EXISTING CONDITIONS HEC-HMS INPUT PARAMETERS

General Subbasin Data				Time of Concentration (Tc) Data																Lag Time Results		Tc and tp Results				
								Upper Reach or Entire Reach (0 to 400-ft length)							Middle Reach (400 to1600-ft length)						Lag Time	Lag Time	Actual Tc	Final Tc	Tp	Composite CN	Sub-basin
Sub-basin	Sub-basin Area	Sub-basin Area	Number of Reaches	L Length of Longest Water-course	Lca Centroid Length	Sc Composite Slope	Kc Composite K	Top Elevation at beginning of water course	Bottom Elevation	Length (L_1)	Slope (S_1)	K_{N1}	K_1	V_1	Elevation at lower end of water course	Length (L_2)	Slope (S_2)	K_{N2}	K_2	V_2						
	acres	sq mi		ft	ft	ft/ft		ft	ft	ft	ft/ft			ft/sec	ft	ft	ft/ft			ft/sec	(hours)	(minutes)	hours	hours	hours		
a	acres	a		a	a	i	j	a	a	a		d	b	e	a	a		d	b	e	(k)		f	g	h		a
A-1D	19.758	0.0309	2	1,642	NA	0.0292	1.4457	5258	5252	400	0.0150		1.0	1.22	5210	1,242	0.0338		2.0	3.68	0.15	9	0.18	0.20	0.13	69	A-1D
A-2D	11.581	0.0181	2	986	NA	0.0144	1.2671	5221.19	5210	400	0.0280		1.0	1.67	5207	586	0.0051		2.0	1.43	0.15	9	0.18	0.20	0.13	90	A-2D
A-3D	19.628	0.0307	2	878	NA	0.0207	1.4012	5203.2	5193	400	0.0255		1.0	1.60	5185	478	0.0167		2.0	2.59	0.15	9	0.12	0.20	0.13	91	A-3D
C-1D	6.581	0.0103	2	553	NA	0.0651	0.4480	5256	5250	400	0.0150		0.7	0.86	5220	153	0.1961		2.0	8.86	0.15	9	0.13	0.20	0.13	63	C-1D
C-2D.1	12.376	0.0193	2	844	NA	0.0332	0.8183	5216	5210	400	0.0150		0.7	0.86	5188	444	0.0495		2.0	4.45	0.15	9	0.16	0.20	0.13	65	C-2D.1
C-2D.2	26.803	0.0419	2	1,544	NA	0.0233	1.6145	5206	5192	400	0.0350		1.0	1.87	5170	1,144	0.0192		2.0	2.77	0.15	9	0.17	0.20	0.13	69	C-2D.2
D-1.1	0.556	0.0009	2	460	NA	0.0130	1.0571	5212	5207	400	0.0125		1.0	1.12	5206	60	0.0167		2.0	2.58	0.15	9	0.11	0.20	0.13	87	D-1.1
D-1.2	1.268	0.0020	2	953	NA	0.0210	1.3981	5206	5198	400	0.0200		1.0	1.41	5186	553	0.0217		2.0	2.95	0.15	9	0.13	0.20	0.13	87	D-1.2
LV-1	0.721	0.00113	2	607	NA	0.0478	1.2222	5217	5196	400	0.0525		1.0	2.29	5188	207	0.0386		2.0	3.93	0.15	9	0.06	0.20	0.13	87	LV-1
LV-2	1.225	0.00191	2	967	NA	0.0248	1.4428	5188	5175	400	0.0325		1.0	1.80	5164	567	0.0194		2.0	2.79	0.15	9	0.12	0.20	0.13	87	LV-2
O-1	2.852	0.00446	2	1,870	NA	0.0171	1.4742	5214	5200	400	0.0350		0.7	1.31	5182	1,470	0.0122		2.0	2.21	0.20	12	0.27	0.27	0.18	66	O-1
I40_1	7.3624	0.0115	2	1,479	NA	0.0176	1.0249	5276	5273.5	400	0.0063		0.7	0.55	5250	1079	0.0218		2.0	3.0	0.23	14	0.30	0.30	0.20	89	I40_1
I40_2	3.959	0.00619	2	806	NA	0.0199	1.0426	5250	5242	400	0.0200		0.7	0.99	5234	406	0.0197		2.0	3	0.15	9	0.15	0.20	0.13	89	I40_2
I40_3	2.0761	0.00324	2	409	NA	0.0171	0.6681	5234	5228	400	0.0150		0.7	0.86	5227	9	0.1111		2.0	7	0.15	9	0.13	0.20	0.13	89	I40_3
I40_4	1.9764	0.00309	1	341	NA	0.0176	0.7000	5227	5221	341	0.0176		0.7	0.93	5221	1	0.0000		2.0	0	0.15	9	0.10	0.20	0.13	83	I40_4

(a) All measurements were obtained from the Drainage Basin Maps, based on Lidar contour mapping dated 2010.

(b) Obtained from Table F-5 in the DPM, pg. 22-64.

(d) Obtained from Table F-6 in the DPM, , pg. 22-64.

(e) V= 10*K*S^0.5 - determined from V=K * (S*100)^0.5

(f) See DPM, pages 22-63 through 22-65 for following formulas :

If L < 4000 ft, then

Tc= (L1/V1 + L2/V2 + L3/V3)3600 sec/hour

If L is between 4,000 ft and 12,000 ft, then

Tc= ((12,000-L) / (72,000*K*s^0.5)) + ((L-4000)*Kn*(Lca/L)^0.33 / (552.2*s^0.165)) (ignore upper reach K - it is insignificant for long lengths and assume middle reach K for this equation)

If L > 12000 ft, then

Tc= (4/3)*26*Kn*((L*Lca/(5280^2*(s*5280)^0.5))^0.33)

(g) Tc= if Tc is computed to be less than 0.2 hours, then use 0.2 hours DPM pg. 22-37

(h) Tp= (2/3)*Tc per DPM pg. 22-36

(i) Sc= (L1*S1+L2*S2+L3*S3)/L per DPM pg. 22-65

(j) Kc= (L/S^0.5) / (L1/(K1*S1^0.5) + L2/(K2*S2^0.5) + L3/(K3*S3^0.5)) per DPM pg. 22-65