Survey of Inner River Widths

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Summary: A field survey of the inner river widths was performed to improve our hydraulic simulations of the study site.

A map of the study area, Shazhou polder, Nanjing, is provided in Figure 1. This shows the location of pumping stations (and their pumping capacities), and locations that were flooded during the July 2016 storm that caused widespread inundation.

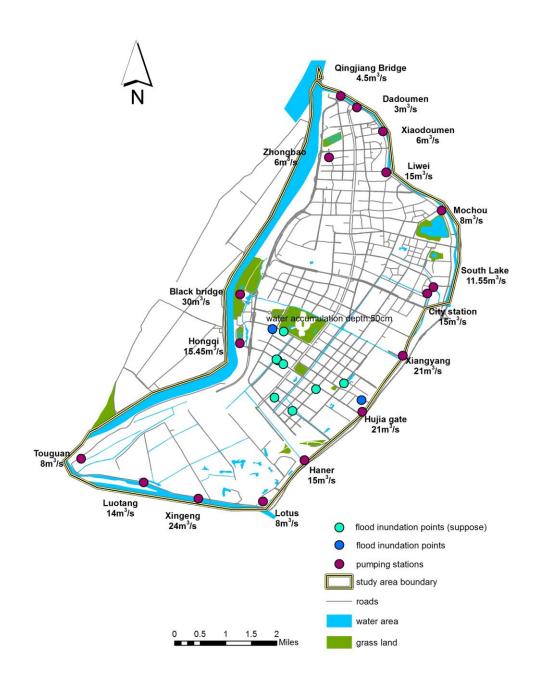


Fig1. Study area

A total of 29 inner rivers were identified in the study area from the Google image shown in Figure 2. Ten field measuring points were selected to span the range of widths identified from the analysis of the Google image. These are marked in yellow in Table 1. The measurements derived from the Google image closely match the field measurements. (Measure date: 8th October,2019)

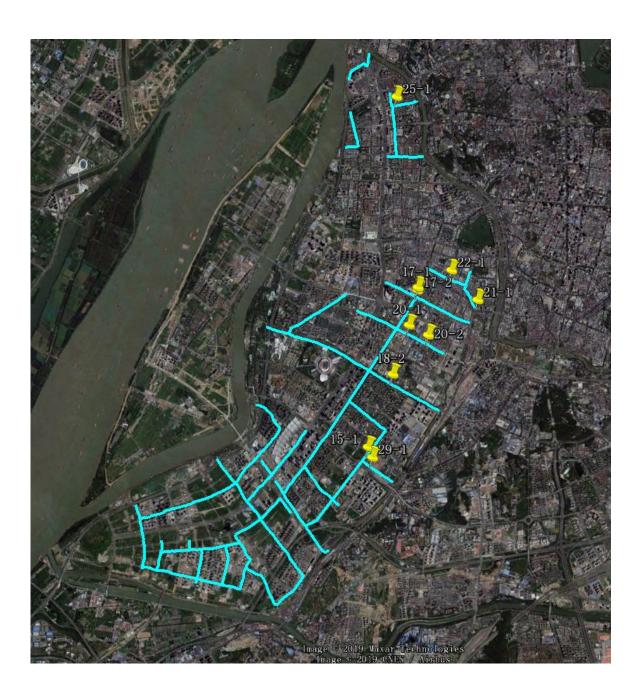


Fig 2. Measurement points (The field measure points are marked in yellow. The blue line is inner river)

Table 1: Inner river width (From Google and field)

River	Measure	Width (Google)	Width	note
number	point number	(m)	(field) (m)	
1	1-1	15.47		
2	2-1	13.95		
3	3-2	21.43		
3	3-1	8.45		
4	4-1	8.47		
5	5-1	20.18		
6	6-1	5.81		
7	7-1	8.69		
8	8-1	18.74		
9	9-1	15.61		
10	10-1	6.73		
11	11-1	11.01		
12	12-1	11.37		
13	13-1	12.74		
14	14-1	14.37		
15	15-1	25.79	25	Water depth: 1.7m
15	15-2	10.21		
16	16-1	22.44		
17	17-1	17.33	16	Water depth :0.97m
17	17-2	9.1	8.9	Water depth:1.4m
17	17-2	5.9		
18	18-1	24.88		
18	18-2	10.39	11.24	Water depth:1.7-1.9
19	19-1	11.59		
20	20-1	9.46	8.6	Water depth:0.5-0.7m
20	20-2	5.23	5.6	Water depth:0.5m
				Water depth:1m normal water
21	21-1	9.17	9.6	level:2m(estimated)
22	22-1	10.25	9.5-11.6	River depth:1.6m
23	23-1	14.15		

24	24-1	5.94		
24	24-2	6.77		
				River
25	25-1	7.25	7-9	depth:2m(estimated)
26	26-1	14.42		
27	27-1	13.44		
28	28-1	7.31		
29	29-1	30.59	31.34	Water depth:1.3-1.9m

Photographs of the field measurement point are provided below.

