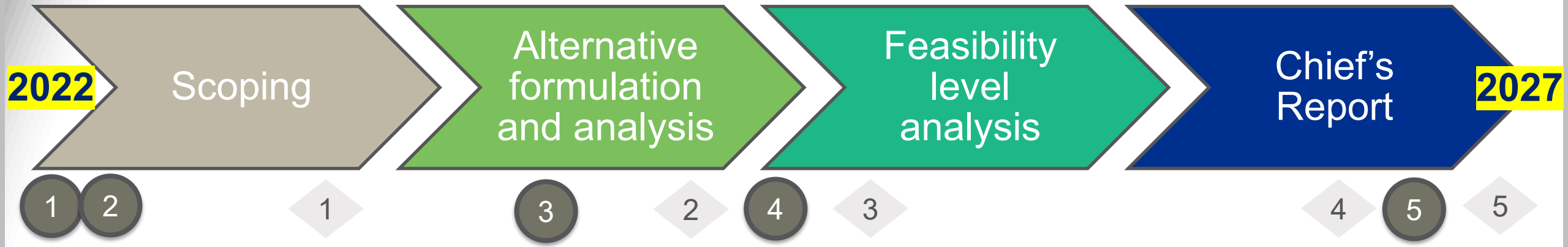
WHY ARE WE STUDYING THE MISSISSIPPI RIVER?



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;
B. Navigation
C. Ecosystem and environmental restoration
D. Water supply
E. Hydropower production
F. Recreation
G. Other purposes as determined by the Secretary

WHERE ARE WE IN THE STUDY PROCESS



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

National Environmental Policy Act Process

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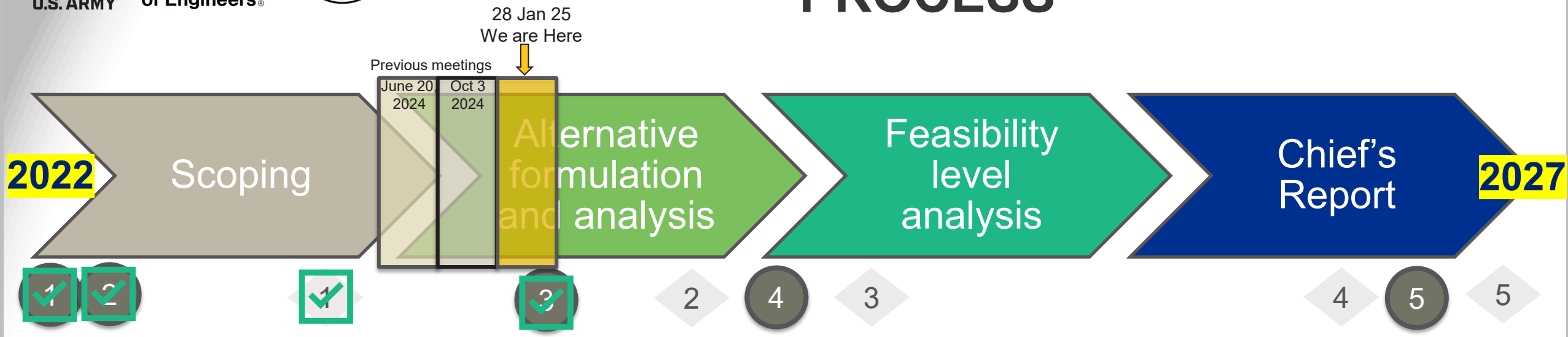

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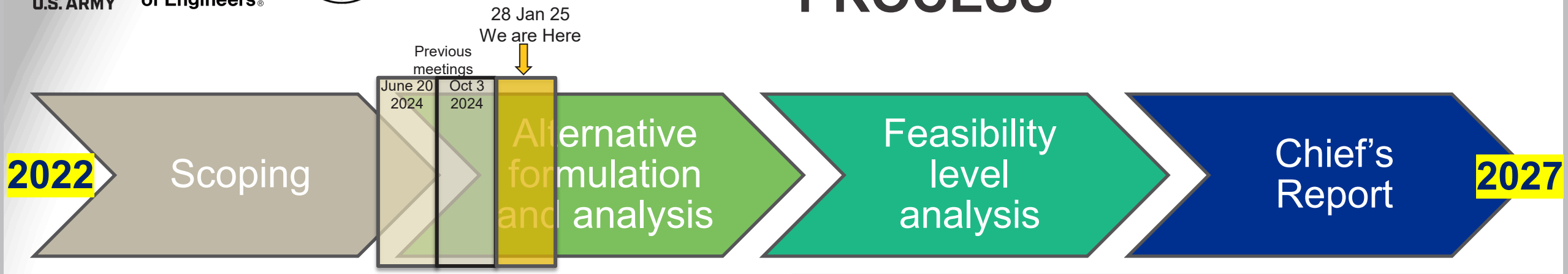


Recap of Last Quarterly Public Update:

Coordination:

- Engagement with Federal and State Agencies, Tribal Nations, and Stakeholders continues

Reviewing Scoping Input

- Screening measures based on criteria
- Developing the process for tiered studies

Modeling:

- Water models developed for Mississippi and Atchafalaya Rivers
- Investigating operational changes at existing structures, such as Old River Control Complex
- Sediment models calibrated/validated.

Activities Since Last Quarterly Public Update:

Coordination with stakeholders continued

Review Scoping Input:

- Screening of measures and developing alternatives
- Developing and initiating process for tiered studies

Modeling:

- Operational changes at existing structures, such as Old River Control Complex have been evaluated with hydro model
- Sediment models have been developed and are being combined with hydro models to evaluate future conditions under several different operational scenarios

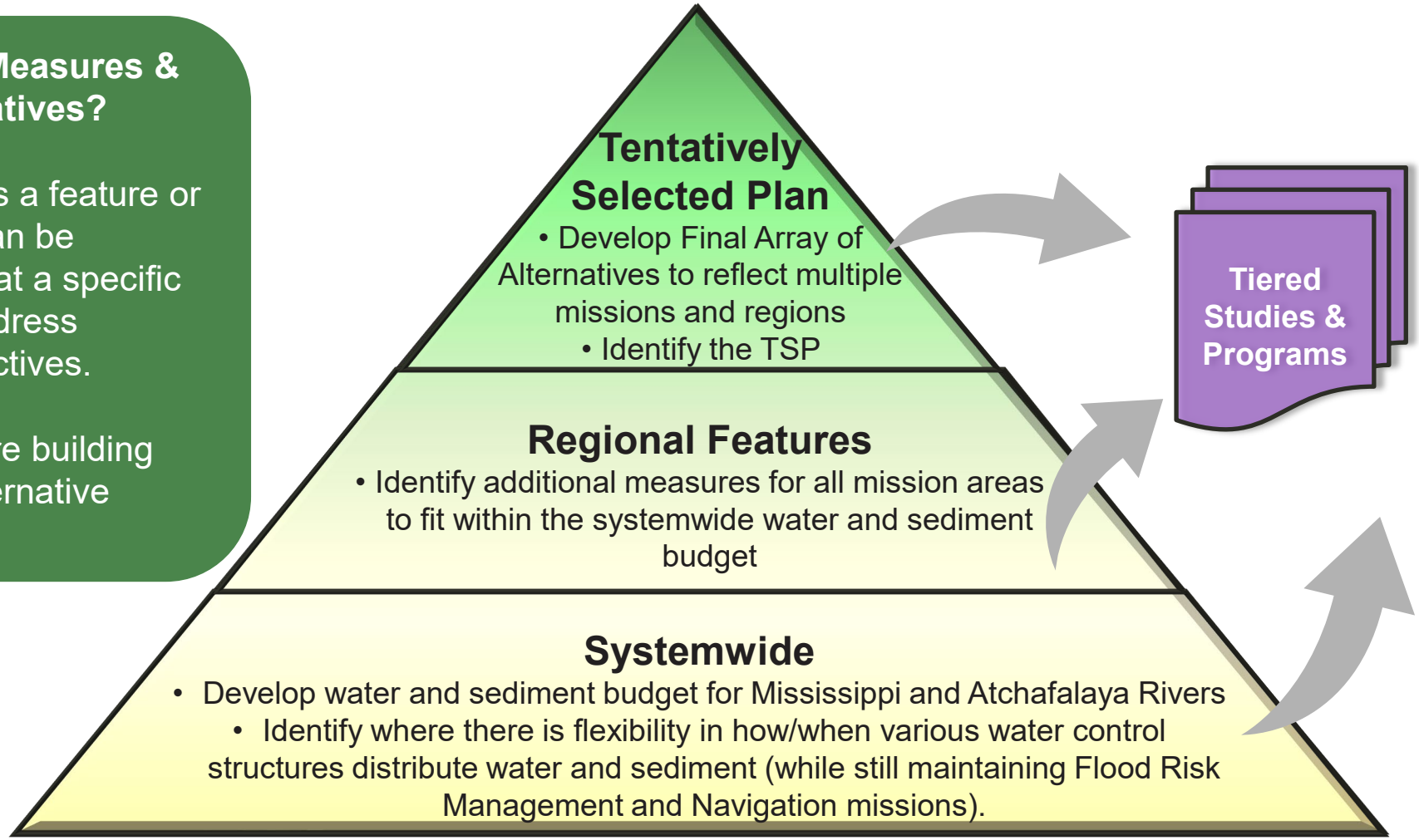
ALTERNATIVE FORMULATION & ANALYSIS

The Study Team is using a step-wise approach to formulating and screening alternatives.

What are Measures & Alternatives?

A “measure” is a feature or activity that can be implemented at a specific location to address planning objectives.

“Measures” are building blocks of “Alternative Plans”.

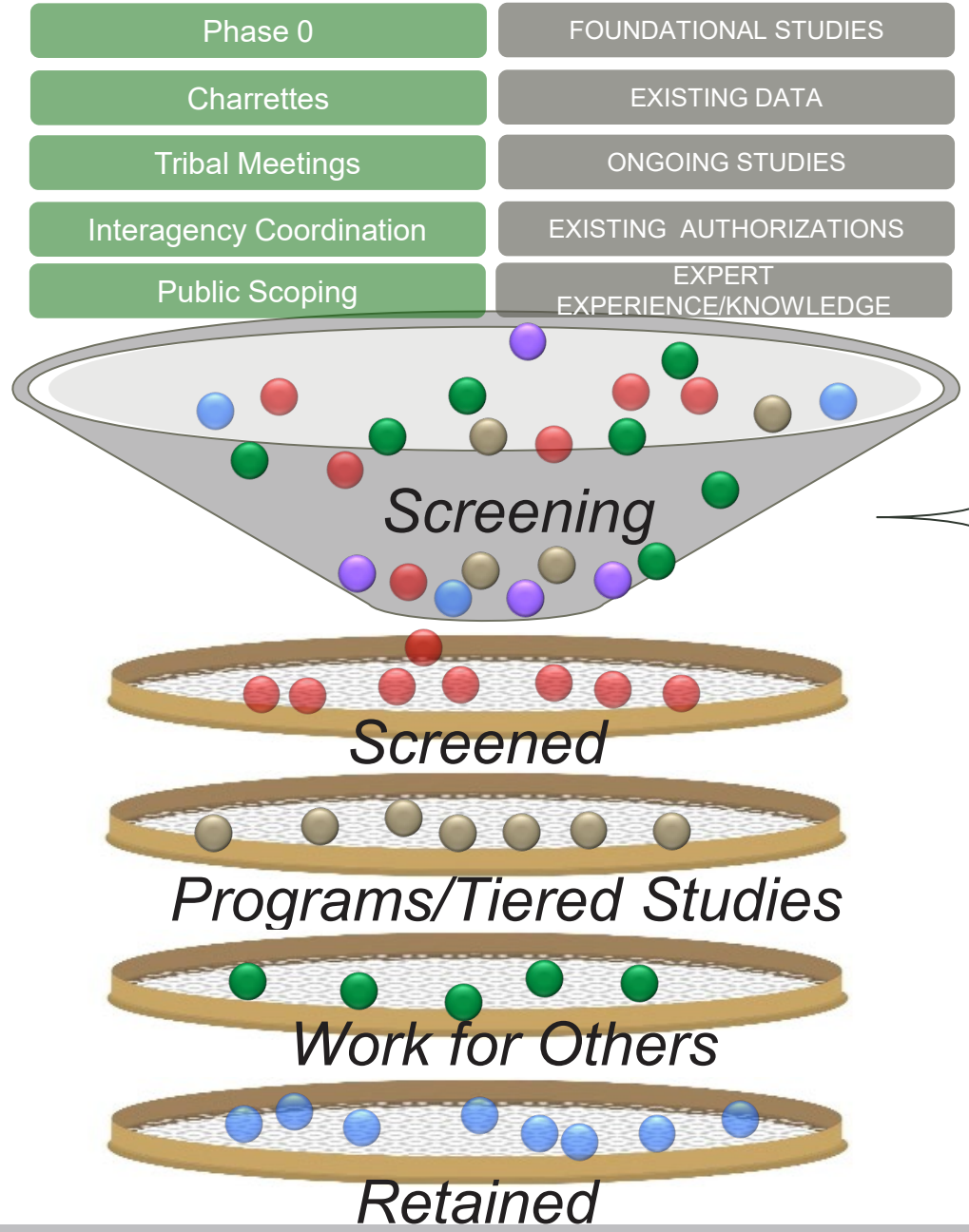


MEASURE SCREENING PROCESS

Where we've been →

We are here! →

Where we're going →



- Focus groups established to initiate measures' evaluation process
- Groups are leveraging results from existing reports, historical information, and existing data to screen measures
- Geographic Specific – Evaluating measures in subject matter expert groups while working across multiple USACE districts
- Measures screening will be informed by hydraulic and hydrologic modeling

SCREENING CRITERIA

Criteria:

- Will the measure effectively achieve the study objectives related to various mission areas? (Ecosystem Restoration, Water Supply, etc.)
- Is the measure within the authority of the Study?
- Is the measure acceptable to state and local entities and the public and is it compatible with existing laws, regulations, and public policies?
- Would implementation of the measure transfer risk/impact somewhere else?
- Was the measure recommended a duplicative measure already being evaluated?
- Are there existing Authorities/Project/Programs that can implement the measure and are currently studying/designing it?
- Is implementation of the measures cost-effective?

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SCREENING CONSTRAINTS

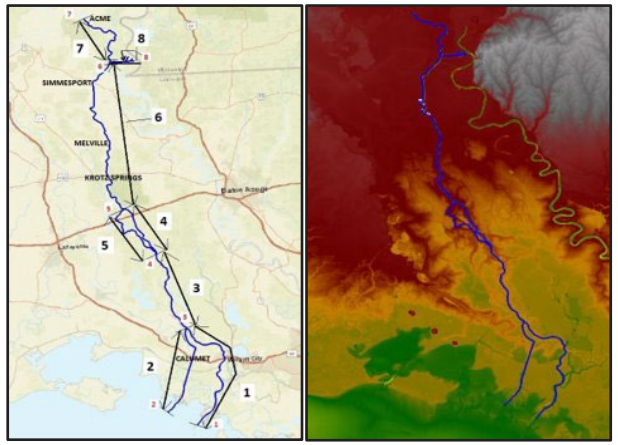
Constraints:

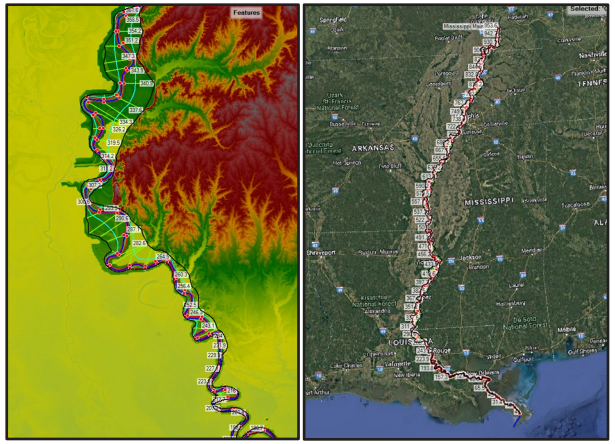
- Threatened/Endangered Species – Avoid and/or minimize negative impacts to species and protected habitats (inclusive of Critical Habitat and Essential Fish Habitat)
- No loss of authorized navigation performance
- Avoid inducing development in floodplains
- Avoid or minimize impacts to water supply – municipal, industrial, residential, tribal and freshwater infrastructure
- No loss of authorized flood risk management performance
- Tribal Impacts – inclusive of affects to Tribal lands or restricted access to resources

HYDRAULIC AND SEDIMENT MODELING

Utilizing expertise both within and outside of USACE to advance our understanding of hydrodynamics and sediment dynamics in the Mississippi and Atchafalaya Rivers.

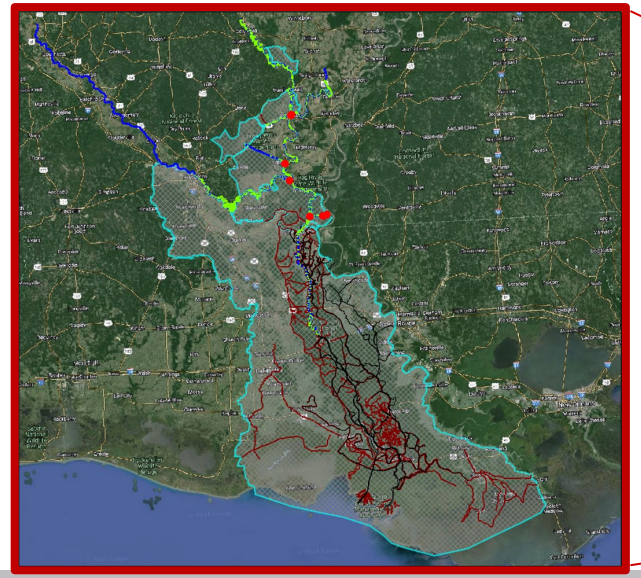
Sediment Model
Atchafalaya River
HEC-6T



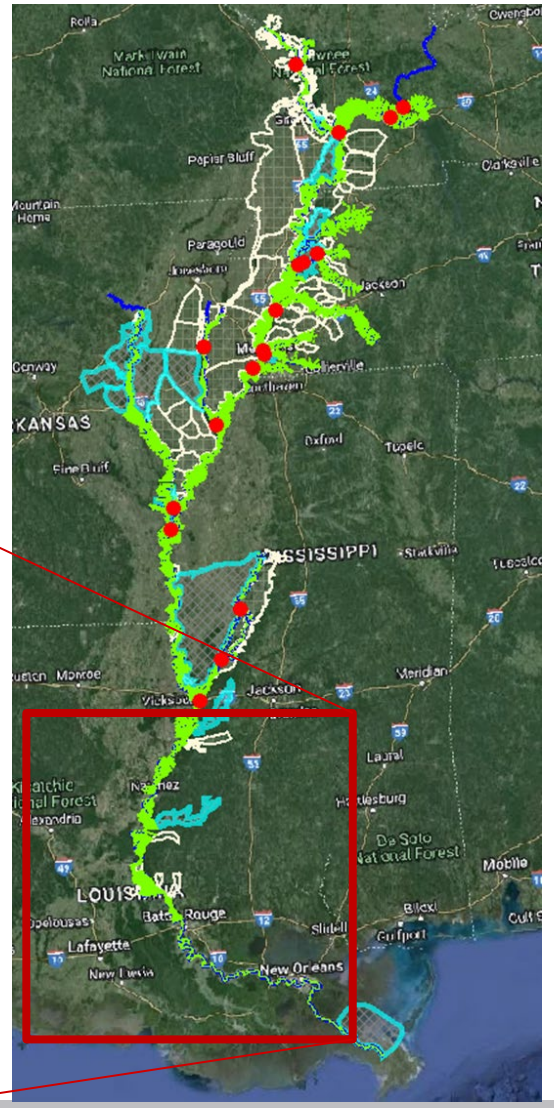


Sediment Model
Mississippi River
HEC-RAS 1D

Hydraulic Model
Atchafalaya River
1D/2D HEC-RAS



Hydraulic Model
Mississippi River
1D HEC-RAS



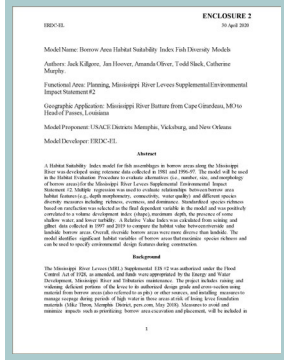
ECOSYSTEM MODELING

Ecosystem models have not yet been identified

Will be identified based on Final Array of Alternatives.

Analysis will build on past and ongoing work in the Study Area to look at minimizing environmental impacts and providing ecosystem benefits.

Borrow Area Habitat Suitability Index – Fish Diversity Models


ENCLOSURE 2

Model Name: Borrow Area Habitat Suitability Index Fish Diversity Models

Authors: Jack Killgore, Jan Hoover, Amanda Oliver, Todd Slack, Catherine Murphy

Functional Area: Planning, Mississippi River Levees Supplemental Environmental Impact Statement #2

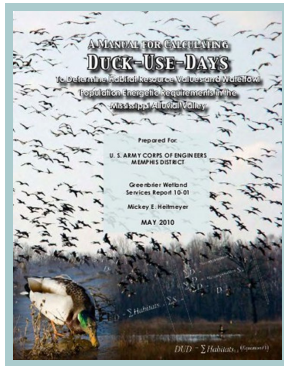
Geographic Application: Mississippi River Batture from Cape Girardeau, MO to Head of Passes, Louisiana

Model Proponent: USACE Districts Memphis, Vicksburg, and New Orleans

Model Developer: ERDC-EL

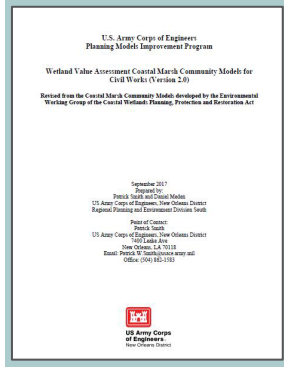
Abstract

Background



Manual for Calculating Duck-Use-Days

Wetland Value Assessment-Coastal Marsh Community Models


U.S. Army Corps of Engineers
Planning Models Improvement Program

Wetland Value Assessment Coastal Marsh Community Models for Civil Works (Version 2.0)

Revised from the Coastal Marsh Community Model developed by the Environmental Working Group of the Coastal Wetland: Planning, Protection and Restoration Act

September 2017
Prepared by:
Patrick Smith and Daniel Meden
US Army Corps of Engineers, New Orleans District
Regional Planning and Environment Division South

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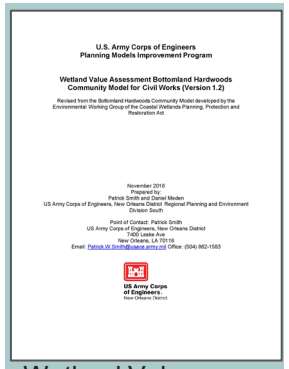
US Army Corps of Engineers
New Orleans District


U.S. Army Corps of Engineers
Planning Models Improvement Program

Wetland Value Assessment Bottomland Hardwoods Community Model for Civil Works (Version 1.2)

Revised from the Bottomland Hardwoods Community Model developed by the Environmental Working Group of the Coastal Wetlands Planning, Protection and Restoration Act

November 2018
Prepared by:
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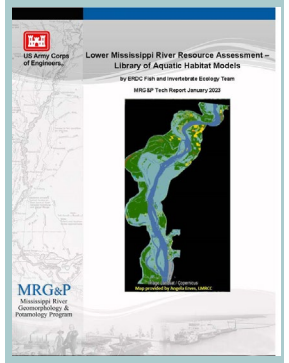
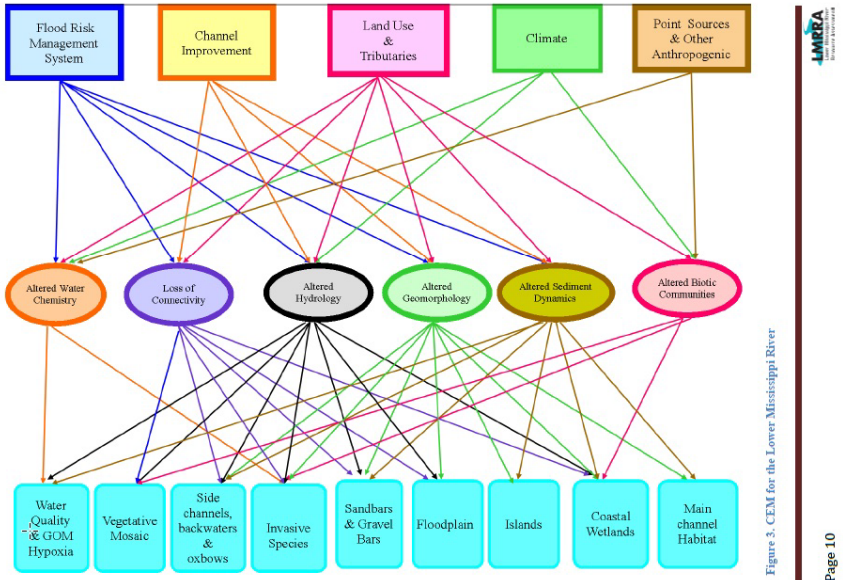
US Army Corps of Engineers
New Orleans District

Wetland Value Assessment-Bottomland Hardwoods Community Models

Lower Mississippi River Resource Assessment – Aquatic Habitat Models



And Other Models



Conceptual Ecological Model for the Lower Mississippi River (LMRRA)

FINDING FLEXIBILITY IN HOW WE OPERATE THE SYSTEM

Flood Risk Management opportunities during high flows

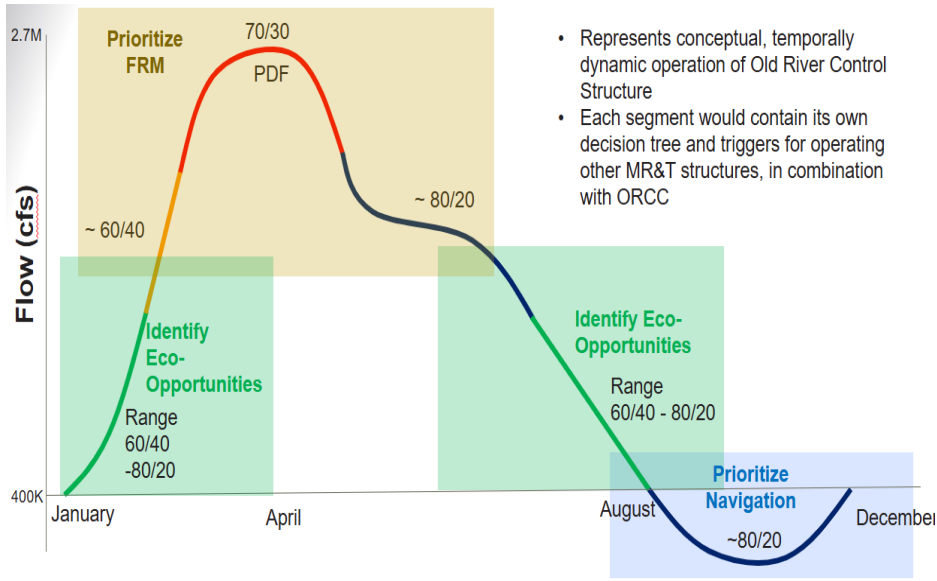
- When the Mississippi River is rising, operate Old River Control to put more water down the Atchafalaya (60/40 split)
- When the Mississippi River is falling, operate Old River Control to put less water down the Atchafalaya (80/20 split)
- Evaluate structural limitations at Old River Control Complex
- Alter mainstem flow triggers

Navigation opportunities during critical low flows

- Operate Old River Control to keep more water in the Mississippi River channel (80/20 split)
- Evaluate navigation impacts to Atchafalaya
- Evaluate structural limitations at Old River Control Complex

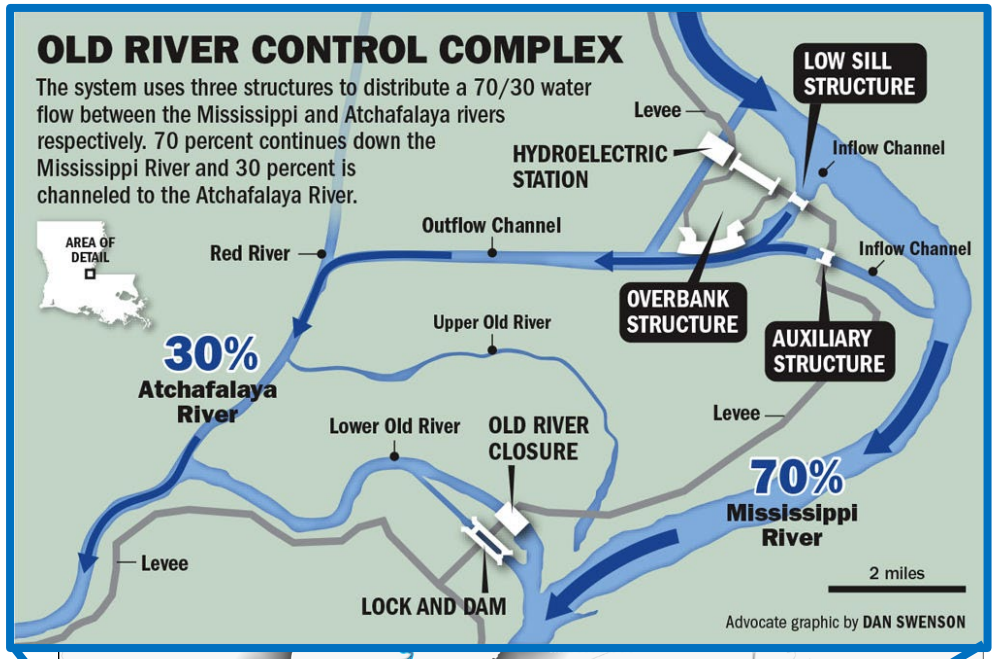
Ecosystem opportunities during average flows

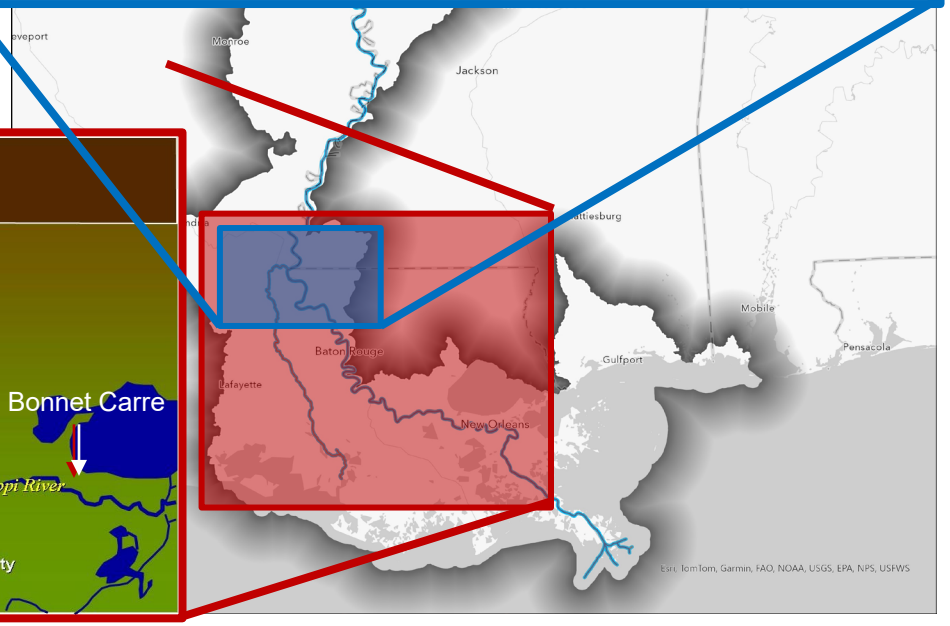
- Operate Old River Control between 60/40 and 80/20 to provide ecosystem benefits to Atchafalaya and MS Mainstem
- Re-evaluate Mainstem Flow Triggers for Morganza Spillway and Bonnet Carré Spillway



RETAINED MEASURES FOR REDUCING FLOOD RISK

- Reduce Roughness in the Batture
- Optimize Existing Floodways - Dual use of ORCC and Morganza before opening Bonnet Carré for FRM purposes.
- ORCC Flush at or above authorized levels – to pass more sediment through MR.
- Raise MR&T levees





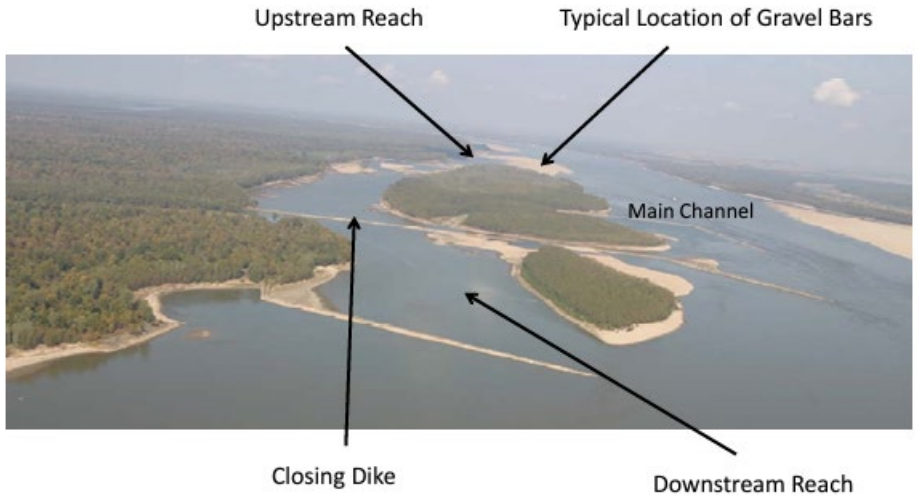
RETAINED MEASURES FOR IMPROVING NAVIGATION

- Provide a 12 ft navigation channel from Baton Rouge, LA to Cairo IL
- Restrict flow downstream of east bank crevasses to regulate flow
- Modify ORCC flows to move sediment through mainstem MR
- Close distributaries on the Atchafalaya River to increase stream power

RETAINED MEASURES FOR IMPROVING ECOSYSTEM RESTORATION

- Return flow to abandoned oxbow lakes and meanders
- Establish systemwide riparian buffers, such as tree screens, along top banks for purposes of bank stabilization, water quality and habitat connectivity.
- Restore connectivity to secondary channels
- Create or restore native rivercane break habitat (a culturally significant keystone species) for ER and bank stabilization purposes.
- Dedicated dredging for wetland enhancement
- Dredge sand from river and place in crevasses for land building and to mitigate saltwater intrusion.

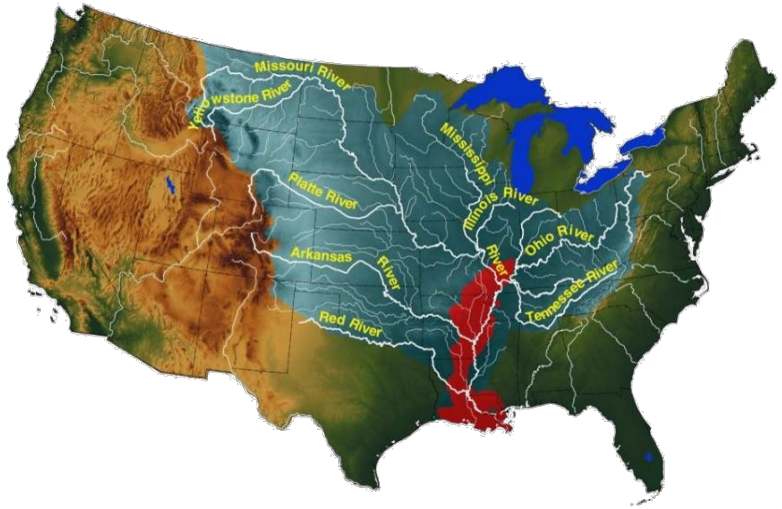
Mississippi River winding along the border of Arkansas and Mississippi. Source: earth.com

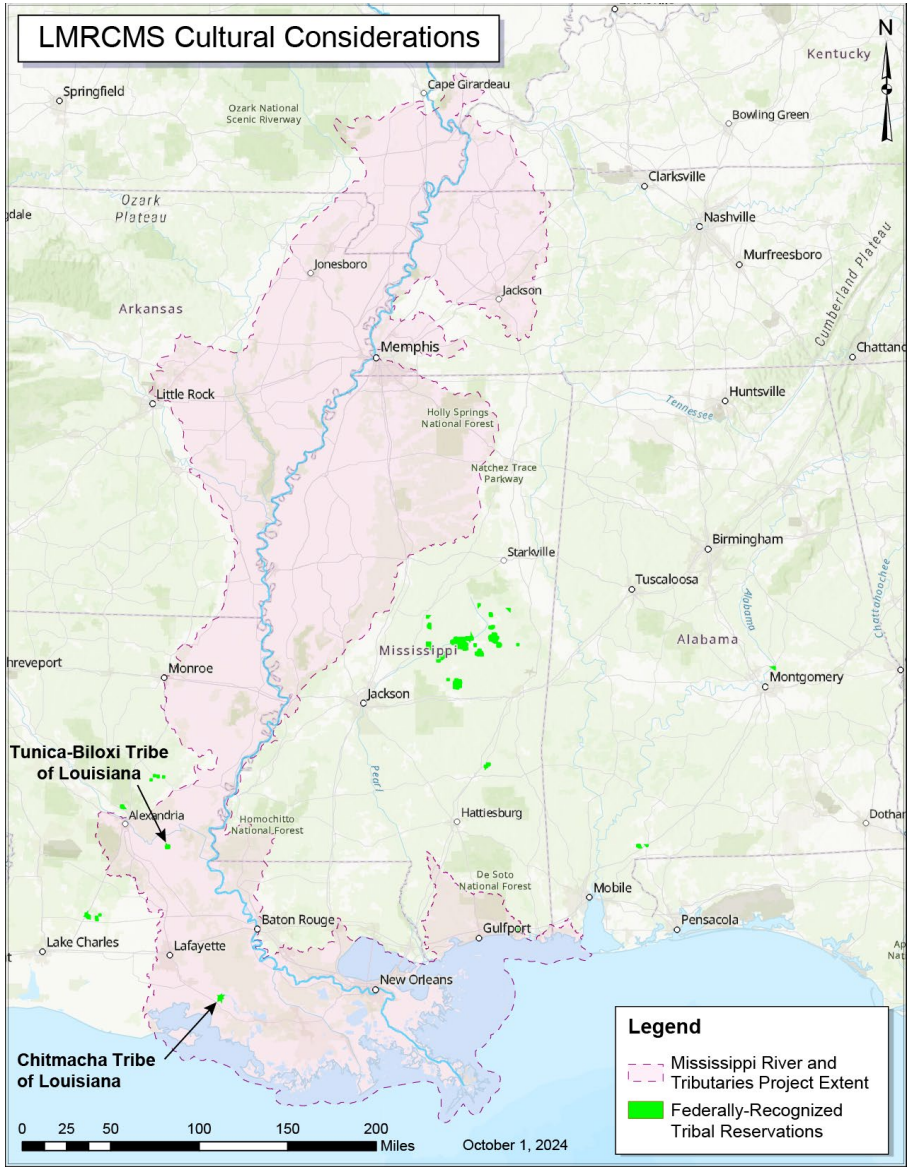


High-quality secondary channel with dikes.
Source: ERDC TN-EMRRP-ER-15 August 2012

RETAINED MEASURES FOR IMPROVING WATER SUPPLY RELIABILITY

- Continue dredging in the Atchafalaya in select areas for drinking water reliability
- Divert excess MS River surface water to tributaries for ER and reducing agricultural demand on the aquifer for Water Supply purposes
- Pump water into oxbows such as Mhoon Lake to allow controlled releases to tributaries





RETAINED MEASURES FOR IMPROVING ACCESS FOR RECREATION AND EMERGENCY RESPONSE

- Partner with organizations to implement walking/biking paths along existing features
- Reconnect secondary channels for recreation access and use
- Install boat ramps/public access points for recreation, emergency access, and data collection

https://www.lmrcc.org/outdoor-recreation/fishing/

TIERED STUDIES

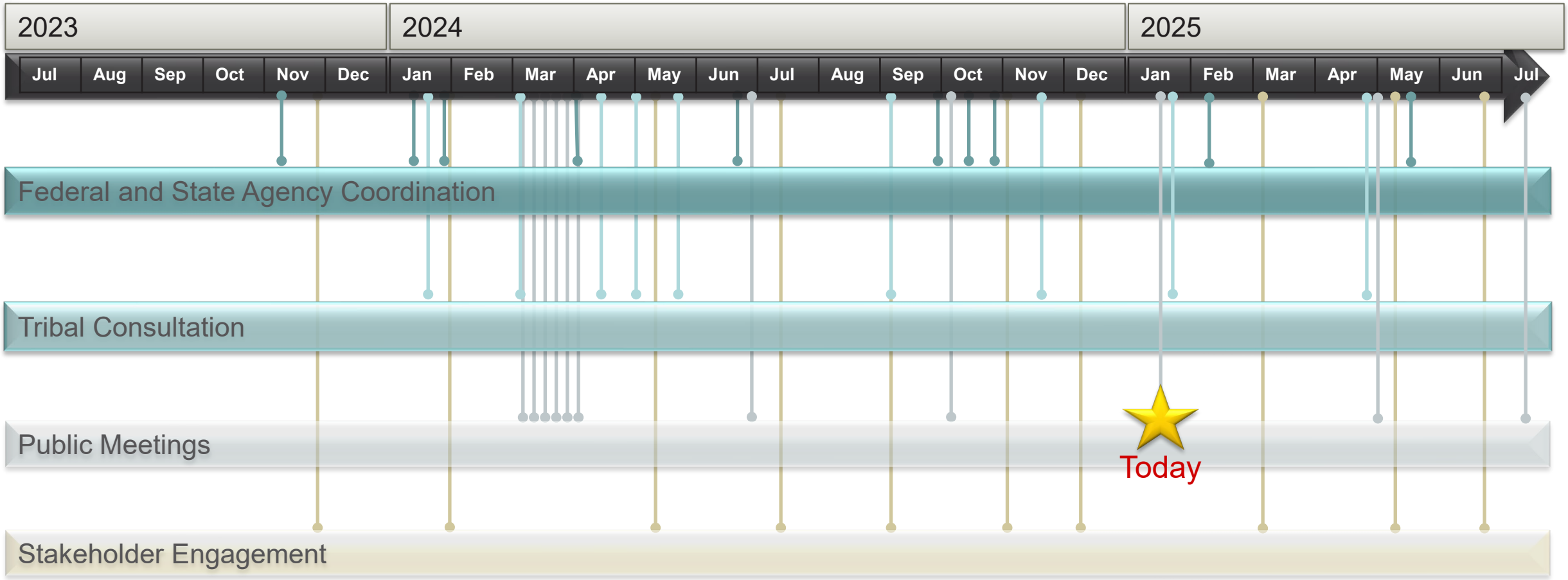
A tiered study will fall in 1 of 3 categories regarding authority:

1. **LMRC Authority**
   -waiver of cost share requirement but subject to LMRC budget ($25M) and time
2. **Other Existing Authority**
   -not subject to LMRCMS budget and cost share requirement is not waived
3. **New Authority Needed**
   -requires authorization from Congress
   -”New Start” study

Potential Tiered Studies will be summarized using Sec 7001 criteria and could be included in the annual report to Congress.

ENGAGEMENT STRATEGY

Implementing strategic engagement with agency partners, tribes, stakeholders, and the public demonstrates our commitment to long-term collaboration and cooperation throughout the Study process.



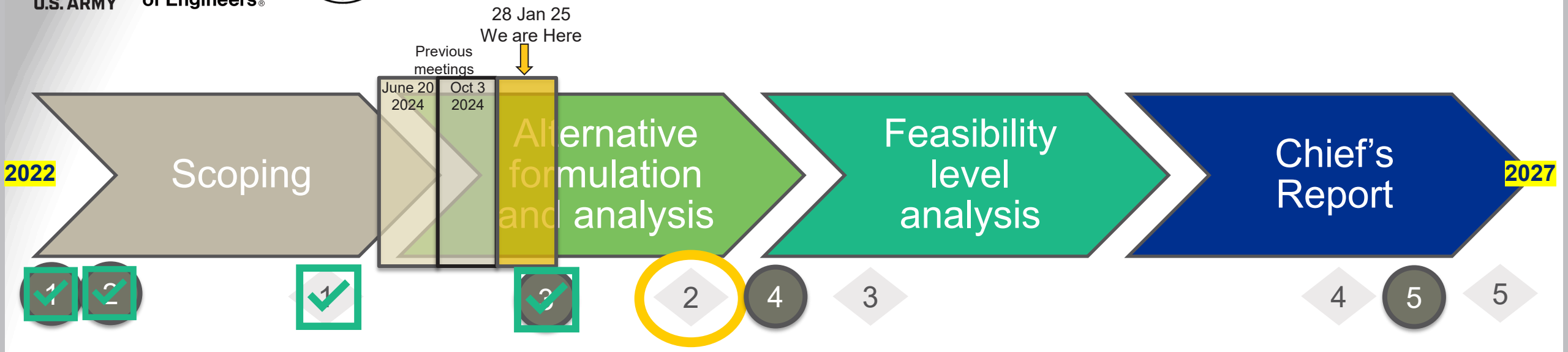
COMMENTS FROM STAKEHOLDERS

- Overall support of Scoping Report
- Identify synergies with other programs and complementary efforts (e.g., Deepwater Horizon Restoration program, Louisiana's Coastal Master Plan, Sustainable Rivers Program)
- Expand and continue Stakeholder Engagement (e.g., Gulf of Mexico Fishery Management Council)
- Consider study requirements and implications to other agencies (e.g., timing of reviews, impacts to missions and abilities)
- Tailor information to specific regions and states

QUESTIONS FROM PREV PUBLIC UPDATE

- Differentiate between suspended and bedload sediment when evaluating water and sediment budget.
- Request for Gulf Coast stakeholder meeting in Mississippi Sound.
- Meeting participant requested to be connected to the St. Louis District.
- Meeting participant requested USACE participate in the planning of a coastal resilience lab.
- Ensure cross coordination of the LMR Comp Study with the Lower Missouri Study Team.
- Inclusion of the Atchafalaya Basin reservoirs in the LMR Comp Study.

NEXT STEPS



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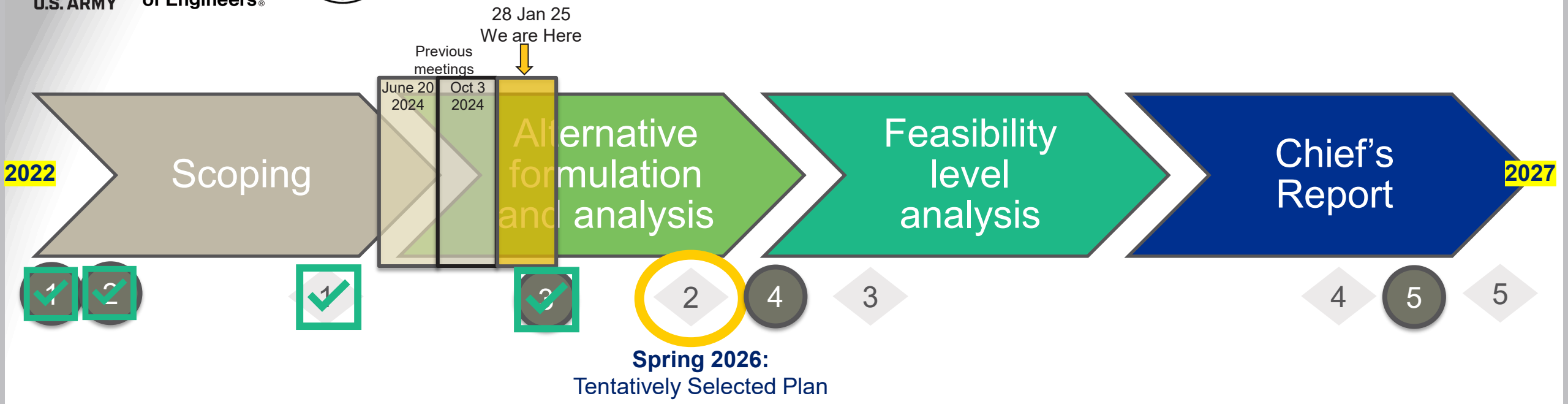
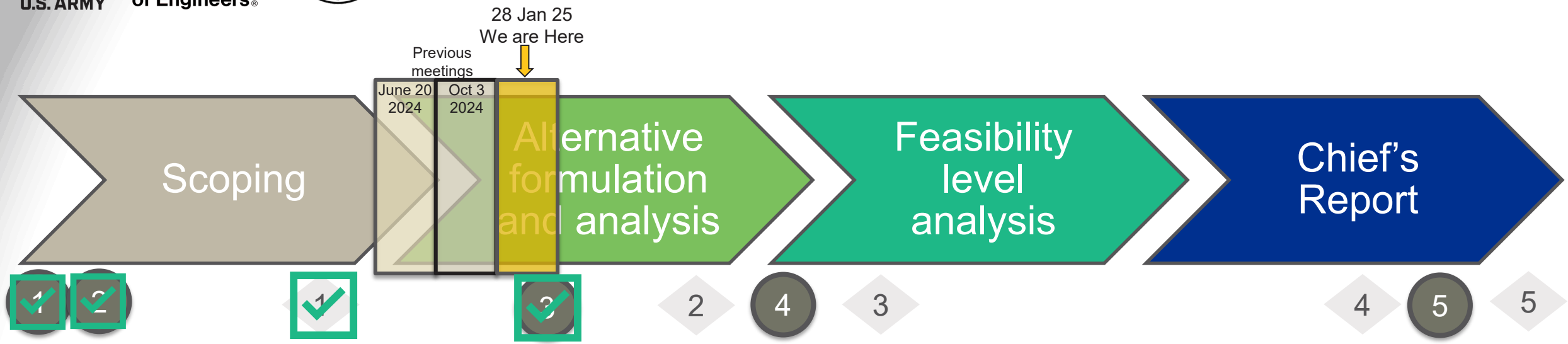


Spring 2026:
Tentatively Selected Plan

- ✓ Complete reviews of measures
- ✓ Continue integrated sediment and water model runs
- ✓ Develop Alternatives
- ✓ Identify and run ecosystem models to evaluate ecosystem benefits
- ✓ Analyze, evaluate, and compare Alternatives
- ✓ Conduct additional meetings with the Public, Agencies and other stakeholders
- ✓ Begin preparing the Draft Integrated Feasibility Report and Environmental Documentation
- ✓ Select Tentatively Selected Plan
- ✓ Identify recommendations for Tiered Studies

NEXT STEPS



STAY TUNED!
Next Quarterly Public Update will be in Spring 2025

QUESTIONS AND COMMENTS SESSION

Before you log off, please fill out this short questionnaire on today's webinar!

Quarterly Public Update #3 - Lower Mississippi River Comprehensive Management

https://forms.osi.apps.mil/r/Y4L5HNGHvw

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THANK YOU FOR ATTENDING TODAY'S MEETING

Lower Mississippi River Comprehensive Management Study – Quarterly Public Update

View the study website at:
www.mvn.usace.army.mil/About/LMRComp/

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