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Supplementary Material

Assessing the Accuracy of HydroCAD for Pre-Development Runoff in Wooded Coastal Watersheds

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Table S1 Ia/S Ratio data for New Kent and Cow Swamp sites and their respective sensitivities. Ia/S Ratios were established in increments of 0.1, ranging from 0.01 – 2.0.

Site	Ia/S Ratio	Peak Discharge (cfs)	Sensitivity (%)
New Kent	0.2	28.48	
New Kent	0.19	29.52	3.651685
New Kent	0.18	30.55	7.268258
New Kent	0.17	31.56	10.81461
New Kent	0.16	32.55	14.29073
New Kent	0.15	33.52	17.69663
New Kent	0.14	34.48	21.06742
New Kent	0.13	35.41	24.33287
New Kent	0.12	36.32	27.52809
New Kent	0.11	37.21	30.65309
New Kent	0.1	38.05	33.60253
New Kent	0.09	38.9	36.58708
New Kent	0.08	39.74	39.53652
New Kent	0.07	40.55	42.38062
New Kent	0.06	41.35	45.18961
New Kent	0.05	42.14	47.96348
New Kent	0.04	42.9	50.63202
New Kent	0.03	43.65	53.26545
New Kent	0.02	44.39	55.86376
New Kent	0.01	45.1	58.35674
Cow Swamp	0.2	10.79	
Cow Swamp	0.19	13.46	24.74513
Cow Swamp	0.18	16.32	51.25116
Cow Swamp	0.17	19.39	79.70343
Cow Swamp	0.16	22.63	109.7312
Cow Swamp	0.15	26.01	141.0565
Cow Swamp	0.14	29.48	173.2159
Cow Swamp	0.13	33.03	206.1168
Cow Swamp	0.12	36.76	240.6858
Cow Swamp	0.11	40.34	273.8647
Cow Swamp	0.1	43.86	306.4875
Cow Swamp	0.09	47.32	338.5542
Cow Swamp	0.08	50.69	369.7868
Cow Swamp	0.07	53.99	400.3707
Cow Swamp	0.06	57.22	430.3058
Cow Swamp	0.05	60.36	459.4069
Cow Swamp	0.04	63.44	487.9518
Cow Swamp	0.03	66.44	515.7553
Cow Swamp	0.02	69.37	542.9101
Cow Swamp	0.01	72.23	569.4161

Table S2 Soil boring number, depth (cm), USDA HSG classification, and field sample classification of the soils taken from the New Kent and Cow Swamp study sites.

Soil Boring number (SB)	Depth (cm)	New Kent USDA HSG classification	New Kent field sample classification	Cow Swamp USDA HSG classification	Cow Swamp field sample classification
SB-1	5.24 – 66.04	D	B	D	B
	66.04 – 116.84	D	Water	D	C
SB-2	5.24 – 66.04	D	B	D	B
	66.04 – 116.84	D	B	D	B
SB-3	5.24 – 66.04	D	B	D	C
	66.04 – 116.84	D	A	D	B
SB-4	5.24 – 66.04	D	A	D	B
	66.04 – 116.84	D	Water	D	B
SB-5	5.24 – 66.04	D	A	D	C
	66.04 – 116.84	D	A	D	C
SB-6	5.24 – 66.04	D	B	D	B
	66.04 – 116.84	D	B	D	C
SB-7	5.24 – 66.04	D	A	D	C
	66.04 – 116.84	D	B	D	C
SB-8	5.24 – 66.04	D	B	C	B
	66.04 – 116.84	D	C	C	B
SB-9	5.24 – 66.04	D	B	D	B
	66.04 – 116.84	D	A	D	C
SB-10	5.24 – 66.04	D	B	D	C
	66.04 – 116.84	D	B	D	B
SB-11	5.24 – 66.04	D	C	D	B
	66.04 – 116.84	D	C	D	B
SB-12	5.24 – 66.04	C	B	C	A
	66.04 – 116.84	C	A	C	B
SB-13	5.24 – 66.04	C	B	D	C
	66.04 – 116.84	C	B	D	B
SB-14	5.24 – 66.04	C	A	D	B
	66.04 – 116.84	C	Water	D	C
SB-15	5.24 – 66.04	D	A		
	66.04 – 116.84	D	B		
SB-16	5.24 – 66.04	D	B		
	66.04 – 116.84	D	A		
SB-17	5.24 – 66.04	D	B		
	66.04 – 116.84	D	C		
SB-18	5.24 – 66.04	C	B		
	66.04 – 116.84	C	A		
SB-19	5.24 – 66.04	C	B		
	66.04 – 116.84	C	B		
SB-20	5.24 – 66.04	D	C		
	66.04 – 116.84	D	A		
SB-21	5.24 – 66.04	D	B		
	66.04 – 116.84	D	C		

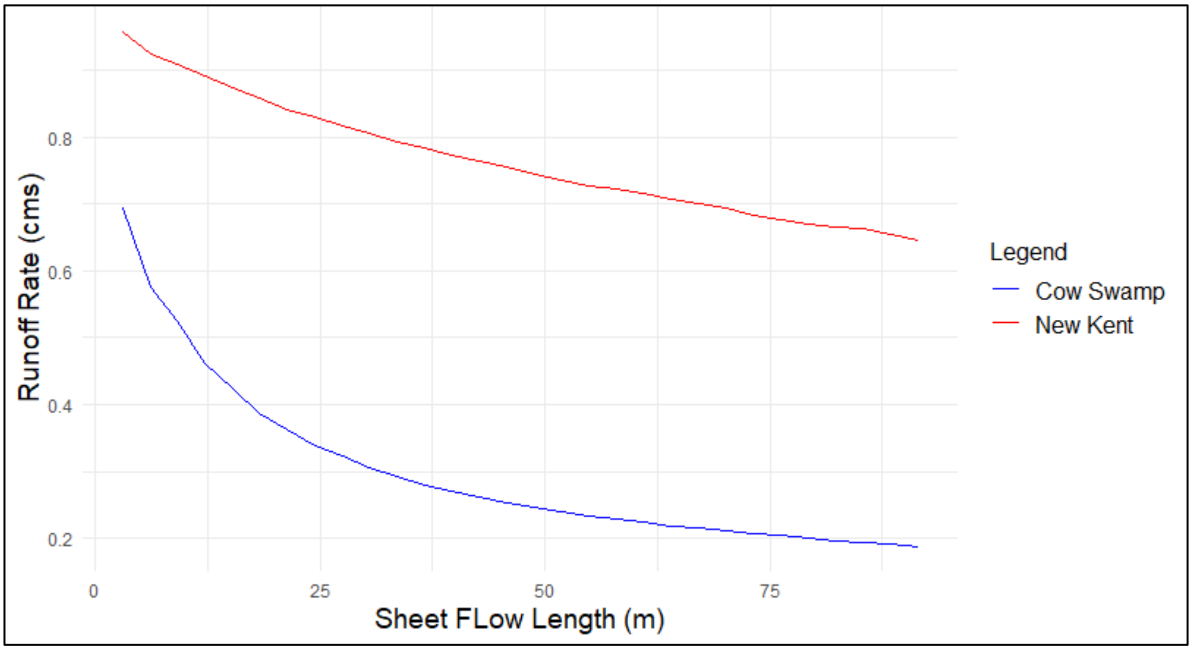

Fig. S1. Polynomial regression between various sheet flow lengths and Q_p. There was a statistically significant relationship between sheet flow lengths and Q_p across both sites.