

FY23 UPDATE

REGULATING WORKS



US Army Corps
of Engineers®



PROJECT DESCRIPTION

Authority – Since 1881, the Regulating Works Project has been authorized by various River and Harbor Acts, mainly the River and Harbor Acts of June 25, 1910; January 21, 1927; and July 3, 1930.

Description - The St. Louis District of the U.S. Army Corps of Engineers (Corps) is charged with obtaining and maintaining a navigation channel on the Middle Mississippi River (MMR) that is a minimum of nine (9) feet deep and 300 feet wide with additional width in bends as necessary (commonly called the Regulating Works Project). As authorized by Congress, the Project is obtained by construction of revetment, rock removal, and river training structures to maintain bank stability and ensure adequate, reliable navigation depth and width. The long-term goal of the Project, as authorized by Congress, is to obtain and maintain a navigation channel and reduce federal expenditures by alleviating the amount of annual maintenance dredging through the construction of river training structures and revetments.

Relevance to the Region/Nation:

- The Mississippi River is an artery of commerce critical to the movement of hundreds of millions of tons of essential goods and commodities such as corn, grain, coal, petroleum, and many other products important to the national economy.



US Army Corps
of Engineers®
Memphis District

Mississippi River Value to the Nation



DELIVERING THE SUPPLY CHAIN DURING EXTREME DROUGHT

MISSISSIPPI RIVER

LOW WATER EVENT 2022

START DATE OF EVENT: 01 SEP 2022

When our nation's busiest commercial waterway is impacted by low water levels, USACE works with Federal, State, Local and Industry partners to keep goods moving.



(AS OF 15 DEC 2022)

VALUE TO THE NATION

MISSISSIPPI RIVER ANNUAL TONNAGE VALUE: **~\$934 BILLION**

MISSISSIPPI RIVER ANNUAL TONNAGE: **659 MILLION** SHORT TONNES OF CARGO

TOP FIVE MISSISSIPPI RIVER COMMODITIES



PETROLEUM & PETRO-CHEM PRODUCTS



CHEMICALS & RELATED PRODUCTS



COAL



FOOD & FARM PRODUCTS
(Corn & Soybean Primarily)



CRUDE MATERIALS



CONSTANT ACTION

NUMBER OF ACTIVE DREDGES: **6 TOTAL**

DOLLARS INVESTED IN LOW WATER 2022 DREDGING SINCE 01 SEP 2022: **\$50.3 MILLION**

CUBIC YARDS (CYS) OF DREDGED MATERIAL SINCE 01 SEP 2022: **14 MILLION CYS**

ENOUGH TO FILL MORE THAN **4,242** SWIMMING POOLS



CONSISTENT INVESTMENT | USACE MISSISSIPPI RIVER INVESTMENT SINCE 2012

BIPARTISAN INFRASTRUCTURE LAW

\$274 MILLION

To address damages to revetments and dikes.

MISSISSIPPI RIVER & TRIBUTARIES PROGRAM (MR&T)

\$1.52 BILLION

To construct over 2M revetment squares and 14 miles of dikes.

REGULATED WORKS PROGRAM

\$55.2 MILLION

To remove rock from the channel, place revetments, and construct river training structures.

REVELEMENTS, DIKES, AND RIVER TRAINING STRUCTURES CONCENTRATE RIVER FLOW AND FORCE IT TO SCOUR OUT A DEEPER NAVIGATION CHANNEL WHILE REDUCING BANKLINE EROSION.



U.S. Army Corps
of Engineers®

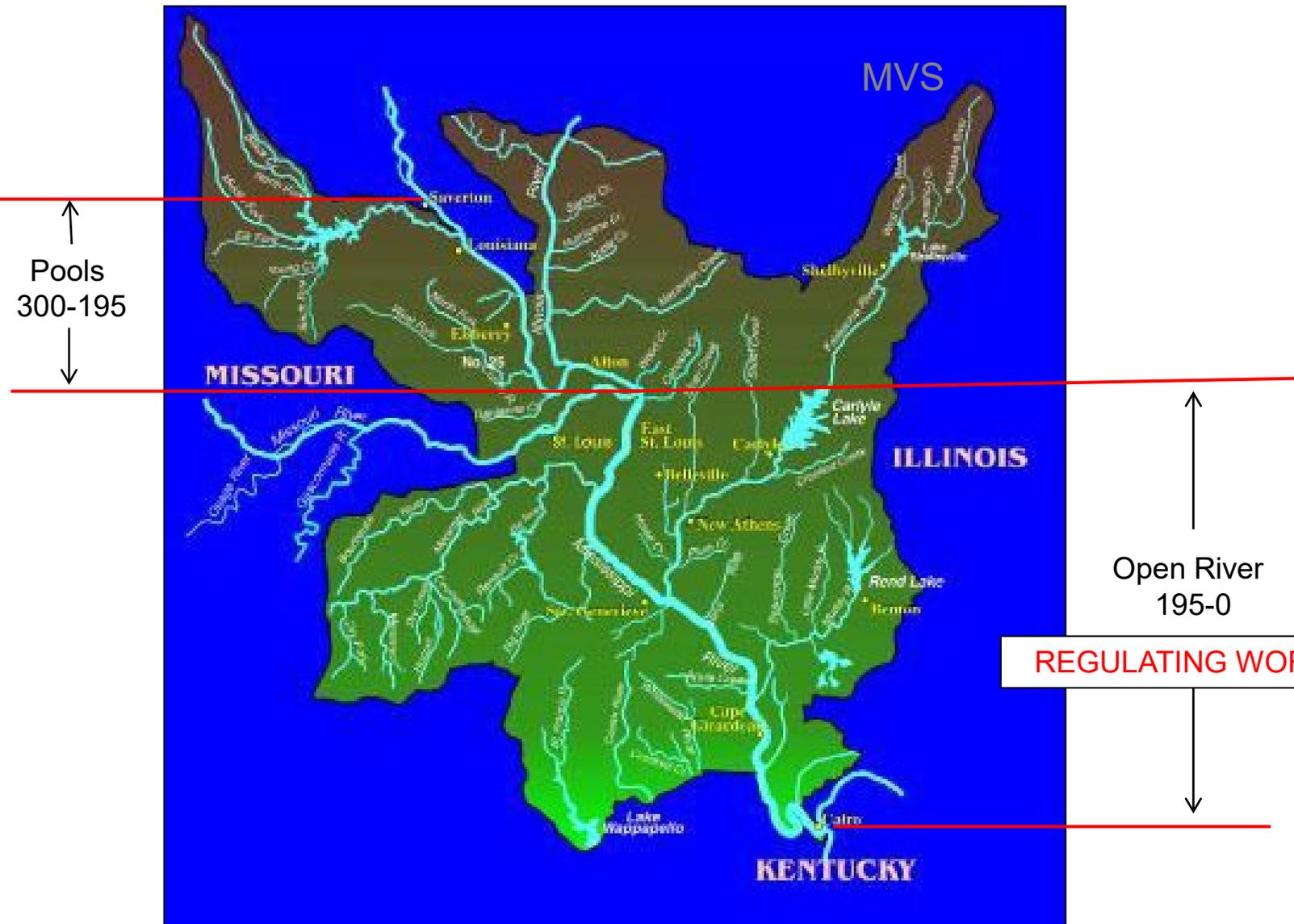
BUILDING STRONG®



BUILDING STRONG®



PROJECT DESCRIPTION



Construction Execution - Bankline Restoration at Dogtooth Bend (Len Small)



Project Collaboration - Annual RATT Meeting on Middle Mississippi River



TOOLS USED FOR MAINTAINING AUTHORIZED NAVIGATION CHANNEL DIMENSIONS ON OPEN RIVER



Dikes and other River Training Structures



Dredging



Rock Removal



Weirs

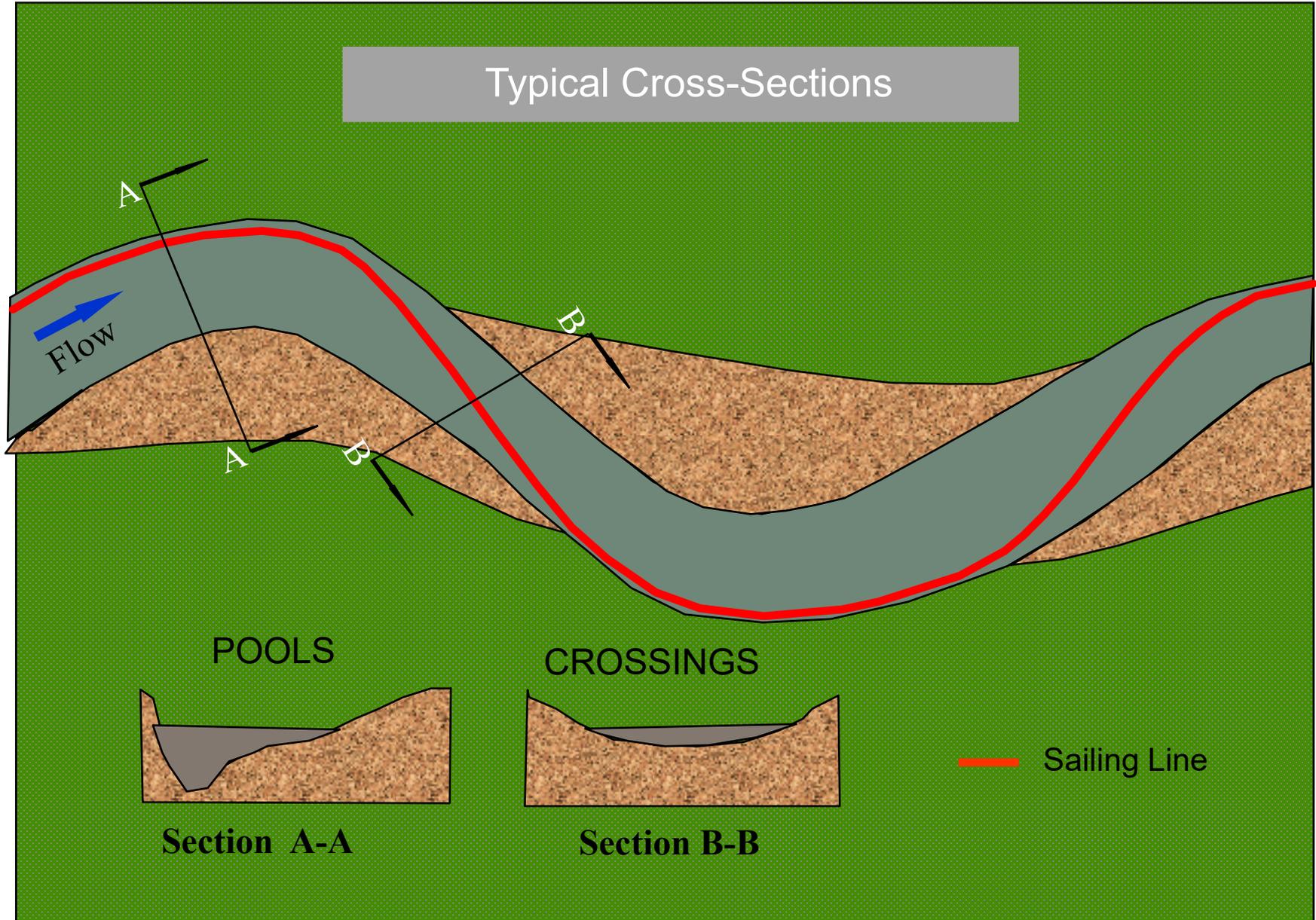


Revetments



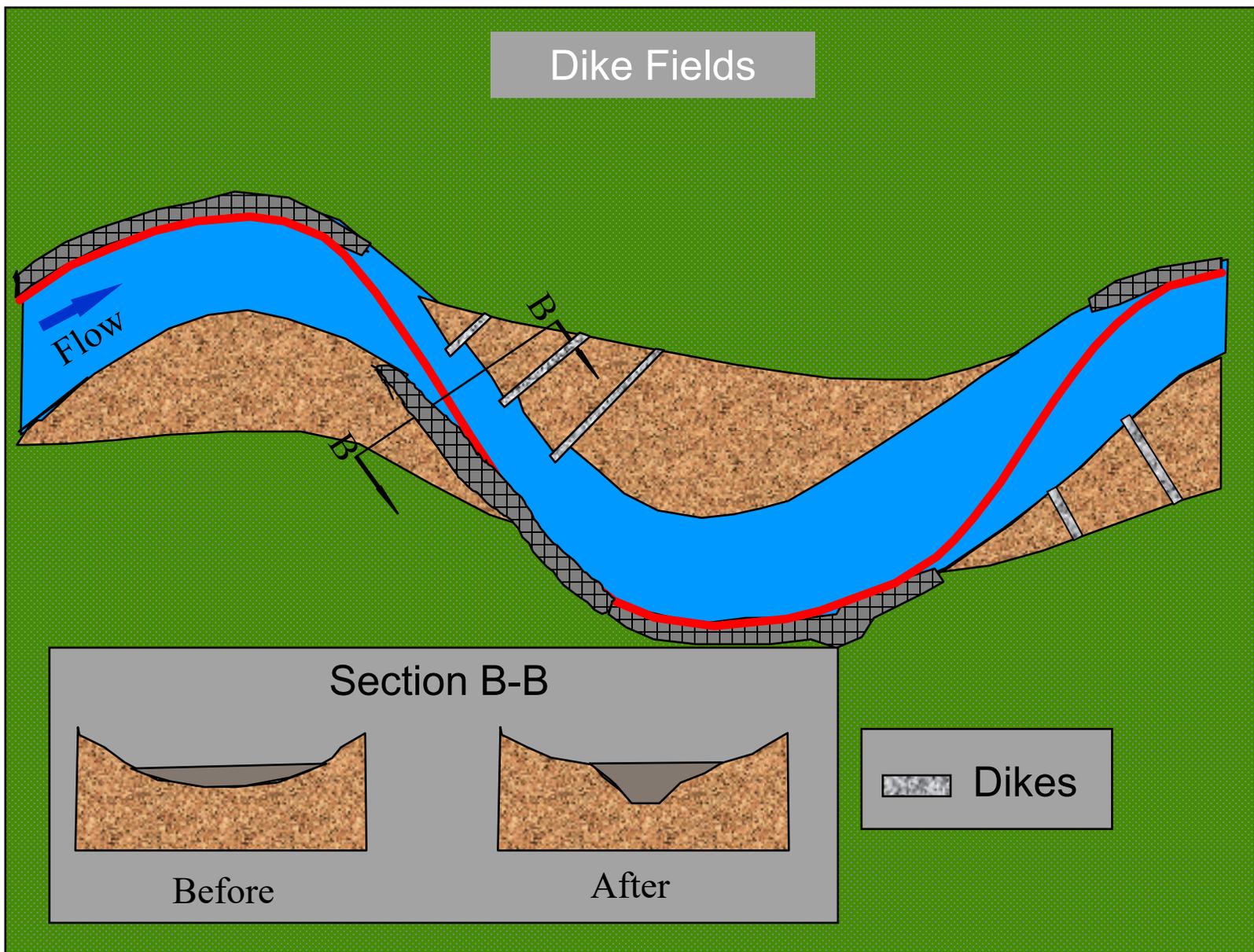
RIVER TRAINING STRUCTURES

Typical Cross-Sections



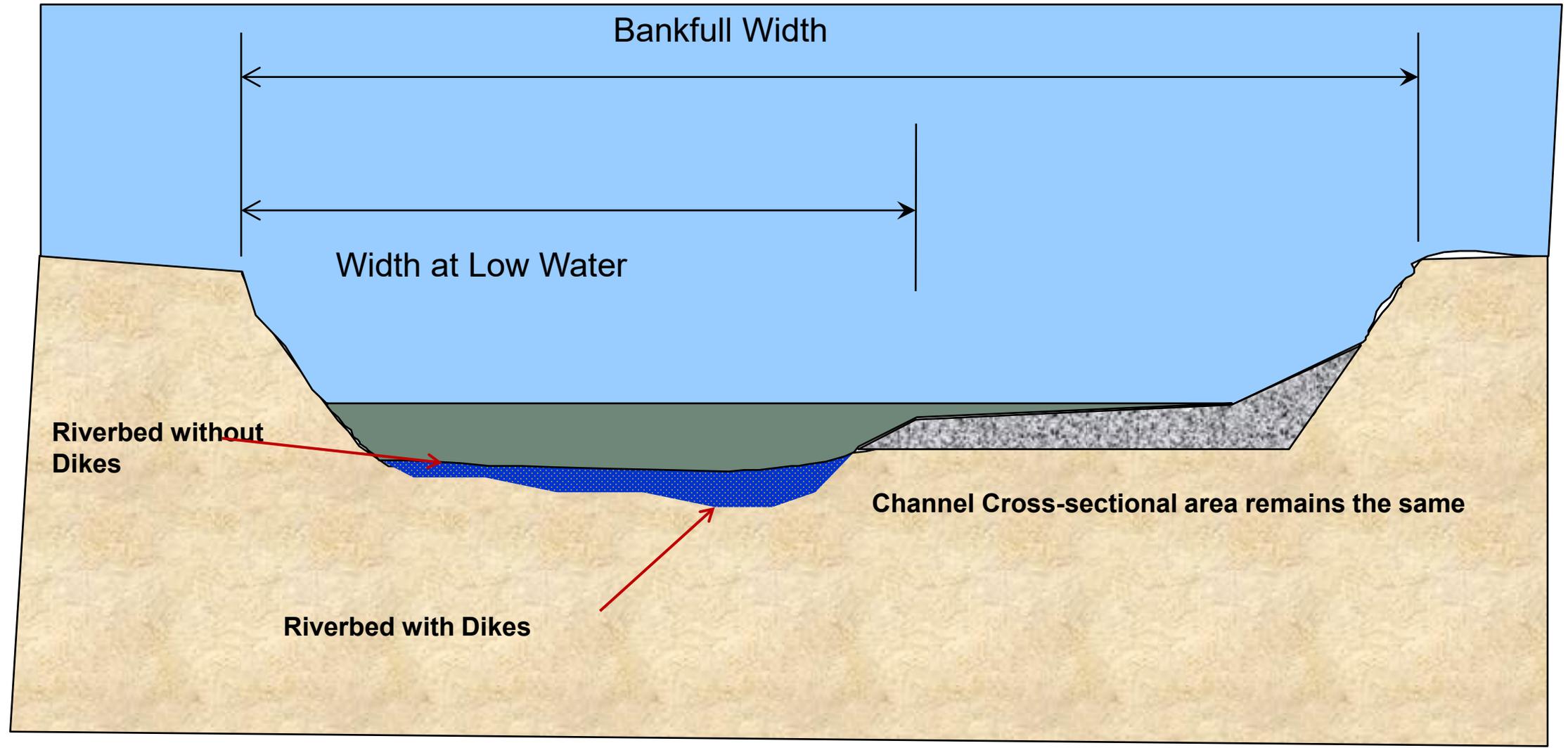


RIVER TRAINING STRUCTURES



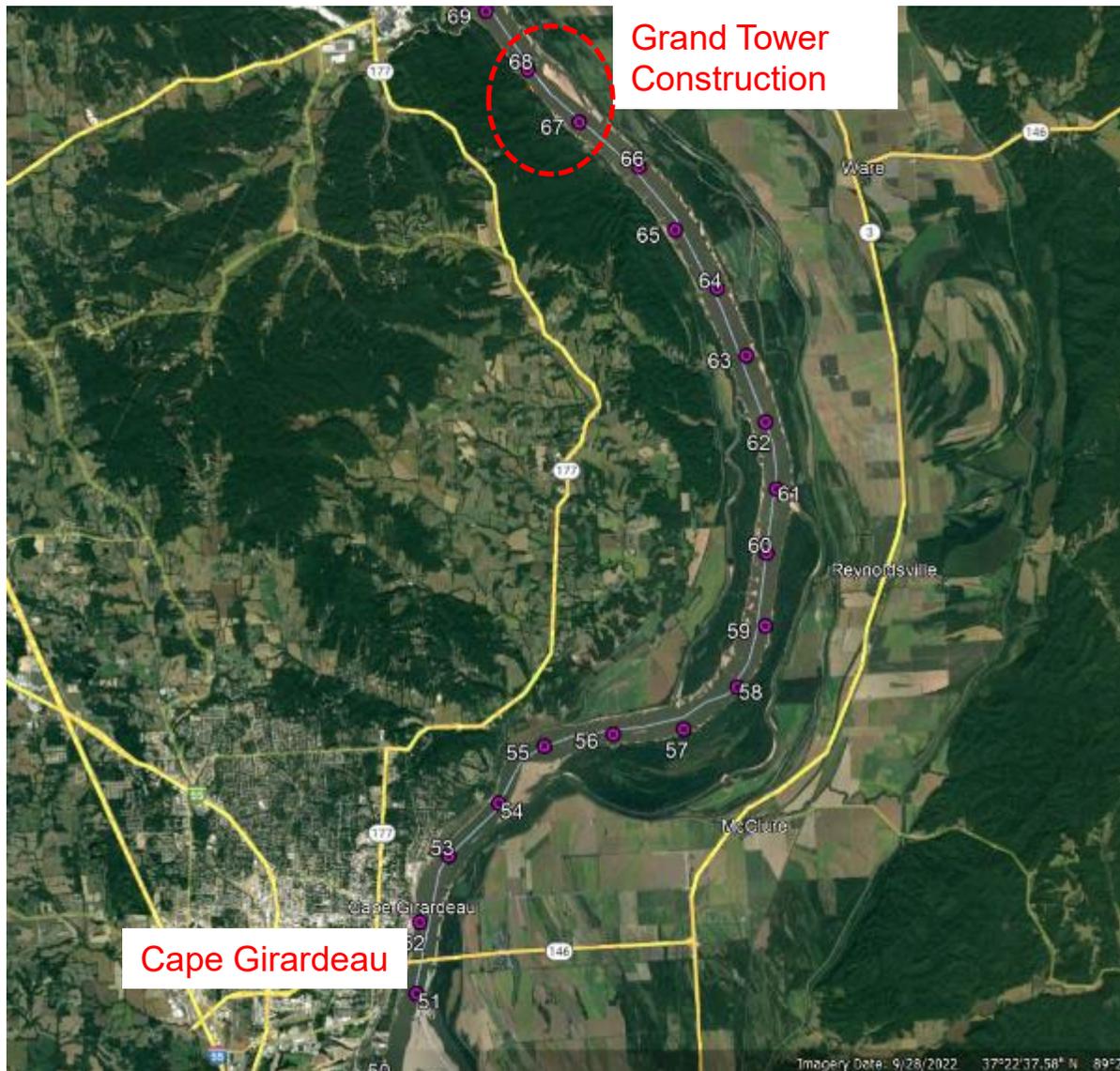


RIVER CONTRACTION





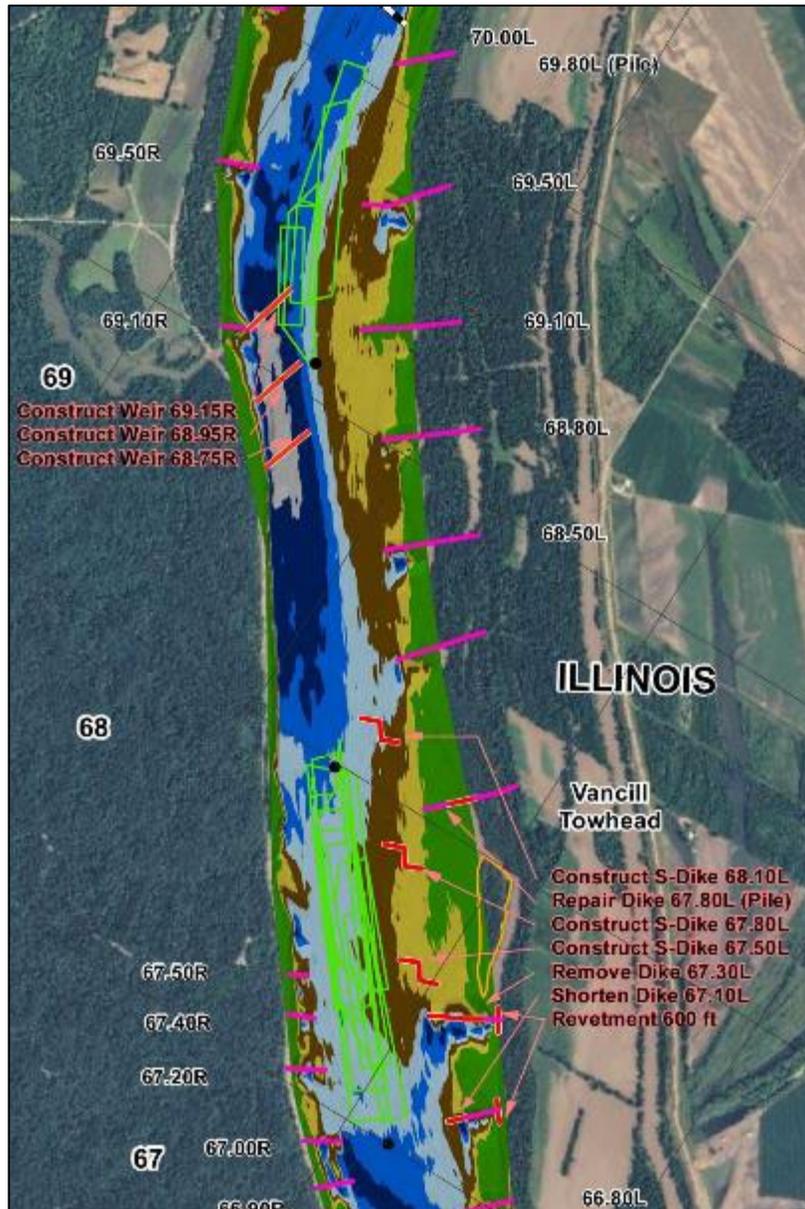
GRAND TOWER (VANCIL TOWHEAD) LOCATION



Grand Tower Work Location is 15 miles upstream of the City of Cape Girardeau, at Upper Mississippi River Miles 68 - 67



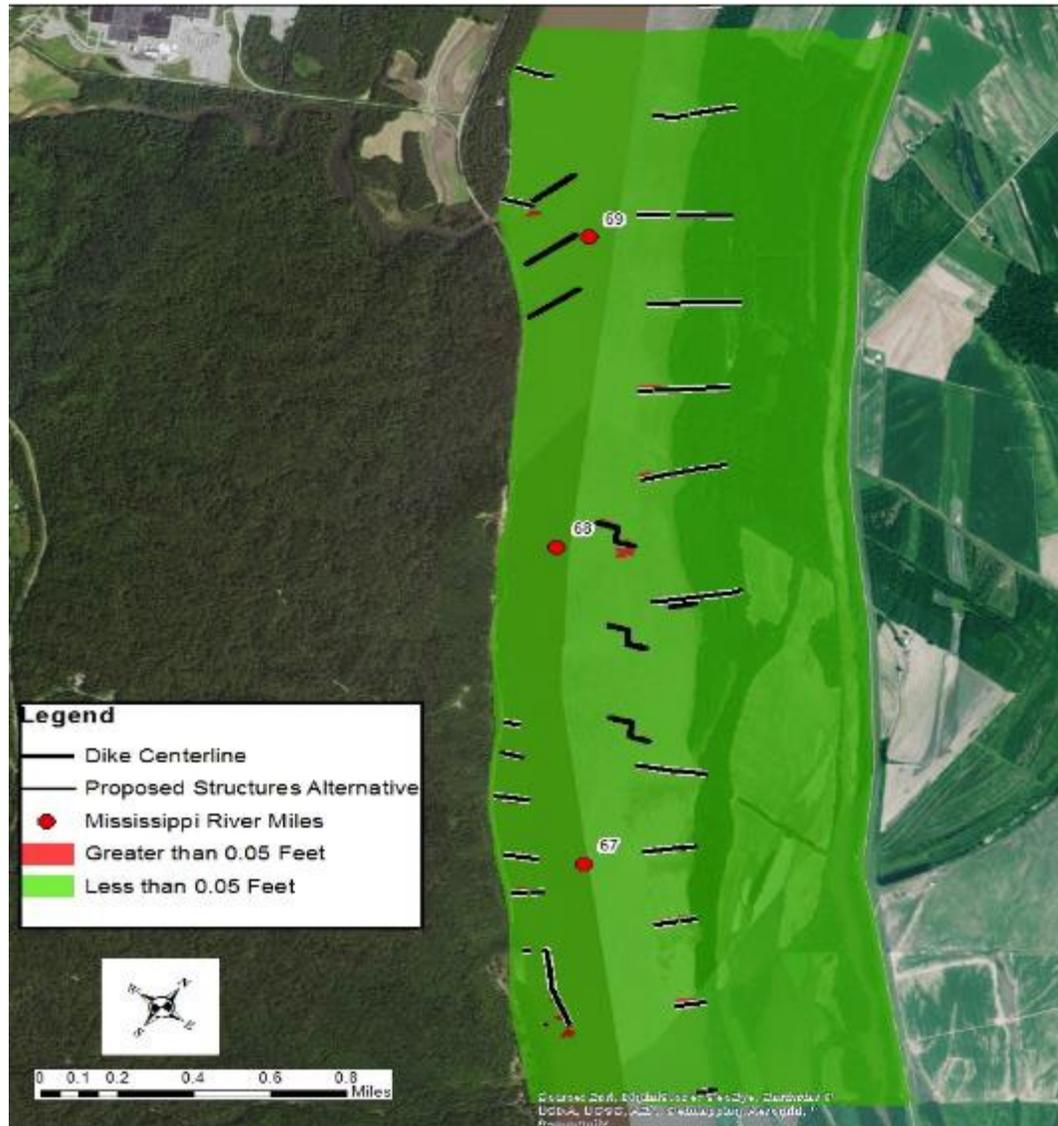
GRAND TOWER PHASE 5 (VANCIL TOWHEAD)



- Repetitive Dredge Issue
 - 2000 to 2015 4.8M cy - \$11M
 - 2010 to 2015 1.7M cy - \$4.2M
 - 2015 278,000 cy - \$700k
- Hydraulic Sediment Response (HSR) model was completed in 2012 with a total of 37 alternatives evaluated.
- Alternative 33 was selected because it reduced/eliminated repetitive dredging and maintained ecological diversity within the study reach
- 2014 a public hearing was held (19-Feb-14) and we received many comments about the impacts of river training structures to flood heights and the construction of new “diverter” dikes.
- Based on public comments we moved forward with a numerical model (AdH 2-D) to evaluate the hydrodynamic portion of this project. The modeling was completed in November 2015 and the report finalized February 2016.



ADH MODEL RESULTS



Significant Public concerns with respect to increase in Water Surface Elevation (WSE) with this Project. Additional measures were taken to ensure that this would not occur

- Two Dimensional Adaptive Hydraulic (AdH) Model completed.
 - Localized increase near river training structures but no overall impacts within the reach (<0.05 feet)



GRAND TOWER PHASE 5 VANCIL TOWHEAD CASE STUDY



Construction of S Dikes – March 2017



Aerial Imagery Bar Formation – September 2022



GRAND TOWER PHASE 5 CASE STUDY



Construction Complete in 2017

- No Mechanical Dredging required to maintain navigation channel since construction complete. Includes low water period of 2022

Water Surface Elevation (WSE)

- No measured increase in WSE

Bar Complex

- 1.8 Miles of wetted perimeter
- 63 Acres of ephemeral island
- 5,000 feet (9/10th mile) long side channel

2020 USACE Chief of Engineers Award of Excellence

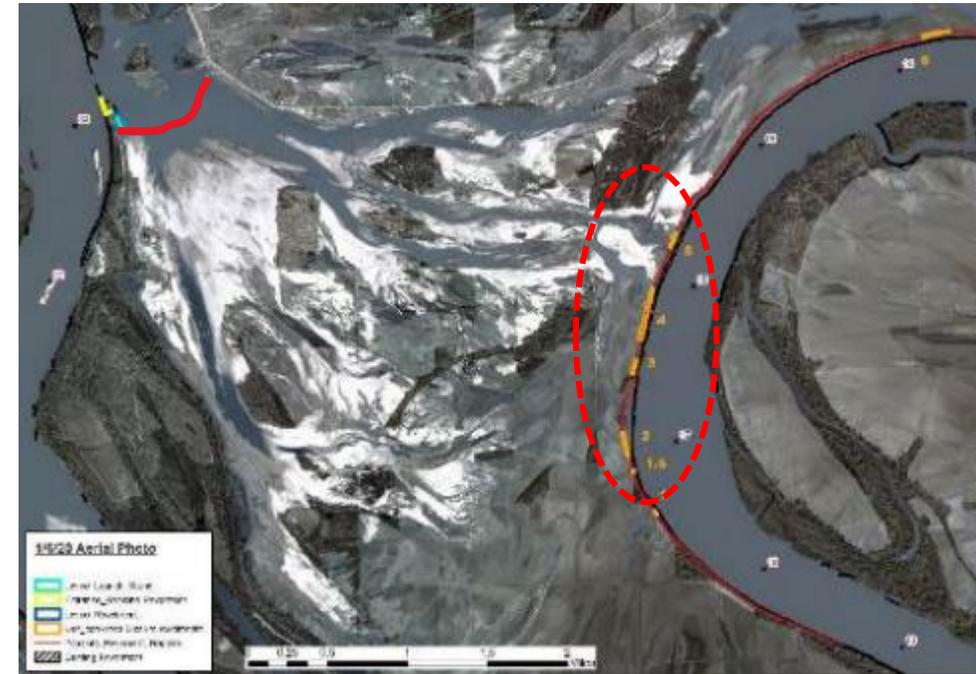
- Honor Award for the reduction of dredging and creation of habitat



REGULATING WORKS (CG)

CURRENT WORK FEATURES

- Dogtooth bend emergency structure completed in January 2021. The structure overtopped multiple times and is working as designed. No O&M requirements have been identified at this time.
- Dogtooth Bend Phase 7 – Revetments on downstream end. FY23 funding will not meet full need.
- Dogtooth Bend Risk and Alternatives Analysis
 - Stabilize downstream revetments (DTB Phase 7)
 - Increase roughness (vegetation) on the upstream end
 - Naturally occurring/new plantings (NRCS)
- Evaluate future work areas – 2022/2023 dredge season significant with low water



Milestones

- Dogtooth Bend Phase 7 task order award
 - August 21, 2023– FY23 SATOC
- Dogtooth Bend Risk and Alternatives Assessment
 - 8/1/2022 – Start
 - 10/15/2023 – Report complete
- Future Work Locations
 - Finalizing Project Requirements with 2022/2023 dredge data



STATUS OF LAWSUIT (NWF)



Yesterday ([August 1, 2023](#)), the Seventh Circuit reached a favorable decision (attached) in the National Wildlife Federation's challenge the St. Louis District's 2017 final supplemental environmental impact statement (FSEIS) its Regulating Works Project, which involves a long history of building and maintaining river training structures (dikes, weirs, etc.) to maintain navigation in the Middle Mississippi River. Plaintiffs argued that the FSEIS was deficient because the purpose and need statement was unreasonably narrow and because the alternatives analysis was insufficient. Plaintiffs also argued that the FSEIS was a "report" as that term is used in 33 U.S.C. § 2283(d)(1) (fish and wildlife mitigation provisions of WRDA 1986, Section 906, as amended) and that the Corps thus was required to prepare a detailed mitigation plan for the "continue construction" alternative selected in the FSEIS.

In short, we argued that the project's purpose and need statement was reasonable in light of Congressional direction on how to maintain the Middle Mississippi River navigation channel and that the Corps' detailed evaluation of two alternatives ("No New Construction" and "Continue Construction") was reasonable in light of the project's Congressionally authorized purpose and in light of the Corps' efforts to consider and screen out numerous other possible alternatives. We further argued that § 2283(d)(1) does not apply to a supplemental environmental impact statement because "report" is a WRDA term of art that refers to civil works planning reports in which the Corps can either recommend project alternatives to Congress or modify existing projects. Here, the 2017 FSEIS was not submitted to Congress and was prepared only to update the Corps' NEPA compliance, not to modify existing project authorizations (notably, preparing such a report would require non-Federal sponsor participation).

The Court largely accepted our arguments, concluding that the purpose and need statement was reasonable and that the Corps considered a broader array of alternatives "but offered substantial reasons for eliminating several from further consideration." With respect to § 2283(d)(1), the Court found that legislative history, as well as the "textual clues" in other WRDA provisions, suggest uses of "report" generally "refer only to reports submitted to Congress" and that certain other provisions suggest NEPA documents are not included in the term "report." The Court also noted that the Corps issued implementation guidance indicating that § 2283(d)(1) applies only to reports submitted to Congress for authorization, and Congress has not expressed any disagreement or corrected the Corps' interpretation.