Appendix C

GISHydro2000 Outputs

Fixed Region Peak Flow Estimates for:
GISHydro Release Version Date: January 8, 2011
Hydro Extension Version Date: January 8, 2011
Analysis Date: February 28, 2017

Geographic Province(s):
-Piedmont (100.0% of area)

Q(1.25): 406 cfs
Q(1.50): 494 cfs
Q(2): 625 cfs
Q(5): 1060 cfs
Q(10): 1430 cfs
Q(25): 2060 cfs
Q(50): 2620 cfs
Q(100): 3280 cfs
Q(200): 4030 cfs
Q(500): 5280 cfs

Area Weighted Prediction Intervals (from Tasker)

Return	50 PERCENT		67 PERCENT		90 PERCENT		95 PERCENT	
Period	lower	upper	lower	upper	lower	upper	lower	upper
1.25	303	543	263	627	199	828	173	951
1.5	377	648	330	740	255	958	224	1090
2	487	802	430	908	339	1150	301	1300
5	853	1310	768	1450	626	1780	565	1980
10	1180	1750	1070	1930	880	2340	800	2570
25	1700	2500	1550	2750	1290	3310	1170	3630
50	2140	3200	1940	3530	1600	4280	1460	4710
100	2650	4070	2390	4520	1950	5540	1760	6130
200	3170	5110	2820	5750	2250	7220	2000	8090
500	4000	6960	3490	7980	2680	10400	2340	11900

Individual Province Tasker Analyses Follow:

Flood frequency estimates for

REGION: Blue Ridge & Piedmont
area= 2.00:lime = 0.00:forest = 3.60 :Impervious Area= 28.70 :skew= 0.48

Return Period	Discharge (cfs)	Standard Error of Prediction (percent)	Equivalent Years of Record	Standard Error of Prediction (logs)
1.25	406.	45.6	1.84	0.1888
1.50	494.	42.1	1.90	0.1754
2.00	625.	38.6	2.37	0.1620
5.00	1060.	32.8	5.93	0.1387
10.00	1430.	30.4	10.26	0.1292
25.00	2060.	29.4	16.65	0.1251
50.00	2620.	30.6	19.88	0.1300
100.00	3280.	32.7	21.80	0.1384
200.00	4030.	36.8	30.86	0.1546
500.00	5280.	43.2	28.40	0.1797

P R E D I C T I O N I N T E R V A L S

Return	50 PERCENT		67 PERCENT		90 PERCENT		95 PERCENT	
Period	lower	upper	lower	upper	lower	upper	lower	upper
1.25	303.	543.	263.	627.	199.	828.	173.	951.
1.50	377.	648.	330.	740.	255.	958.	224.	1090.
2.00	487.	802.	430.	908.	339.	1150.	301.	1300.
5.00	853.	1310.	768.	1450.	626.	1780.	565.	1980.
10.00	1180.	1750.	1070.	1930.	880.	2340.	800.	2570.
25.00	1700.	2500.	1550.	2750.	1290.	3310.	1170.	3630.
50.00	2140.	3200.	1940.	3530.	1600.	4280.	1460.	4710.
100.00	2650.	4070.	2390.	4520.	1950.	5540.	1760.	6130.
200.00	3170.	5110.	2820.	5750.	2250.	7220.	2000.	8090.
500.00	4000.	6960.	3490.	7980.	2680.	10400.	2340.	11900.

Fixed Region Peak Flow Estimates for:
GISHydro Release Version Date: January 8, 2011
Hydro Extension Version Date: January 8, 2011
Analysis Date: February 28, 2017

Geographic Province(s):
-Piedmont (100.0% of area)

Q(1.25): 253 cfs
Q(1.50): 322 cfs
Q(2): 425 cfs
Q(5): 794 cfs
Q(10): 1150 cfs
Q(25): 1750 cfs
Q(50): 2340 cfs
Q(100): 3060 cfs
Q(200): 3620 cfs
Q(500): 5000 cfs

Area Weighted Prediction Intervals (from Tasker)

Return	50 PERCENT		67 PERCENT		90 PERCENT		95 PERCENT	
Period	lower	upper	lower	upper	lower	upper	lower	upper
1.25	190	338	165	389	125	513	109	589
1.5	246	421	216	480	167	620	147	705
2	332	545	294	615	232	779	206	877
5	643	982	579	1090	473	1330	427	1480
10	943	1400	856	1540	709	1860	645	2050
25	1450	2120	1320	2330	1100	2800	1000	3070
50	1920	2850	1740	3150	1440	3800	1310	4180
100	2480	3780	2230	4200	1820	5130	1650	5680
200	2860	4570	2550	5130	2040	6420	1820	7180
500	3810	6560	3330	7500	2570	9730	2250	11100

Individual Province Tasker Analyses Follow:

Flood frequency estimates for

REGION: Blue Ridge & Piedmont
area= 2.00:lime = 0.00:forest = 14.20 :Impervious Area= 33.20 :skew= 0.48

Return Period	Discharge (cfs)	Standard Error of Prediction (percent)	Equivalent Years of Record	Standard Error of Prediction (logs)
1.25	253.	45.1	2.68	0.1869
1.50	322.	41.6	2.76	0.1736
2.00	425.	38.2	3.45	0.1604
5.00	794.	32.4	8.64	0.1373
10.00	1150.	30.1	14.92	0.1279
25.00	1750.	29.1	24.23	0.1238
50.00	2340.	30.3	28.93	0.1287
100.00	3060.	32.3	31.73	0.1370
200.00	3620.	36.1	31.99	0.1519
500.00	5000.	42.4	29.43	0.1765

P R E D I C T I O N I N T E R V A L S

Return	50 PERCENT		67 PERCENT		90 PERCENT		95 PERCENT	
Period	lower	upper	lower	upper	lower	upper	lower	upper
1.25	190.	338.	165.	389.	125.	513.	109.	589.
1.50	246.	421.	216.	480.	167.	620.	147.	705.
2.00	332.	545.	294.	615.	232.	779.	206.	877.
5.00	643.	982.	579.	1090.	473.	1330.	427.	1480.
10.00	943.	1400.	856.	1540.	709.	1860.	645.	2050.
25.00	1450.	2120.	1320.	2330.	1100.	2800.	1000.	3070.
50.00	1920.	2850.	1740.	3150.	1440.	3800.	1310.	4180.
100.00	2480.	3780.	2230.	4200.	1820.	5130.	1650.	5680.
200.00	2860.	4570.	2550.	5130.	2040.	6420.	1820.	7180.
500.00	3810.	6560.	3330.	7500.	2570.	9730.	2250.	11100.