



Saltwater Intrusion – SITUATIONAL REPORT

26 October 2023 – 10:30 am

Incident Snapshot

State Declaration: 154 JBE 2023	WebEOC Incident: 23-023 Saltwater Intrusion – Region 1 – Jun	Activation Level: 3 – Partial Activation
Fed Declaration: FEMA-3600-EM-LA	Total Resource Requests: 53	Incident Start Period: September 20, 2023

Incident Overview

Given the extended drought conditions, the fresh water flow rate coming down the Mississippi River has been low. An intrusion of sea water (saltwater) from the Gulf is making its way Northwest towards the lower parishes and has already affected Plaquemines Parish. Public drinking water, which feeds critical infrastructure as well as residential homes, is sanitized by Water Treatment Plants. The water source for Plaquemines, St. Bernard, Jefferson and Orleans is the fresh water from the Mississippi River.

Incident Objectives

1. Protect life and property
2. Maintain ongoing messaging and communication to keep public and stakeholders informed
3. Support water needs for citizens until mitigation measures are present
4. Coordinate and manage all available resources effectively
5. Continue to provide effective incident management that is scalable and fiscally responsible

Weekly update calls: Wednesdays @ 10AM

Current Operations	Future Operations
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GOHSEP remains postured to maintain ongoing coordination with Parishes, State Agencies and Federal Partners, NGOs, Business, and other stakeholders to support the following five lines of efforts:

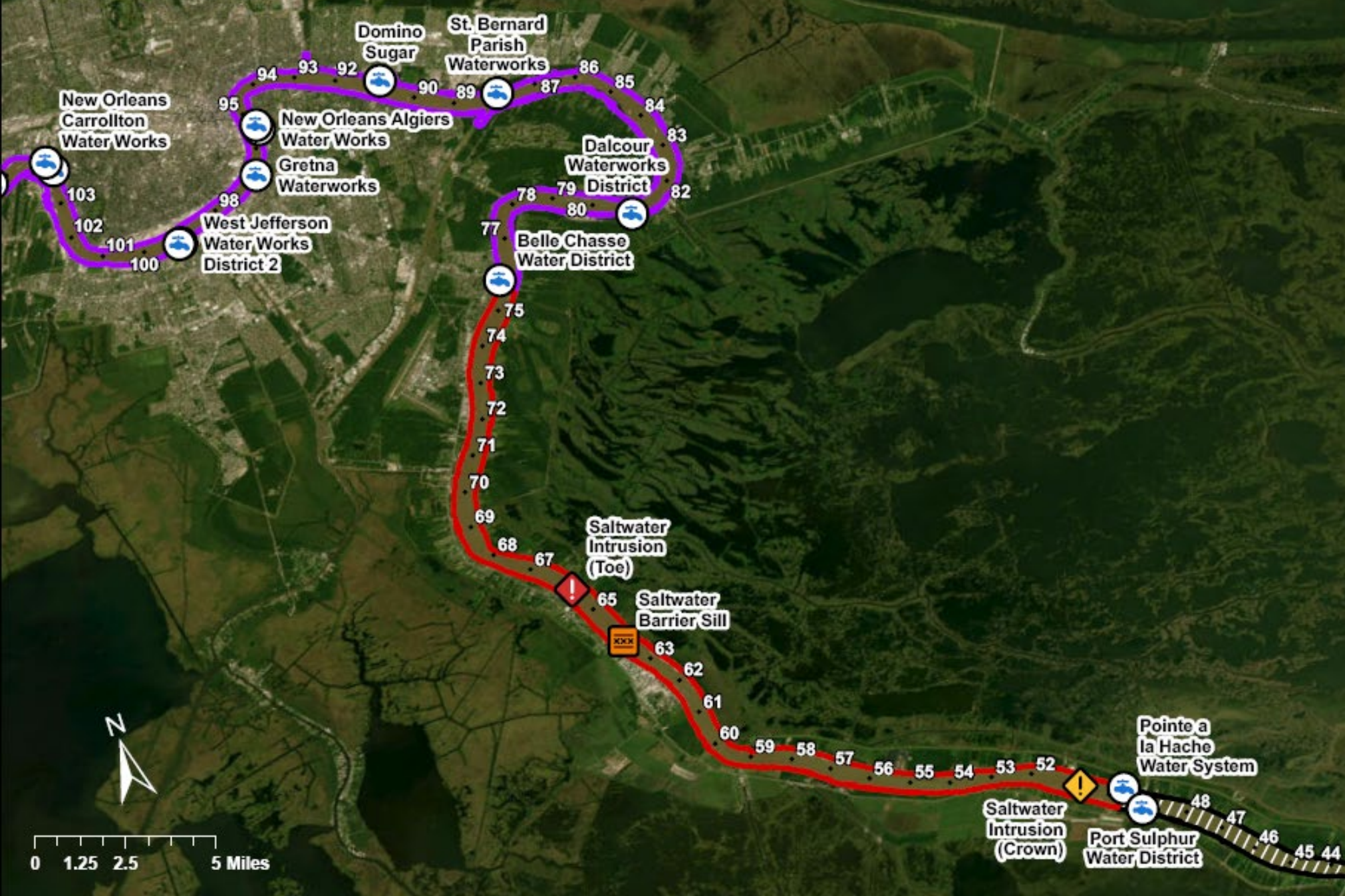
1) Technical Workgroup	2) Public Messaging	3) Public Health
4) Private Sector Engagement	5) Logistics Planning	

USACE continues to support multiple efforts to provide additional mitigation and technical assistance to maintain potable water within the parishes. Salinity remains static and all reverse osmosis pump units (ROPU) have been delivered. The saltwater wedge toe is currently located at River Mile 65.8 and the crown is located at River Mile 50.8. Current flow rate of the river is 134K CFS. USACE 21 day forecast for river flow is 131K CFS. Recalculation of the progression timeline is ongoing by USACE. LDH maintains monitoring, sampling and contingency plans for drinking water as chloride levels less than 250ppm can impact distribution lines.

Continued efforts to monitor and support intakes that are impacted and subject to be impacted remain ongoing. Barging, tie-ins between systems, and reverse osmosis purification unit (ROPU) installations are prioritized mitigation efforts that are either operational or soon-to-be operational. Private sector, faith-based, social services, nonprofits and VOAD organizations engagement are steadfast and postured to support water inventory, unified communication, and support for vulnerable populations as needed. USACE will continue to monitor river flow and incorporate NWS forecasts within projections.

GOHSEP will continue to monitor the situation to maintain inventory and support coordination with all federal, state and local partners until the incident ends.



Mississippi River Saltwater Intrusion WebEOC Incident 23-023



Points of Interest

-  Barrier
-  Saltwater Intrusion (Crown)
-  Saltwater Intrusion (Toe)
-  Water Intake Point
- River Mile Marker

Forecast Inundation Date

-  September 20, 2023
-  November 30, 2023
-  No Forecast



This map was developed by the Louisiana Governor's Office of Homeland Security & Emergency Preparedness using data from LDH, USACE, and USGS.

Contact:
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Last Updated:
10/26/2023 9:48 AM

Location of Toe: 65.8

MVN SALTWATER COP PLACEMAT



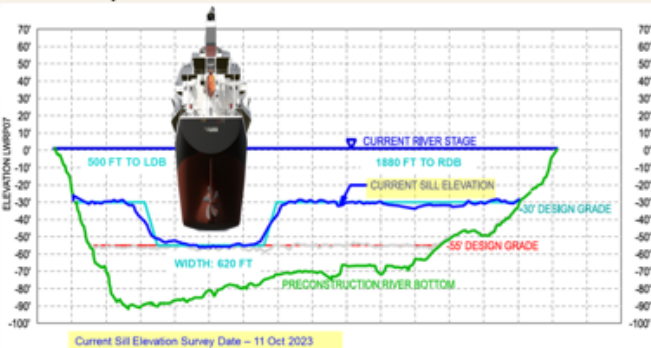
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MVN LOE #1: Monitor and Track the Saltwater Wedge

- Location of toe: RM 65.8
- Location of crown: RM 50.8
- Current flow rate: 134K CFS ↑
- Yesterday's flow rate: 133K CFS
- 21-Day flow forecast: 131K CFS ↓

MVN LOE #2: Saltwater Sill Augmentation

- Current 100% complete
- Completion Date: 12 Oct



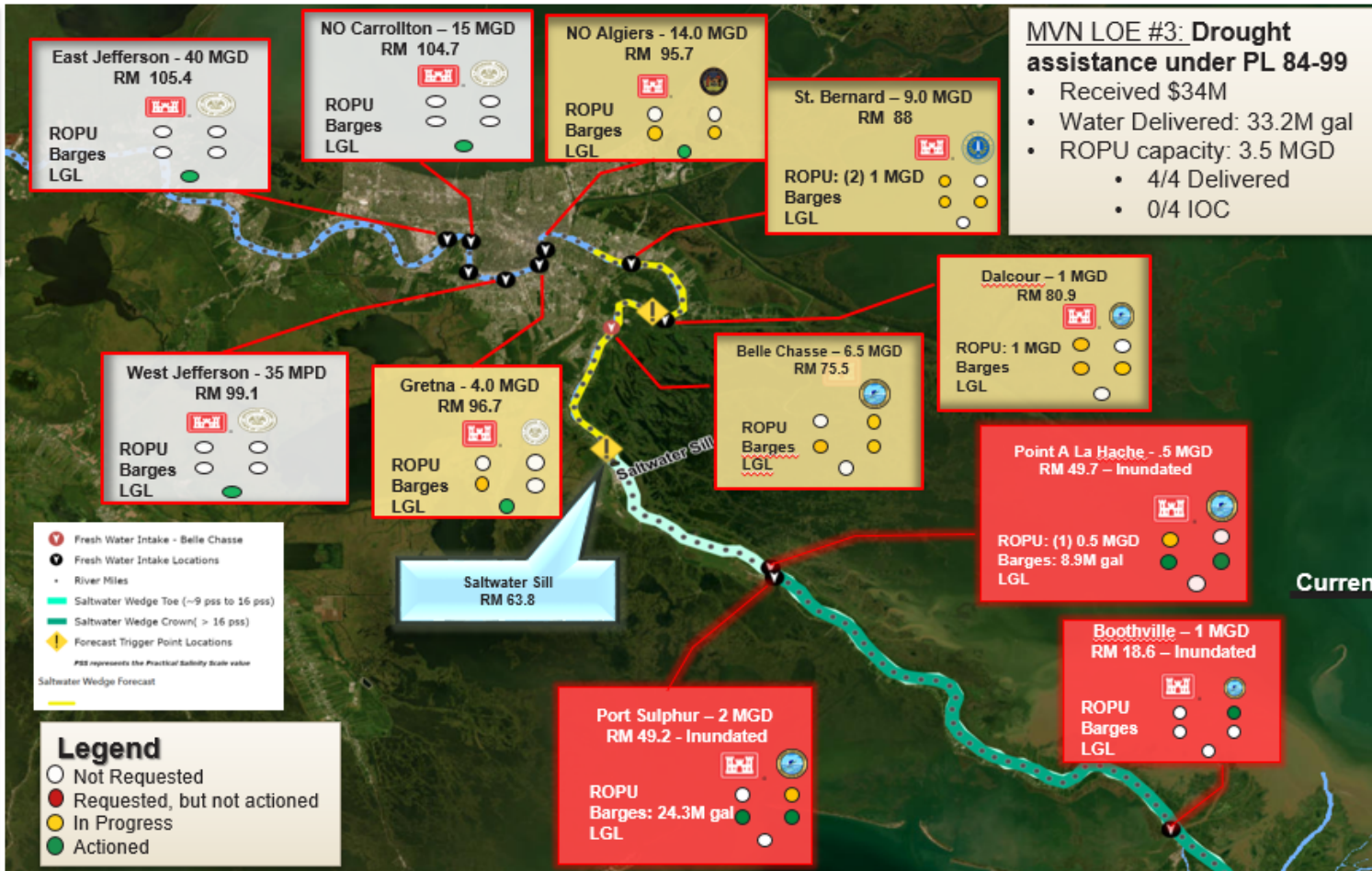
MVN LOE #4: Communication

- GOHSEP Coordination Calls: Wed
- JIC calls: As Needed
- Latest Forecast Timeline: 24 OCT23

MVN LOE #5: Expedited Permitting

- JP east bank: ● 2/4 permits approved
- JP west bank: ●
- S&WB east bank: ●
- Algiers cofferdam: ●

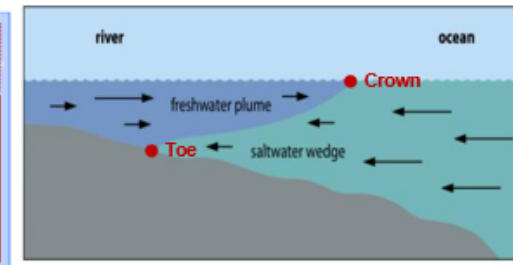
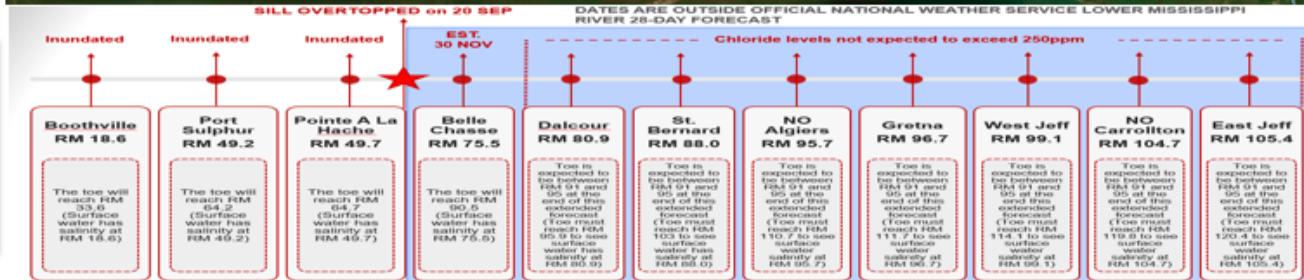
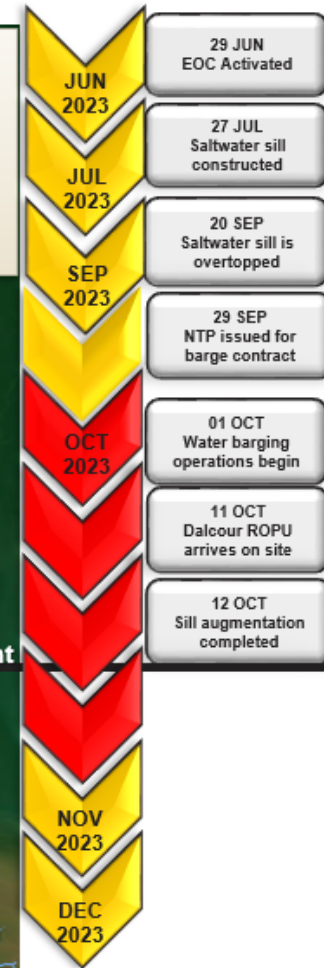
POC: cemvn-eoc@usace.army.mil



as of 0800 25OCT23

MVN LOE #3: Drought assistance under PL 84-99

- Received \$34M
- Water Delivered: 33.2M gal
- ROPU capacity: 3.5 MGD
 - 4/4 Delivered
 - 0/4 IOC





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SALTWATER WEDGE TIMELINE WITH NOTCH SILL



TIMELINE REPRESENTS CURRENT NWS FORECAST, SURVEYED MOVEMENT OF THE SALTWATER TOE AND MODELED BENEFITS FROM AUGMENTING THE UNDERWATER SILL

SILL OVERTOPPED on 20 SEP

DATES ARE OUTSIDE OFFICIAL NATIONAL WEATHER SERVICE LOWER MISSISSIPPI RIVER 28-DAY FORECAST

Inundated

Inundated

Inundated

EST. 30 NOV

Chloride levels not expected to exceed 250ppm

Boothville
RM 18.6

The toe will reach RM 33.6 (Surface water has salinity at RM 18.6)

Port Sulphur
RM 49.2

The toe will reach RM 64.2 (Surface water has salinity at RM 49.2)

Pointe A La Hache
RM 49.7

The toe will reach RM 64.7 (Surface water has salinity at RM 49.7)

Belle Chasse
RM 75.5

The toe will reach RM 90.5 (Surface water has salinity at RM 75.5)

Dalcour
RM 80.9

Toe is expected to be between RM 91 and 95 at the end of this extended forecast (Toe must reach RM 95.9 to see surface water has salinity at RM 80.9)

St. Bernard
RM 88.0

Toe is expected to be between RM 91 and 95 at the end of this extended forecast (Toe must reach RM 103 to see surface water has salinity at RM 88.0)

NO Algiers
RM 95.7

Toe is expected to be between RM 91 and 95 at the end of this extended forecast (Toe must reach RM 110.7 to see surface water salinity at RM 95.7)

Gretna
RM 96.7

Toe is expected to be between RM 91 and 95 at the end of this extended forecast (Toe must reach RM 111.7 to see surface water salinity at RM 96.7)

West Jeff
RM 99.1

Toe is expected to be between RM 91 and 95 at the end this extended forecast (Toe must reach RM 114.1 to see surface water salinity at RM 99.1)

NO Carrollton
RM 104.7

Toe is expected to be between RM 91 and 95 at the end of this extended forecast (Toe must reach RM 119.8 to see surface water salinity at RM 104.7)

East Jeff
RM 105.4

Toe is expected to be between RM 91 and 95 at the end of this extended forecast (Toe must reach RM 120.4 to see surface water salinity at RM 105.4)

PROJECTED TIMELINE IS ACCURATE AS OF THE NWS FORECAST FOR 23 OCT 2023 AND IS SUBJECT TO CHANGE.

AS OF 24OCT23

PLAQUEMINES PARISH

PARISH IMPACTS

- 23,303 Residents
- Naval Air Station Joint Reserve Base
- 11 Schools (5K students)
- 1 Prison (700 inmates)
- 1 Nursing Home (100 residents)
- 1 Urgent Care Clinic
- Citrus Farms and Livestock
- Chevron (reverse osmosis system is being installed by the facility)
- Reports of appliances damaged (water heaters, washers, ice machines, etc.)
- Reports of skin irritation and other health conditions from salt exposure

SALTWATER PROJECTIONS TO SURFACE INTAKE

- Saltwater inundated the Boothville water treatment intake at river mile 18.6
- Saltwater inundated the Port Sulphur water treatment intake at river mile 49.2
- Saltwater inundated the Pointe a la Hache water treatment intake at river mile 49.7
- Saltwater is forecasted to reach the Belle Chasse water treatment intake at river mile 75.5 by November 30
- Chloride levels not expected to exceed 250ppm at the Dalcour water treatment intake at river mile 80.9



LIFELINE SUMMARIES – Food, Hydration, Shelter



LIFELINE SUMMARIES – Water Systems

CURRENT OPERATIONS

- Boothville electrical work is expected to be completed by today (10/26) for ROPU to be operational by this Friday (10/27)
- Port Sulphur should have power by Friday (10/27) or Monday (10/30) for ROPU to be operational next week
- Point a la Hache should be operational by the end of the week as barge is onsite
- Belle Chasse has poles and contractors onsite to install the ROPU with 3 additional ROPU due in this week
- Remain a participant in ongoing Joint Information Center (JIC) efforts in Region 1 to provide communications to citizens and stakeholders

FUTURE OPERATIONS

- Installing the ROPU at Dalcour soon
- Resolution of the permit issues for St. Bernard's tie-in
- Tie-in with Jefferson is ongoing and expected to be completed in a couple of weeks
- Will continue to monitor the situation as it progresses and adjust operations as needed

ST. BERNARD PARISH

PARISH IMPACTS

- 44,258 Residents
- 13 Schools
- 1 Junior College (2,166 enrollment)
- 1 Prison (700 inmates)
- 1 Nursing Home
- 1 Hospital
- 2 Dialysis Centers

SALTWATER PROJECTIONS TO SURFACE INTAKE

- Chloride levels not expected to exceed 250ppm at the St. Bernard water treatment intake at river mile 88



LIFELINE SUMMARIES – Food, Hydration, Shelter



LIFELINE SUMMARIES – Water Systems

CURRENT OPERATIONS

- ROPU to be online by today (10/26) with barges on standby
- Ongoing Joint Information Center (JIC) efforts in Region 1 to provide communications to citizens and stakeholders

FUTURE OPERATIONS

- Support resolution of the permitting issues for tie-in for St. Bernard and Plaquemines
- Will continue to monitor the situation as it progresses and adjust operations as needed

ORLEANS PARISH

PARISH IMPACTS

- 376,971 Residents
- 85 Public Schools (47,462)
- 56 Private Schools (19,154 students)
- 27 Hospitals
- 14 Nursing Homes
- 28 Dialysis Center
- Jail (1,500 inmates)

SALTWATER PROJECTIONS TO SURFACE INTAKE

- Chloride levels not expected to exceed 250ppm at the Algiers water treatment intake at mile marker 95.7
- Chloride levels not expected to exceed 250ppm at the NO Carrollton water treatment intake at mile marker 104.7



LIFELINE SUMMARIES – Food, Hydration, Shelter



LIFELINE SUMMARIES – Water Systems

CURRENT OPERATIONS

- Contract to barge water to Algiers awaiting completion
- Algiers water system has received bids to retrofit their intake to accommodate barging
- Completed water distribution plan and remain poised to activate plans as needed
- Continue ongoing Joint Information Center (JIC) efforts in Region 1 to provide communications to citizens and stakeholders

FUTURE OPERATIONS

- Working on permits on the East bank and holding bids (coffer dam and barging)
- Continue to monitor the situation as it progresses and adjust operations as needed

JEFFERSON PARISH

PARISH IMPACTS

- 433,688 Residents
- 82 Public Schools (46,839 students)
- 56 Private Schools (18,935)
- 6 Tier 1 Hospitals
- 8 Tier 2 Hospitals
- Regional Trauma Center
- 10 Nursing Homes
- Prison (1,200 inmates)

SALTWATER PROJECTIONS TO SURFACE INTAKE

- Chloride levels not expected to exceed 250ppm at the Gretna water treatment intake at mile marker 96.7
- Chloride levels not expected to exceed 250ppm at the West Jefferson water treatment intake at mile marker 99.1
- Chloride levels not expected to exceed 250ppm at the East Jefferson water treatment intake at mile marker 105.4



LIFELINE SUMMARIES – Food, Hydration, Shelter



LIFELINE SUMMARIES – Water Systems

CURRENT OPERATIONS

- Flexible line construction further up river to maintain a continuous flow of fresh water is in final stages and will be tested in the coming weeks
- Gretna is working with Jefferson for barging and tie-in options
- Ongoing Joint Information Center (JIC) efforts in Region 1 to provide communications to citizens and stakeholders

FUTURE OPERATIONS

- Gretna will begin barging water if surface intake reaches 75ppm chlorides
- Will continue to monitor situation as it progresses and adjust operations as needed