



## **Module 4 Activity: *Flooding: Understanding Risk, Forecasts, and Warnings***

---

### **Practical Exercise Statement**

Using the 2016 floods in Baton Rouge, LA, as a case study, the practical exercise consists of receiving and interpreting a series of escalating watches/warnings in a flood scenario. This exercise allows participants to interpret flood insurance risk maps (FIRMs); read and interpret the language and graphics of forecasts from the National Weather Service; recognize outlooks, watches, and warnings; and read a hydrograph.

### **Introduction**

Baton Rouge, LA, experienced major flooding in August 2016.

### **Action to be Completed**

Work with your group to answer the questions in your group using the handouts provided. Share your ideas in a discussion, and note your answers for reference on the question sheets provided.

### **Rationale**

Flooding situations can develop rapidly. This exercise provides an opportunity for participants to work together in groups to understand and appreciate different decisions and courses of action that they may need to make in a flooding situation.

### **Time Necessary to Complete**

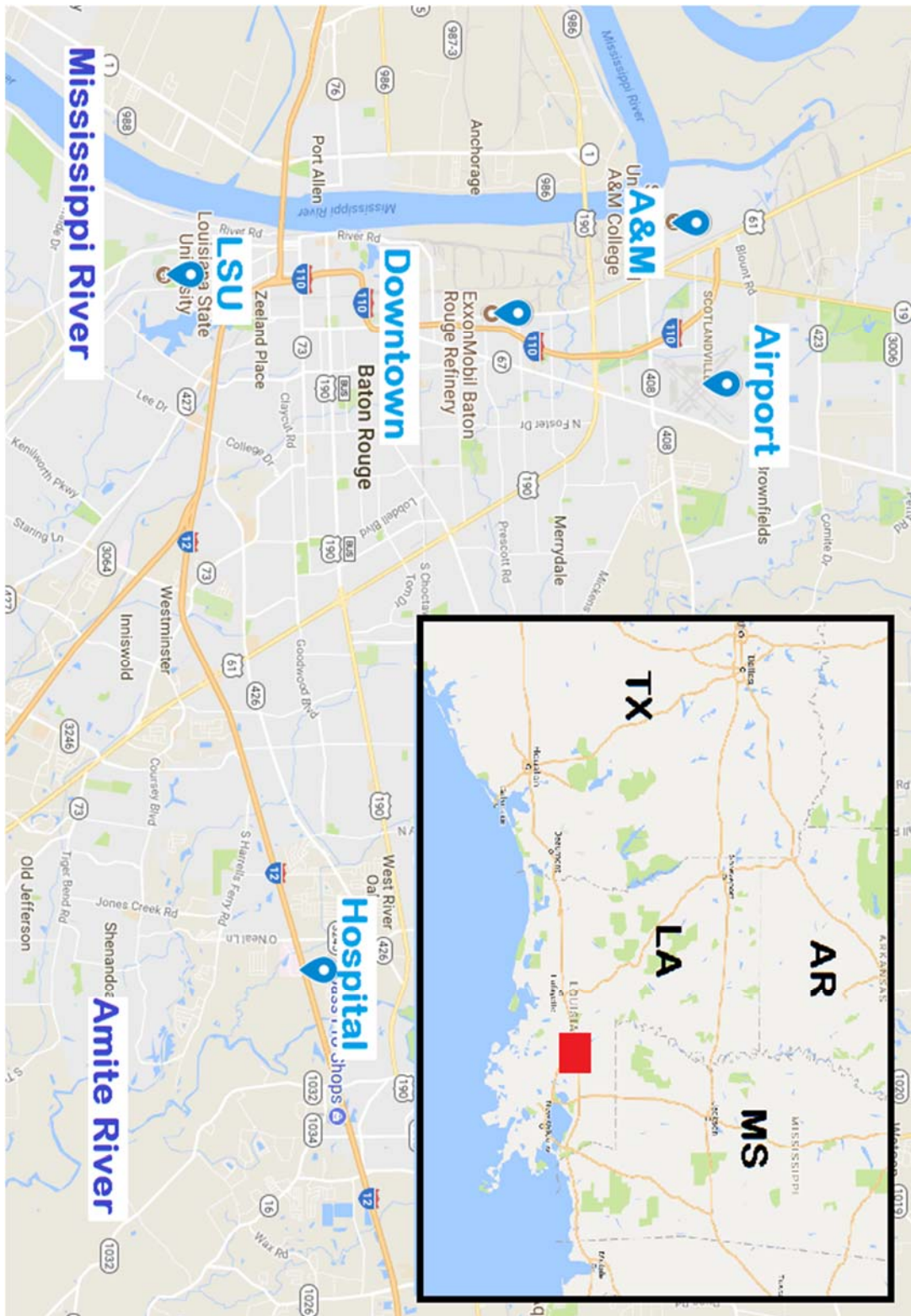
40 minutes

### **Resources**

Each group will have a binder with Handouts 1-6.



# Handout #1



(Source: Google Maps, annotated by Rob Dale, 2017)










## Handout #2 – Flood Insurance Rate Map



Medical Center and Interstate

### Flood Hazard Zones

-  1% Annual Chance Flood Hazard
-  Regulatory Floodway
-  Special Floodway
-  Area of Undetermined Flood Hazard
-  0.2% Annual Chance Flood Hazard
-  Future Conditions 1% Annual Chance Flood Hazard
-  Area with Reduced Risk Due to Levee



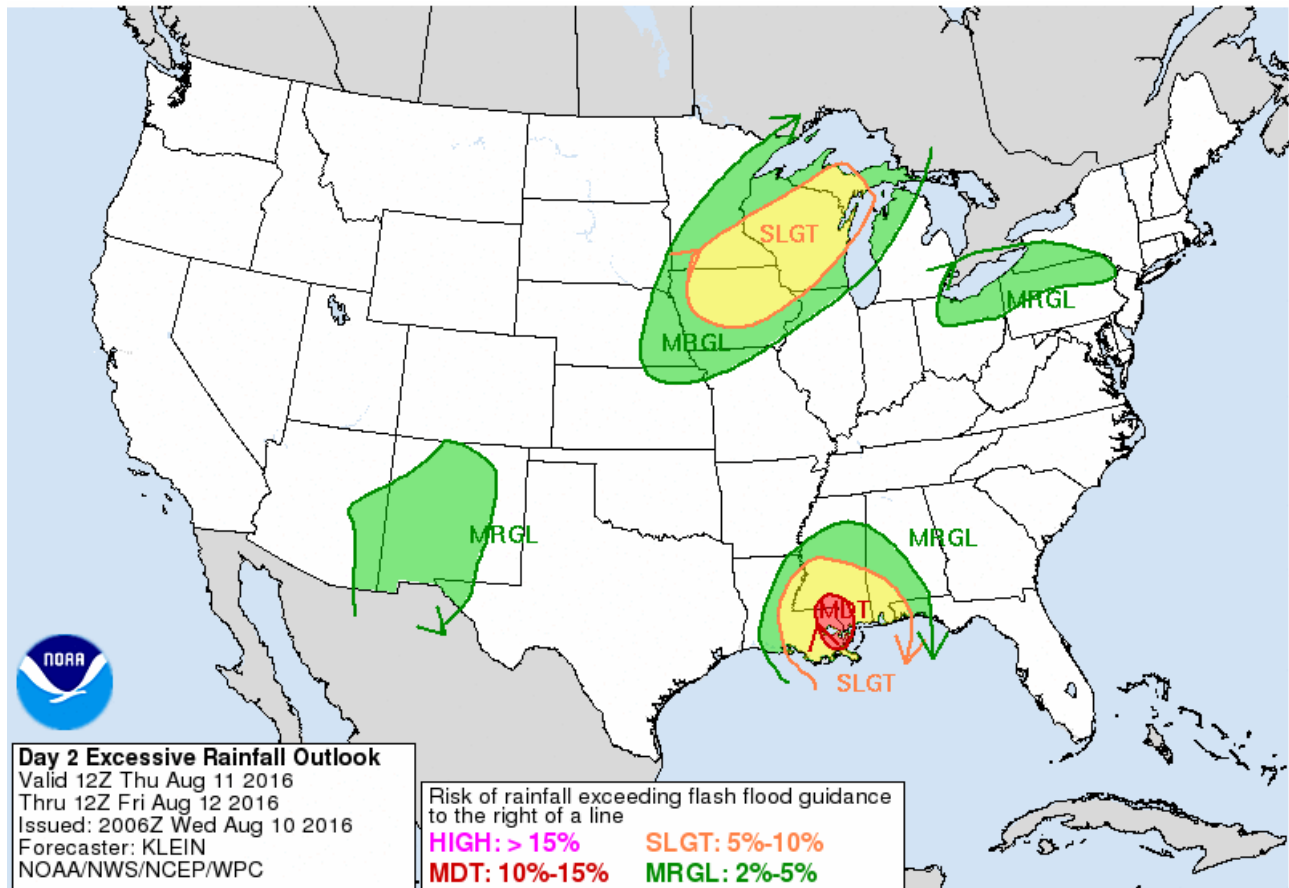
Airport

(Sources: FEMA/NFIP, 2017)





## Handout #3 – Wednesday PM



(Source: NOAA, 2016)

Wednesday Evening  
Issued: 2006 UTC Wed Aug 10 2016  
Valid: 12 UTC Thu Aug 11 2016 thru  
12 UTC Sat Aug 13 2016

12:00 UTC = 7:00 am CDT  
20:00 UTC = 3:00 pm CDT



## Handout #3 (continued)

---

HAZARDOUS WEATHER OUTLOOK  
NATIONAL WEATHER SERVICE NEW ORLEANS LA  
512 PM CDT WED AUG 10 2016

THIS HAZARDOUS WEATHER OUTLOOK IS FOR PORTIONS OF SOUTHEAST LOUISIANA...SOUTH MISSISSIPPI AND THE ADJACENT COASTAL WATERS. DAYS TWO THROUGH SEVEN...THURSDAY THROUGH TUESDAY SCATTERED TO NUMEROUS THUNDERSTORMS ARE EXPECTED THROUGH THE ENTIRE PERIOD WITH **A FEW STRONGER STORMS POSSIBLE AT TIMES**. THE GREATEST RISK WILL BE FREQUENT LIGHTNING STRIKES...WIND GUSTS OF 30 TO 40 MPH...AND **WIDESPREAD LOCALLY HEAVY RAINFALL THAT CAN RESULT IN LOCALIZED FLOODING OF LOW LYING AND POORLY DRAINED AREAS**. WATERSPOUTS AND TROPICAL FUNNELS WILL BE POSSIBLE EACH DAY.

SPOTTER INFORMATION STATEMENT...  
**SPOTTER ACTIVATION MAY BE NEEDED TONIGHT INTO SATURDAY FOR FLOOD MONITORING**. REPORT ANY FLOODING PROMPTLY TO THE NATIONAL WEATHER SERVICE OFFICE IN SLIDELL.





## Handout #4 – Thursday AM

---



(Source: NOAA, 2017)



## Handout #4 (continued)

---

FLASH FLOOD WATCH  
NATIONAL WEATHER SERVICE NEW ORLEANS LA  
432 AM CDT THU AUG 11 2016

...FLASH FLOOD WATCH IN EFFECT THROUGH SATURDAY MORNING...

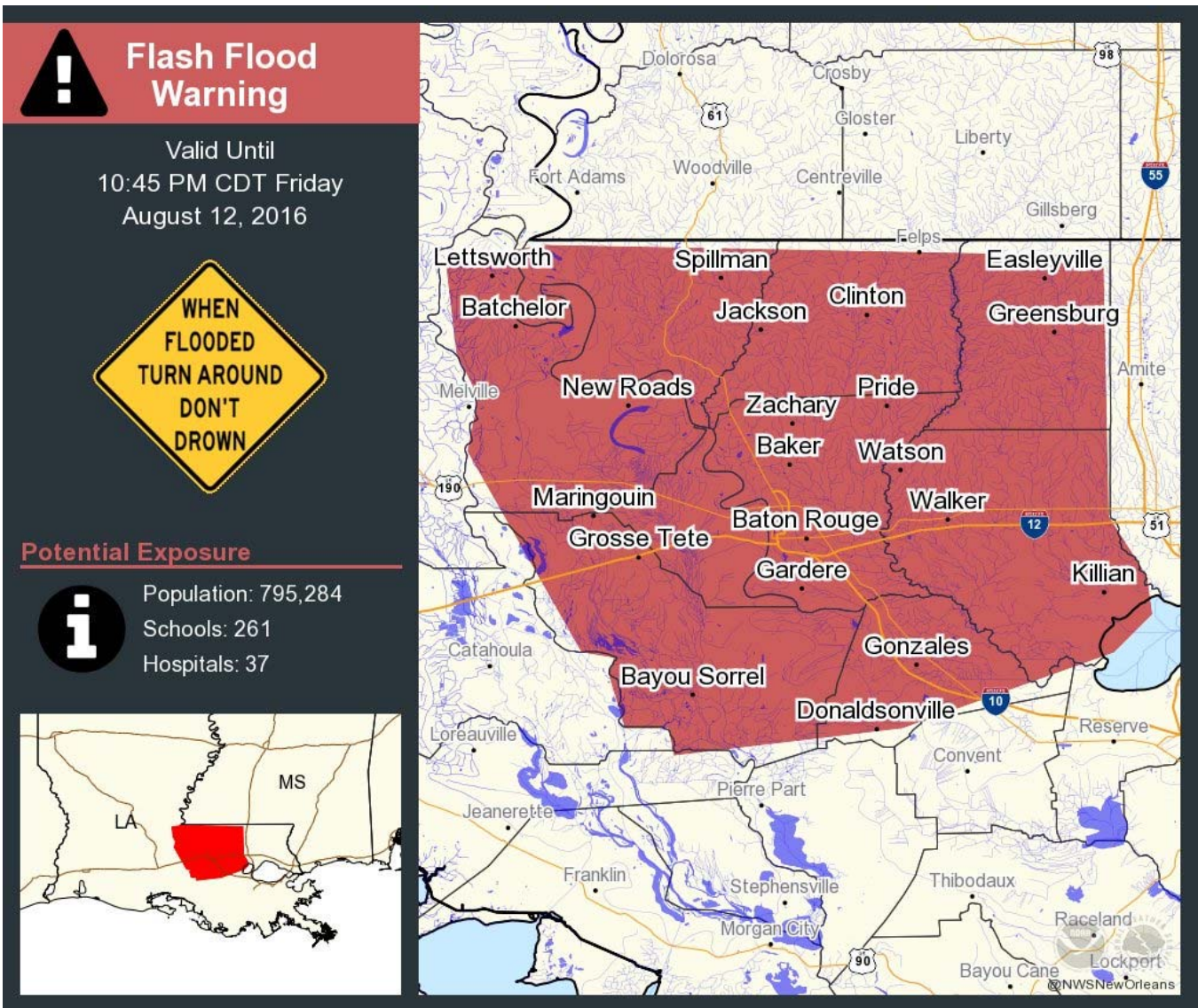
THE NATIONAL WEATHER SERVICE IN NEW ORLEANS HAS ISSUED A

- \* **FLASH FLOOD WATCH** FOR PORTIONS OF SOUTHEAST LOUISIANA AND SOUTHERN MISSISSIPPI...INCLUDING THE FOLLOWING AREAS...IN SOUTHEAST LOUISIANA...ASCENSION...ASSUMPTION...EAST BATON ROUGE...EAST FELICIANA...IBERVILLE...LIVINGSTON...NORTHERN TANGIPAOHA...POINTE COUPEE...ST. HELENA...ST. JAMES...ST. JOHN THE BAPTIST...WASHINGTON...WEST BATON ROUGE AND WEST FELICIANA. IN SOUTHERN MISSISSIPPI...AMITE...PIKE...WALTHALL AND WILKINSON.
- \* **THROUGH SATURDAY MORNING**
- \* ABUNDANT TROPICAL MOISTURE POOLED AROUND A WEAK SURFACE LOW PRESSURE SYSTEM NEAR THE MISSISSIPPI COAST WILL ALLOW FOR FAVORABLE CONDITIONS FOR HEAVY RAINS AND THE POTENTIAL OF FLASH FLOODING IN THE CENTRAL GULF COAST REGION. **STORM TOTAL RAINFALL ACCUMULATIONS THROUGH SATURDAY MORNING COULD RANGE BETWEEN 5 AND 8 INCHES WITH SOME LOCALLY HIGHER AMOUNTS CLOSE TO 10 INCHES**...PARTICULARLY ALONG THE MISSISSIPPI COAST AND INTO THE METRO NEW ORLEANS AREA.
- \* **IMPACTS INCLUDE FLASH FLOODING IN LOW LYING AND POORLY DRAINED AREAS AS WELL AS ELEVATED LEVELS ON AREA RIVERS AND STREAMS.**





# Handout #5 – Friday AM



(Source: NOAA, 2017)



## Handout #5 (continued)

---

BULLETIN - EAS ACTIVATION REQUESTED  
FLASH FLOOD WARNING  
NATIONAL WEATHER SERVICE NEW ORLEANS LA  
1042 AM CDT FRI AUG 12 2016  
...**FLASH FLOOD EMERGENCY**...

THE NATIONAL WEATHER SERVICE IN NEW ORLEANS HAS ISSUED A

\* FLASH FLOOD WARNING FOR...

NORTHEASTERN WEST FELICIANA PARISH IN SOUTHEASTERN LOUISIANA...

WESTERN ST. HELENA PARISH IN SOUTHEASTERN LOUISIANA...

NORTHEASTERN EAST BATON ROUGE PARISH IN SOUTHEASTERN LOUISIANA...

EAST FELICIANA PARISH IN SOUTHEASTERN LOUISIANA...

WESTERN AMITE COUNTY IN SOUTHERN MISSISSIPPI...

EASTERN WILKINSON COUNTY IN SOUTHERN MISSISSIPPI...

\* UNTIL 115 PM CDT

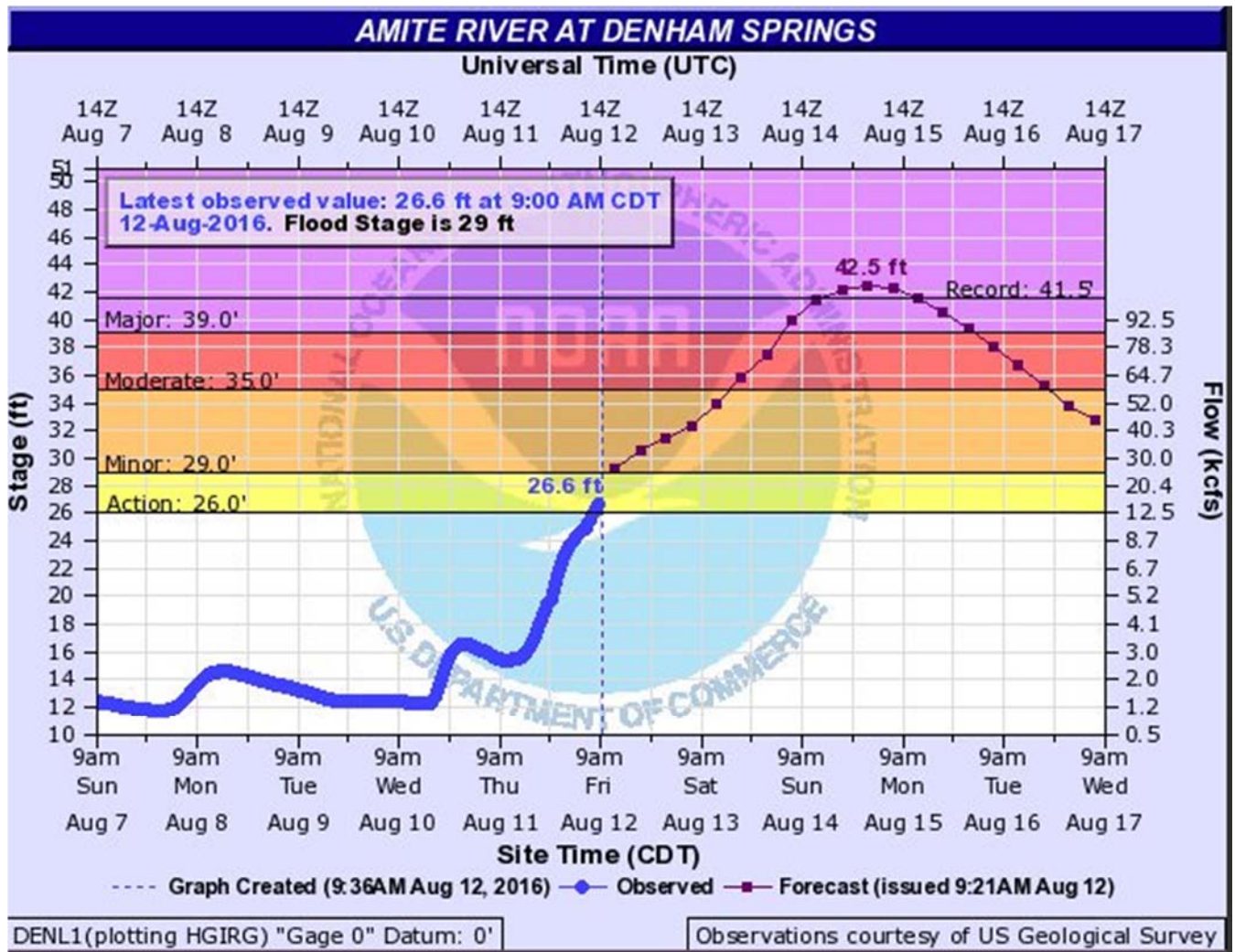
\* AT 1038 AM CDT...EMERGENCY MANAGEMENT OFFICIALS REPORTED HEAVY RAIN AND **WIDESPREAD FLASH FLOODING REQUIRING RESCUES AND EVACUATIONS IN SEVERAL LOCATIONS WITHIN THIS WARNED AREA**. RAINFALL AMOUNTS **BETWEEN 6 AND 13 INCHES OF RAIN HAVE FALLEN** THIS MORNING. FLASH FLOODING IS ALREADY OCCURRING.

THIS IS A FLASH FLOOD EMERGENCY FOR A LARGE AREA BETWEEN CROSBY MISSISSIPPI SOUTHWARD TO PRIDE AND GREENWELL SPRINGS LOUISIANA. **THIS IS A PARTICULARLY DANGEROUS SITUATION**. SEEK HIGHER GROUND NOW! ADDITIONAL RAINFALL AMOUNTS OF 2 TO 4 INCHES ARE POSSIBLE IN THE WARNED AREA.





# Handout #6 – Friday AM



(Source: NOAA, 2017)

