



Association of Levee Boards of Louisiana



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November 30, 2022

www.dotd.la.gov

Today's Discussion

- **Public Works & Water Resources**
 - Levee Safety & Dam Safety
 - Louisiana Watershed Initiative
 - Statewide Flood Control Program

- **Office of Multimodal Commerce**
 - Ports & Waterways Division

Levee Safety Program

Inspections

- Assist Levee Districts with Inspections

Project Management

- Capital Outlay Projects

Regulatory Support

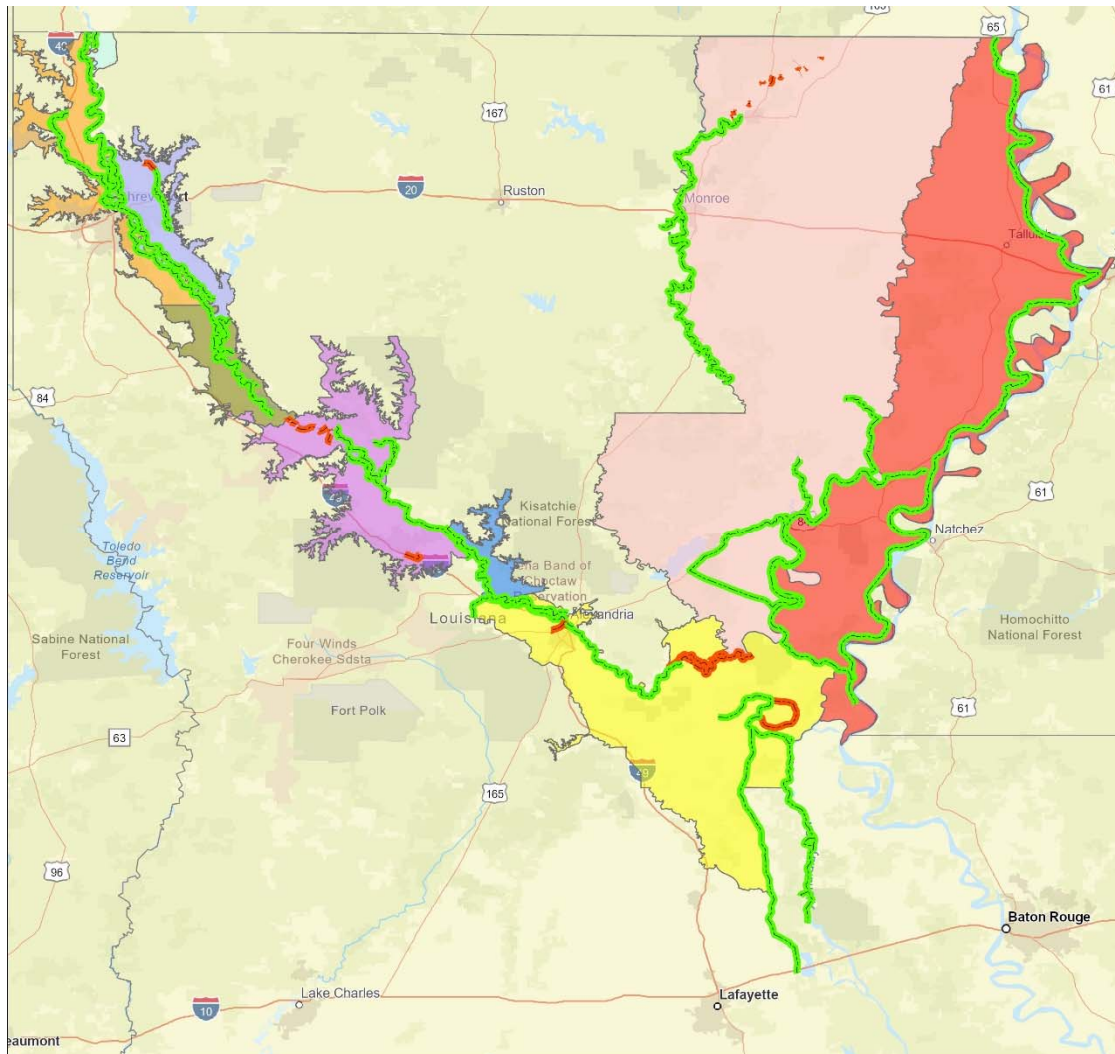
- Coordination for certifications
- Stakeholder meetings with USACE

Strategic Planning

- Review of USACE and FEMA guidance documents to identify upcoming requirements
- Interface with resources to determine if legislative activity should be considered



Levee Safety Program



Levee District / Type	Federal (Miles)	Non-Federal (Miles)
Bossier	66.04	3.31
Caddo	114.03	
Fifth	296.45	
Natchitoches	69.29	13.67
Nineteenth	26.16	
North Bossier	3.38	
Red River	51.67	
RRABB	196.51	76.24
Tensas	249.99	4.74

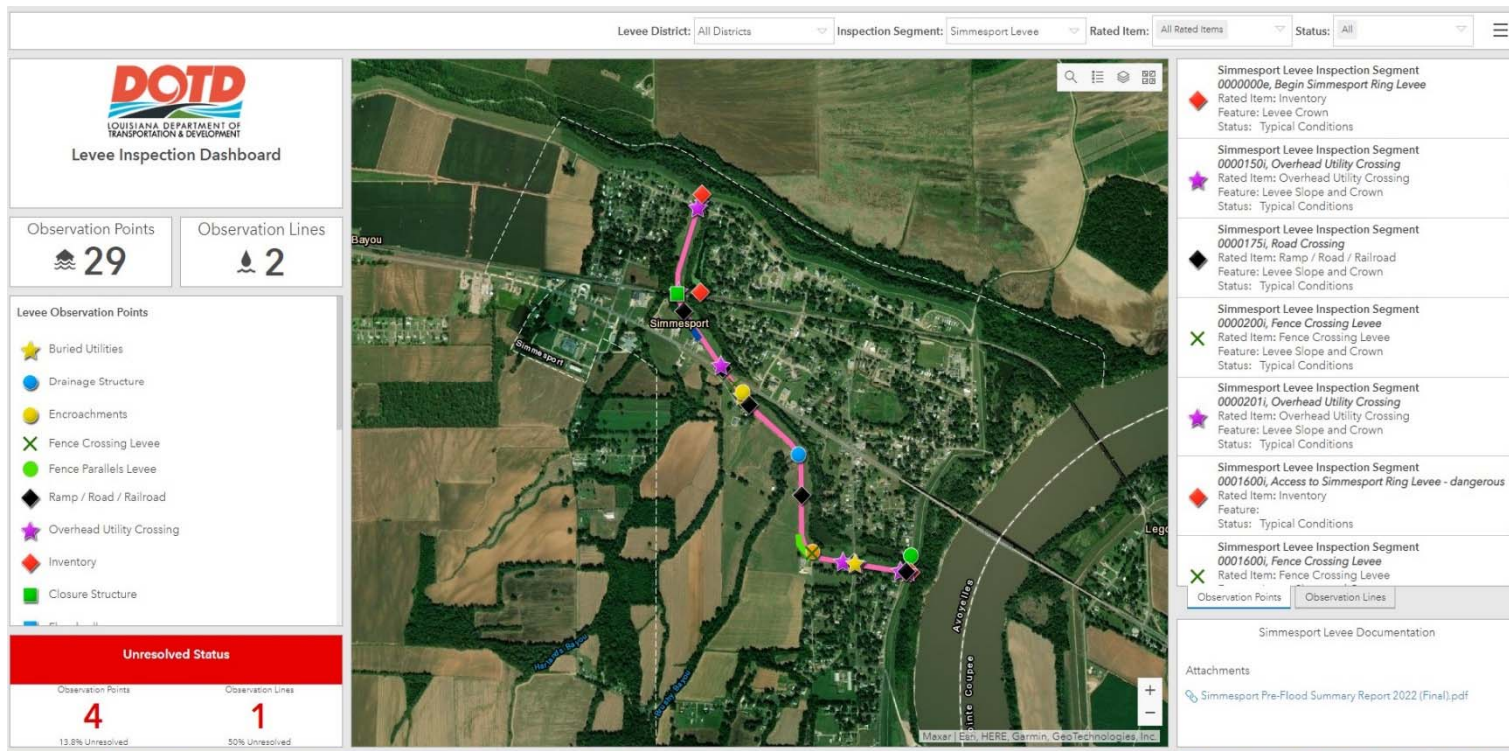
1073 miles of Federal Levees
(inspected semi-annually)
98 miles of Non-Federal Levees

Levee Safety Program

Levee Inspection

Inspections

- Assist Levee Districts with Inspections
- Pre and Post Flood Inspection Reports
- Flood Fight Support



The screenshot displays the Levee Inspection Dashboard for the Simmesport Levee. The interface includes a top navigation bar with filters for Levee District (All Districts), Inspection Segment (Simmesport Levee), Rated Item (All Rated Items), and Status (All). The main map shows the Simmesport area with various inspection points marked by colored icons. A legend on the left identifies these icons: Buried Utilities (yellow star), Drainage Structure (blue circle), Encroachments (yellow circle), Fence Crossing Levee (green X), Fence Parallels Levee (green circle), Ramp / Road / Railroad (black diamond), Overhead Utility Crossing (purple star), Inventory (red diamond), and Closure Structure (green square). A red banner at the bottom left indicates 'Unresolved Status' with 4 unresolved observation points (13.8% unresolved) and 1 unresolved observation line (50% unresolved). The right panel lists inspection segments with their respective rated items, features, and statuses. An attachments section at the bottom right shows a link to 'Simmesport Pre-Flood Summary Report 2022 (Final).pdf'.

Levee Safety Program

Capital Outlay Submittals and
Project Management

➤ Tensas Basin Levee District:

- \$24M approved in fall of 2020

➤ Natchitoches Levee & Drainage District:

- \$1M in design under review at DOA
- Levee certification projects submitted for funding



Dam Safety Program

Number of Dams

651 Regulated Dams

(As of November 7, 2022)

- 41 High Hazard
- 73 Significant Hazard
- 537 Low Hazard



Morning Glory Inlet at
Lake Claiborne Dam, Claiborne Parish



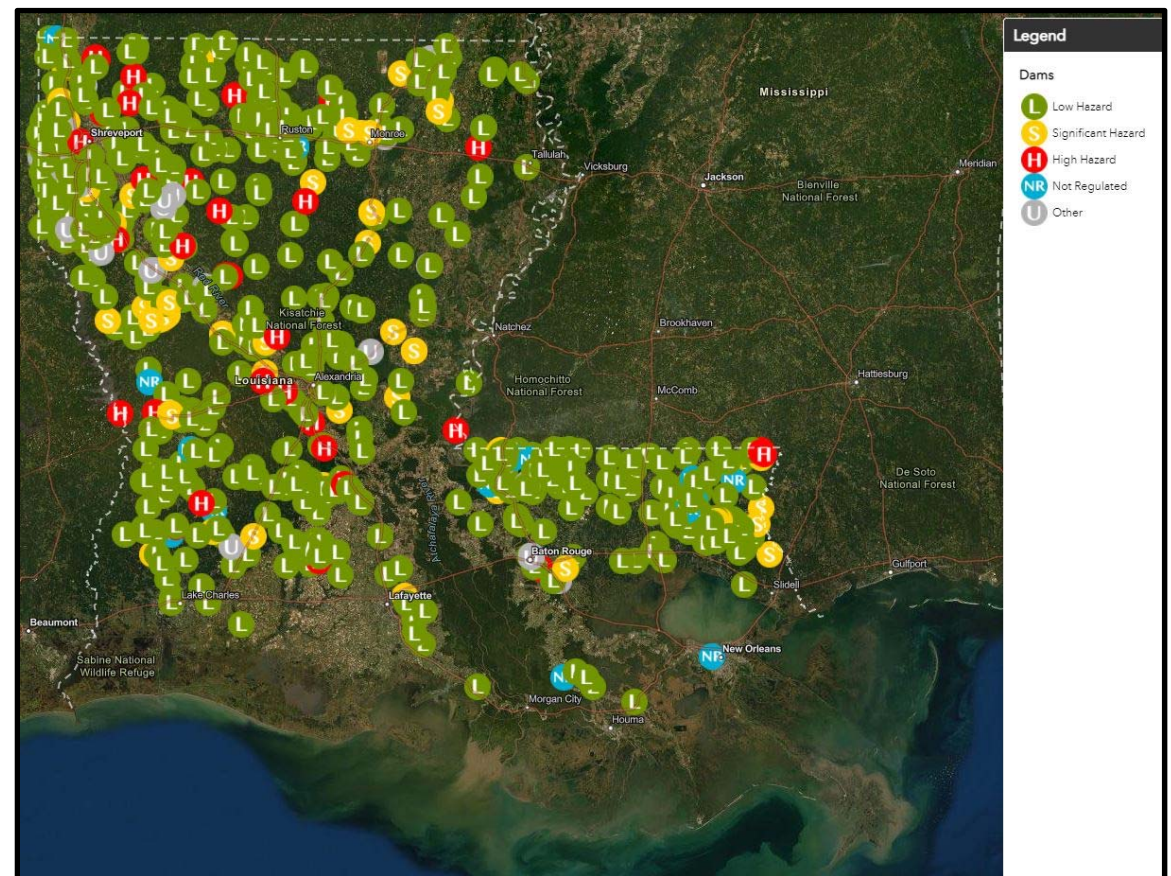
Tanter Gate Spillway at
Bayou D'Arbonne, Union Parish

Dam Safety Program

Inspections

- High Hazard Dams are inspected annually
- Significant Hazard Dams are inspected every 3 years
- Low Hazard Dams are inspected every 5 years
- Annually - 175 to 200 dams are inspected

Dams in Louisiana

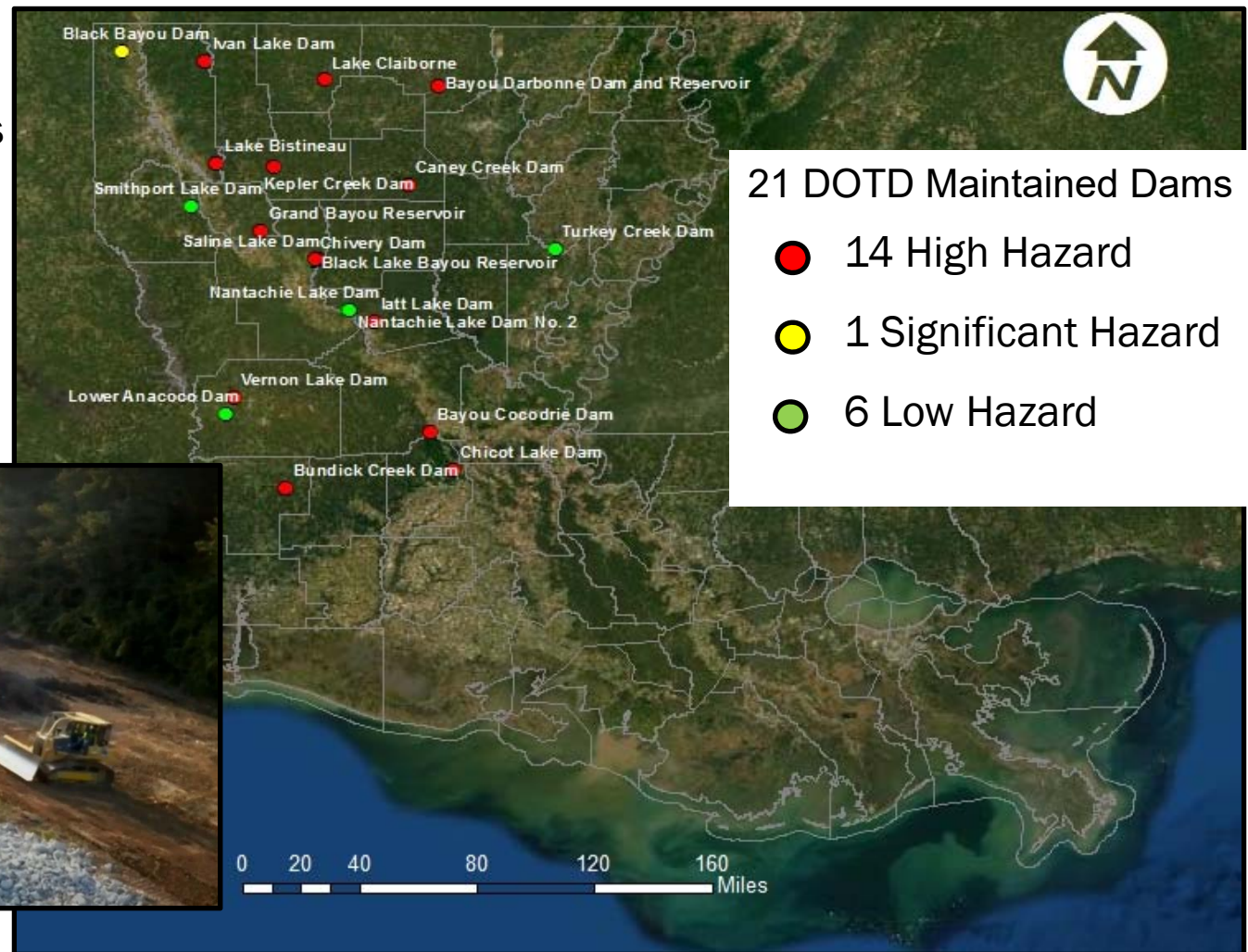


Dam Safety Program

DOTD Maintained Dams

➤ LA RS 38:26

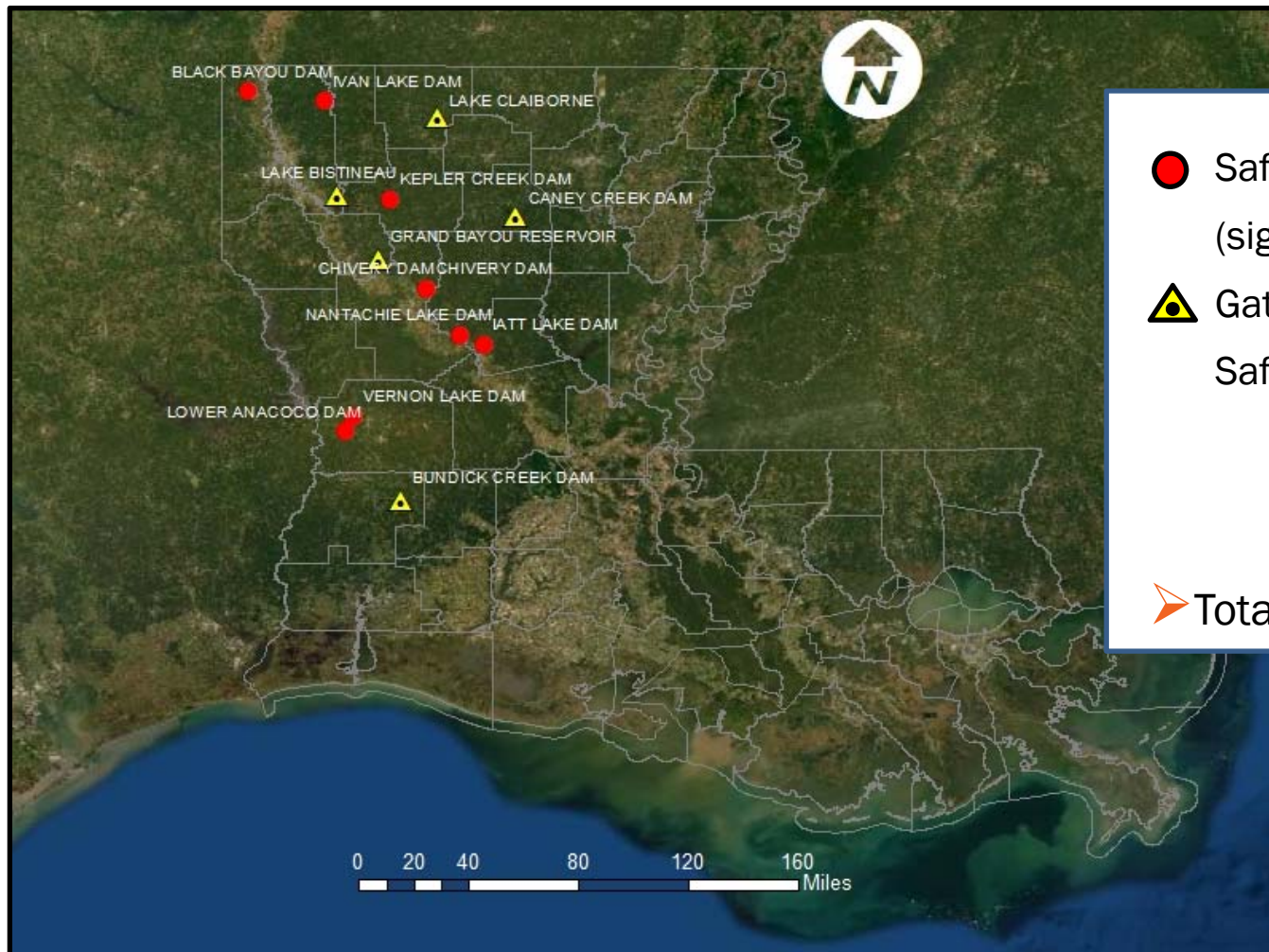
- Statute designates DOTD to operate and maintain 21 dams



Repairs at Vernon Lake Dam caused by Hurricane Harvey

Dam Safety Program

State Maintained Dams – Capital Outlay Projects (13)



● Safety Measures Only (8)
(signs, boat barriers, fences)

▲ Gate Rehab/Maintenance &
Safety Measures (5 Projects)

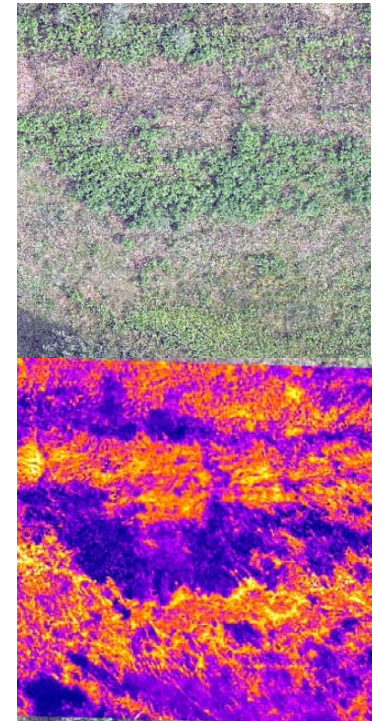
➤ Total Projects = \$2.5 Million

Dam Safety Program

Future of Inspections



- Expanded use of technology to enhance dam inspections and monitoring
 - Drones
 - Inspect areas with limited/unsafe access
 - Thermal imaging to detect seepage areas
 - LiDAR data to monitor embankment slides
 - Remote monitoring / data collection
 - Automated piezometer data collection
 - Remote water level sensors

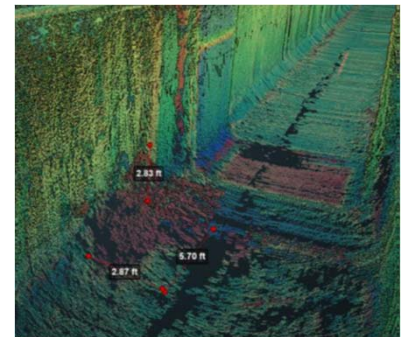


Dam Safety Program

Future of Inspections



- Continued improvements to the ESRI Dam Inspection Apps
- Underwater Drone Inspection
 - Video inspection of spillway approaches, drawdown structures, etc.
 - Sonar inspection of culverts
- Conduit / Culvert Inspection Equipment
 - Inspection of spillway drainage systems
 - Inspection of spillway / discharge pipes



Louisiana Watershed Initiative



The federal government has awarded Louisiana \$1.2 billion in HUD CDBG-Mitigation funds to support the LWI.

Louisiana Council on Watershed Management

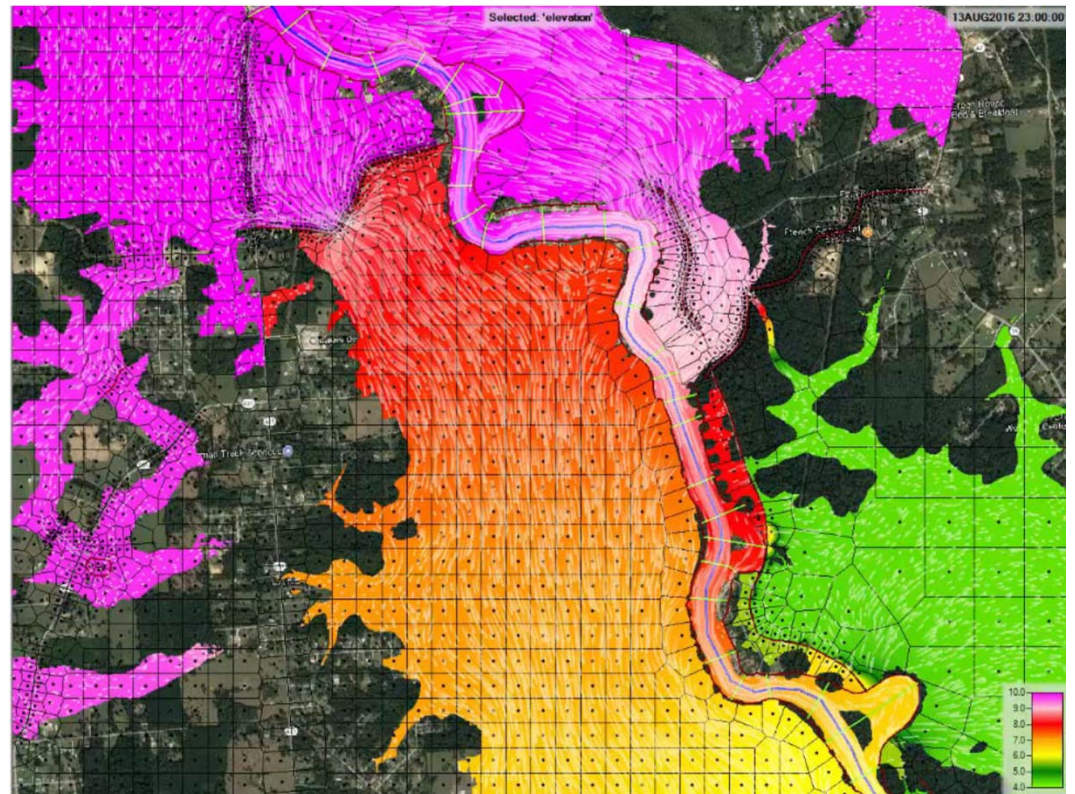


LOUISIANA
Office of
COMMUNITY
DEVELOPMENT

Louisiana Watershed Initiative

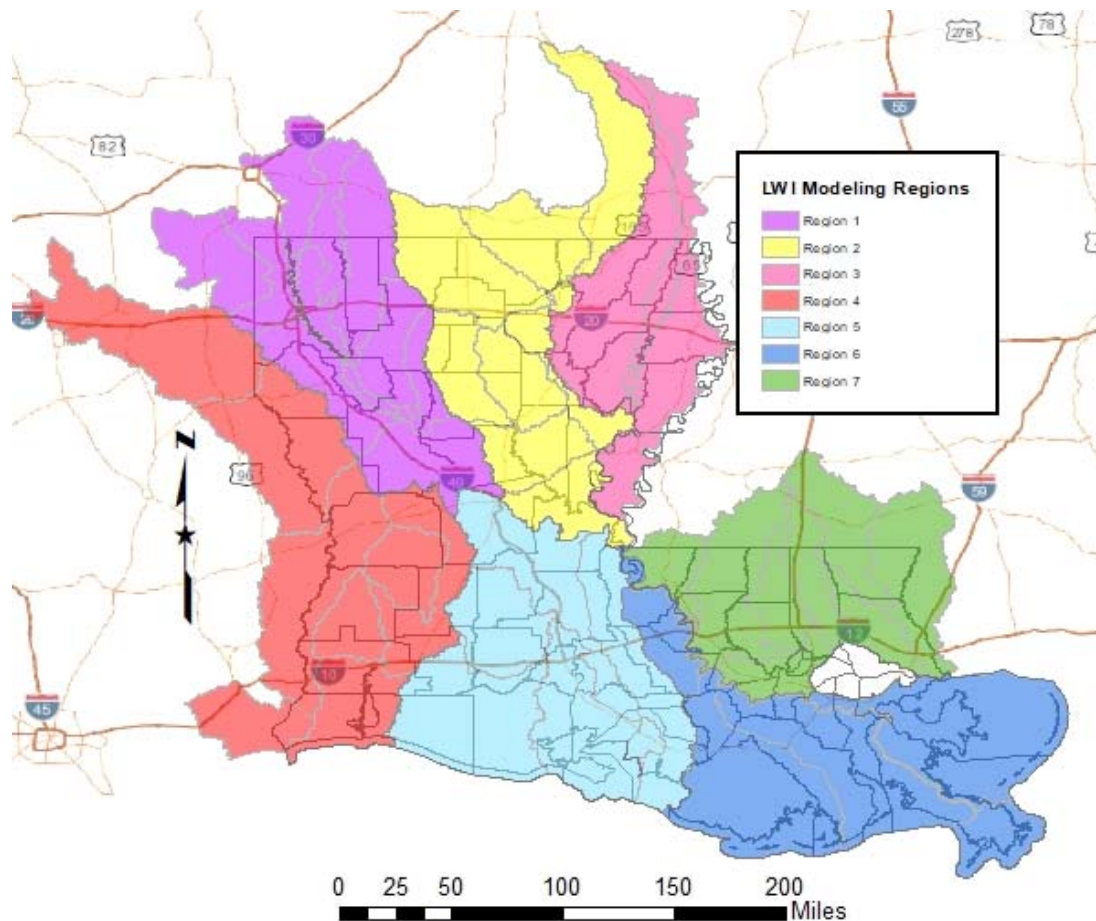
Statewide Watershed Modeling

- \$77M+ (Modeling Budget)
- HUC8 Models (48 total)
 - Delivered by end of 2023
- Coupled 1D/2D or Full 2D
- Tiered Approach Factors
 - Population
 - Complexity
 - Known Risk



Louisiana Watershed Initiative

Statewide Watershed Modeling



Prime Consultants by Region:

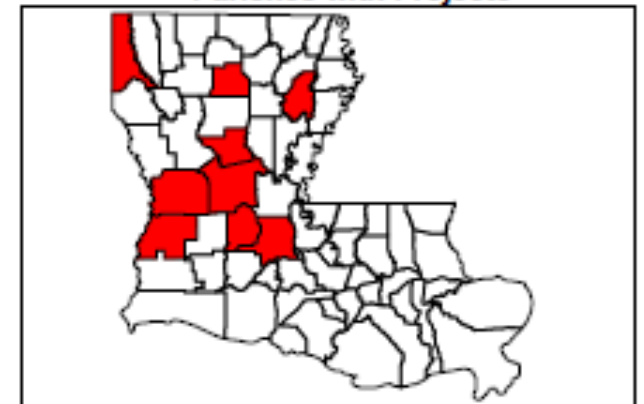
1. Atkins North America
2. Freese & Nichols
3. WSP
4. C.H. Fenstermaker & Associates
5. HDR Engineering
6. Michael Baker International
7. Dewberry Engineers

Louisiana Watershed Initiative

State Projects & Programs (SPP)

- Nine projects selected and approved
 - Eight dams (two in one project) and one backwater flooding project
- Two Consultant Contracts: 1) Michael Baker 2) Freese & Nichols
- Notice to Proceed to be issued Dec 2022
- Five year project timeline (Engr & Construction)
- Flood capacity upgrades to all structures
- Total Project Cost = \$53M

Parishes with Projects



Louisiana Watershed Initiative

State Projects & Programs (SPP)



- Bundick Creek Dam
- Lower Anacoco Dam
- Vernon Lake Dam
- Three Mile Lake
- ▲ Caney Creek Dam
- ▲ Black Bayou Dam
- ▲ Bayou Cocodrie Dam
- ▲ Iatt Lake Dam
- ▲ Turkey Creek Dam

Statewide Flood Control Program

- \$20M in total annual program funding
- Project requirements
 - Must reduce existing flood damages of structures
 - Does not encourage additional development in flood prone areas
 - Does not adversely affect upstream or downstream flooding
 - Must have a construction cost of \$100,000 or more
 - Must be a stand-alone project
 - Cannot serve the primary purpose of protection against coastal storm surge
 - Maximum SWFC Participation: \$5M per project (New requirement)

Statewide Flood Control Program

➤ Competitive & Cost-Shared

- Projects are evaluated based on potential damage reduction versus State investment
- Provides up to 90% of the construction cost for non-federal projects
- Provides up to 70% of non-federal participants' share of federal projects
- **Rural Grant Opportunity** may eliminate 10% match requirement for parishes with less than 50,000 residents and municipalities less than 5,000 residents

➤ Uniquely structured to ensure:

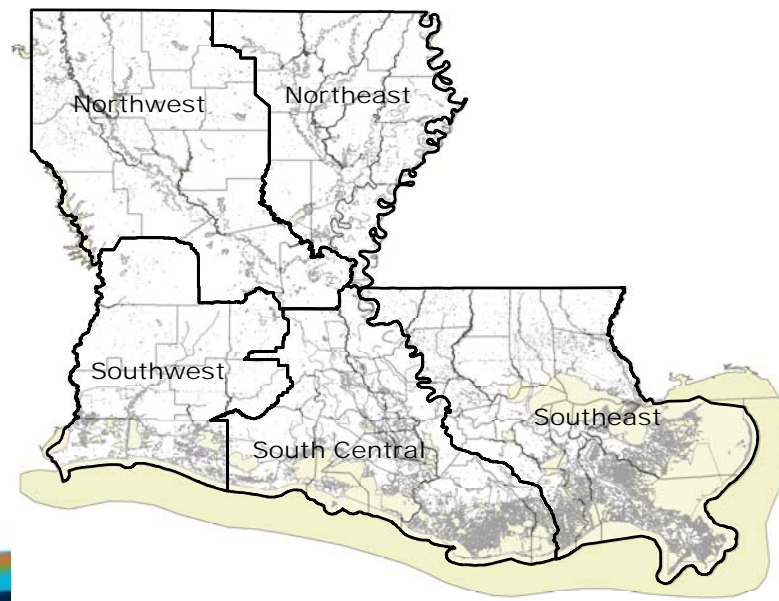
- Equitable distribution of funds statewide
- All levels of local government can compete successfully

Statewide Flood Control Program

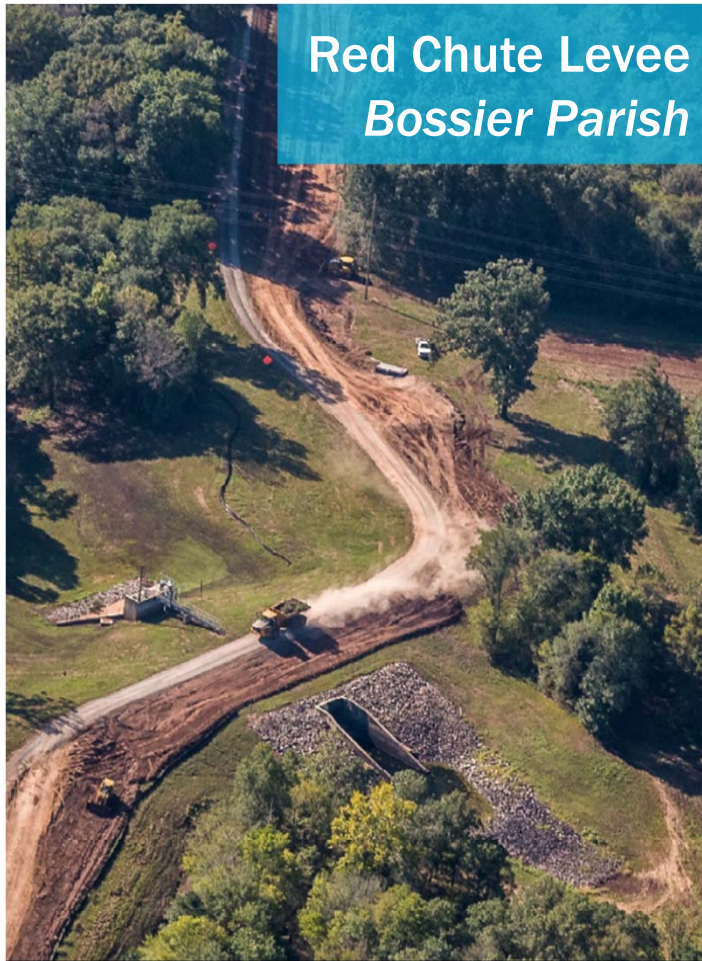
Funding Distribution

- Funds are distributed between the Urban and Rural Program:
 - Urban Areas (45%)
 - Shreveport, Monroe, Alexandria, Lake Charles, Lafayette, Baton Rouge, New Orleans, Hammond, Mandeville-Covington, Slidell, and Houma Urban Areas
 - Rural Funding Districts (55%)

Rural Funding District	Percentage of Rural Funding
Northwest	28.589
Northeast	19.644
Southwest	18.199
South Central	16.907
Southeast	16.661



Statewide Flood Control Program 2022 - 2023 Application Cycle



- 17 pre-applications received
(\$47.2M)
 - 9 determined eligible
- 6 full applications received
(\$25.5M)

Statewide Flood Control Program Accomplishments



2009 Flood Event



Raising of the Red Chute Levee
Bossier Parish

Phase I – Widening
\$4.6M SWFC Participation
Completed Fall 2021

**2021 – 9.5 Miles Widened (Phase 1)
Elevating Levee (Phase 2)**

Statewide Flood Control Program Accomplishments

Bayou Têche Flood Protection
St. Mary Parish



\$9.75M SWFC Share
Completed Summer 2021

Statewide Flood Control Program Accomplishments to Date

- Approved projects in 43 of 64 parishes
- 129 projects completed
- \$299.9M Expended
- \$2.724B in Flood Reduction Benefits
- 10.26 Benefits/Cost Ratio

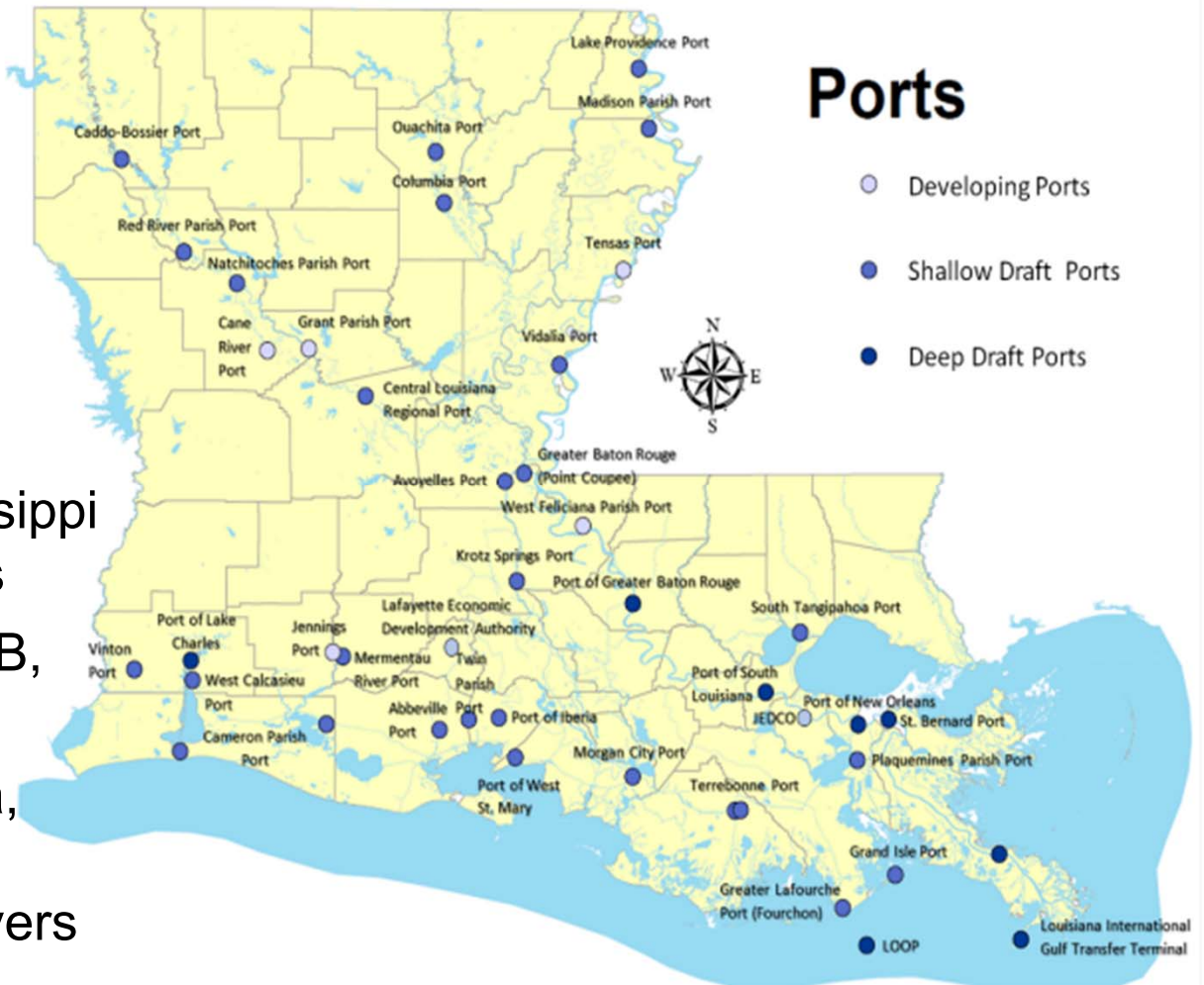
Ports & Waterways

➤ Ports:

- 39 Port Authorities
- 8 Deep Draft
- 31 Shallow Draft

➤ Waterways:

- Deep Draft: Mississippi & Calcasieu Rivers
- Coastal: HNC, FWB, GIWW
- Inland: Atchafalaya, Red (JBJ) Ouachita/Black Rivers



Port Construction & Development Priority Program

- Created by Act 452 of the 1989 Regular Session
- Provide 90% of construction cost
- Funded by the LA Transportation Trust Fund
- Applications submitted four times a year (March, June, Sept, & Dec)
- Applications are similar to a business plan:
 - Projects must have:
 - B/C ratio of at least one
 - Rate of Return on State's investment of 2.375

Port Priority Program Funding

- \$39.4 M. Current Funding Level
- Since 1989
 - \$698 M. expended
 - 409 Contracts Completed
- 25 Active Construction Contracts
 - \$90 M in State Funding
 - \$80 M in Local Port Funding
- 44 Active Design Projects
 - \$216 M in State Funding
 - \$401 M in Local Port Funding





Port of Lake Charles – Berth Rehab



Port of Caddo-Bossier – Warehouse



Port NOLA – Crane Rail Extension



Port Fourchon – Bulkhead



Port of South Louisiana – Harbor Cranes



Central Louisiana Regional Port – Manufacturing Facility & Storage Warehouse

Waterways Section

- Continuously improve the State's waterway infrastructure, maritime access and port connectivity
- Work “hand in hand” with our partners
 - Corps of Engineers
 - Ports
 - Congressional Delegation
 - State Leaders
 - Various Associations

Current Waterway Projects

- **MS River Deepening:**
 - Approved deepen MRSC from 45ft to 50ft from Gulf through Port of Baton Rouge
- **Houma Navigation Canal (HNC) Deepening Project**
(Deepen channel from 15ft to 20ft):
 - Port starting pipeline relocation
- **Acadiana to the Gulf of Mexico Access Channel (AGMAC)/Port of Iberia Deepening Project:**
 - Pipelines being relocated and dredging to start in 2022



Mississippi River Ship Channel Deepening to 50 ft. Project

- From the Gulf through the Port of BR
- Total Project Costs \$245 M
- State's Share \$81 M
 - \$40 M for construction
 - \$41 M for pipeline
- Capital Outlay Funding
- Project is Scheduled for Completion in 2025



Questions ?