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Katrina - Scenario A2: Modeling conditions

- I next modeled Hurricane Katrina to isolate and study the incremental impact on flooding at each Trial Property resulting from the IHNC floodwall breaches.
- Scenario A2 is identical to the A1 *Katrina Actual Event Conditions* Scenario A1 except that all breaches along the MRGO Reach 2 were eliminated. In other words, only the two breaches on the IHNC channel into the St. Bernard Polder were active.
- Scenarios A1 and A2 compare in their features as:

Scenario	MRGO Status	Marsh Status	Levee Breaches	Description
A1 (Katrina Actual Event Conditions)	2005 pre-Katrina dimensions	2005 pre-Katrina conditions	Breaching occurring as during Katrina	Base case: Actual Katrina Hindcast
A2 (2005 MRGO/ 2005 Wetlands/ IHNC Breaches Only)	2005 pre-Katrina dimensions	2005 pre-Katrina conditions	IHNC Breaches Only	Base case reflecting levee breaches only in the IHNC floodwall

Table 5

Katrina - Scenario A2: Flooding in St. Bernard Parish

- In the A2 Scenario, floodwaters initially penetrate and inundate St. Bernard Polder in much the same way as in Scenario A1.
- As in Scenario A1, Hurricane Katrina's storm surge grew from 6 ft at 2:00 am CDT to over 10 ft at 4:00 am CDT in Lake Borgne and the MRGO Reach 1 and Reach 2 channels.
- Likewise as in Scenario A1, by 6:00 am CDT, floodwater is pouring into the Lower Ninth Ward of New Orleans through the North breach in the IHNC floodwall.
- And, as in Scenario A1, by 8:00 am CDT, floodwaters pouring through both IHNC floodwall breaches have inundated almost the entire Lower Ninth Ward, with water surface elevations as high as 8 or 9 ft near the breaches.
- However, in this Scenario, because the Reach 2 levees do not breach, floodwaters do not fill the Central Wetlands and thus do not begin overtopping the 40 Arpent levee east of Paris Road.

Katrina - Scenario A2: Flooding in St. Bernard Parish

- As the next set of slides demonstrate, Figures 23a-q, in the A2 Scenario, flooding in the Lower Ninth Ward and the portion of St. Bernard Parish west of Paris Road is dominated by the IHNC breaches.
- Throughout the morning, floodwaters pouring in through both the IHNC North and South breaches inundate St. Bernard Polder west of Paris Road to water surface elevations as high as 10 ft.
- By noon, flooding from the IHNC breaches begin to inundate the Polder east of Paris Road.
- Flooding continues throughout the day and into the early morning of August 30, 2005.
- Thus, even without the Reach 2 levee breaches, maximum water surface elevations in the Polder reach as high as 10 ft in the Lower Ninth Ward, 7 ft near Paris Road, and over 4 ft on properties east of Paris Road to the Violet Canal.

8/29/2005 at 2 am CDT

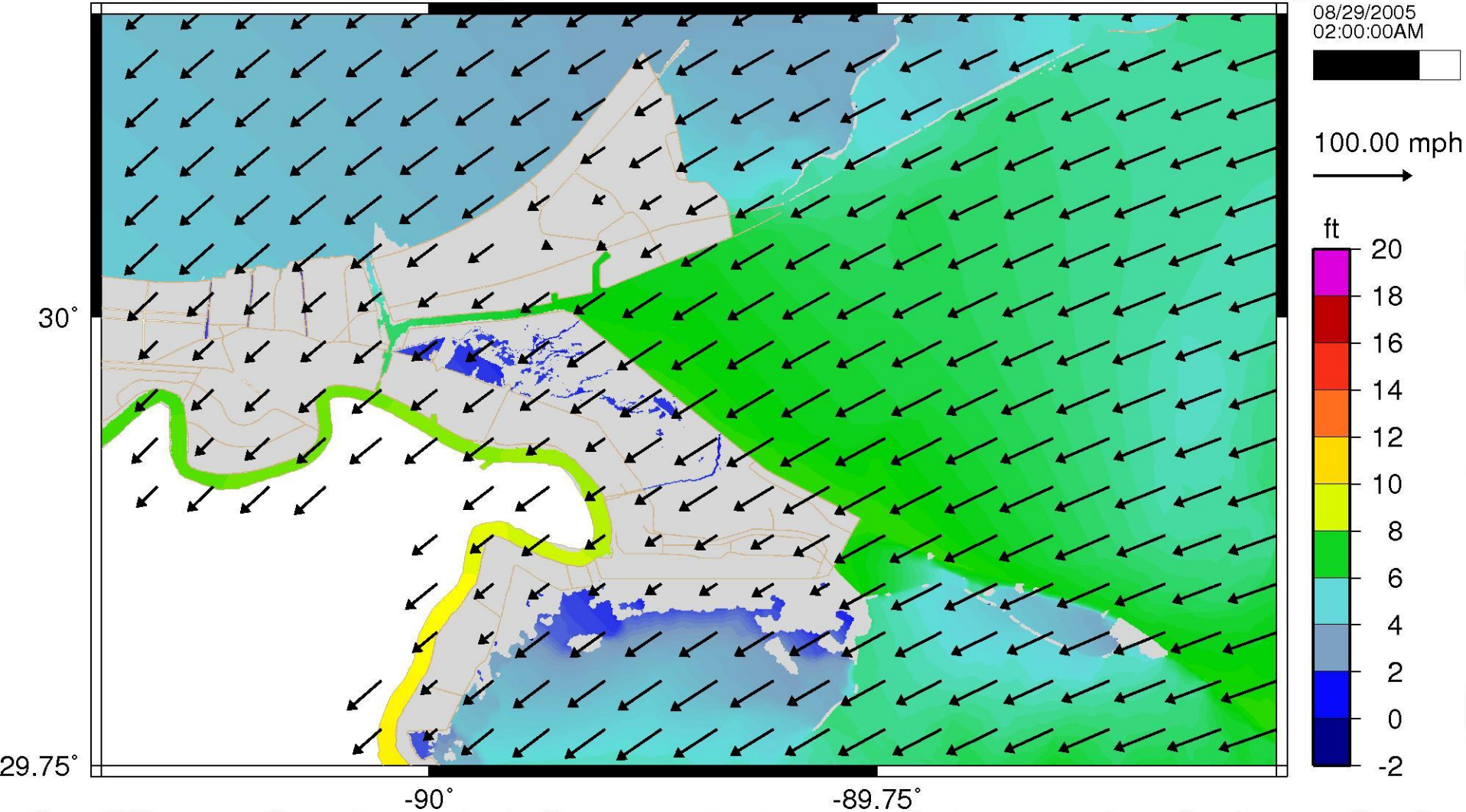


Figure 23a

8/29/2005 at 4 am CDT

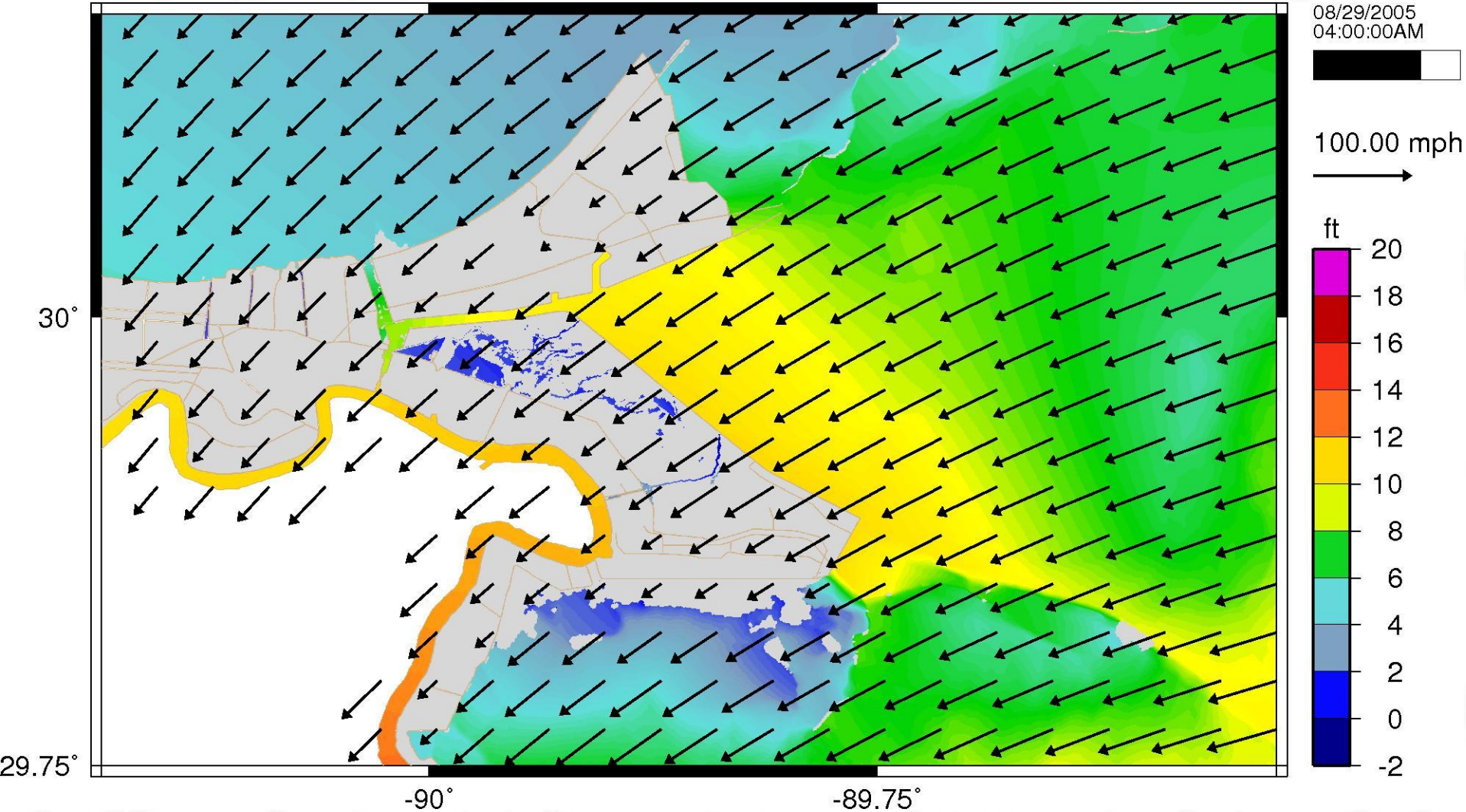


Figure 23b

8/29/2005 at 6 am CDT

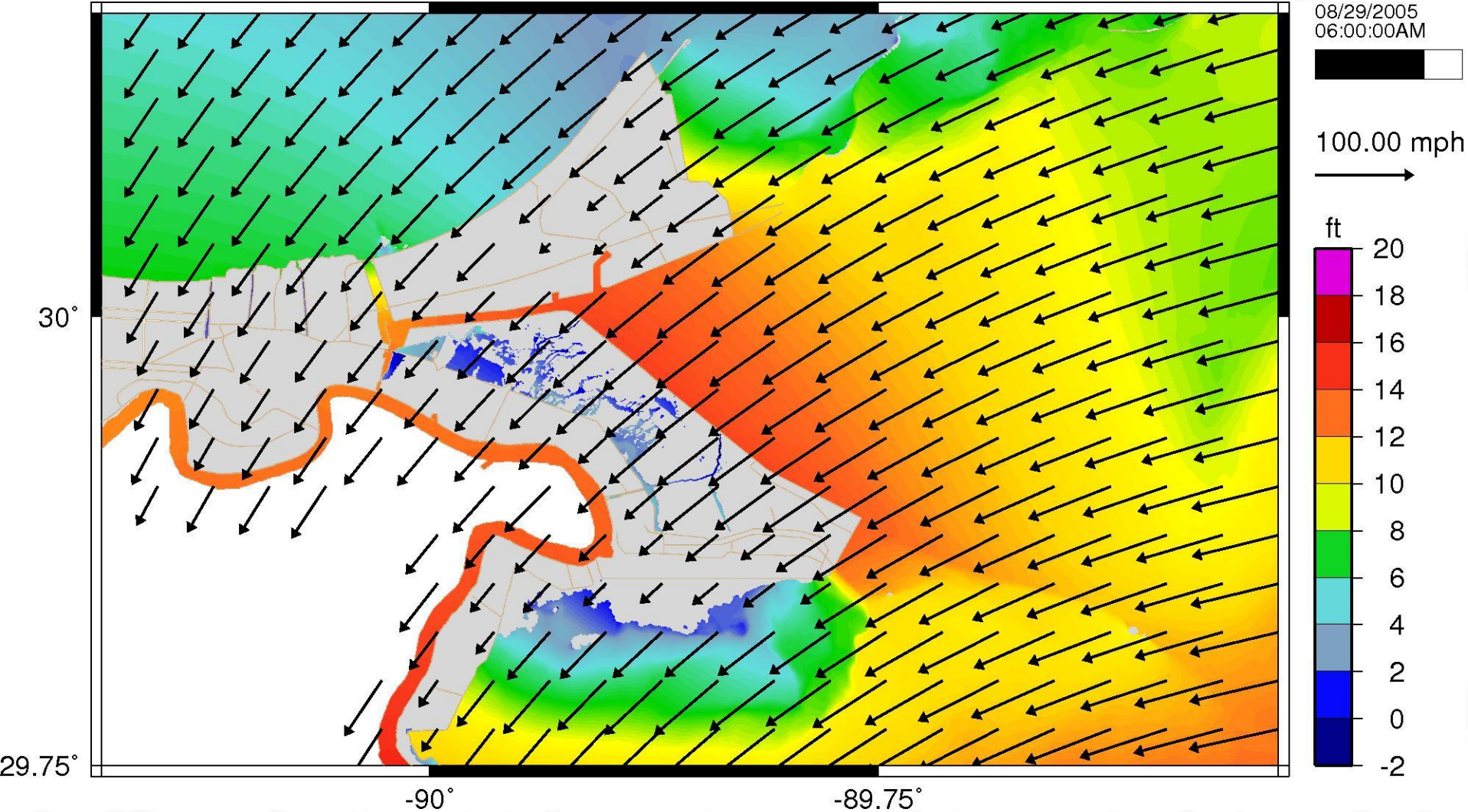


Figure 23c

8/29/2005 at 7 am CDT

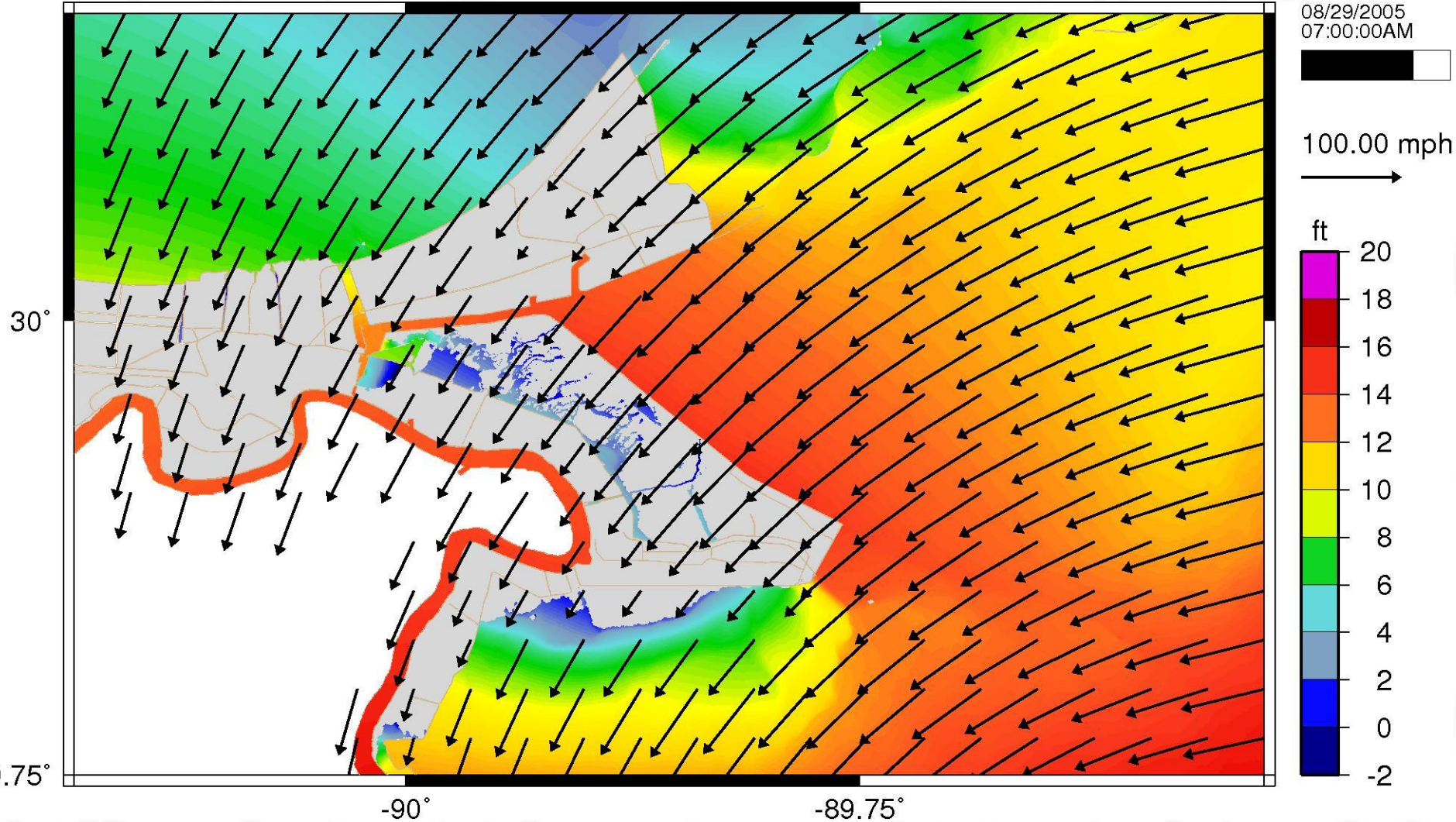


Figure 23d

8/29/2005 at 8 am CDT

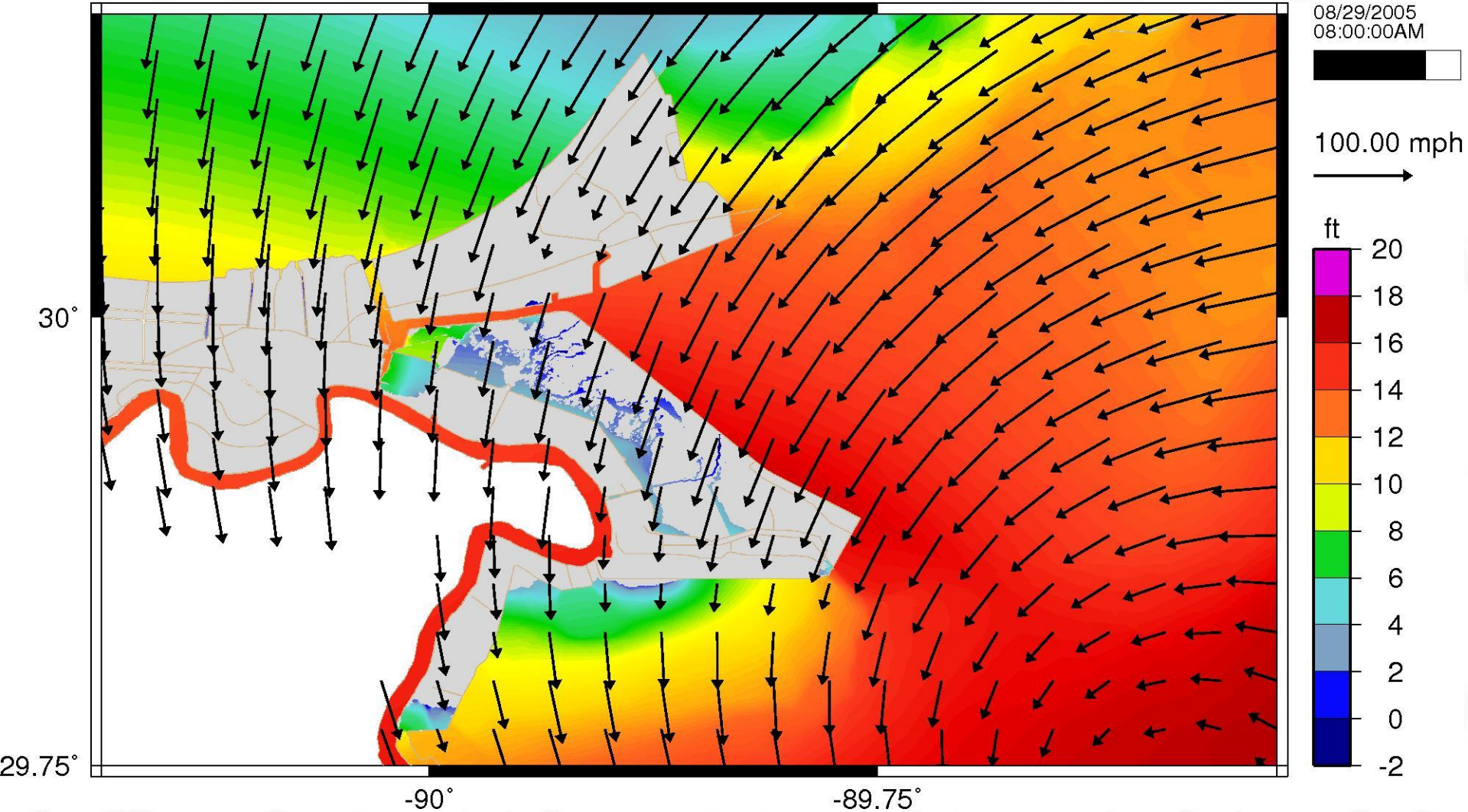


Figure 23e

8/29/2005 at 9 am CDT

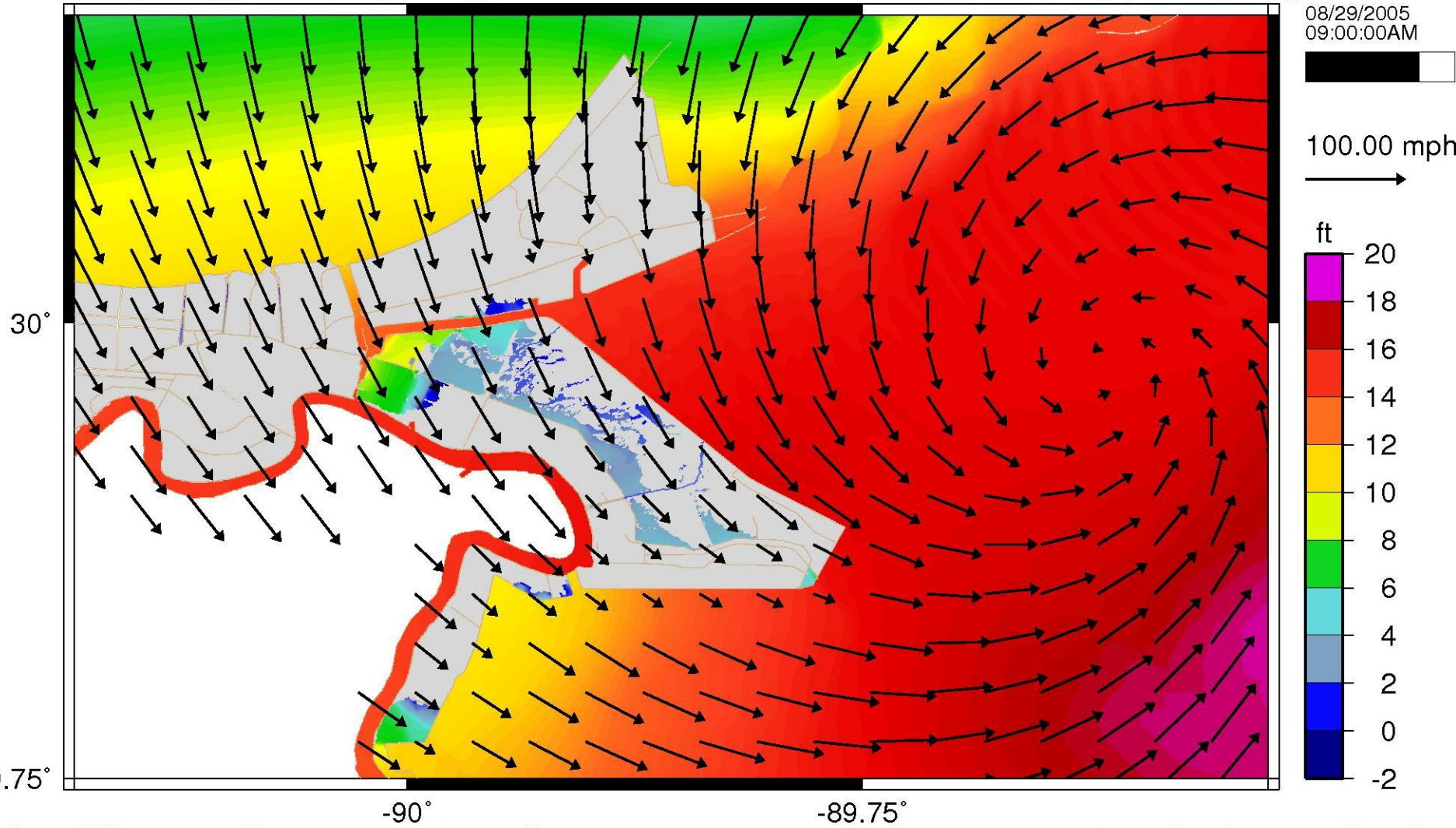


Figure 23f

8/29/2005 at 10 am CDT

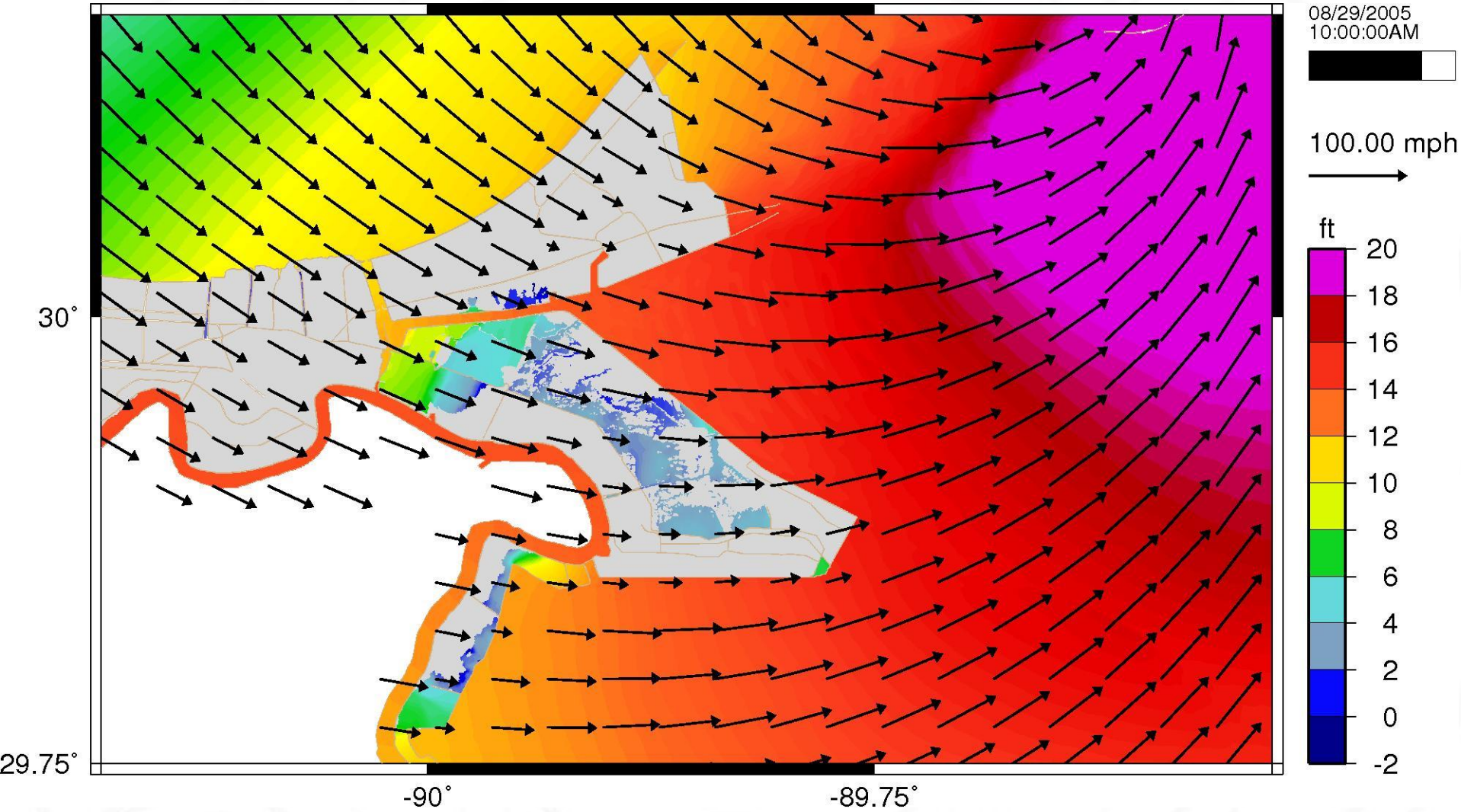


Figure 23g

8/29/2005 at 11 am CDT

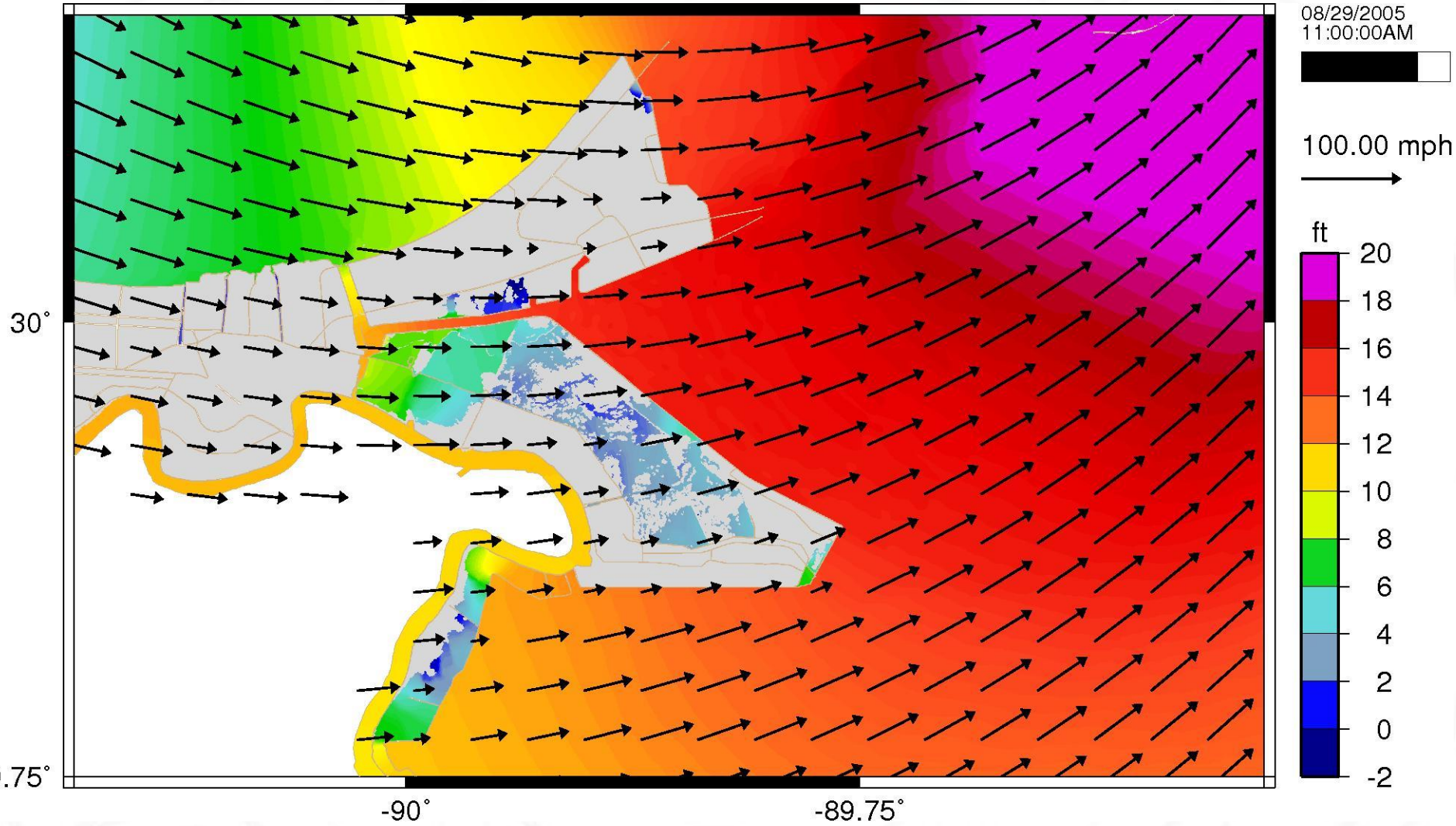


Figure 23h

8/29/2005 at 12 pm CDT

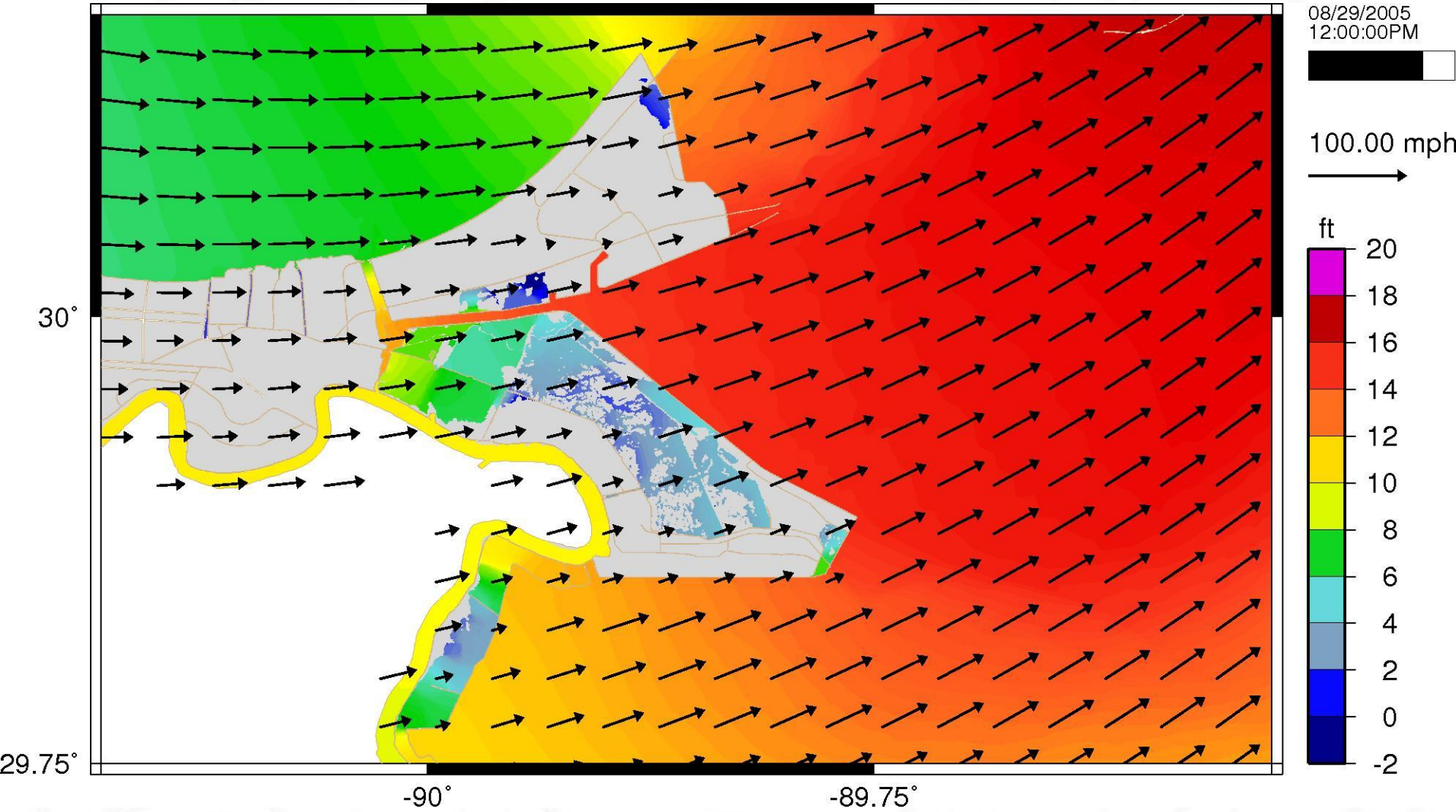


Figure 23i

8/29/2005 at 1 pm CDT

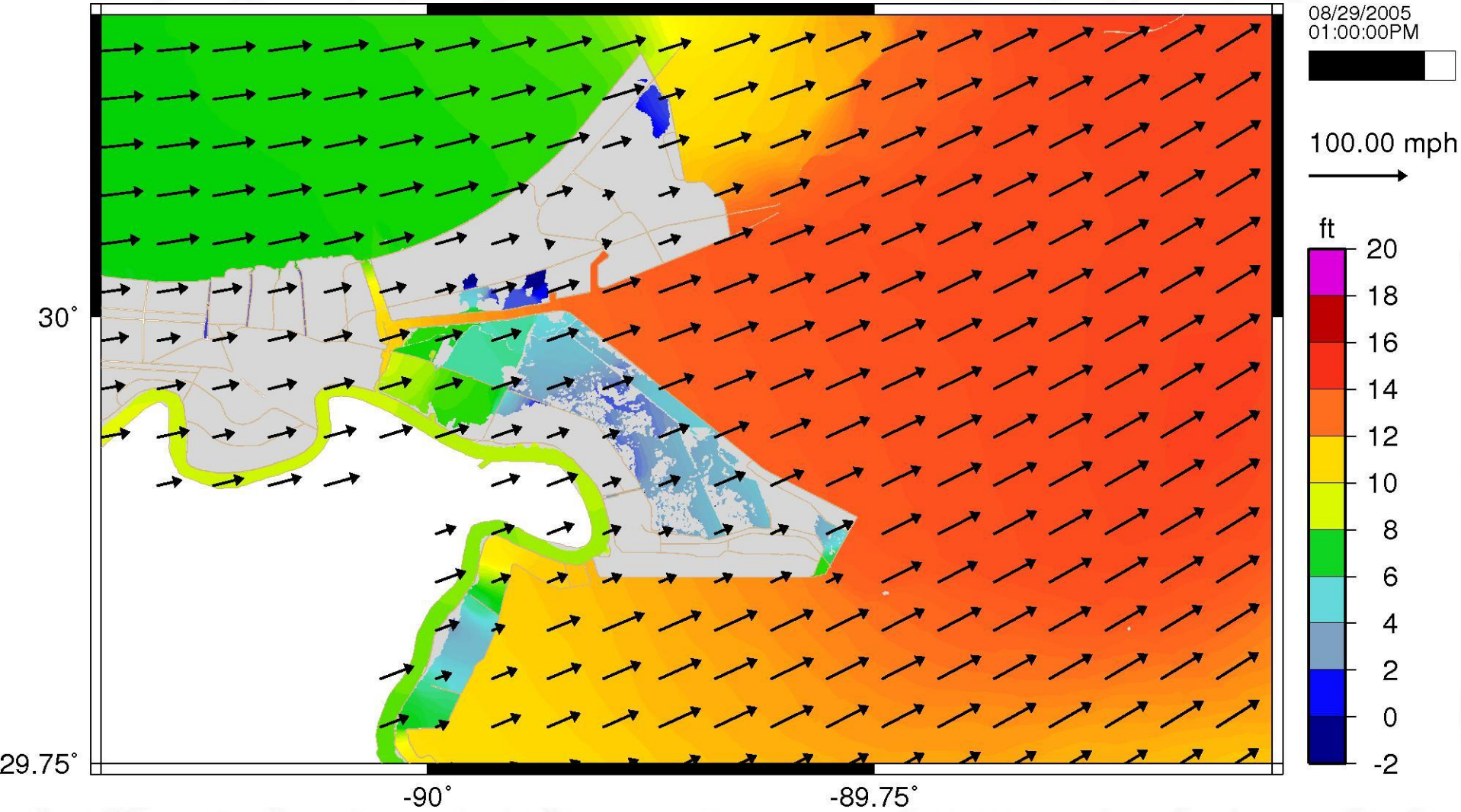


Figure 23j

8/29/2005 at 2 pm CDT

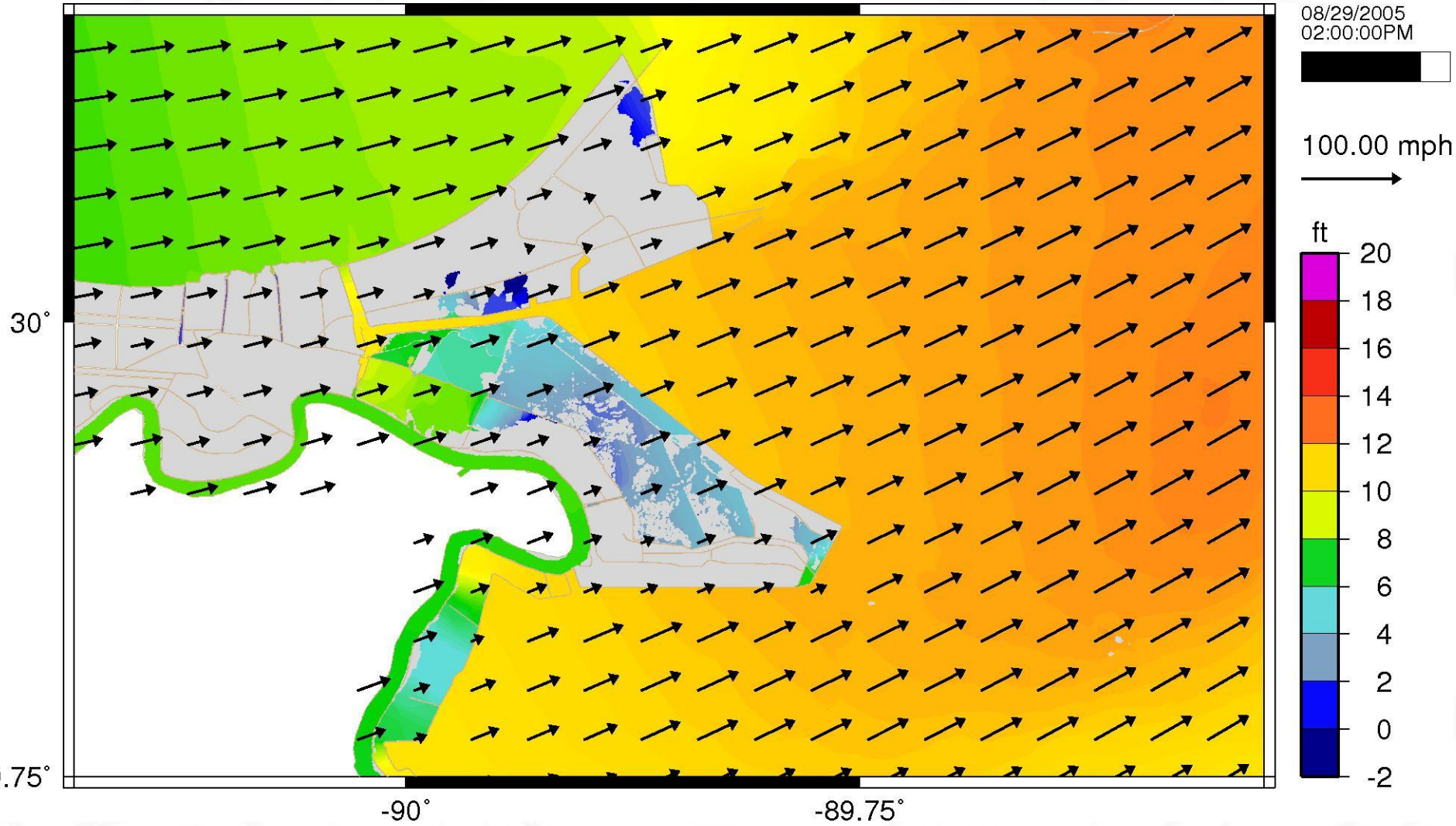


Figure 23k

8/29/2005 at 3 pm CDT

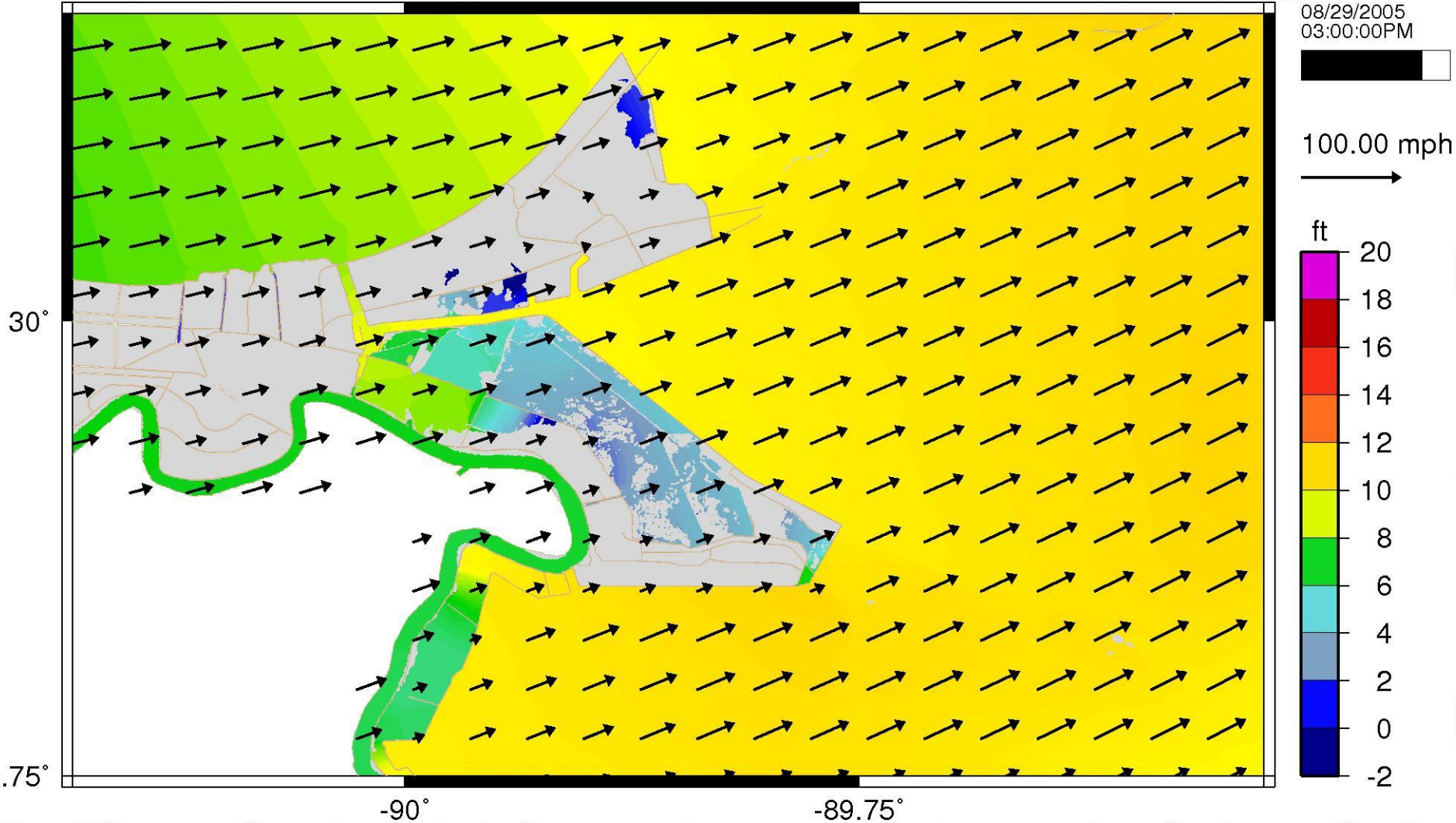


Figure 23I

8/29/2005 at 4 pm CDT

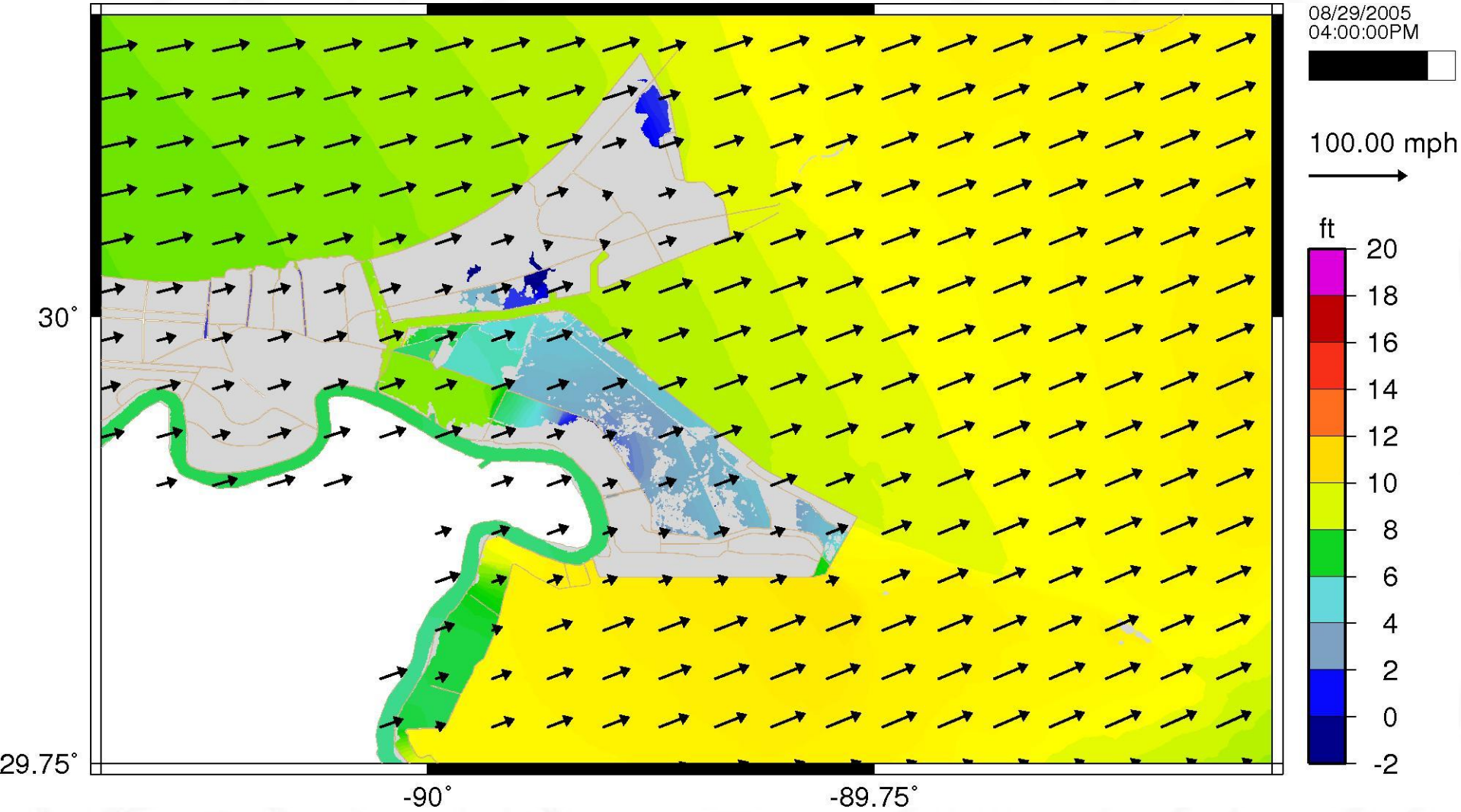


Figure 23m

8/29/2005 at 6 pm CDT

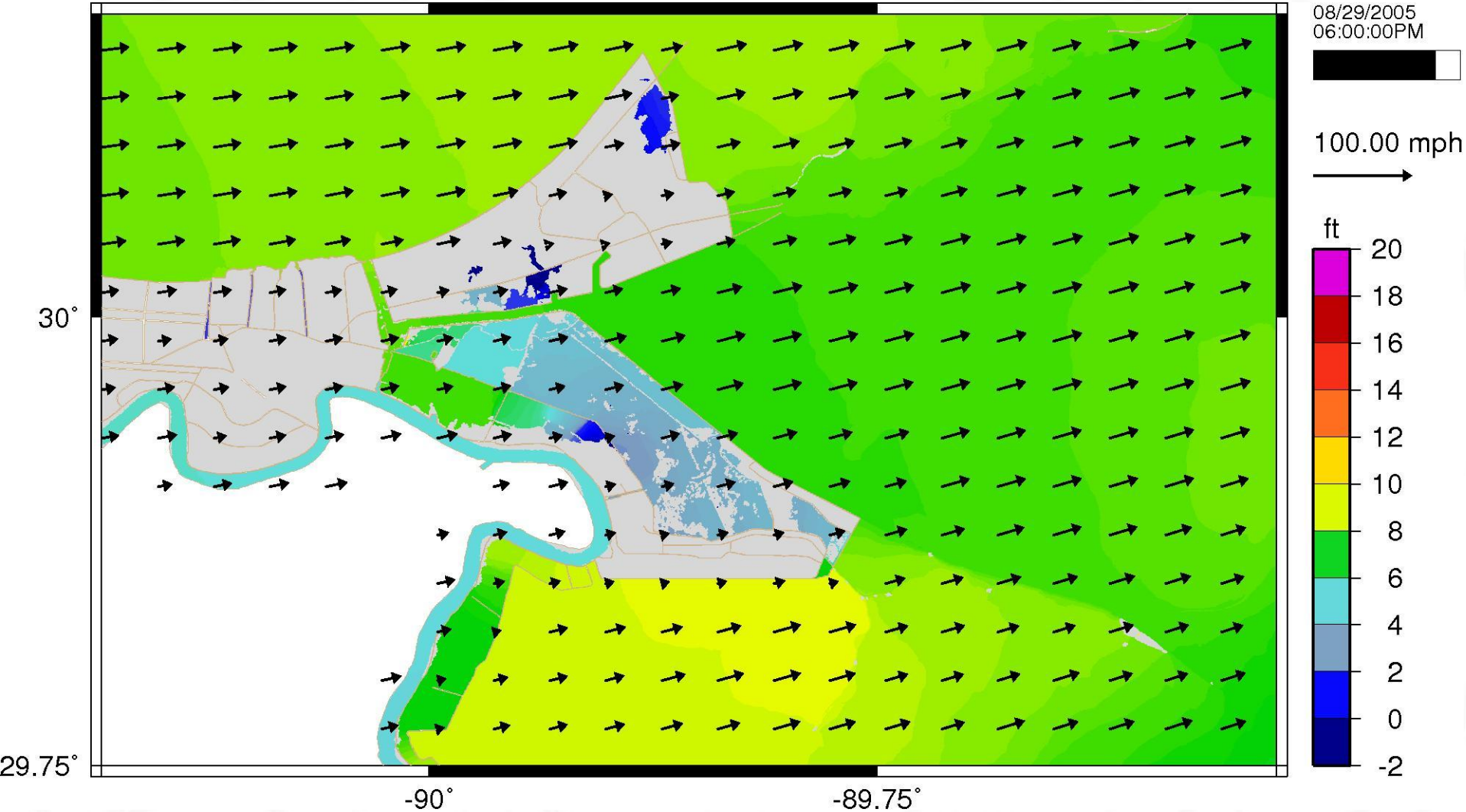


Figure 23n

8/29/2005 at 8 pm CDT

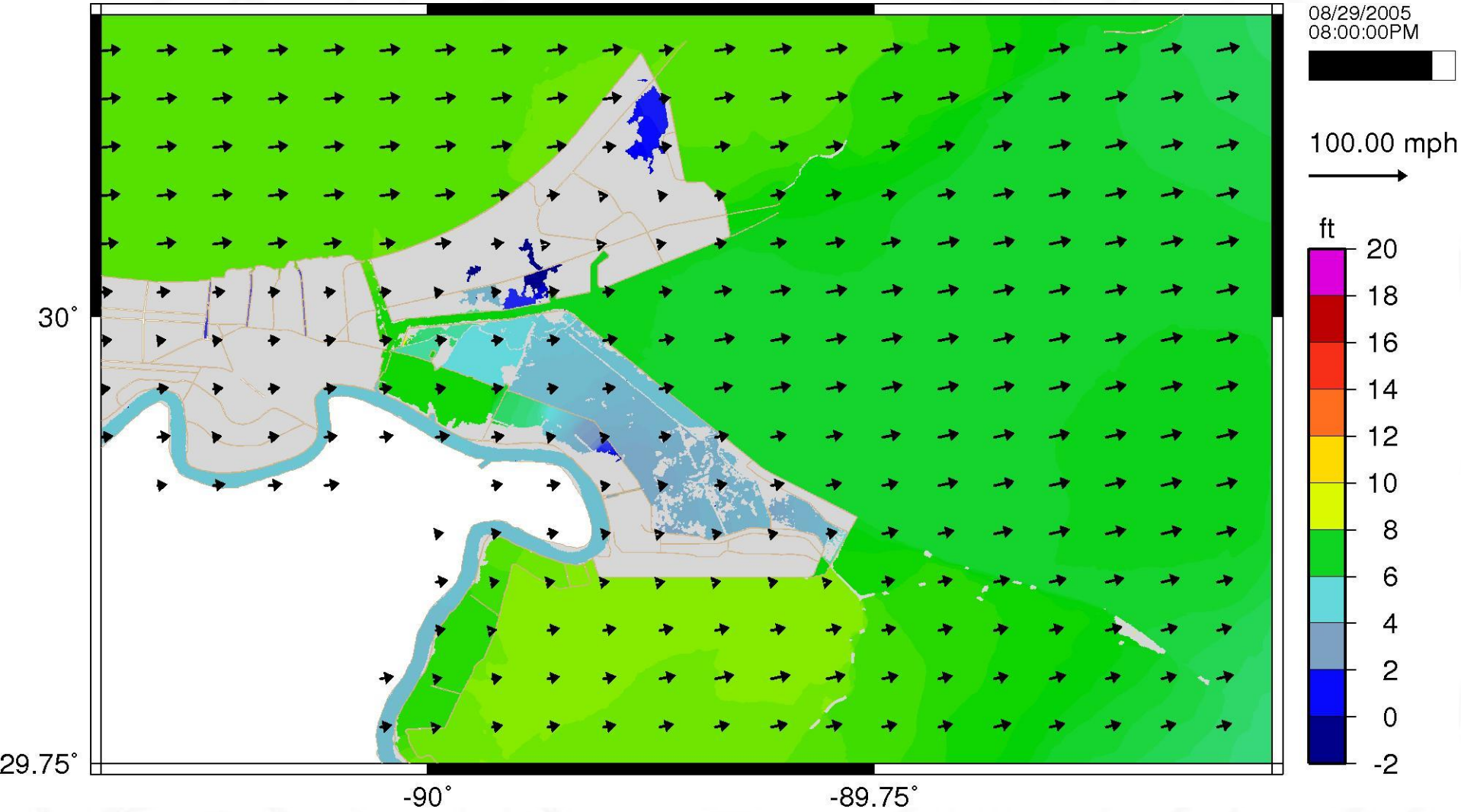


Figure 23o

8/29/2005 at 10 pm CDT

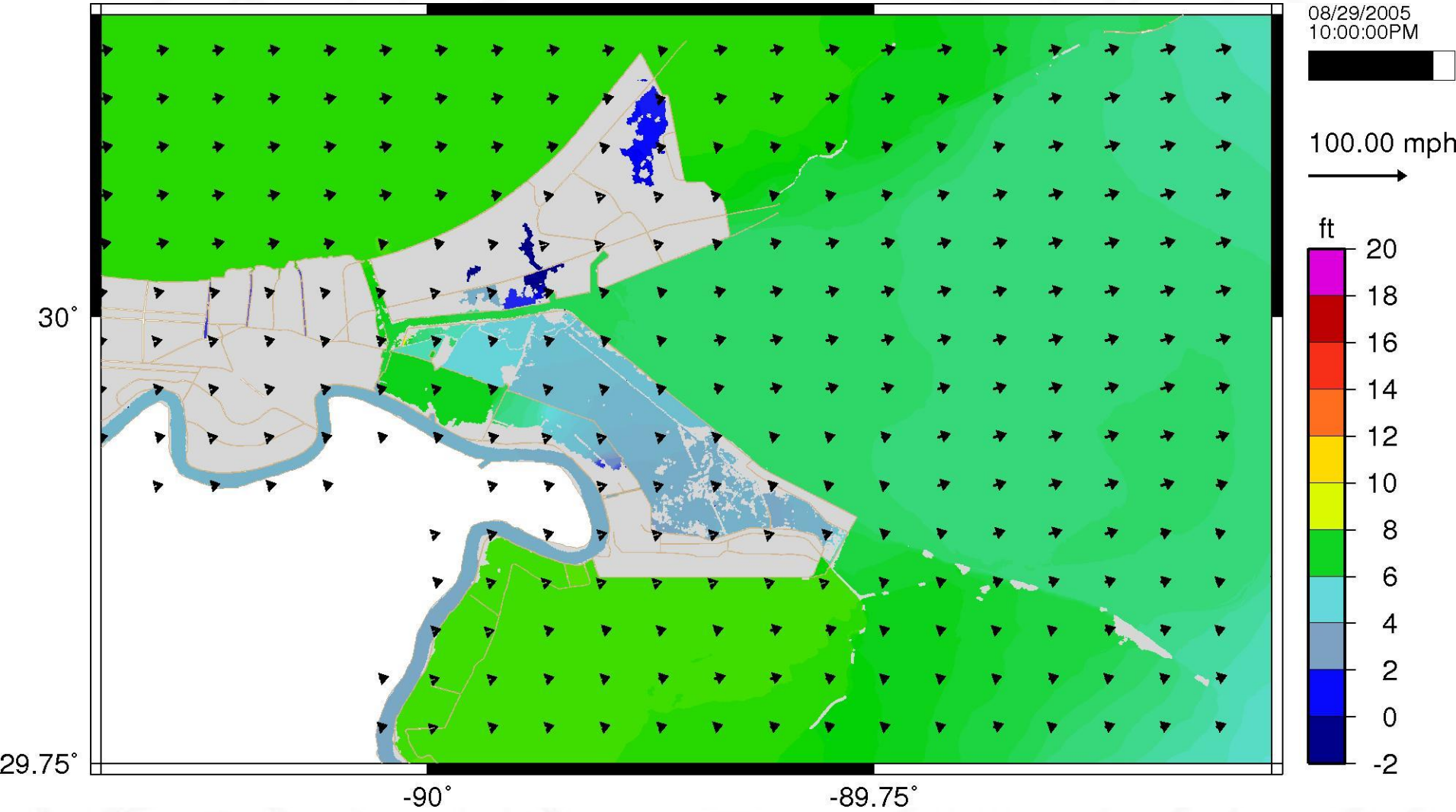


Figure 23p

8/30/2005 at 12 am CDT

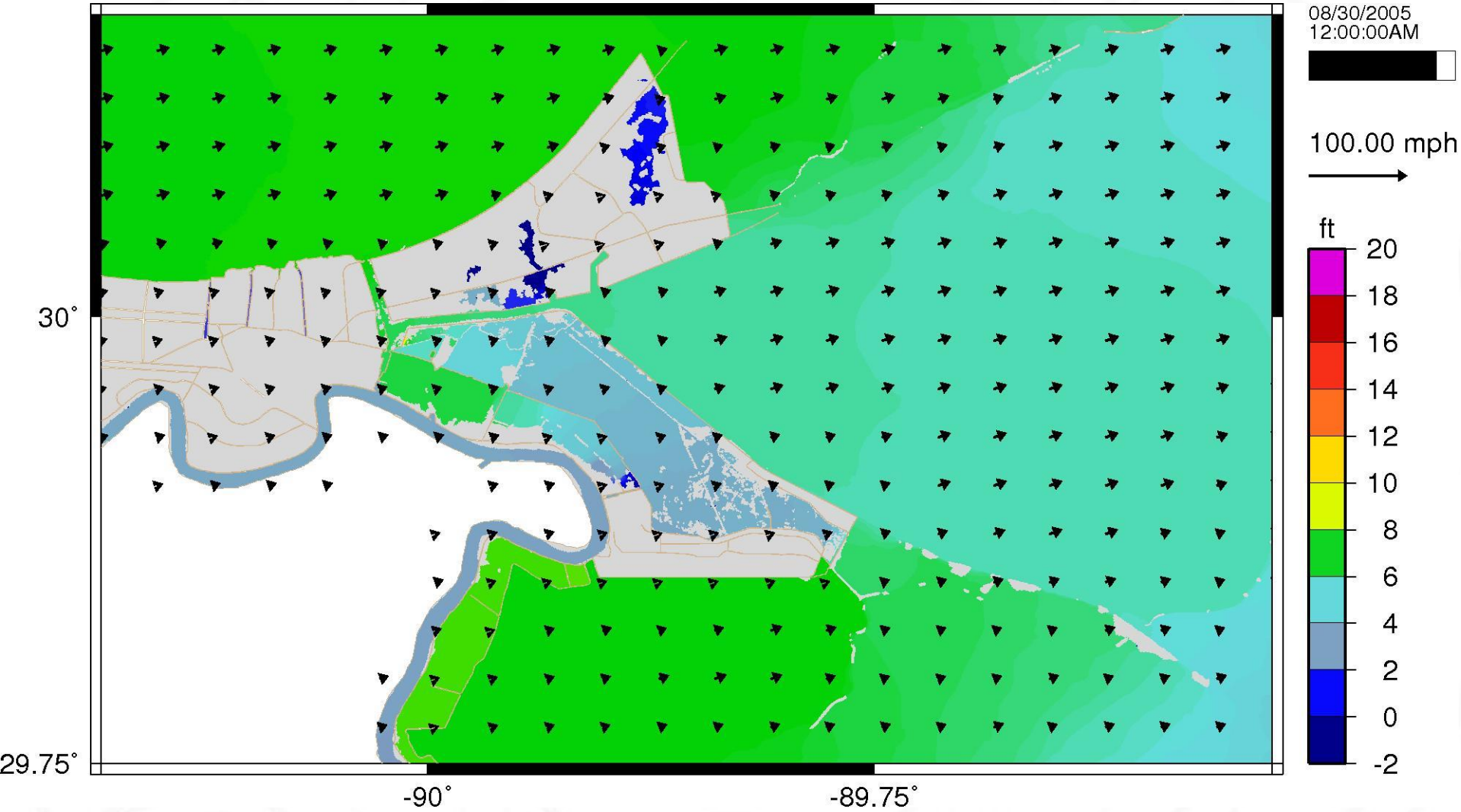


Figure 23q