

CPRA

Operations Division

HURRICANE PREPAREDNESS



Emergency Management

Responsible for flood protection infrastructure and integrated coastal protection projects across the Louisiana Coastal Area

Hazards that have the potential to affect CPRA operations and infrastructure include:

- Tropical Cyclone Activity
- Flooding and High Water Events
- Large Scale Coastal Oil Spills or HazMat Incidents



Emergency Management –

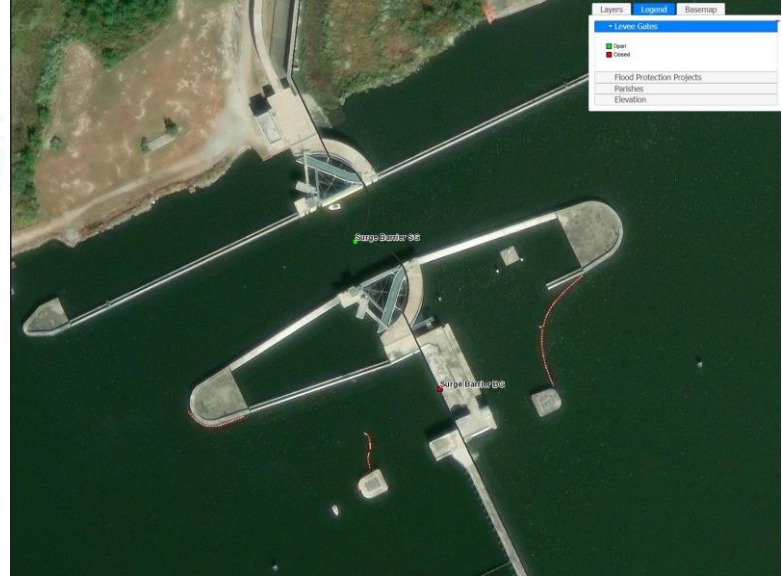
Pre-Event

- Maintains an Emergency Operations Plan (EOP) which outlines CPRA's pre- and post-storm activities duties
- Coordinates with the United States Army Corps of Engineers (USACE) and the local levee districts within the Coastal Area
- Maintains a list of Levee District items:
 - ✓ Emergency Contacts
 - ✓ EOPs
 - ✓ Flood Fight inventories, supplies, and equipment to support emergency response
- Levee Information Management System (LIMS)
 - ✓ Gate Closure Status
- Hurricane Gage Monitoring System (HGMS)
 - ✓ Consolidation of key gages from multiple sources
- Provides ADCIRC Forecasting to assist Levee Districts with gate closure decisions



Emergency Management –

Preparedness



Surge Barrier Barge Gate Open and Closed Positions
Closed for Hurricane Season – April 2024



Emergency Management

CPRA – During an Event

- Provides staff and capability to support the State's Emergency Operations Center (EOC). CPRA staffs the EOC's Emergency Support Function (ESF-3) infrastructure desk
- Coordinates with local, State, and Federal entities including Parish Governments, Levee Boards, and other jurisdictions in Louisiana's Coastal Zone
 - Local requests are made when the requesting jurisdiction has exhausted all resources and no longer has the capability to support themselves.
 - ALL REQUESTS MUST GO THROUGH WEB EOC
 - Requests generally involve maintaining the integrity of levee and flood control infrastructure in order to save lives and protect property
 - CPRA relies on emergency contracts through the Office of State Purchasing to procure temporary flood protection measures, de-watering support, etc.

Emergency Management

CPRA – Post-Event

- Performs Damage Assessments:
 - Inspects levee, flood protection, and integrated coastal protection projects throughout coastal Louisiana to protect lives and property as well as to ensure continued suitability of service
- Coordinates inspections with the appropriate local and Federal authorities
- Where issues are found, makes requests to the USACE for Federal assistance



Keys to Tropical Cyclone Operations

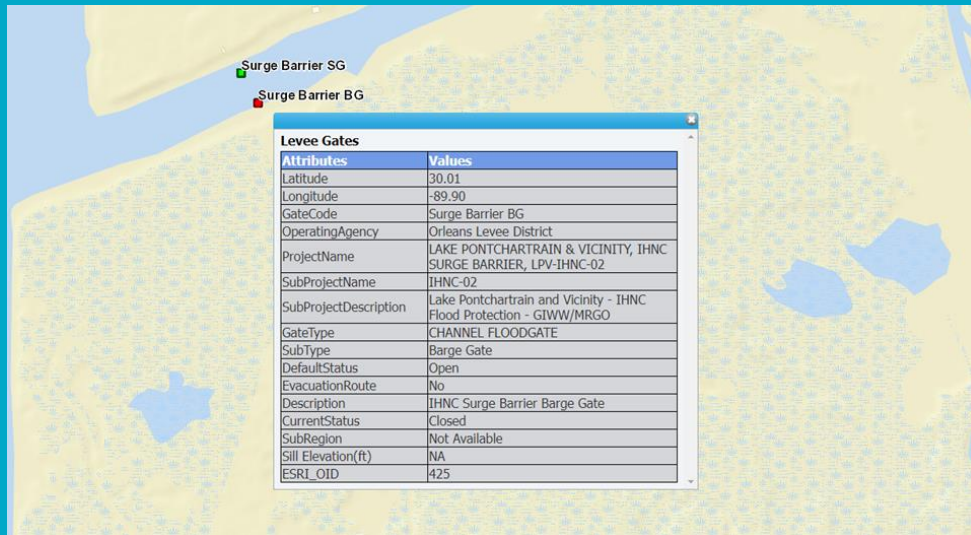
- Flood Risk Reduction Systems (levee, walls, gates, Pump Stations, and Drainage Structures)
- Levee Information Management System (LIMS)
- Hurricane Gage Monitoring System (HGMS)
- ADCIRC Surge Guidance System (ASGS)

These tools are intended to help guide CPRA and the levee districts with the necessary information to make operational decisions on coastal floodgate closures as a tropical system approaches landfall. These operational tools are not intended for evacuation purposes – for this we use the National Weather Service (NWS) and Local Authorities.



Levee Information Management System (LIMS)

- Log closure structure operations
- Store closure structure info/attributes
- Create closure structure status reports
- Display closure structure status graphically
- Link to document library
 - ✓ Contact Directory
 - ✓ EOP Manuals
 - ✓ Statewide Emergency Contracts
 - ✓ Local Flood Fight Asset Inventory
- Public access – separate portal shows map / gate list with status



The screenshot shows the LIMS web application interface. At the top, there is a blue header with the CPRA logo and the text 'Coastal Protection and Restoration Authority'. Below the header, there is a navigation menu with links for 'Home', 'Events', 'Levee Gates', 'Reports', and 'DBA'. The main content area is titled 'Welcome to LIMS - Levee Information Management System'. It includes a brief description of the system, a note about password protection, and a link to a spatial viewer. There are also buttons for 'Events', 'Levee Gates', and 'Reports'. A map of the Lake Pontchartrain area is shown, with various locations marked and color-coded: red for 'Closed', green for 'Open', and green lines for 'Flood Protection Systems'. The map includes labels for locations like 'New Orleans', 'Meraux', 'Harahan', 'River Ridge', 'Luling', 'Boutte', 'Paradis', 'Bayou Gauche', 'Jean Lafitte', and 'Iberville'. At the bottom, there is a 'Document Links' section with links to 'Flood Protection Contact Directory', 'Emergency Operating Procedures Manuals', 'Statewide Emergency Contracts', and 'Local Flood Fight Asset Inventory'. The footer features a silhouette of a coastal scene with trees and a building.



Levee Information Management System (LIMS)

- Report feature shows changes in gate status by project, levee district, and period of time

LIMS Levee Gate Status Change Report

[Filter](#)
[Export Gate Status Change Report \(Excel\)](#)
[Export Gate Status Change Report \(PDF\)](#)

Project: LAKE PONTCHARTRAIN & VICINITY
 Operating Agency: OLD (Orleans Levee District)

From Date: 06/06/2020 09:54 AM
 To Date: 06/08/2020 09:55 AM
Selected criteria applied successfully.

[Reset](#)
[Filter](#)

FLOODGATE STATUS CHANGE REPORT			
START DATE & TIME: 06/06/2020 09:54 AM			
END DATE & TIME: 06/08/2020 09:55 AM			
PROJECT	Operating Agency	STATUS CHANGED TO	
		CLOSED	OPENED
LAKE PONTCHARTRAIN & VICINITY		19	0
	OLD (Orleans Levee District)	19	0
LAKE PONTCHARTRAIN & VICINITY SEABROOK LPV-IHNC-01		5	0
	OLD (Orleans Levee District)	5	0
LAKE PONTCHARTRAIN & VICINITY, IHNC SURGE BARRIER, LPV-IHNC-02		2	0
	OLD (Orleans Levee District)	2	0
Grand Total		26	0

Levee Information Management System (LIMS)

- Report feature shows rollup of gate status by project and/or levee district at a given time

LIMS Levee Gate Status Report

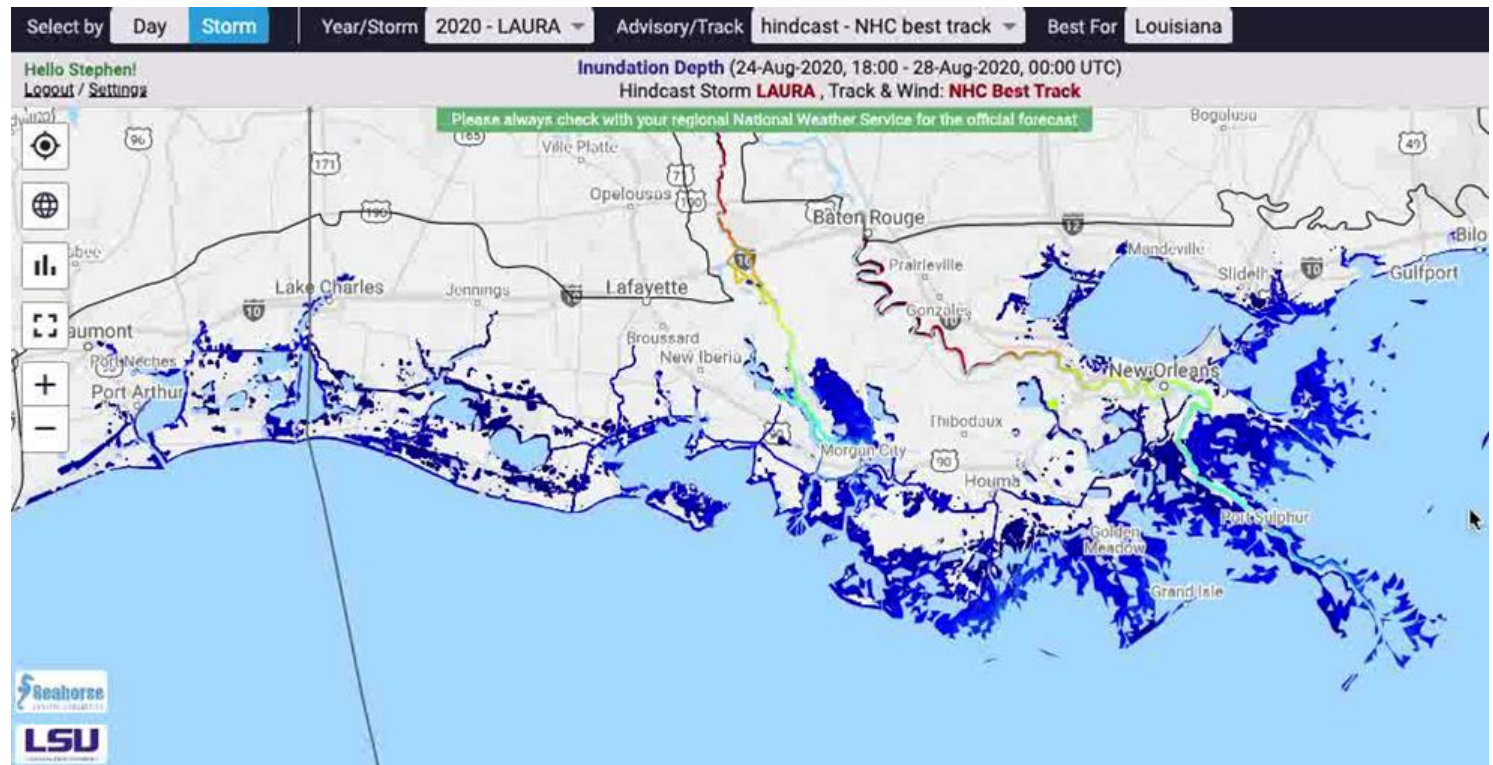
Project:
 Operating Agency:

Request Date:

FLOODGATE STATUS REPORT						
5/11/2021 9:53 AM						
PROJECT	Operating Agency	DEFAULT STATUS	STATUS	STATUS	GATES	
		CLOSED	CLOSED	OPEN	TOTAL	
LAKE PONTCHARTRAIN & VICINITY		75	64	131	195	
	EJLD (East Jefferson Levee District)	8	4	9	13	
	LBBLD (Lake Borgne Basin Levee District)	0	0	19	19	
	OLD (Orleans Levee District)	62	55	101	156	
	PLD (Pontchartrain Levee District)	5	5	2	7	
LAKE PONTCHARTRAIN & VICINITY SEABROOK LPV-IHNC-01		1	0	5	5	
	OLD (Orleans Levee District)	1	0	5	5	
LAKE PONTCHARTRAIN & VICINITY, IHNC SURGE BARRIER, LPV-IHNC-02		0	1	2	3	
	OLD (Orleans Levee District)	0	1	2	3	
LAROSE TO GOLDEN MEADOW - FLOOD PROTECTION		0	0	5	5	
	SLLD (South Lafourche Levee District)	0	0	5	5	
MORGANZA TO THE GULF		0	1	10	11	
	TLCD (Terrebonne Levee and Conservation District)	0	1	10	11	
MS RIVER & TRIBUTARIES (MR&T)		45	58	237	295	
	ABLD (Atchafalaya Basin Levee District)	6	7	33	40	
	ALD (Algiers Levee District)	0	0	2	2	
	LBBLD (Lake Borgne Basin Levee District)	0	0	9	9	
	OLD (Orleans Levee District)	30	38	100	138	
	SMLD (Saint Mary Levee District)	7	7	66	73	
	SMP (St. Mary Parish)	0	0	2	2	
	TLCD (Terrebonne Levee and Conservation District)	0	0	5	5	
	USACE (United States Army Corps of Engineers)	1	3	5	8	
	WJLD (West Jefferson Levee District)	1	1	17	18	
NEW ORLEANS TO VENICE		0	1	2	3	
	PPG (Plaquemines Parish Government)	0	1	2	3	
NON-FEDERAL LEVEES		6	11	23	34	
	LAJLD (Lafitte Area Independent Levee District)	2	7	4	11	
	LBBLD (Lake Borgne Basin Levee District)	1	1	9	10	
	OLD (Orleans Levee District)	1	0	4	4	
	PPG (Plaquemines Parish Government)	0	0	2	2	
	SMP DD2 (St. Mary Parish Gravity Drainage District #2)	0	1	0	1	
	TLCD (Terrebonne Levee and Conservation District)	0	2	4	6	
PERMANENT CANAL CLOSURES AND PUMP STATIONS		0	0	5	5	
	OLD (Orleans Levee District)	0	0	5	5	
WEST BANK & VICINITY		24	23	112	135	
	PPG (Plaquemines Parish Government)	6	5	32	37	
	SCP (St. Charles Parish)	0	0	6	6	
	WJLD (West Jefferson Levee District)	18	18	74	92	
Grand Total		151	159	532	691	

ADCIRC Surge Guidance System (ASGS)

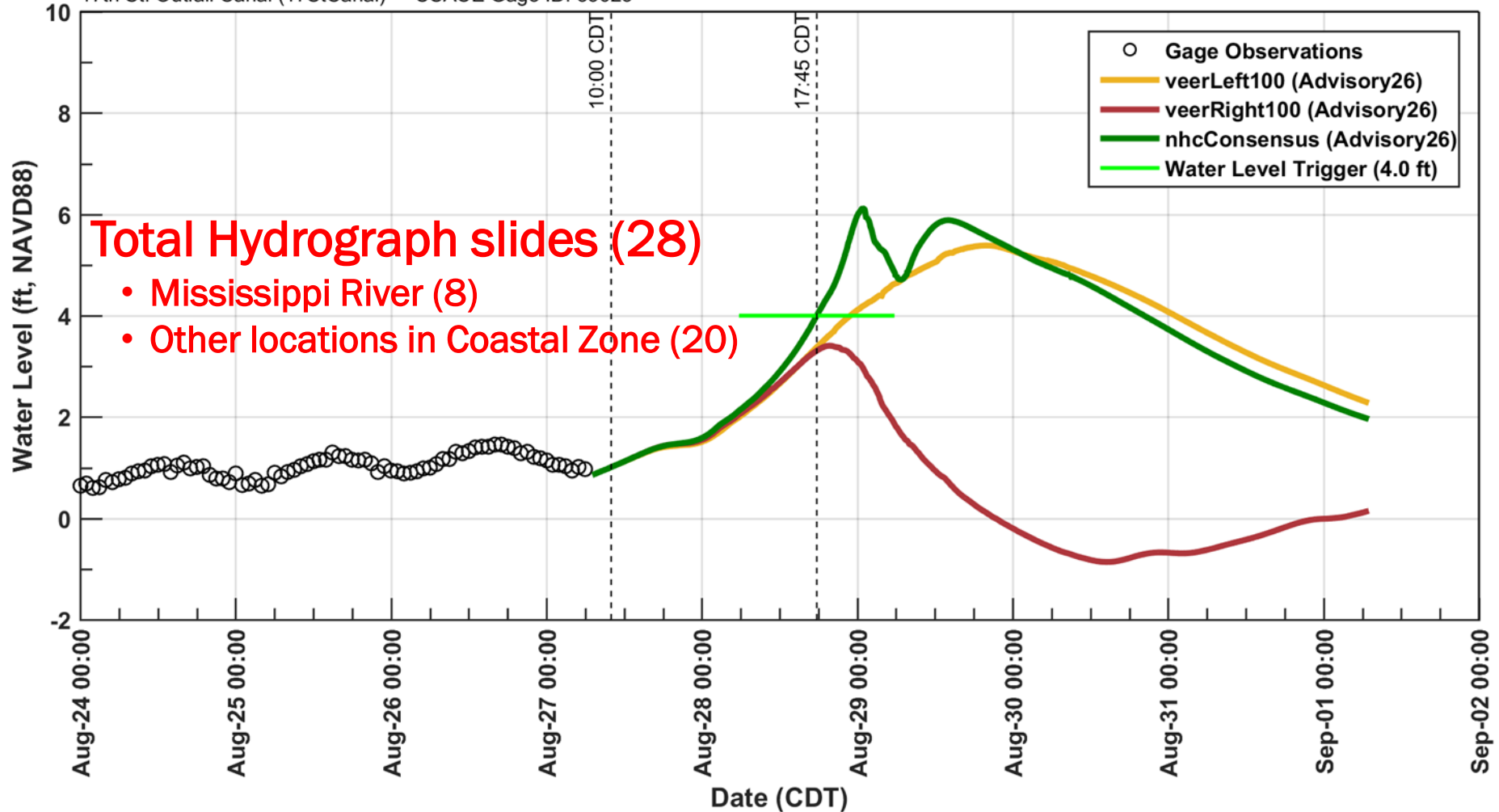
- CPRA works with LSU's Center for Coastal Resiliency (CCR) team which includes Scimaritan's Dr. Jason Fleming to implement and maintain the ADCIRC Surge Guidance System (ASGS) for the modeling of storm surge for hurricanes and tropical events.
- ASGS model output provides CPRA and the levee districts with water elevation forecasts to assist with operational decisions on coastal floodgate closures as a tropical storm approaches
- ADCIRC grid is updated each year with the latest bathymetric and topographic data
- ASGS is tested and validated using historical storm data.
- Automated forecast system is maintained in ready-mode during hurricane season



Example Hydrograph:

Permanent Canal Closure and Pumps (PCCP-01)

Storm: ISAAC - Advisory: 26 Issued on 08-27 10:00 CDT - grid: LA_v19j-WithUpperAtch_chk
17th St. Outfall Canal (17StCanal) - USACE Gage ID: 85625



Frequently Used Sites

- **CPRA CIMS** <https://cims.coastal.louisiana.gov>,
(login required for HGMS and LIMS Private)
 - **HGMS:** Navigate to Protection > HGMS Private > Map Viewer. Displays water level and meteorological data for CPRA, USACE, USGS, and NOAA gages.
 - **LIMS:** Navigate to Protection >
 - Select “LIMS Gate Status”, which is the publicly-accessible open/closed status of gates/closures.
 - Select “LIMS Private”, allows levee districts/authorities to change gate/closure status to open/closed.
- **CERA** <https://cera.coastalrisk.live/>
 - ADCIRC visualization
- **Rivergages website:** www.rivergages.com; backup resource for checking water levels on GOES network; source for pulling data to other sites e.g. CIMS HGMS.

- CIMS – Coastal Information Management System
- HGMS – Hurricane Gage Monitoring System
- LIMS – Levee Information Management System
- CERA – Coastal Emergency Risks Assessment
- CFIGS – Compound Flood Inundation Guidance System
- GOES – Geostationary Operational Environmental Satellite

Thank You

