

SUPPORTING INFORMATION

1

2

3 Stormwater Runoff Pollutant Loading Distributions and Their Correlation with 4 Rainfall and Catchment Characteristics in a Rapidly Industrialized City

5 Dongya Li¹, Jinquan Wan^{1,2,*}, Yongwen Ma^{1,3}, Yan Wang¹, Mingzhi Huang¹
6 and Yangmei Chen¹

⁷ ¹ College of Environment and Energy, South China University of Technology, Guangzhou 510006,
⁸ China;

² The Key Lab of Pollution Control and Ecosystem Restoration in Industry Clusters, Ministry of Education, Guangzhou 510006, China

³ State Key Laboratory of Pulp and Paper Engineering, South China University of Technology, Guangzhou 510640, China

* Author to whom correspondence should be addressed; E-Mail: ppjqwan@scut.edu.cn; Tel./Fax: +86-020-87114970.

15

16 **Tables**

17 **Table A.** Stormwater event mean concentrations (*EMCs*) data for Dalingshan catchment.

18 **Table B.** Stormwater event mean concentrations (*EMCs*) data for Niushan catchment.

19 **Table C.** Stormwater event mean concentrations (*EMCs*) data for Tongsha catchment.

20 **Table D.** Stormwater event pollution loads per unit area (*EPLs*) data for Dalingshan catchment.

21 **Table E.** Stormwater event pollution loads per unit area (*EPLs*) data for Niushan catchment.

22 **Table F.** Stormwater event pollution loads per unit area (*EPLs*) data for Tongsha catchment.

23 **Table G.** Stormwater pollutant loads rate transported by the first 40% of runoff volume (*FF40*) data
24 for DalingshanTongsha catchment.

25 **Table H.** Stormwater pollutant loads rate transported by the first 40% of runoff volume (*FF40*) data
26 for Niushan catchment.

27 **Table I.** Stormwater pollutant loads rate transported by the first 40% of runoff volume (*FF40*) data for
28 Tongsha catchment.

29

30 **Table A.** Stormwater event mean concentrations (*EMCs*) data for Dalingshan catchment

31

<i>Date</i>	<i>COD</i>	<i>TSS</i>	<i>TN</i>	<i>TP</i>	$NH_4^+ - N$	<i>Fe</i>	<i>Zn</i>
15/4/2009	277.44	416.01	15.23	3.87	7.75	2.98	0.57
15/9/2009	287.75	352.36	3.67	1.09	1.79	0.33	0.22
20/10/2009	103.25	194.15	6.29	0.42	5.10	1.8	0.41
2/6/2010	121.21	141.03	3.49	1.72	1.35	0.12	0.12
28/6/2010	467.63	516.49	20.42	4.74	5.71	2.34	0.43
20/10/2010	395.83	297.34	13.53	2.69	8.60	2.61	0.3
16/4/2011	334.97	395.63	39.05	3.81	9.13	1.54	0.11
3/5/2011	144.32	187.62	5.03	0.75	3.51	0.78	0.35
9/8/2011	328.55	462.83	27.02	7.09	6.04	1.32	0.44
21/9/2011	567.11	708.40	33.22	5.55	6.25	1.77	0.38

32

33

34 **Table B.** Stormwater event mean concentrations (*EMCs*) data for Niushan catchment
35

<i>Date</i>	<i>COD</i>	<i>TSS</i>	<i>TN</i>	<i>TP</i>	$NH_4^+ - N$	<i>Fe</i>	<i>Zn</i>	<i>Cu</i>
15/4/2009	291.33	337.89	13.18	3.65	7.49	6.78	4.78	0.47
15/9/2009	164.48	216.10	2.46	0.86	1.71	1.3	2.10	0.13
20/10/2009	92.04	134.07	4.86	0.67	3.72	4.1	3.60	0.37
2/6/2010	270.68	184.10	6.45	1.39	0.99	1.23	1.80	0.39
28/6/2010	331.28	427.55	13.97	4.06	4.56	5.4	4.80	0.21
20/10/2010	106.09	435.83	6.01	1.42	5.08	4.54	1.57	0.33
16/4/2011	187.11	239.06	9.05	2.26	7.09	6	5.07	0.11
3/5/2011	203.36	258.25	5.30	2.15	4.77	3.7	3.43	0.41
9/8/2011	81.93	96.93	16.65	1.48	2.62	5.89	2.70	0.38
21/9/2011	486.22	651.30	11.88	3.24	4.72	3.76	5.12	0.29

36

37

38

39 **Table C.** Stormwater event mean concentrations (*EMCs*) data for Tongsha catchment

40

<i>Date</i>	<i>COD</i>	<i>TSS</i>	<i>TN</i>	<i>TP</i>	NH_4^+-N	<i>Fe</i>
15/4/2009	67.97	107.68	2.78	0.98	1.00	0.85
15/9/2009	56.90	58.20	1.51	0.43	0.45	0.22
20/10/2009	71.36	92.59	1.88	0.32	0.93	0.51
2/6/2010	24.41	25.80	3.32	0.43	0.12	0.13
28/6/2010	81.17	96.76	1.45	1.79	1.19	0.46
20/10/2010	122.21	133.09	1.22	0.28	1.36	0.58
16/4/2011	106.02	117.83	3.32	0.09	1.08	0.33
3/5/2011	71.31	84.26	0.91	1.52	0.98	0.15
9/8/2011	17.18	78.11	4.34	0.28	0.37	0.11
21/9/2011	60.86	72.87	2.60	4.05	1.05	0.31

41

42

43

44

Table D. Stormwater event pollution loads per unit area (*EPLs*) data for Dalingshan catchment

<i>Date</i>	<i>COD</i>	<i>TSS</i>	<i>TN</i>	<i>TP</i>	$NH_4^+ - N$	<i>Fe</i>	<i>Zn</i>
15/4/2009	130.92	196.30	7.19	1.83	3.66	1.41	0.27
15/9/2009	25.29	30.97	0.32	0.10	0.16	0.03	0.02
20/10/2009	8.08	15.19	0.49	0.03	0.40	0.14	0.03
2/6/2010	9.10	10.59	0.26	0.13	0.10	0.01	0.01
28/6/2010	126.09	139.27	5.50	1.28	1.54	0.63	0.12
20/10/2010	132.15	99.26	4.52	0.90	2.87	0.87	0.10
16/4/2011	33.87	40.00	3.95	0.39	0.92	0.16	0.01
3/5/2011	11.63	15.12	0.41	0.06	0.28	0.06	0.03
9/8/2011	55.99	78.87	4.60	1.21	1.03	0.22	0.07
21/9/2011	38.23	47.75	2.24	0.37	0.42	0.12	0.03

45

46

47 **Table E.** Stormwater event pollution loads per unit area (*EPLs*) data for Niushan catchment

<i>Date</i>	<i>COD</i>	<i>TSS</i>	<i>TN</i>	<i>TP</i>	$NH_4^+ - N$	<i>Fe</i>	<i>Zn</i>	<i>Cu</i>
15/4/2009	138.30	160.40	6.26	1.73	3.55	3.22	2.27	0.22
15/9/2009	16.22	21.31	0.24	0.08	0.17	0.13	0.21	0.01
20/10/2009	7.24	10.55	0.38	0.05	0.29	0.32	0.28	0.03
2/6/2010	20.45	13.91	0.49	0.11	0.07	0.09	0.14	0.03
28/6/2010	89.86	115.98	3.79	1.10	1.24	1.46	1.30	0.06
20/10/2010	35.63	146.37	2.02	0.48	1.71	1.52	0.53	0.11
16/4/2011	19.03	24.32	0.92	0.23	0.72	0.61	0.52	0.01
3/5/2011	16.60	21.09	0.43	0.18	0.39	0.30	0.28	0.03
9/8/2011	14.04	16.61	2.85	0.25	0.45	1.01	0.46	0.07
21/9/2011	32.97	44.17	0.81	0.22	0.32	0.25	0.35	0.02

48

49

50 **Table F.** Stormwater event pollution loads per unit area (*EPLs*) data for Tongsha catchment

<i>Date</i>	<i>COD</i>	<i>TSS</i>	<i>TN</i>	<i>TP</i>	NH_4^+-N	<i>Fe</i>
15/4/2009	19.14	30.33	0.78	0.27	0.28	0.24
15/9/2009	4.00	4.10	0.11	0.03	0.03	0.02
20/10/2009	3.33	4.32	0.09	0.02	0.04	0.02
2/6/2010	1.09	1.16	0.15	0.02	0.01	0.01
28/6/2010	13.06	15.57	0.23	0.29	0.19	0.07
20/10/2010	24.35	26.52	0.24	0.06	0.27	0.12
16/4/2011	6.40	7.11	0.20	0.01	0.07	0.02
3/5/2011	5.55	6.55	0.07	0.12	0.08	0.01
9/8/2011	2.44	11.12	0.62	0.04	0.05	0.02
21/9/2011	2.45	2.93	0.10	0.16	0.04	0.01

51

52

53 **Table G.** Stormwater pollutant loads rate transported by the first 40% of runoff volume (FF_{40}) data
54 for DalingshanTongsha catchment

55

<i>Date</i>	<i>COD</i>	<i>TSS</i>	<i>TN</i>	<i>TP</i>	$NH_4^+ - N$
15/4/2009	0.62	0.66	0.73	0.66	0.87
15/9/2009	0.50	0.55	0.58	0.72	0.58
20/10/2009	0.49	0.54	0.64	0.63	0.57
2/6/2010	0.48	0.48	0.53	0.57	0.51
28/6/2010	0.56	0.58	0.70	0.70	0.61
20/10/2010	0.58	0.65	0.71	0.63	0.79
16/4/2011	0.57	0.64	0.80	0.75	0.67
3/5/2011	0.47	0.41	0.38	0.50	0.43
9/8/2011	0.60	0.63	0.52	0.76	0.66
21/9/2011	0.51	0.50	0.58	0.58	0.53

56

57

58 **Table H.** Stormwater pollutant loads rate transported by the first 40% of runoff volume (FF_{40}) data
59 for Niushan catchment

<i>Date</i>	<i>COD</i>	<i>TSS</i>	<i>TN</i>	<i>TP</i>	$NH_4^+ - N$
15/4/2009	0.66	0.65	0.65	0.75	0.69
15/9/2009	0.49	0.64	0.49	0.77	0.67
20/10/2009	0.47	0.60	0.63	0.54	0.63
2/6/2010	0.54	0.47	0.55	0.70	0.50
28/6/2010	0.57	0.56	0.55	0.72	0.59
20/10/2010	0.57	0.46	0.37	0.53	0.48
16/4/2011	0.54	0.64	0.55	0.70	0.68
3/5/2011	0.40	0.39	0.32	0.37	0.41
9/8/2011	0.55	0.66	0.62	0.53	0.70
21/9/2011	0.40	0.64	0.32	0.37	0.67

60

61

62 **Table I.** Stormwater pollutant loads rate transported by the first 40% of runoff volume (FF_{40}) data
63 for Tongsha catchment

Date	COD	TSS	TN	TP	$NH_4^+ - N$
15/4/2009	0.61	0.54	0.76	0.70	0.57
15/9/2009	0.58	0.55	0.70	0.70	0.58
20/10/2009	0.69	0.65	0.79	0.79	0.52
2/6/2010	0.48	0.56	0.56	0.58	0.56
28/6/2010	0.58	0.53	0.71	0.54	0.59
20/10/2010	0.37	0.32	0.36	0.31	0.34
16/4/2011	0.61	0.58	0.66	0.63	0.61
3/5/2011	0.38	0.46	0.43	0.44	0.48
9/8/2011	0.52	0.49	0.66	0.61	0.69
21/9/2011	0.47	0.50	0.53	0.52	0.53

64