

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 – SLFPA-W



Western Closure Complex (WCC) and Hwy 45 Gate Annual Exercise



Emergency Management –

Preparedness – Plaquemines Parish Government



Annual Gate Exercise WBV-04.2 (C&C Marine off of Engineers Road)



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.



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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

Surge Barrier SG
Surge Barrier BG

Levee Gates	
Attributes	Values
Latitude	30.01
Longitude	-89.90
GateCode	Surge Barrier BG
OperatingAgency	Orleans Levee District
ProjectName	LAKE PONTCHARTRAIN & VICINITY, IHNC SURGE BARRIER, LPV-IHNC-02
SubProjectName	IHNC-02
SubProjectDescription	Lake Pontchartrain and Vicinity - IHNC Flood Protection - GIWW/MRGO
GateType	CHANNEL FLOODGATE
SubType	Barge Gate
DefaultStatus	Open
EvacuationRoute	No
Description	IHNC Surge Barrier Barge Gate
CurrentStatus	Closed
SubRegion	Not Available
Sill Elevation(ft)	NA
ESRI_OID	425

Coastal Protection and Restoration Authority

Home Events Levee Gates Reports DBA Logged in as jeremy.fall@la.gov | Log Out

Welcome to LIMS - Levee Information Management System

LIMS allows specified internal staff in the CPRA Operations Division and specified external flood/storm protection system staff the ability to change and check flood/storm protection system gate status, lookup gate attribution information, and produce reports on gate history through various custom query options.

This site is password protected and access and roles are controlled by CPRA Operations Division staff.

Access a full featured spatial viewer for flood protection here.

Questions should be directed to: cpra-cims@usgs.gov.

Events Levee Gates Reports

Document Links

- [Flood Protection Contact Directory](#)
- [Emergency Operating Procedures Manuals](#)
- [Statewide Emergency Contracts](#)
- [Local Flood Fight Asset Inventory](#)

Legend: Closed (Red square), Open (Green square), Flood Protection Systems (Green line)



Levee Information Management System (LIMS)

- Report feature shows changes in gate status by project, levee district, and period of time
- Report feature shows rollup of gate status by project and/or levee district at a given time.

LIMS Levee Gate Status Change Report

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.

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	STATUS CHANGED TO 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

LIMS Levee Gate Status Report

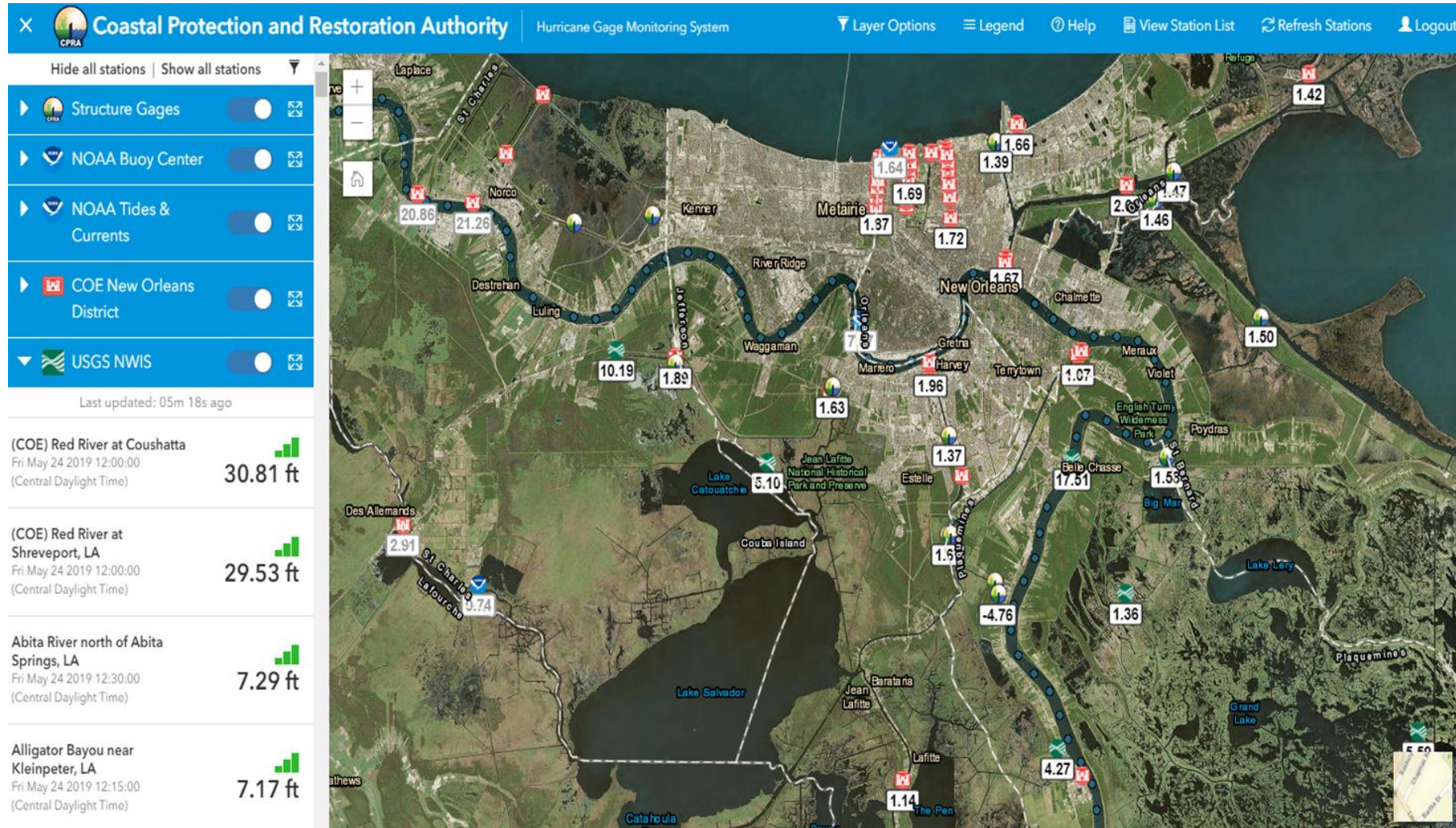
Project: Select Project
 Operating Agency: Select Operating Agency

Request Date:

FLOODGATE STATUS REPORT					
5/11/2021 9:53 AM					
PROJECT	Operating Agency	DEFAULT STATUS CLOSED	STATUS CLOSED	STATUS OPEN	GATES TOTAL
LAKE PONTCHARTRAIN & VICINITY		75	64	131	195
	OLD (East Jefferson Levee District)	2	4	2	11
	LBBD (Lake Borgne Basin Levee District)	2	2	2	16
	OLD (Orleans Levee District)	42	52	111	159
	PLD (Pontchartrain Levee District)	1	5	2	2
	PLD (Pontchartrain Levee District)	1	0	5	5
LAKE PONTCHARTRAIN & VICINITY SEABROOK LPV-IHNC-01		1	0	0	0
	OLD (Orleans Levee District)	1	0	0	0
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
	SLD (South Lafourche Levee District)	0	0	5	5
MORGANZA TO THE GULF		0	1	10	11
	TLCD (Terminos Levee and Conservation District)	0	1	10	11
MS RIVER & TRIBUTARIES (MRAT)		45	58	237	295
	ABLD (Abbeville Basin Levee District)	0	0	2	2
	ALD (Algiers Levee District)	0	0	2	2
	LBBD (Lake Borgne Basin Levee District)	0	0	0	0
	OLD (Orleans Levee District)	30	38	100	139
	SALD (Saint Mary Levee District)	7	7	66	73
	SMP (St. Mary Parish)	0	2	0	2
	TLCD (Terminos Levee and Conservation District)	0	0	0	0
	USACE (United States Army Corps of Engineers)	1	1	0	2
	WALD (West Jefferson Levee District)	1	1	17	19
NEW ORLEANS TO VENICE		0	1	2	3
	PPD (Plaquemine Parish Government)	0	1	2	3
NON-FEDERAL LEEVES		6	11	23	34
	LALD (Lafourche Area Independent Levee District)	2	7	4	11
	LBBD (Lake Borgne Basin Levee District)	1	1	0	2
	OLD (Orleans Levee District)	1	0	4	4
	PPD (Plaquemine Parish Government)	0	0	4	4
	SMP (St. Mary Parish)	0	1	0	1
	SMP (St. Mary Parish)	0	0	0	0
	TLCD (Terminos Levee and Conservation District)	0	0	2	2
PERMANENT CANAL CLOSURES AND PUMP STATIONS		0	0	0	0
	OLD (Orleans Levee District)	0	0	0	0
WEST BANK & VICINITY		24	23	112	135
	PPD (Plaquemine Parish Government)	0	0	12	12
	BCP (St. Charles Parish)	0	0	0	0
	WALD (West Jefferson Levee District)	12	12	12	36
Grand Total		151	159	532	691

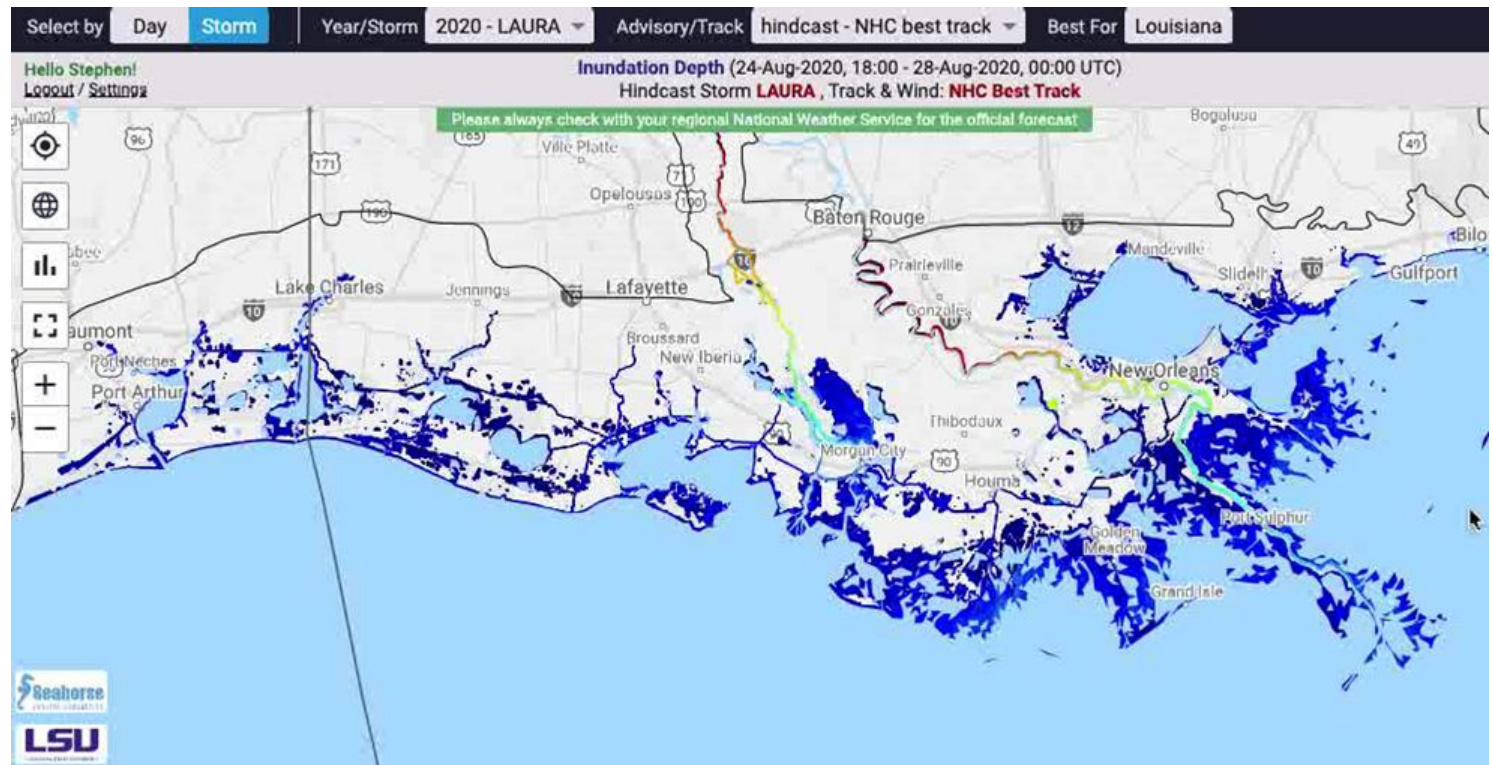
Hurricane Gage Monitoring System (HGMS)

- Water-level gage data from USACE, USGS, NOAA and Structure Gages shown spatially



ADCIRC Surge Guidance System (ASGS)

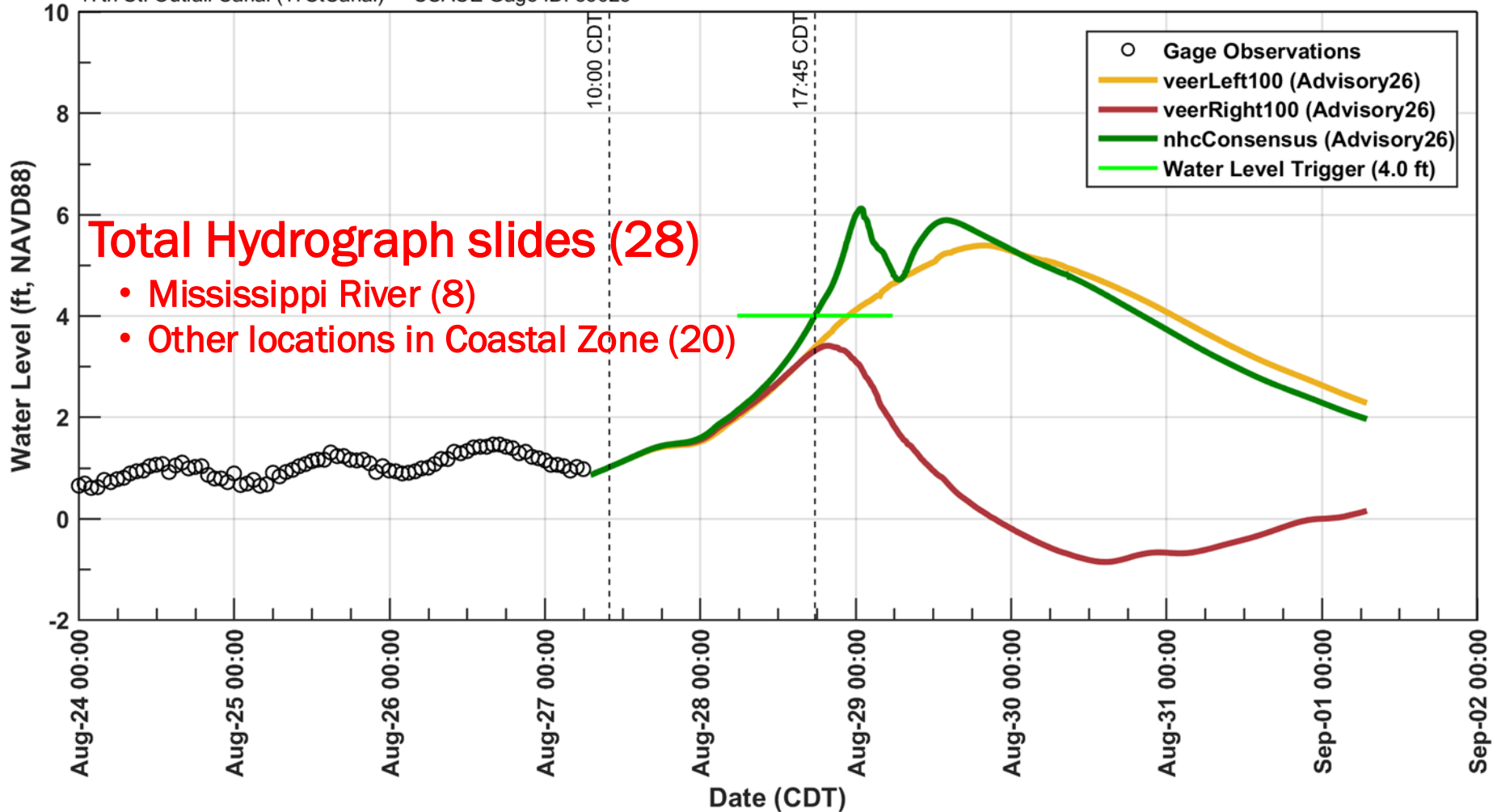
- CPRA works with LSU's Center for Coastal Resiliency (CCR) team which includes Dr. Jason Fleming to implement and maintain the ADCIRC Surge Guidance System (ASGS) for the modeling of storm surge for hurricanes and tropical events.
- ASGS model output provides CPRA and the levee districts with water 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>,
 - **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
(login required for HGMS and LIMS Private)

Thank You

