

Table 1S. Rain gauge measurements and amount of precipitation recovered from TAMUG OCSB Roof.

Date	Rain Gauge (mm)	Precipitation Recovered (L)
1/29/2020	2	0.3
2/13/2020	32	2.5
2/21/2020	2	0.25

Table 2S. Rainfall data from Scholes Field and Dickinson Station obtained from National Weather Service (NWS). Note: The highest event for February for the Dickinson Station was after the sampling event was collected, so is subtracted from the Monthly total for February.

Station	Scholes Field (Lower Bay)	Dickinson (Middle Bay)
January 2020 Total	200.66 mm	153.92 mm
Jan. Highest Event	93.98 mm (Jan. 26)	37.59 mm (Jan. 11)
February 2020 Total	38.35 mm	17.3* (41.40 mm)
Feb. Highest Event	19.30 mm (Feb. 12)	24.1 (Feb. 24)

Table 3S. Water sample collection data from the middle bay and lower bay site.

Lower Bay					
Date	Time Collected	Tidal Phase	Wind Speed & Gusts (m/s)	Wind Direction	Average TSS (mg/L)
1/29/2020	3:00 PM	flood	6-7 m/s& 10 m/s gusts	WNW	90
2/21/2020	4:45 PM	flood	6 m/s& 7.5 m/s gusts	NNE	110
Middle Bay					
Date	Time Collected	Tidal Phase	Wind Speed & Gusts (m/s)	Wind Direction	Average TSS (mg/L)
1/29/2020	1:30 PM	flood	6 m/s	WNW	109
2/13/2020	2:00 PM - 2:45 PM	ebb	6 m/s & 8 m/s gusts	N	114
2/21/2020	3:00 PM	flood	6 m/s & 10 m/s gusts	NNE	84

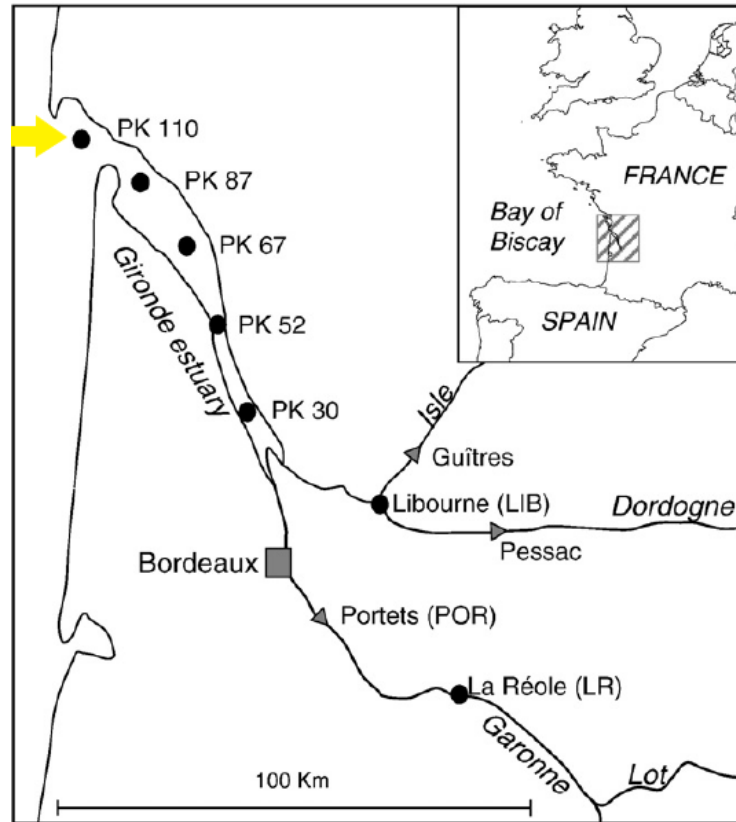


Figure 1S. Gironde Estuary sampling where particulate sample comparison is located by the blue arrow (Saari et al., 2010).

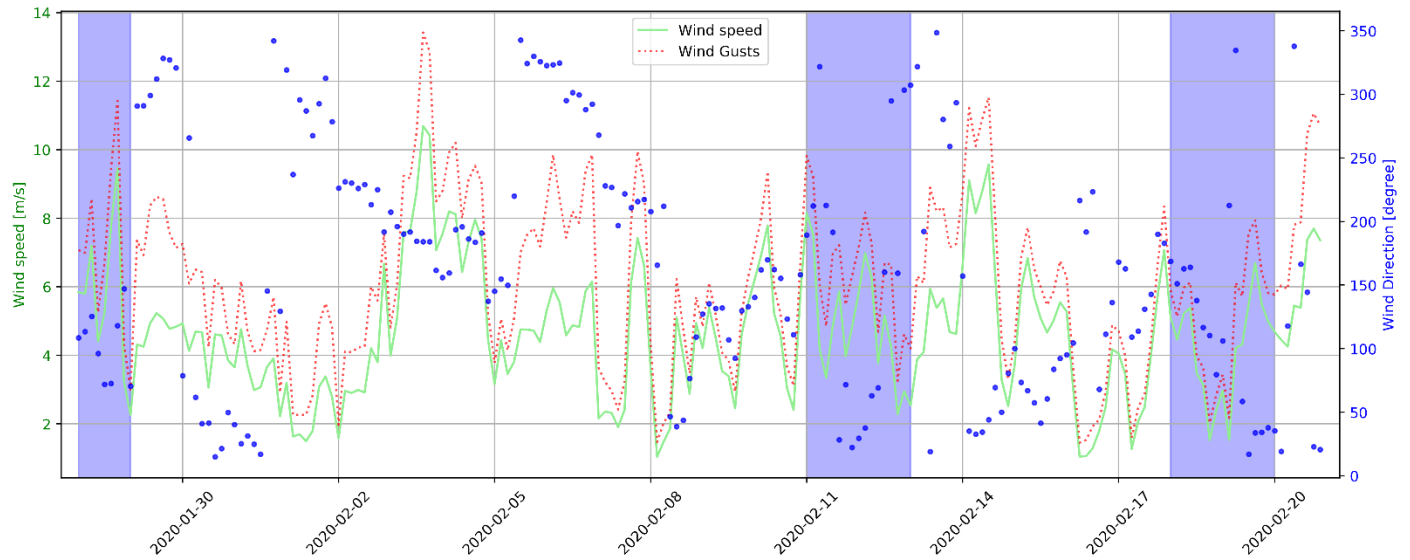


Figure 2S. Measured wind speed, gusts, and direction from NOAA Eagle Point, TX. Wind speed, gusts (m/s) and wind direction (deg) vs. Time obtained from NOAA Eagle Point, TX station (<https://tidesandcurrents.noaa.gov/met.html?id=8771450>; <https://tidesandcurrents.noaa.gov/met.html?id=8771013>). Shaded area represents cold fronts.