

The Mississippi River Commission

History of the Management of the Mississippi River



Louisiana Coastal Protection and Restoration Authority



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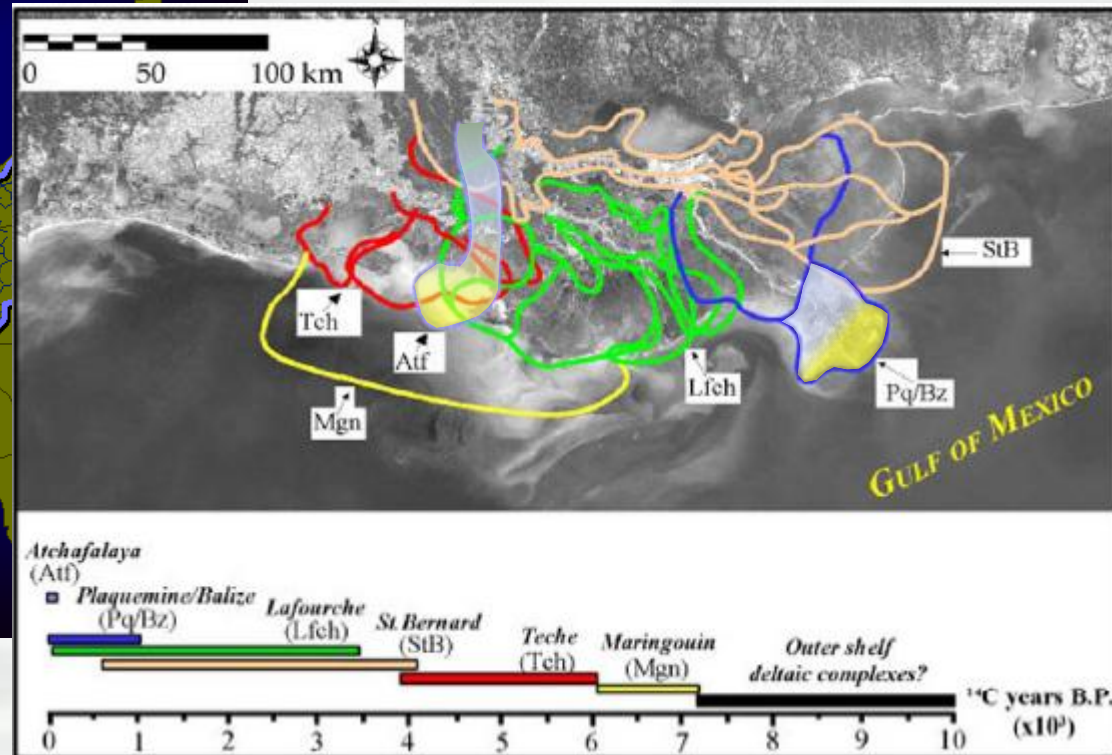
Presentation Outline

- Overview of Mississippi River
- History of Mississippi River Commission (MRC)
- Mississippi River flood of 1927
- Mississippi River and Tributaries (MR&T) project
- Lower MR&T project
 - ▶ Flood risk reduction system
 - ▶ Deep water navigation
 - ▶ Ecosystem restoration



Mississippi River

Mississippi River Drainage Basin



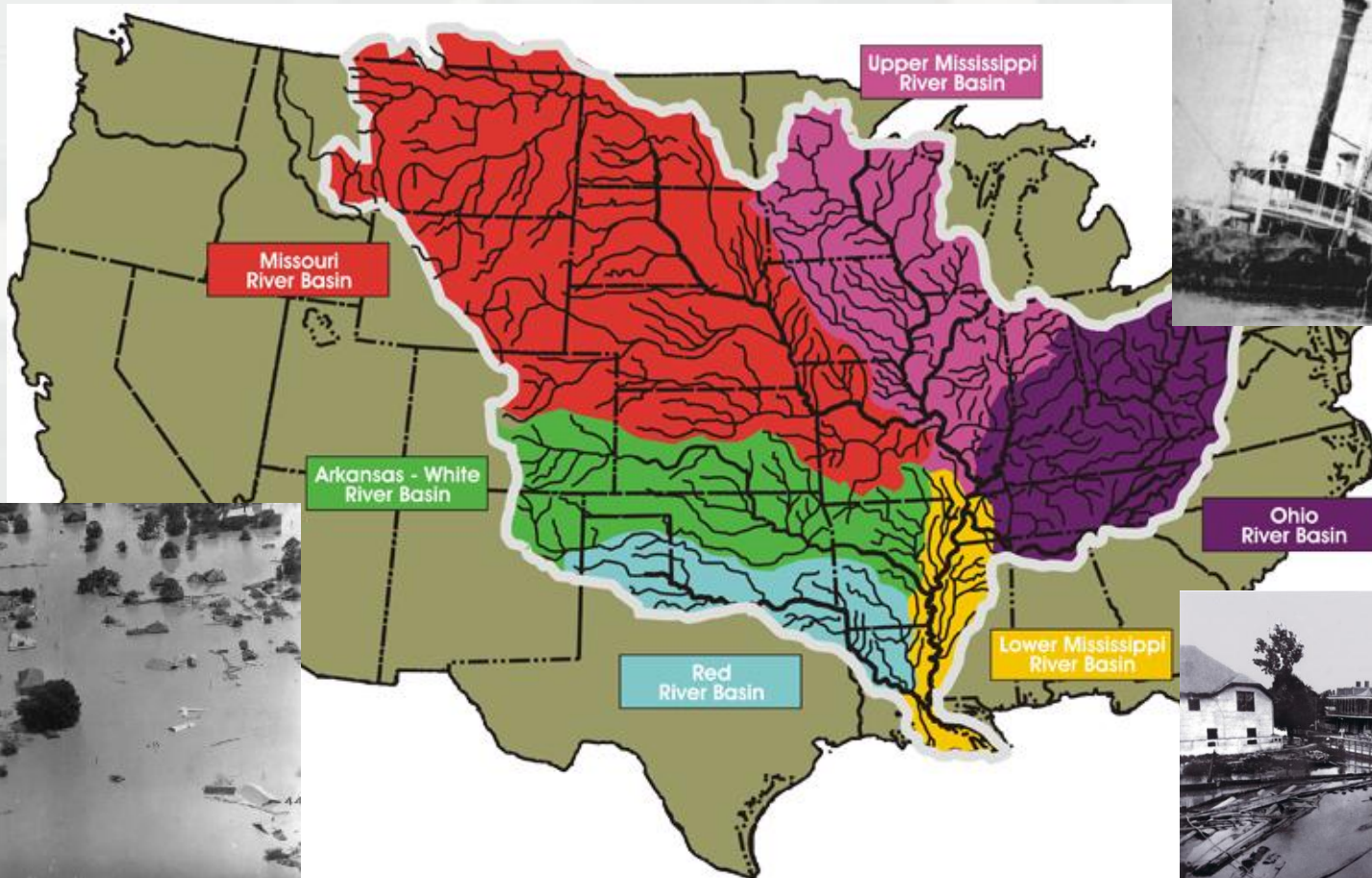
History of the Mississippi River and the creation of the Mississippi River Commission (MRC)

- **1717** First levee built by Europeans along the Mississippi River (3 ft high, 5400 ft long, and 18 ft wide at the top)
- **1743** French hasten development of levee system
- **1802** Congress created the modern Army Corps of Engineers
- **1803** Louisiana Purchase
- **1811** Arrival of the Steamboat
- **1876-1879** Jetty system completed
- **1879** Creation of Mississippi River Commission



Act of Congress on June 28, 1879

Charge of the Mississippi River Commission



Mississippi River Commission (MRC)

1879 Mississippi River Commission Act, Forty-Sixth Congress, Sess. I. Ch. 43.

- Jurisdiction on the Mississippi River from its headwaters at Lake Itasca, Minnesota, to the Head of Passes near the Gulf of Mexico
- Three officers from the U.S. Corps of Engineers
- One member from the U.S. Coast and Geodetic Survey (now the National Oceanic and Atmospheric Administration (NOAA))
- Three civilians (Two Civilian Engineers)
- All nominated by the President and confirmed by the Senate



Current Mississippi River Commission (MRC)



- Maj. Gen. John W. Peabody*
President Designee
Corps of Engineers, Vicksburg, MS
- COL. Margaret W. Burcham*
Corps of Engineers, Cincinnati, Ohio
- Brig. Gen. John R. McMahon*
Corps of Engineers, Portland, Ore.
- Rear Adm. Jonathan W. Bailey
NOAA, Silver Springs, Md.
- Honorable Sam E. Angel
Civilian, Lake Village, Ark.
- Honorable R. D. James
Civilian/Civil Engineer, New Madrid, Mo.
- Honorable Wm. Clifford Smith*
Civilian/Civil Engineer, Houma, La.



Mississippi River Floods

- ❑ Three years after establishment of the Commission, one of the most disastrous floods ever known devastated the entire delta area
- ❑ During that flood there were hundreds of crevasses
- ❑ Outlook for a permanent solution to flooding in the Mississippi Valley was disheartening
- ❑ 1881 through 1892, federal law prohibited the MRC from expending funds to build or repair levees for the sole purpose of protecting private property from overflow
- ❑ Major floods again occurred in 1912 and 1913
- ❑ The first federal flood control act , passed in 1917, facilitated the implementation of a “levees-only” program



The Great Mississippi Flood of 1927

- ❑ Herbert Hoover, then Secretary of Commerce, "the greatest peace-time calamity in the history of the country"



- ❑ Inundated more than 16 million acres
- ❑ Up to 500 people lost their lives, another 700,000 seeking shelter
- ❑ More than 41,000 buildings destroyed
- ❑ Total value of losses reached up to \$1 billion, when the federal budget rarely exceeded \$3 billion



Mississippi River and Tributaries (MR&T) Project

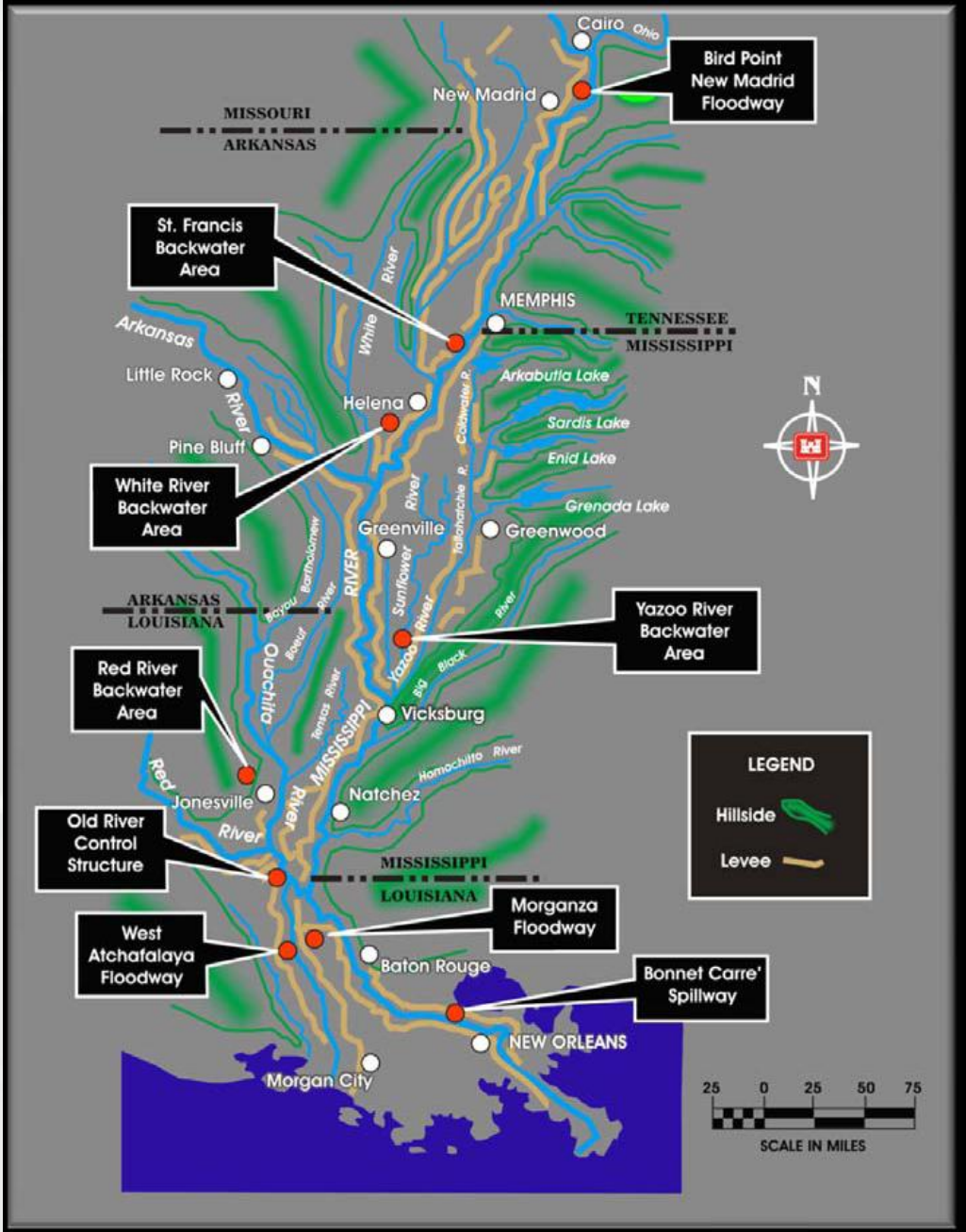
- ❑ ***Flood Control Act of 1928*** authorized MR&T Project
- ❑ Committed the federal government to a definite program of flood control (Jadwin Plan)
- ❑ Nation's first comprehensive flood control and navigation act.
- ❑ Largest flood control project in the world:
 - Levees for containing flood flows
 - Floodways for the passage of excess flows past critical reaches of the Mississippi River
 - Channel improvement and stabilization to provide an efficient and reliable navigation channel, increase the flood-carrying capacity of the river, and protect the levee system
 - Tributary basin improvements for major drainage basins to include dams and reservoirs, pumping plants, auxiliary channels and pumping stations



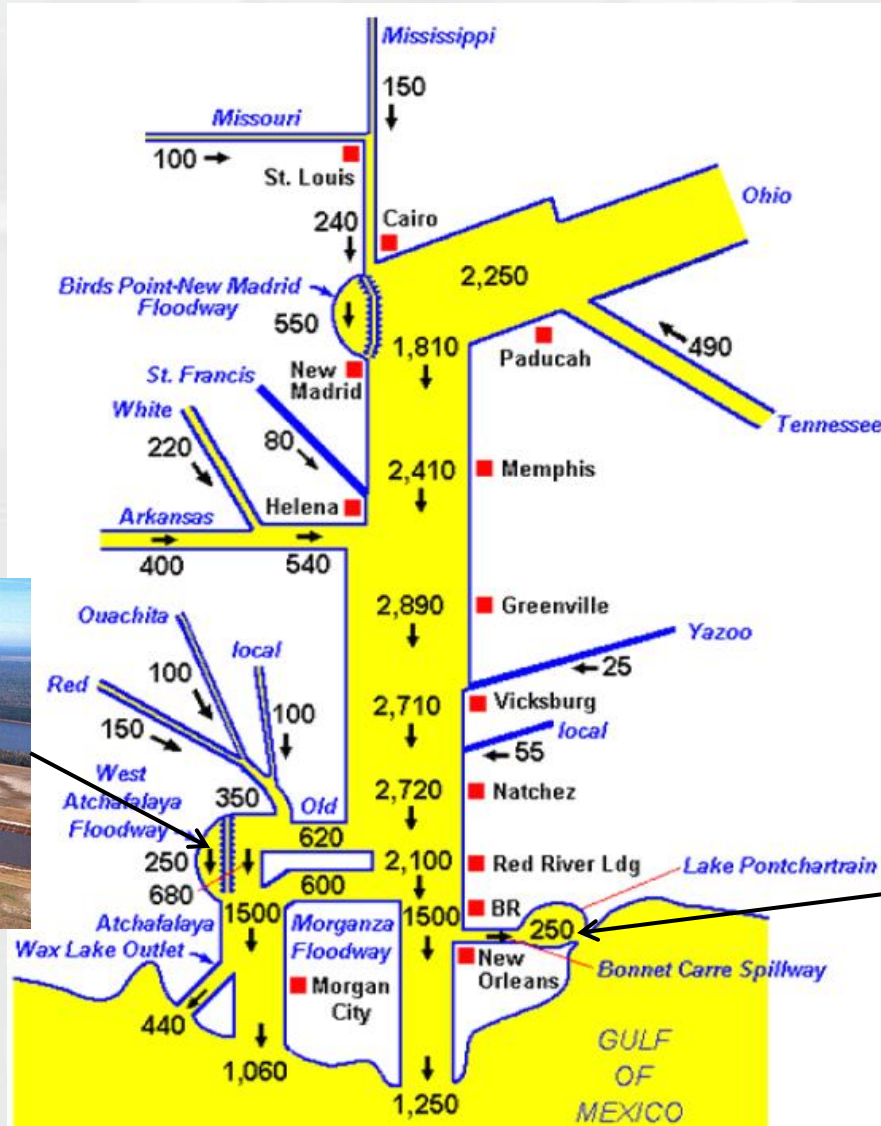
Mississippi River and Tributaries (MR&T) Project

- Designed to control the "project flood."
- Designed for floods larger than the record flood of 1927
- 11 percent greater than the flood of 1927 at the mouth of the Arkansas River
- 29 percent greater at the latitude of Red River Landing, amounting to 3,030,000 cfs at that location, about 60 miles below Natchez.
- US currently contributed nearly \$12 billion project
- Received an estimated \$425.5 billion return on that investment
- No project levee has ever failed since the inception of the project
- Estimated 37 to 1 return on investment when system is completed

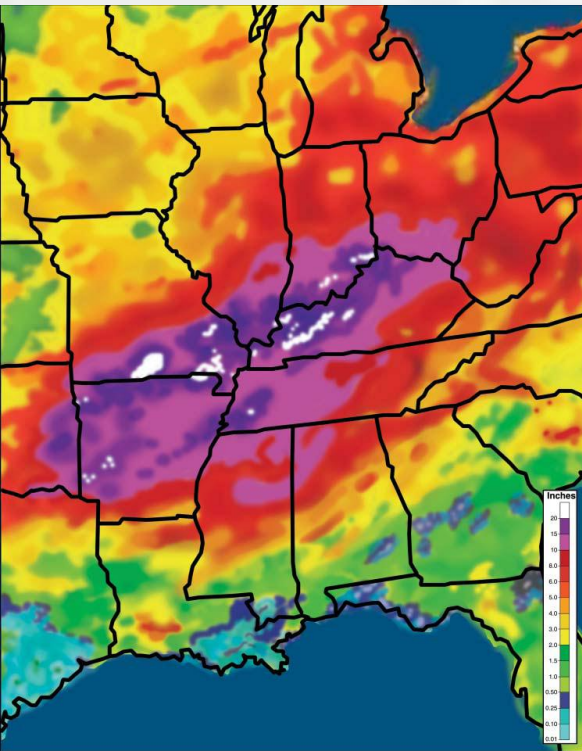




(MR&T) Project Design Flood Discharge in 1,000 cfs



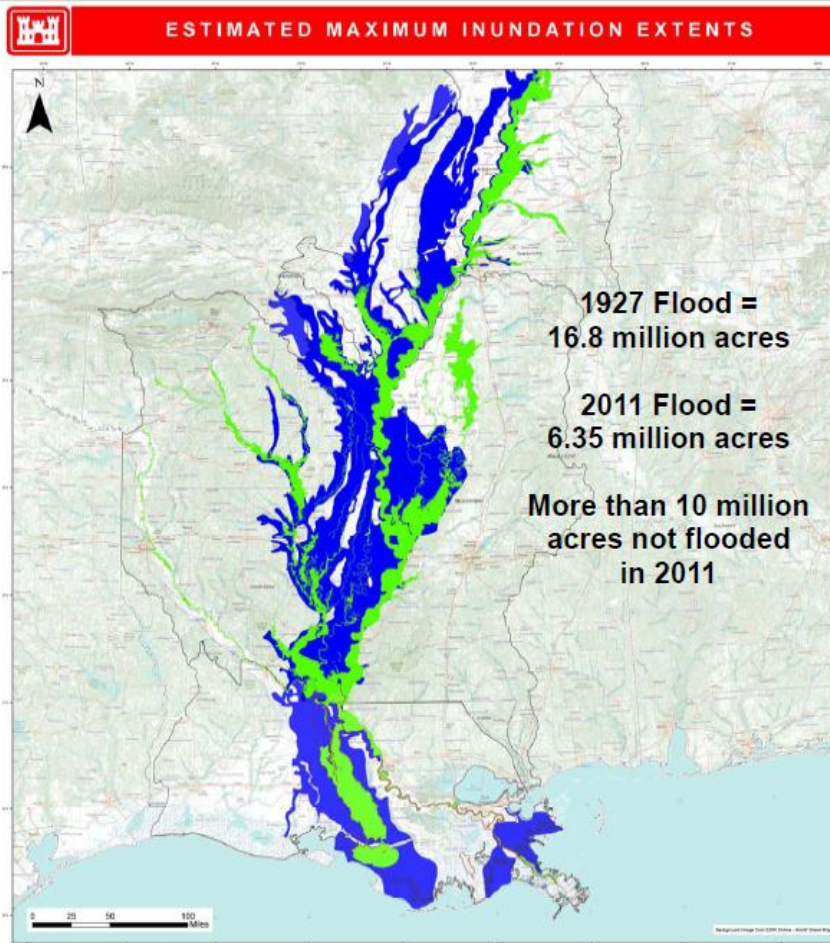
2011 MR&T Flood



**30-Day Rain Totals
(April 5 - May 5, 2011)**



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**1927 Flood =
16.8 million acres**

**2011 Flood =
6.35 million acres**

**More than 10 million
acres not flooded
in 2011**



- Legend**
- 1927 Flood Inundation Extent
 - 2011 Flood Inundation Extent
 - Levee
 - USACE District Boundary

Disclaimer
This map has been compiled using the best information available and is believed to be accurate; however, its preparation required many assumptions. Actual conditions during a flood event may vary from those portrayed, so the accuracy cannot be guaranteed. The levels of flooding shown should only be used as a guideline for emergency planning and response actions. Actual areas inundated will depend on actual flooding conditions and may differ from the areas shown on the map.



Activation of the Birds Point-New Madrid Floodway



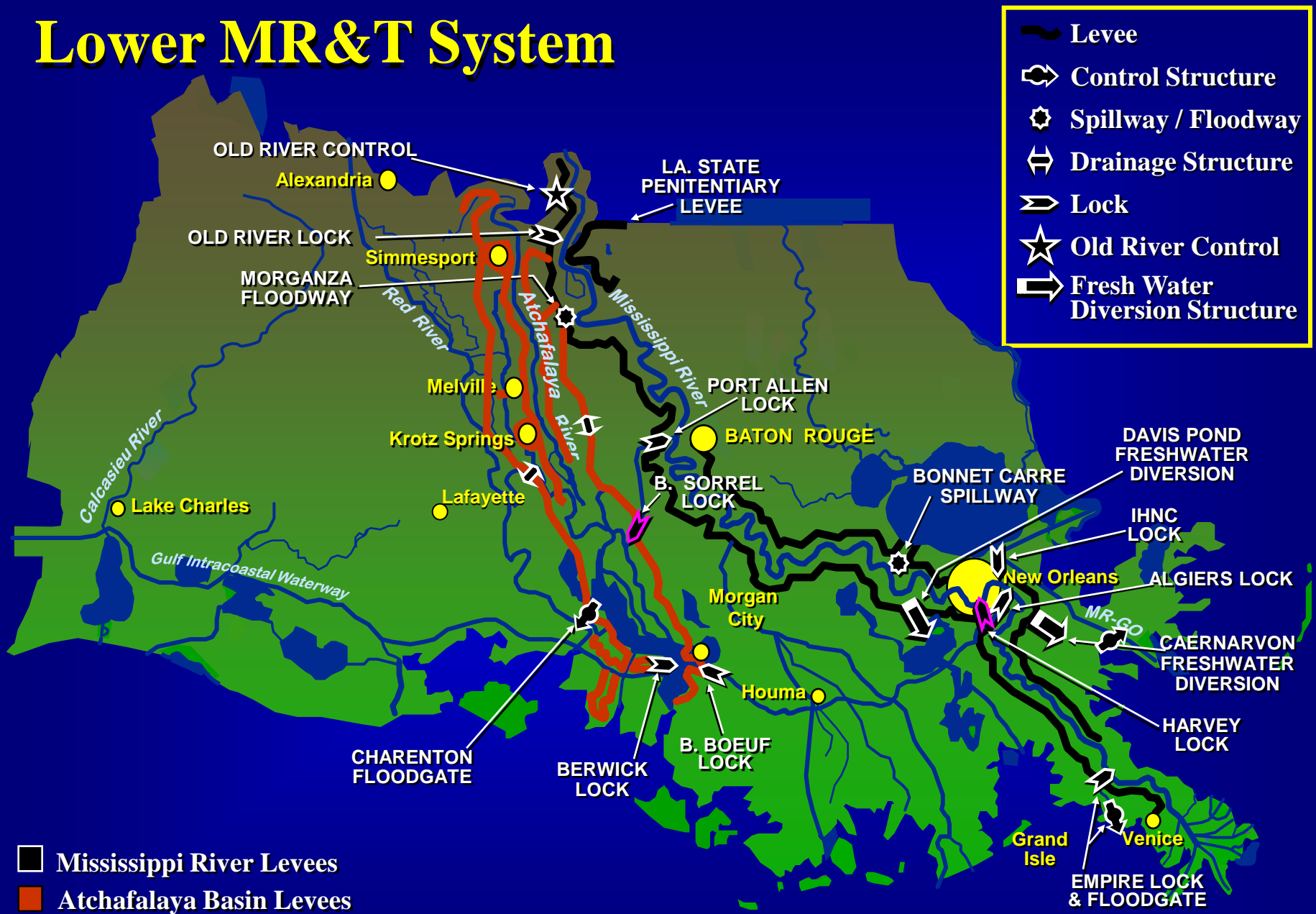
Opening of Morganza Floodway



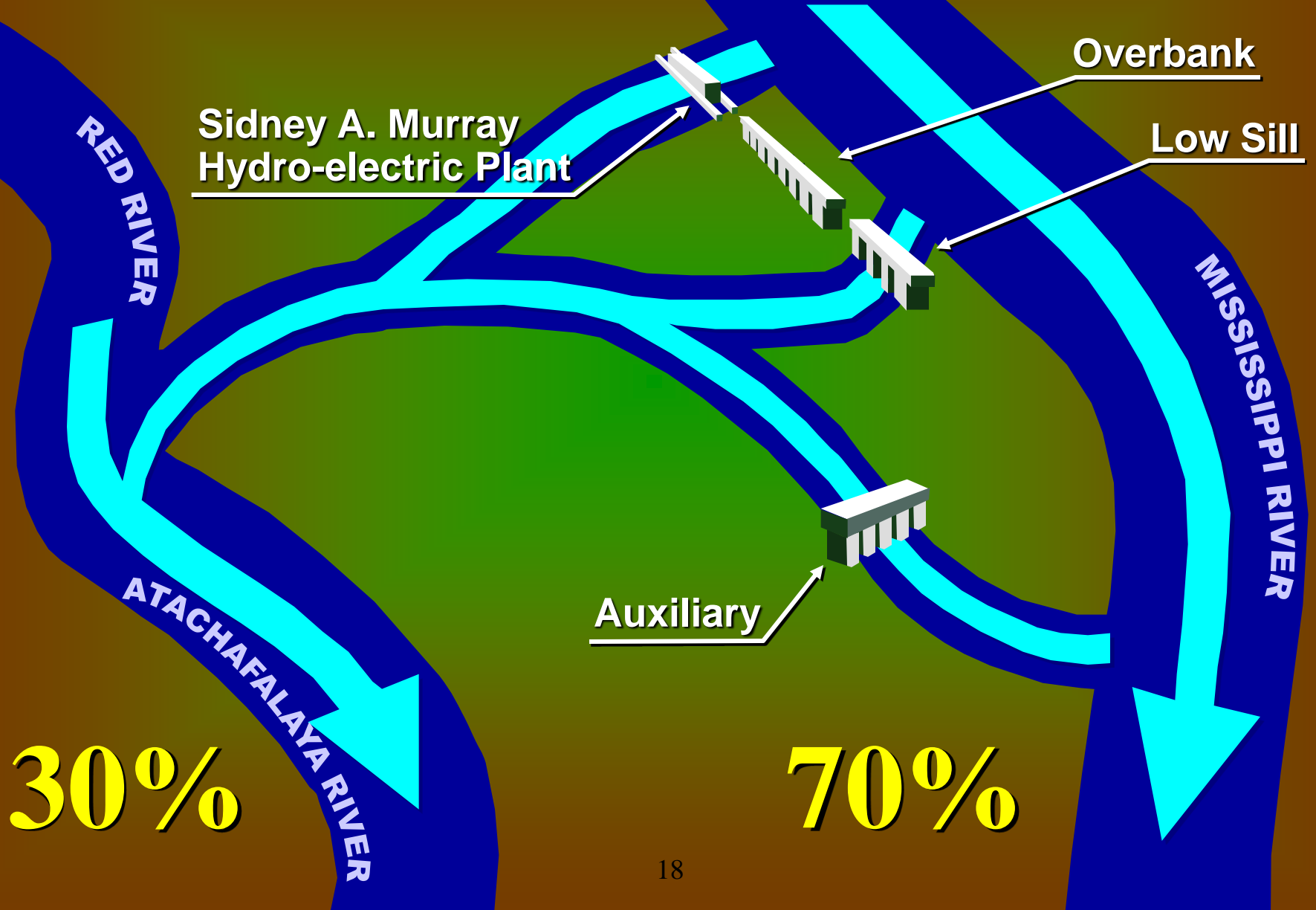
Navigation: Channel Improvements



Lower MR&T System



Latitude Flows at Old River





Deep Draft Navigation on Lower Mississippi River

- #1 Largest Port Complex in the United States
- U.S. Tonnage Rankings:
 - #1 - Port of South Louisiana
 - #7 - Port of New Orleans
 - #11 - Port of Plaquemines
 - #13 - Port of Baton Rouge
- 256 miles of deep draft navigation channel
- 25 Safe Harbor Deep Water Anchorages
- 420M Tons of Cargo/year
- 10,700 vessels per year



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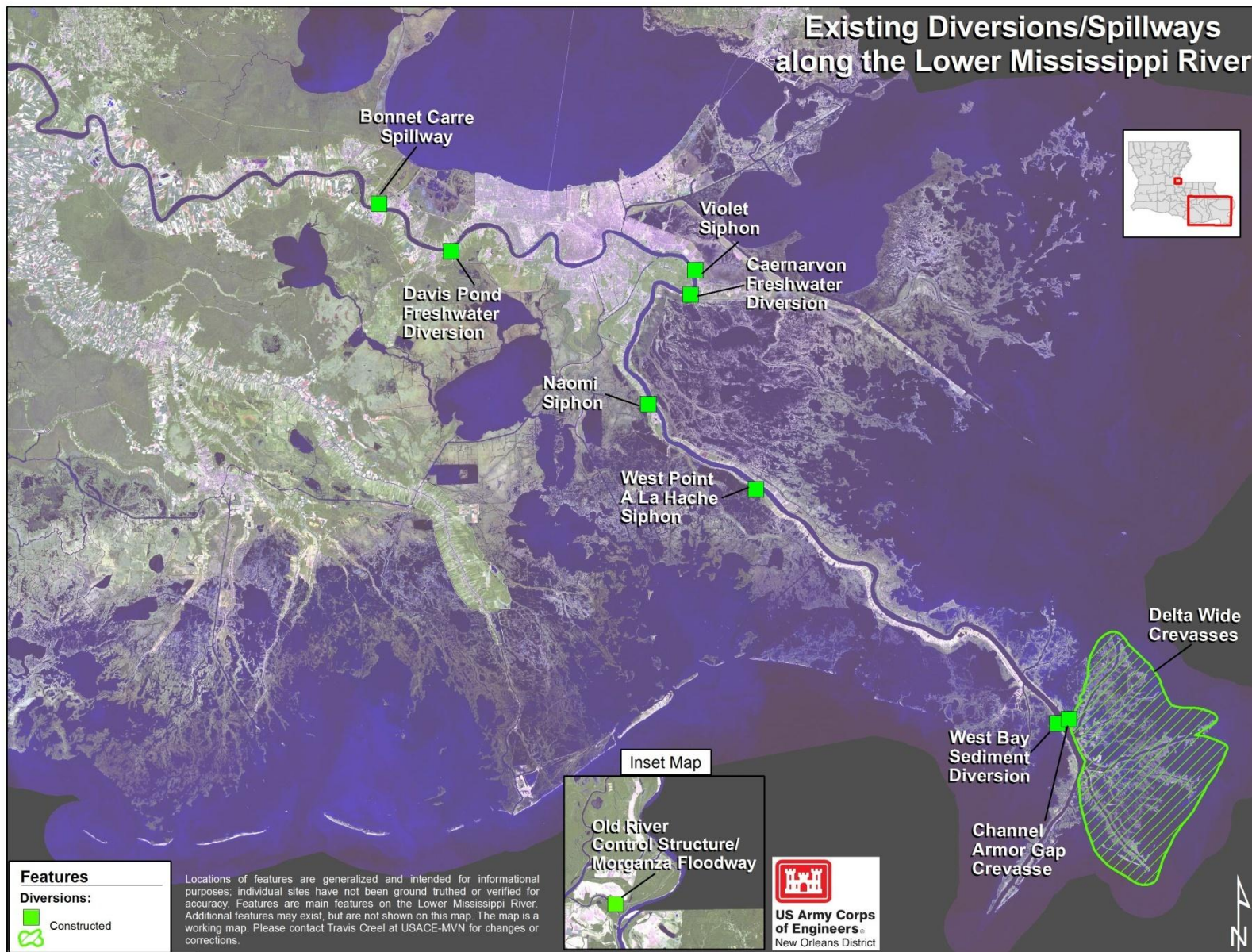


Mississippi River Baton Rouge to the Gulf of Mexico

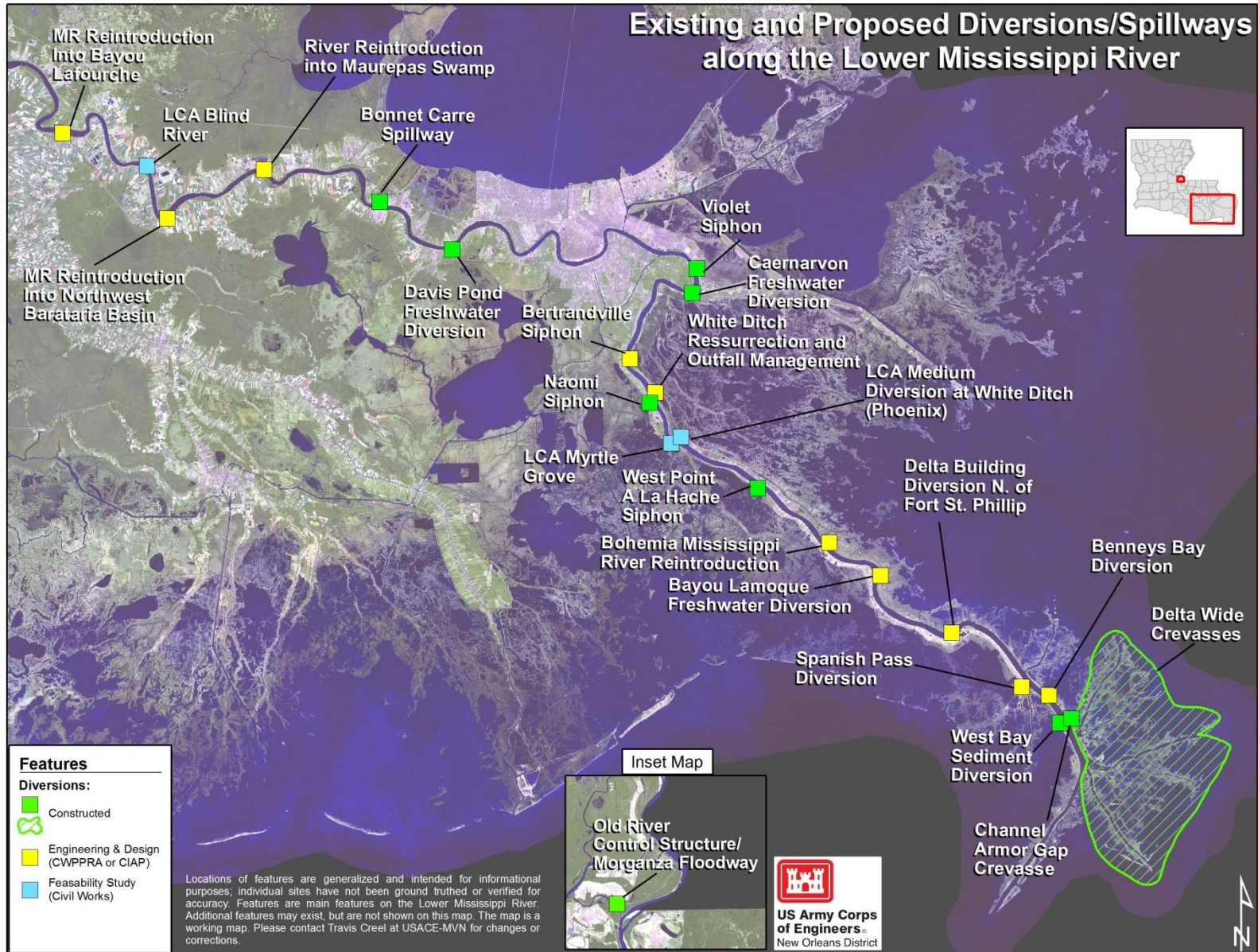


Ecosystem Restoration

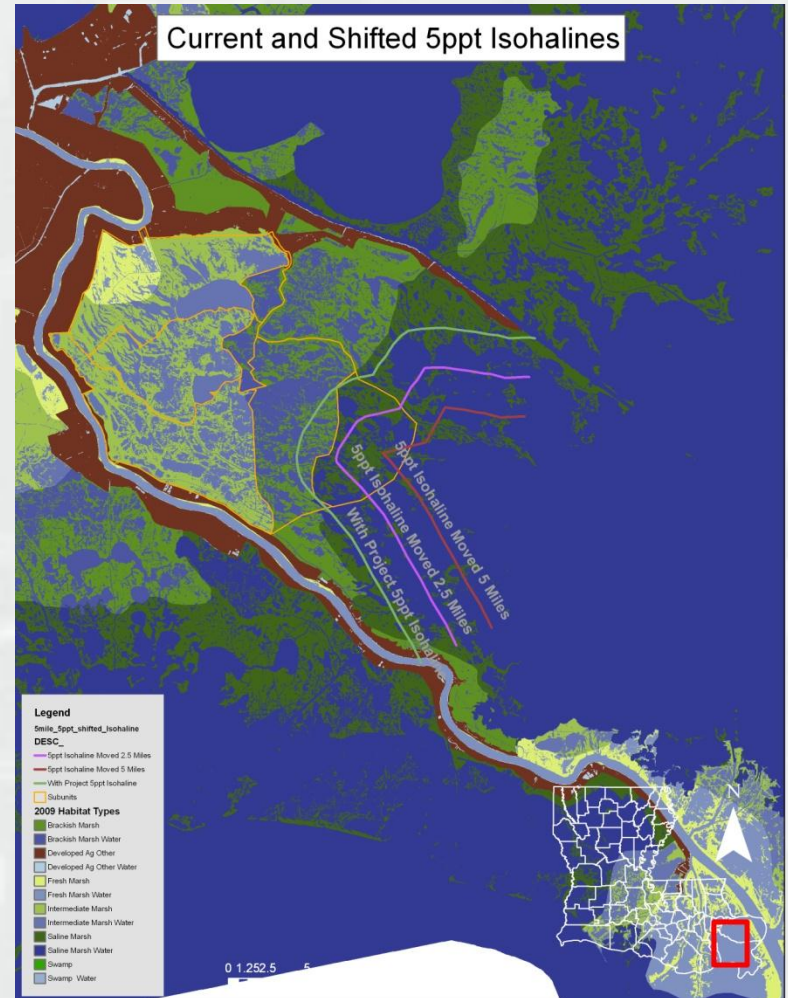
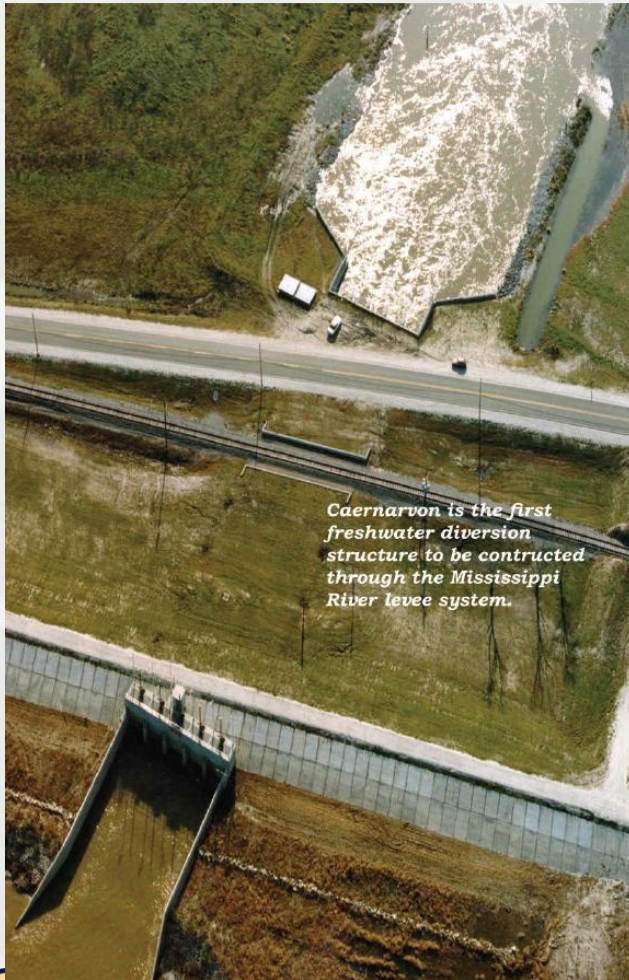
Water Resources Development Acts of 1974, 1986 and 1996



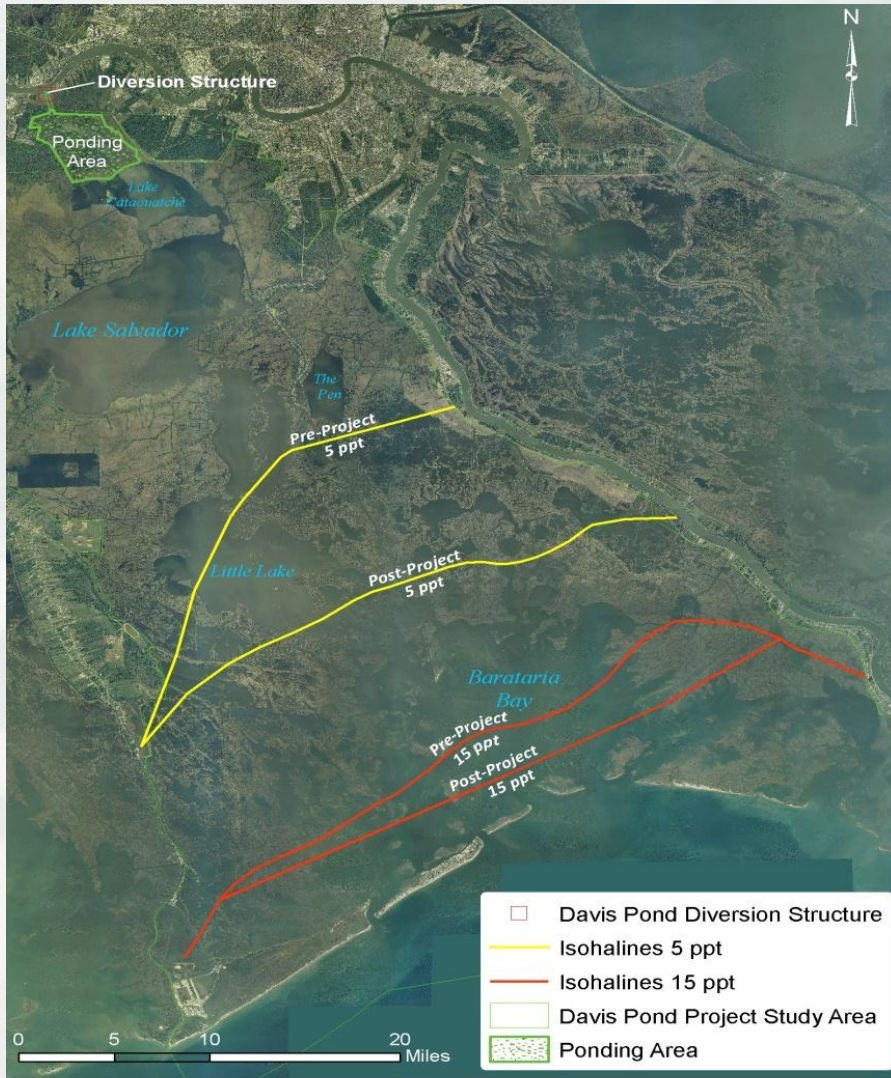
Ecosystem Restoration Existing and Proposed Diversions



Caernarvon Freshwater Diversion



Davis Pond Freshwater Diversion



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