

Supplemental Information

Table S1. Sampling conditions at Louis Valentino Pier (LVP, Brooklyn, NY, USA) and Flushing Bay (FB, Queens, NY, USA).

Sample Date	Sample Site	Onshore Wind Speed (m s ⁻¹)	Onshore Wind Direction	Temp. (°C)	Relative Humidity (%)	Surface Salinity (ppt)
6-Apr-11	LVP	6.5	W	8.5	49.2	17.2
11-Apr-11	LVP	1.8	SW	15.7	85.0	18.2
29-Apr-11	LVP	3.8	W	15.7	58.8	11.05
5-May-11	LVP	7.7	NW	11.8	60.0	15.9
6-May-11	LVP	2.8	W	14.2	51.5	16.0
24-May-11	LVP	2.7	W	22.2	80.1	13.6
2-Jun-11	LVP	7.1	W	24.5	29.4	20.2
3-Jun-11	LVP	6.2	NW	16.3	53.1	20.5
8-Jun-11	LVP	0.9	SW	22.2	80.9	24.1
23-Apr-14	LVP	9.0	WNW	10.1	59.4	19.7
24-Apr-14	LVP	10.8	WNW	9.1	33.3	20.0
28-Apr-14	FB	3.2	NNE	12.4	48.5	NA
2-May-14	FB	5.0	NW	17.5	35.7	16.7
5-May-14	FB	6.8	N	13.9	48.2	18.8
7-May-14	FB	1.5	NNE	16.1	32.7	19.9
19-May-14	FB	6.0	NNE	17.1	42.0	20.4
20-May-14	FB	4.2	NNE	20.1	37.1	20.9
10-Jun-14	FB	2.5	NE	20.9	86.0	21.6
18-Jun-14	FB	7.1	NW	27.8	49.0	22.4

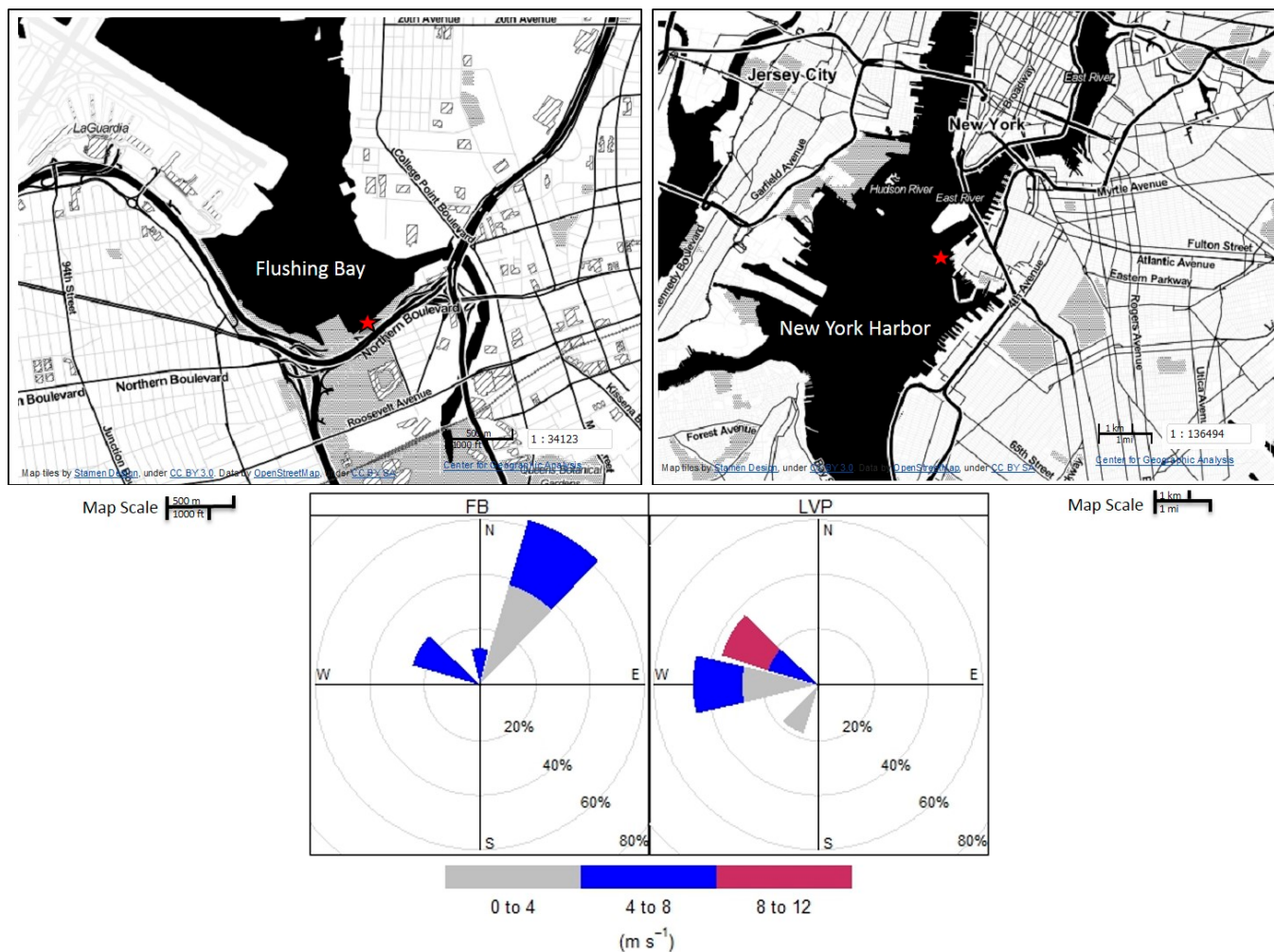


Figure S1. Field site maps (with red stars denoting sampling sites): Flushing Bay (FB) located in Flushing, Queens, U.S.A; Louis Valentino Pier (LVP) located on the New York Harbor, in Red Hook, Brooklyn, U.S.A. Both sites are public NYC parks. Windroses below the maps represent general wind speeds and wind directions during all sampling events (see Table S1). (Maps constructed using Harvard World Map, <http://worldmap.harvard.edu/maps>).

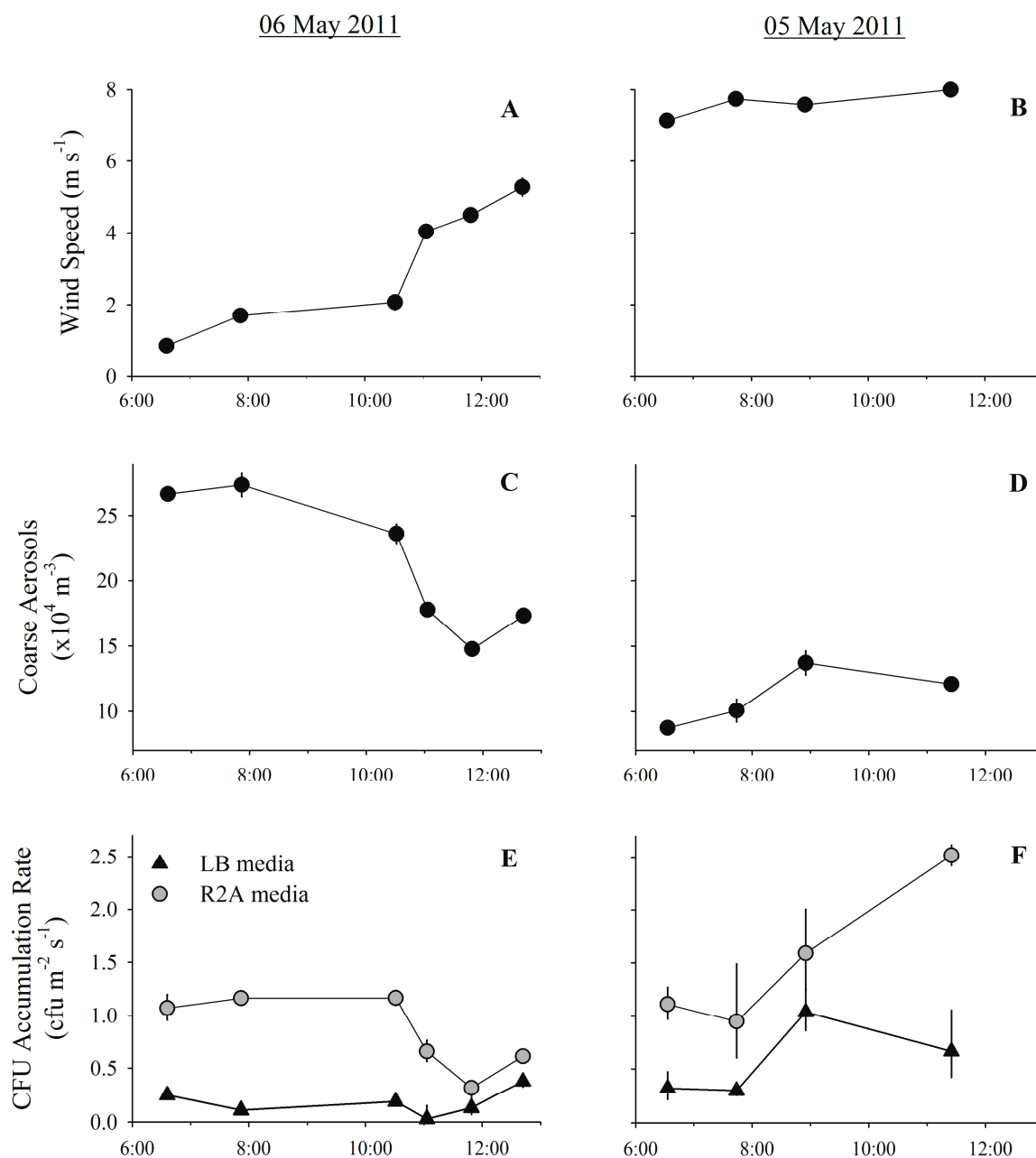


Figure S2. Hourly interaction of wind speed with coarse aerosols and CFU accumulation rate. Case study of wind speed (m s^{-1}) (6 A,B), coarse aerosol concentration (m^{-3}) (6 C, D), and CFU accumulation rate ($\text{CFU m}^{-2} \text{ s}^{-1}$) (6 E, F) on 6 May 2011 (left column) and 5 May 2011 (right column).