MISSISSIPPI RIVER HIGH WATER EVENT: STATUS AND IMPACTS
1 AUGUST 2019

Brad L. Inman
Chief, Projects and Restoration Branch
US Army Corps of Engineers
New Orleans District
For the year-to-date, the precipitation total was 19.05 inches, 3.74 inches above average, and the wettest such period in the 125-year record.

• Average precipitation across the contiguous U.S. for July 2018–June 2019 was 37.86 inches, 7.90 inches above average, and broke a record, exceeding the July-June record of 35.11 inches, which occurred from July 1982-June 1983.

• This new record also exceeded the previous all-time 12-month period record set at the end of May 2019.

• The all-time 12-month record prior to this was 36.31 during May 2018–April 2019.
FLOOD FIGHT – MISSISSIPPI RIVER AND TRIBUTARIES

• 2,200 Miles of MR&T levees and floodwalls – 973 miles in New Orleans District

• Event started 26 Oct 2018

• Work closely with non-federal sponsors

• Phase I:
  • 11.0’ at Carrollton gage
  • 5.0’ at Morgan City gage

• Phase II:
  • 15.0’ at Carrollton gage
  • 7.0’ at Morgan City gage
## Consecutive Days Above Flood Stage

**Lower Mississippi River Forecast Center**  
Current data as of July 31st 2019

<table>
<thead>
<tr>
<th>Forecast Location</th>
<th>Record (Days/Year)</th>
<th>2019 (Days/Period)</th>
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*Numbers in Red are records for this year*

Data provided by U.S. Army Corps of Engineers
Active Sites: 333
Armoring Needed: 3
Cracking: 38
Debris: 6
Depression: 9
Encroachment: 13
Erosion: 41
Leaking: 5
No Issue: 1
Obstructions: 2
Other (Specify in Remarks): 28
Relief Wells: 9
Rutting: 5
Sand Boils: 6
Seepage: 106
Sliding: 30

MVN Advisory Gages
Flood Fight Advisory Phases
- No Advisory
- Phase 1 Advisory
- Phase 2 Advisory
- Others

Active Inspection Points
- Seepage
- Sliding
- Encroachment
- Excavation
- Erosion
- Sand Boils
- Other

Days in Flood Fight 278
Days in Phase 2 169

Priority Sites
- 3 High
- 80 Medium

Active Inspection Sites 333
Sites Closed Yesterday 0
Sites Opened Yesterday 6

Point of Contact
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Phone: (504) 862-1102
Email: Sarah.T.Stone@usace.army.mil
Date: 30 Jul 2019

US Army Corps of Engineers.
What are we looking for?
# 21 DAY FORECAST

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**Phase I** | **Phase II** | **Crest**

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*As of xx December 2016*

**21 DAY FORECAST**

*As of xx December 2016*

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**21 DAY FORECAST**

*As of xx December 2016*

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**21 DAY FORECAST**

*As of xx December 2016*
Flood Control Projects

- Old River
- Morganza
- Bonnet Carre
- New Orleans
- Baton Rouge
- Morgan City
Old River Control Structure

Sydney A. Murray Hydropower Plant

Old River Overbank Structure

Old River Low Sill Structure

Knox Landing

Outflow Channel

Old River Auxiliary Control Structure
Morganza Floodway

- **Purpose:** maintain design flows of 1.5 million cfs or less through Baton Rouge

- **Opening trigger:** 57.0 ft stage at Morganza AND flow forecast of 1.5 million cfs and rising. OR to minimize flood damages in the downstream reaches and to prevent stages from exceeding approved flowline

- **Historical:**
  - Constructed 1954
  - 71,500 acre floodway
  - Operated Twice:
    - 1973 Peak Flow = 194,000 cfs
    - 2011 Peak Flow = 186,000 cfs

**2019 Status:**
- Forebay is flooded
- Slides on guide levees – mitigated with riprap
- Sluice gates are closed
- River crested at 57.8 on 18 June 2019
- Completed opening communication sequence and interagency coordination in preparation of potential opening
Bayou Chene Barge Closure
Bayou Chene Barge Closure

Installation Completed
3 June 2019
Bonnet Carré Spillway Operations

- **Purpose:** Maintain design flow of 1.25 million cfs or less through New Orleans
- **Opening trigger:** 1.25 million cfs and rising

**Current Conditions**
- Closed
- **2019 breaking records**
  - 1\textsuperscript{st} back to back openings
  - 1\textsuperscript{st} time open twice in same calendar year
  - Most days open in a calendar year (44 days 79 days)
  - Opened 27 Feb - Closed 11 April
  - Opened 10 May – Closed 27 July
  - Peak flow of 213,000 cfs on 19 March
BONNET CARRE SPILLWAY OPERATION

350 Total Bays

Open Bays 0
(0 High Bays, 0 Low Bays)

Closed Bays 350
(176 High Bays, 174 Low Bays)

24 Hour Bay Change
0 Opened, 26 Closed

Reported Flow: KCFS
Delta: KCFS
Reported Flow Date: 7/30/2019, 8:24 AM

As of xx December 2016

US Army Corps of Engineers

Notes: To date there have been 2 separate recaptures from the spillway operation in March 2018. Other tagged fish are Silver Carp.
Impacts to Federal Projects
Mississippi River
Baton Rouge to the Gulf of Mexico
HOPPER DREDGES IN SW PASS

Material disposal:

- **Head of Passes Hopper Dredge Disposal Area (HDDA)**
  - Material dredged from river miles 10 Above Head of Passes to 11 Below Head of Passes
  - Available for future beneficial placement

- **Ocean Dredged Material Disposal Site (ODMDS)**
  - Material dredged from river miles 11 to 22 Below Head of Passes
  - Located on the right-descending side of the bar channel

- **Agitation dredging**
  - River Miles 18-22 Below Head of Passes (Jetties and Bar Channel)
Mississippi River Status Update
15 Jul 2019

CHANNEL CONDITIONS:
❖ AS OF 26 JUN 19, ALL VESSELS ARE RESTRICTED TO 42 FEET MAXIMUM DRAFT TO ENTER OR EXIT THE MISSISSIPPI RIVER. NO ALTERNATE ROUTES EXIST.

❖ ALL DREDGES HAVE RESUMED WORK FOLLOWING HURRICANE BARRY.

Mississippi River Southwest Pass Dredge Status:
ONGOING:
• WHEELER (Red Flag Call Out #5-2019): 3 Jun 19 – 20 Jul 19
• NEWPORT: 28 Nov 18 – 15 Nov 19
• STUYVESANT: 14 Jun 19 – 30 Sep 19
• RS WEEKS: Hopper Dredge Disposal Area (HDDA) Dredging

SCHEDULED:
• WHEELER (Red Flag Call Out #6-2019): 21 Jul 19 – 31 Aug 19
• SWP Cutterhead Dredge #2-2019: 20 Jul 19 – 20 Sep 19
  - Est start: CR McCaskill 20 Jul & Capt Frank 24 Jul
• SWP Hopper #12-19: Bid opening 18 Jul 19

Mississippi River Deep Draft Crossings Dredge Status:
• HURLEY – Redeye crossing (Mile 224), started 5 May 19. Down for repairs 8-17 Jul 19.
• WALLACE McGEOGE – Baton Rouge Front crossing (Mile 231.5), started 9 May 19
• JADWIN –Belmont crossing (Mile 154), started 28 Jun 19
High River and a Tropical Event
Tropical Storm Barry

Potential Tropical Cyclone Two
Wednesday July 10, 2019
10 AM CDT Advisory 1
NWS National Hurricane Center

Current information: x
Center location 28.5 N 86.4 W
Maximum sustained wind 30 mph
Movement WSW at 8 mph

Forecast positions:
- Tropical Cyclone
- Post/Potential TC
Sustained winds: D < 39 mph
S 39-73 mph H 74-110 mph M > 110 mph

Note: The cone contains the probable path of the storm center but does not show the size of the storm. Hazardous conditions can occur outside of the cone.
Expected Storm Total Rainfall

Tropical Storm Barry

- Storm Total rainfall forecast valid Today through next week
- Locally, most rain will occur Today and Saturday

Note: There will likely be locally higher amounts
Mississippi River

- Storm surge near Mouth of Mississippi River of up to 3-5 ft late Friday or early Saturday.
- Potential storm surge of around 3-4 ft expected along the lower Mississippi River from New Orleans area southward
- New Orleans Carrollton Gage Forecast - Approximately 20 ft late Friday into Saturday.
Hurricane Frequency vs. River Discharge

100-Year Frequency of North Atlantic Basin Tropical Cyclones

Minimum  
Maximum  
Average  
2019  
2018  
Highest storm activity  
FOUO/Pre-decisional
NEW ORLEANS DISTRICT
SCHOONER BAYOU

As of xx December 2016