Exhibit 5-I: Tabular hydrograph unit discharges (csm/in) for type I rainfall distribution

```
TRVL---------------------------------------------------------HYDROGRAPH TIME(HOURS)----------------------------------------------------
TIME    9.3     9.9    10.1    10.3    10.5    10.7   11.0    11.4     11.8    12.3    13.0    14.0    15.0    16.0    18.0    24.0
(hr)9.0     9.6    10.0    10.2    10.4    10.6   10.8    11.2    11.6    12.0    12.6    13.5    14.5    15.5    17.0    20.0
----+---+--+-+-+-+-+--+--+--+-+-+--+-+-+--+--+--+-+-+--+-+-+--+--+-+--+--+--+-+-+--+-+-+--+--+-+--+--+--+-+--++
         IA/P = 0.10                                  * * * TC = 0.1 HR * * *                              IA/P = 0.10
----+---+--+-+-+-+-+--+--+--+-+-+--+-+-+--+--+--+-+-+--+-+-+--+--+-+--+--+--+-+-+--+-+-+--+--+-+--+--+--+-+--++
0.0 30   40   56 183 337 504 326 155 122 107  93  81  73  66   60  56  54   52  49  46  44  40  36  32  30   29  28  27   26  24  20  13
.10 26   35   48  93 153 276 428 360 223 156 123 103  83  72   65  59  56   54  51  47  45  42  37  33  30   29  28  28   26  24  21  13
.20 23   30   41  60  82 129 227 361 360 269 194 147 118  85   71  63  58   55  53  49  46  43  39  35  31   29  29  28   26  24  21  14
.30 22   29   39  56  73 111 188 303 341 293 227 173 136  94   75  65  60   56  54  50  47  43  39  35  31   29  29  28   26  25  21  14

.40 18   25   34  46  53  66  96 157 255 312 300 251 199 126   90  73  64   59  56  52  48  44  40  36  32   30  29  28   26  25  21  14
.50 18   24   32  44  50  61  84 133 214 280 293 265 221 144   99  77  66   60  56  52  49  45  41  37  32   30  29  28   27  25  21  14
.75 14   19   25  34  38  43  49  62  88 134 190 234 252 221  162 115  87   71  63  56  52  47  43  39  35   31  29  29   27  25  22  15
1.0 11   14   19  26  28  31  34  38  44  52  68  98 141 222  238 191 139  101  79  63  56  51  45  41  37   33  30  29   27  26  22  15

1.5  9   10   13  17  18  20  22  25  27  30  34  38  44  74  132 191 211  190 151 101  73  58  50  45  41   37  33  30   28  27  23  16
2.0  6    7    9  11  12  13  14  15  16  18  20  22  24  29   38  58  97  148 193 193 141  89  61  51  46   41  37  33   29  27  24  17
2.5  4    5    7   8   9   9  10  11  11  12  13  14  16  19   23  29  39   58  93 154 181 147  87  61  51   45  41  37   30  28  25  18
3.0  2    3    5   6   6   7   7   8   9   9  10  10  11  13   15  19  23   28  39  72 124 170 138  86  61   50  45  40   33  29  26  19
----+---+--+-+-+-+-+--+--+--+-+-+--+-+-+--+--+--+-+-+--+-+-+--+--+-+--+--+--+-+-+--+-+-+--+--+-+--+--+--+-+--++
         IA/P = 0.30                                  * * * TC = 0.1 HR * * *                              IA/P = 0.30
----+---+--+-+-+-+-+--+--+--+-+-+--+-+-+--+--+--+-+-+--+-+-+--+--+-+--+--+--+-+-+--+-+-+--+--+-+--+--+--+-+--++
0.0  0    0    0  61 195 343 232 129 113 103  91  81  76  71   66  64  62   61  59  56  54  51  47  43  40   40  39  39   37  36  31  21
.10  0    0    0  12  45 145 277 247 169 131 112  98  87  76   70  65  64   62  60  57  55  53  49  44  40   40  39  39   38  36  32  21
.20  0    0    0   9  33 107 220 238 192 151 125 107  94  79   71  66  64   62  61  58  56  53  49  45  41   40  40  39   38  36  32  21
.30  0    0    0   1   6  24  79 173 216 200 168 139 118  90   77  70  66   64  62  59  57  54  50  46  41   40  40  39   38  36  32  22

.40  0    0    0   1   4  17  59 135 189 196 177 152 129  97   81  72  67   64  63  60  57  54  51  46  42   40  40  39   38  36  32  22
.50  0    0    0   0   0   3  12  43 104 161 185 180 161 121   93  79  71   66  64  61  58  55  52  48  43   40  40  39   38  37  33  22
.75  0    0    0   0   0   1   5  18  49  92 130 153 159 142  114  92  79   71  66  63  60  56  53  49  44   41  40  40   38  37  33  23
1.0  0    0    0   0   0   0   0   0   2   9  27  56  92 144  152 128 103   86  75  67  63  59  55  51  47   43  40  40   39  37  34  24

1.5  0    0    0   0   0   0   0   0   0   0   2   6  32  79  121 136 127  109  85  72  64  58  55  51  47   43  40  39   39  38  34  25
2.0  0    0    0   0   0   0   0   0   0   0   0   0   1   9   33  70 105  126 118  97  75  63  58  54  50   46  42  40   39  35  26
2.5  0    0    0   0   0   0   0   0   0   0   0   0   0   0    2  11  32   63 105 118 100  75  63  58  54   50  46  40   39  36  27
3.0  0    0    0   0   0   0   0   0   0   0   0   0   0   0    0   1   3   12  43  84 112  96  74  63  58   54  50  42   40  37  28
----+---+--+-+-+-+-+--+--+--+-+-+--+-+-+--+--+--+-+-+--+-+-+--+--+-+--+--+--+-+-+--+-+-+--+--+-+--+--+--+-+--++
         IA/P = 0.50                                  * * * TC = 0.1 HR * * *                              IA/P = 0.50
----+---+--+-+-+-+-+--+--+--+-+-+--+-+-+--+--+--+-+-+--+-+-+--+--+-+--+--+--+-+-+--+-+-+--+--+-+--+--+--+-+--++
0.0  0    0    0   0   0   3  13  28  39  44  45  46  46  48   49  51  53   54  54  55  56  55  53  50  50   49  49  49   49  48  45  32
.10  0    0    0   0   0   2   9  22  33  41  44  45  46  48   49  50  52   54  54  54  56  55  53  50  50   49  49  49   49  48  45  32
.20  0    0    0   0   0   0   1   7  17  28  36  41  44  46   48  49  51   53  54  54  56  56  54  51  50   50  49  49   49  48  45  32
.30  0    0    0   0   0   0   0   1   5  13  23  32  38  44   47  48  50   51  53  54  54  55  54  52  50   50  49  49   49  48  46  33

.40  0    0    0   0   0   0   0   3  10  18  27  34  43  46   48  49  51   53  54  54  55  54  52  50  50   49  49  49   48  46  33
.50  0    0    0   0   0   0   0   0   2   7  15  23  36  43   46  48  50   51  53  54  55  55  53  50  50   49  49  49   48  46  34
.75  0    0    0   0   0   0   0   0   1   3   7  13  27  37   43  46  48   50  52  54  55  55  54  51  50   50  49  49   48  46  34
1.0  0    0    0   0   0   0   0   0   0   0   0   1   8  20   32  40  45   47  50  52  54  55  54  52  50   50  49  49   49  47  36

1.5  0    0    0   0   0   0   0   0   0   0   0   0   1   5   13  23  33   42  47  51  54  55  54  53  50   50  49  49   48  37
2.0  0    0    0   0   0   0   0   0   0   0   0   0   0   0    1   5  12   25  37  46  51  54  55  54  52   50  49  49   48  39
2.5  0    0    0   0   0   0   0   0   0   0   0   0   0   0    0   0   1    5  15  31  45  51  53  55  54   52  50  49   48  41
3.0  0    0    0   0   0   0   0   0   0   0   0   0   0   0    0   0   0    3  14  32  45  51  53  54  54   51  49  48   42
----+---+--+-+-+-+-+--+--+--+-+-+--+-+-+--+--+--+-+-+--+-+-+--+--+-+--+--+--+-+-+--+-+-+--+--+-+--+--+--+-+--++
         RAINFALL TYPE = I                            * * * TC = 0.1 HR * * *                              SHEET 1 OF 10
```

Exhibit 5-I: Tabular hydrograph unit discharges (csm/in) for type I rainfall distribution – continued

HYDROGRAPH TIME (HOURS)

IA/P = 0.10 * * * TC = 0.2 HR * * * IA/P = 0.10

TRVL TIME (hr)	9.0	9.3	9.6	9.9	10.0	10.1	10.2	10.3	10.4	10.5	10.6	10.7	10.8	11.0	11.2	11.4	11.6	11.8	12.0	12.3	12.6	13.0	13.5	14.0	14.5	15.0	15.5	16.0	17.0	18.0	20.0	24.0
0.0	28	37	52	126	220	379	405	267	168	129	108	92	80	69	62	58	55	53	50	47	44	41	37	33	30	29	28	27	26	24	21	13
.10	24	32	44	71	108	182	313	375	303	213	157	124	103	78	68	61	57	55	52	49	46	42	38	34	30	29	29	28	26	24	21	14
.20	21	28	38	53	65	94	153	260	336	314	247	187	145	97	77	67	60	57	54	50	47	44	39	35	31	30	29	28	26	25	21	14
.30	20	27	36	50	60	82	129	216	296	308	267	214	168	110	82	69	62	58	55	51	47	44	40	36	32	30	29	28	26	25	21	14
.40	17	23	31	42	47	56	74	111	181	258	291	275	234	152	103	79	68	61	57	53	49	45	41	37	33	30	29	28	27	25	22	14
.50	16	22	30	40	45	52	66	96	153	223	269	273	247	171	115	86	71	63	58	54	50	46	42	37	33	30	29	28	27	25	22	14
.75	13	17	24	32	35	39	44	52	68	99	145	194	229	240	183	132	97	77	66	58	53	48	44	39	35	31	30	29	27	26	22	15
1.0	11	13	17	24	26	29	32	35	39	45	56	75	107	189	229	206	158	115	88	67	58	52	46	42	38	34	31	29	28	26	23	15
1.5	8	10	12	15	17	19	21	23	25	28	31	35	39	60	106	166	204	197	165	112	79	60	51	46	42	37	33	30	28	27	23	16
2.0	5	7	9	10	11	12	13	14	15	17	18	20	22	27	34	49	79	126	169	188	152	97	64	52	46	42	38	34	29	28	24	17
2.5	3	5	6	8	8	9	10	10	11	12	13	14	15	18	22	26	34	49	77	136	176	155	95	64	52	46	42	37	31	28	25	18
3.0	2	3	4	5	6	6	7	7	8	8	9	9	10	11	13	16	19	23	29	49	91	154	167	102	67	53	47	42	34	29	26	19

IA/P = 0.30 * * * TC = 0.2 HR * * * IA/P = 0.30

TRVL TIME (hr)	9.0	9.3	9.6	9.9	10.0	10.1	10.2	10.3	10.4	10.5	10.6	10.7	10.8	11.0	11.2	11.4	11.6	11.8	12.0	12.3	12.6	13.0	13.5	14.0	14.5	15.0	15.5	16.0	17.0	18.0	20.0	24.0
0.0	0	0	0	22	76	206	258	207	144	119	104	92	82	74	68	65	63	62	60	57	55	52	48	44	40	40	39	39	38	36	32	21
.10	0	0	0	3	16	56	156	224	213	167	135	114	99	81	73	67	65	63	61	58	56	53	50	45	41	40	40	39	38	36	32	22
.20	0	0	0	2	11	41	116	189	205	179	150	126	108	85	75	69	65	63	62	59	56	54	50	46	41	40	40	39	38	36	32	22
.30	0	0	0	0	2	8	30	58	155	188	182	161	138	103	83	74	68	65	63	60	57	55	51	47	42	40	40	39	38	36	32	22
.40	0	0	0	0	1	6	22	66	126	167	177	166	147	111	88	76	69	66	63	61	58	55	51	47	43	40	40	39	38	37	33	22
.50	0	0	0	0	0	1	4	16	50	100	145	167	166	136	105	85	75	69	65	62	59	56	53	49	44	41	40	40	38	37	33	23
.75	0	0	0	0	0	2	7	22	50	87	119	140	148	124	101	85	74	69	64	61	57	54	50	45	42	40	40	39	38	37	33	23
1.0	0	0	0	0	0	0	0	0	1	3	11	28	55	114	142	135	113	93	80	69	64	60	56	52	48	44	41	40	39	37	34	24
1.5	0	0	0	0	0	0	0	0	0	0	0	1	2	17	52	97	124	129	115	91	75	65	59	55	52	48	43	41	39	38	35	25
2.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	19	49	84	111	120	102	79	65	59	55	51	47	43	40	39	36	26
2.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	6	20	45	89	113	104	78	65	59	55	51	47	41	39	36	28
3.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	7	30	68	108	99	77	65	58	54	50	43	40	37	29

IA/P = 0.50 * * * TC = 0.2 HR * * * IA/P = 0.50

TRVL TIME (hr)	9.0	9.3	9.6	9.9	10.0	10.1	10.2	10.3	10.4	10.5	10.6	10.7	10.8	11.0	11.2	11.4	11.6	11.8	12.0	12.3	12.6	13.0	13.5	14.0	14.5	15.0	15.5	16.0	17.0	18.0	20.0	24.0
0.0	0	0	0	0	0	0	4	15	28	38	43	45	45	48	49	50	52	53	53	53	53	53	53	50	50	50	49	49	49	48	45	32
.10	0	0	0	0	0	0	3	11	22	32	40	43	45	47	48	50	52	53	53	53	53	53	53	50	50	50	49	49	49	48	45	32
.20	0	0	0	0	0	0	2	8	17	27	36	41	43	46	48	49	51	53	53	53	53	53	53	51	50	50	49	49	49	48	45	33
.30	0	0	0	0	0	0	1	6	13	23	31	38	41	45	48	49	51	52	53	53	53	53	53	51	50	50	49	49	49	48	46	33
.40	0	0	0	0	0	0	1	4	10	19	27	34	39	44	47	49	50	52	53	53	53	53	53	51	50	50	49	49	49	49	46	33
.50	0	0	0	0	0	0	1	3	8	15	23	30	36	43	46	48	50	51	53	53	53	53	53	52	50	50	49	49	49	48	46	33
.75	0	0	0	0	0	0	0	0	3	8	14	20	27	37	43	46	48	50	52	53	53	53	53	52	50	50	50	50	49	48	46	34
1.0	0	0	0	0	0	0	0	0	0	0	0	2	4	14	26	36	42	46	48	51	52	53	53	53	52	50	50	49	49	49	47	35
1.5	0	0	0	0	0	0	0	0	0	0	0	0	0	1	5	13	23	33	40	46	49	52	53	53	53	51	50	50	49	49	48	37
2.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	8	16	26	37	44	50	52	53	53	53	51	50	49	49	48	38
2.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	8	19	31	43	50	52	53	53	53	52	51	50	49	48	39
3.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	11	25	41	49	52	53	53	53	52	50	49	48	41

RAINFALL TYPE = I * * * TC = 0.2 HR * * * SHEET 2 OF 10

Exhibit 5-I: Tabular hydrograph unit discharges (csm/in) for type I rainfall distribution – continued

HYDROGRAPH TIME (HOURS)

TRVL TIME (hr)	9.0	9.3	9.6	9.9	10.0	10.1	10.2	10.3	10.4	10.5	10.6	10.7	10.8	11.0	11.2	11.4	11.6	11.8	12.0	12.3	12.6	13.0	13.5	14.0	14.5	15.0	15.5	16.0	17.0	18.0	20.0	24.0
IA/P = 0.10																																**IA/P = 0.10**
* * * TC = 0.3 HR * * *																																
0.0	25	34	46	87	138	242	349	346	256	182	141	115	97	76	66	60	57	54	52	48	45	42	38	34	30	29	28	28	26	24	21	13
.10	24	32	44	77	118	200	299	330	281	215	166	132	109	82	69	62	58	55	52	49	46	42	38	34	30	29	29	28	26	24	21	14
.20	21	28	38	54	69	102	167	255	305	289	240	190	152	103	79	67	61	57	54	50	47	44	40	35	31	30	29	28	26	25	21	14
.30	20	27	36	51	63	89	141	217	276	285	255	212	172	115	85	71	63	58	55	51	48	44	40	36	32	30	29	28	26	25	21	14
.40	17	23	31	42	48	58	79	120	185	246	272	260	228	156	108	82	69	62	57	53	49	45	41	37	33	30	29	28	27	25	22	14
.50	16	22	30	40	45	54	70	104	158	216	253	258	238	173	120	89	72	63	58	54	50	46	42	37	33	30	29	28	27	25	22	14
.75	13	17	24	32	35	39	45	54	72	104	147	189	219	231	182	135	100	79	67	58	53	48	44	40	35	32	30	29	27	26	22	15
1.0	11	13	17	24	26	29	32	35	40	46	58	79	110	184	221	202	158	118	90	68	58	52	46	42	38	34	31	29	28	26	23	15
1.5	8	10	12	15	17	19	21	23	25	28	31	35	40	62	107	163	199	193	165	114	81	61	52	46	42	37	33	31	28	27	23	16
2.0	5	7	9	10	11	12	13	14	15	17	18	20	22	27	35	50	80	125	165	184	152	99	64	53	47	42	38	34	29	28	24	17
2.5	3	5	6	8	8	9	10	10	11	12	13	14	15	18	22	27	35	50	78	134	173	154	96	64	52	46	42	37	31	28	25	18
3.0	2	3	4	6	6	7	7	8	8	9	9	10	11	12	14	17	21	26	34	61	107	164	145	94	64	52	46	41	33	29	26	19
IA/P = 0.30																																**IA/P = 0.30**
* * * TC = 0.3 HR * * *																																
0.0	0	0	0	8	32	98	198	217	192	148	125	108	95	79	72	67	64	63	61	58	56	53	49	45	41	40	40	39	38	36	32	22
.10	0	0	0	1	6	23	73	156	197	194	164	138	118	91	77	70	66	64	62	59	57	54	50	46	41	40	40	39	38	36	32	22
.20	0	0	0	1	4	17	54	122	172	187	171	149	128	98	81	72	67	64	63	60	57	54	51	46	42	40	40	39	38	36	32	22
.30	0	0	0	0	0	3	12	40	95	146	173	172	157	120	34	79	71	67	64	61	58	55	52	48	43	40	40	39	38	37	33	23
.40	0	0	0	0	0	2	9	30	73	122	156	167	160	128	100	83	73	68	65	62	59	56	52	48	44	41	40	39	38	37	33	23
.50	0	0	0	0	0	1	6	22	56	100	137	157	159	135	107	87	76	69	65	62	59	56	53	49	44	41	40	40	38	37	33	23
.75	0	0	0	0	0	0	1	3	9	26	53	86	115	143	134	113	93	80	72	65	62	58	54	51	46	42	40	40	39	37	33	23
1.0	0	0	0	0	0	0	0	0	1	5	14	32	57	111	138	132	113	94	81	69	64	60	56	52	48	44	41	40	39	37	34	24
1.5	0	0	0	0	0	0	0	0	0	0	0	0	1	8	34	74	111	126	121	99	80	67	61	56	53	49	44	41	39	38	35	26
2.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	11	33	66	97	118	108	84	67	60	56	52	48	44	40	39	36	27
2.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	12	32	74	106	112	83	67	60	56	52	48	41	39	37	28
3.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4	21	54	98	107	81	67	60	55	51	43	40	37	29
IA/P = 0.50																																**IA/P = 0.50**
* * * TC = 0.3 HR * * *																																
0.0	0	0	0	0	0	0	1	6	16	27	36	41	44	46	48	49	51	52	52	52	52	52	52	51	50	50	49	49	49	48	46	33
.10	0	0	0	0	0	0	1	4	12	22	31	38	42	45	48	49	51	52	52	52	52	52	52	51	50	50	49	49	49	48	46	33
.20	0	0	0	0	0	0	0	3	9	18	27	34	39	44	47	49	50	51	52	52	52	52	52	51	50	50	49	49	49	48	46	33
.30	0	0	0	0	0	0	0	2	7	14	23	30	36	43	46	48	50	51	52	52	52	52	52	51	50	50	49	49	49	48	46	33
.40	0	0	0	0	0	0	1	5	11	19	26	33	41	46	48	49	51	52	52	52	52	52	52	50	50	49	49	49	48	46	46	33
.50	0	0	0	0	0	0	0	1	4	9	15	23	30	39	44	47	49	50	51	52	52	52	52	50	50	49	49	49	48	46	46	33
.75	0	0	0	0	0	0	0	0	2	4	8	14	20	31	40	44	47	49	51	52	52	52	52	50	50	50	49	49	48	46	46	34
1.0	0	0	0	0	0	0	0	0	0	0	0	1	2	9	20	31	39	44	47	50	51	52	52	52	52	50	50	50	49	49	47	36
1.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	9	18	28	36	44	48	51	52	52	52	51	50	50	49	49	48	37
2.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	5	12	21	33	42	48	51	52	52	52	51	50	49	49	48	38
2.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	5	15	27	40	48	51	52	52	52	51	50	49	48	40
3.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	11	25	41	48	51	52	52	51	50	49	48	41

RAINFALL TYPE = I   * * * TC = 0.3 HR * * *

Exhibit 5-I: Tabular hydrograph unit discharges (csm/in) for type I rainfall distribution – continued

TRVL TIME (hr) ———————————————————— HYDROGRAPH TIME(HOURS) ————————————————————

IA/P = 0.10 * * * TC = 0.4 HR * * * IA/P = 0.10

TRVL TIME (hr)	9.0	9.3	9.6	9.9	10.0	10.1	10.2	10.3	10.4	10.5	10.6	10.7	10.8	11.0	11.2	11.4	11.6	11.8	12.0	12.3	12.6	13.0	13.5	14.0	14.5	15.0	15.5	16.0	17.0	18.0	20.0	24.0
0.0	23	31	42	66	96	157	250	310	304	244	186	149	122	89	73	64	59	56	53	49	46	43	39	35	31	29	29	28	26	25	21	14
.10	22	29	40	61	84	133	211	277	295	261	211	170	138	98	78	66	60	56	54	50	47	43	39	35	31	29	29	28	26	25	21	14
.20	19	26	34	47	56	75	114	178	244	278	267	230	190	128	93	75	65	59	56	52	48	44	40	36	32	30	29	28	27	25	21	14
.30	18	24	33	45	53	67	98	152	213	257	263	241	207	143	102	80	68	61	57	52	49	45	41	37	32	30	29	28	27	25	21	14
.40	15	21	28	38	43	49	61	86	130	185	233	253	245	188	132	97	77	66	60	55	51	46	42	38	34	30	29	28	27	25	22	14
.50	15	20	27	36	41	46	56	76	112	161	209	238	243	201	146	106	82	69	61	55	51	47	42	38	34	31	29	29	27	25	22	14
.75	12	16	21	29	32	35	39	46	57	77	108	147	184	220	200	157	118	91	74	61	55	50	45	40	36	32	30	29	27	26	22	15
1.0	10	12	16	21	24	26	29	32	36	40	48	61	83	147	202	212	178	138	105	75	62	54	47	43	39	35	31	29	28	26	23	16
1.5	8	9	11	14	16	17	19	21	23	25	28	31	35	50	83	134	179	193	177	131	92	65	53	47	42	38	34	31	29	27	24	16
2.0	5	6	8	10	10	11	12	13	14	15	17	18	20	25	31	42	64	102	144	179	163	111	70	55	48	43	39	35	30	28	25	17
2.5	3	4	6	7	8	8	9	9	10	11	12	13	14	16	20	24	30	42	63	114	160	170	107	70	54	47	43	38	31	29	25	18
3.0	2	3	4	5	6	6	7	7	8	8	9	9	10	11	13	16	19	23	30	51	90	148	161	104	69	54	47	42	34	29	26	19

IA/P = 0.30 * * * TC = 0.4 HR * * * IA/P = 0.30

TRVL TIME (hr)	9.0	9.3	9.6	9.9	10.0	10.1	10.2	10.3	10.4	10.5	10.6	10.7	10.8	11.0	11.2	11.4	11.6	11.8	12.0	12.3	12.6	13.0	13.5	14.0	14.5	15.0	15.5	16.0	17.0	18.0	20.0	24.0
0.0	0	0	0	3	14	48	115	184	192	178	148	127	111	88	77	70	66	64	62	59	56	54	50	46	41	40	40	39	38	36	32	22
.10	0	0	0	0	2	10	35	89	152	179	178	158	137	105	85	75	69	65	63	60	58	55	51	47	42	40	40	39	38	36	32	22
.20	0	0	0	0	2	7	26	68	124	161	172	163	146	113	90	78	70	66	64	61	58	55	52	47	43	40	40	39	38	37	33	22
.30	0	0	0	0	1	5	19	52	100	140	162	162	151	120	96	81	72	67	64	61	59	55	52	48	43	41	40	39	38	37	33	23
.40	0	0	0	0	0	1	4	14	39	80	120	148	158	142	114	92	79	71	67	63	60	57	53	49	45	41	40	40	38	37	33	23
.50	0	0	0	0	0	1	3	10	29	63	101	132	152	145	120	97	82	73	68	63	60	57	53	50	45	41	40	40	38	37	33	23
.75	0	0	0	0	0	0	0	1	4	13	31	58	87	130	138	123	103	87	77	68	63	59	55	51	47	43	41	40	39	37	34	24
1.0	0	0	0	0	0	0	0	0	0	2	7	18	36	86	125	134	122	104	88	73	66	61	57	53	49	45	41	40	39	38	34	24
1.5	0	0	0	0	0	0	0	0	0	0	0	0	1	10	36	75	109	124	120	100	81	68	61	56	53	49	44	41	40	38	35	26
2.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	6	22	50	83	116	116	91	70	61	57	53	49	45	40	39	36	27
2.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	8	22	60	97	111	88	70	61	56	53	48	42	39	37	28
3.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	14	43	89	106	86	69	61	56	52	44	40	37	29

IA/P = 0.50 * * * TC = 0.4 HR * * * IA/P = 0.50

TRVL TIME (hr)	9.0	9.3	9.6	9.9	10.0	10.1	10.2	10.3	10.4	10.5	10.6	10.7	10.8	11.0	11.2	11.4	11.6	11.8	12.0	12.3	12.6	13.0	13.5	14.0	14.5	15.0	15.5	16.0	17.0	18.0	20.0	24.0
0.0	0	0	0	0	0	0	0	2	8	17	27	34	40	44	47	49	50	51	51	51	51	51	51	51	50	50	49	49	49	48	46	33
.10	0	0	0	0	0	0	0	0	2	6	13	22	30	40	45	47	49	50	51	51	51	51	51	50	50	50	49	49	49	48	46	34
.20	0	0	0	0	0	0	0	0	0	1	4	10	18	33	41	45	48	49	51	51	51	51	51	51	50	50	49	49	49	49	46	34
.30	0	0	0	0	0	0	0	0	0	0	1	3	8	22	35	42	46	48	50	51	51	51	51	51	51	50	50	49	49	49	47	35
.40	0	0	0	0	0	0	0	0	0	0	1	2	6	19	32	40	45	47	49	51	51	51	51	51	51	50	50	49	49	49	47	35
.50	0	0	0	0	0	0	0	0	0	0	0	2	9	23	34	41	45	48	50	51	51	51	51	51	51	50	50	49	49	49	47	35
.75	0	0	0	0	0	0	0	0	0	0	0	0	1	5	14	26	35	42	46	49	50	51	51	51	51	51	50	50	50	49	47	36
1.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	5	14	25	35	44	48	50	51	51	51	51	50	50	49	49	48	37
1.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	6	13	27	39	47	50	51	51	51	51	50	49	49	48	39
2.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	9	21	36	47	50	51	51	51	51	50	49	48	40
2.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	6	19	37	47	50	51	51	51	50	50	49	42
3.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	8	25	40	48	50	51	51	50	50	49	43

RAINFALL TYPE = I * * * TC = 0.4 HR * * * SHEET 4 OF 10

Exhibit 5-I: Tabular hydrograph unit discharges (csm/in) for type I rainfall distribution – continued

```
TRVL-------------------------------------------------------------HYDROGRAPH TIME(HOURS)------------------------------------------------
TIME    9.3      9.9    10.1     10.3     10.5     10.7    11.0     11.4     11.8    12.3     13.0     14.0     15.0     16.0     18.0   24.0
(hr)9.0      9.6    10.0    10.2     10.4     10.6    10.8     11.2     11.6    12.0    12.6     13.5     14.5     15.5     17.0    20.0
----+---+--+-+-+-+--+---+--+--+---+--+-+-+--+-+-+--+-+-+--+-+-+--+-+-+--+-+-+--+-+-+--+-+-+--+-+-+--+
        IA/P = 0.10                                  * * * TC = 0.5 HR * * *                            IA/P = 0.10
----+---+--+-+-+-+--+---+--+--+---+--+-+-+--+-+-+--+-+-+--+-+-+--+-+-+--+-+-+--+-+-+--+-+-+--+-+-+--+

0.0 21   23   38  56  73 111  175 247 282 271 229  186 152 108   84   71   63   58  55  51  47   44   40   35   31   30   29  28   26  25   21  14
.10 20   27   36  52  66  96  149 214 259 267 242  204 169 119   90   74   65   59  55  51  48   44   40   36   32   30   29  28   26  25   21  14
.20 17   23   31  42  49  60   84 127 185 234 256  247 219 156  112   86   72   63  58  53  49   45   41   37   33   30   29  28   27  25   22  14
.30 16   22   30  40  46  55   74 110 160 210 241  245 227 171  123   93   76   66  59  54  50   46   42   38   33   30   29  28   27  25   22  14

.40 14   19   26  35  38  43   51  67  95 138 186  222 237 210  157  115   89   73  64  57  52   47   43   39   35   31   29  29   27  25   22  15
.50 14   18   25  33  37  41   48  61  84 120 164  203 229 216  170  126   96   77  66  58  53   48   43   39   35   31   30  29   27  25   22  15
.75 11   14   19  26  29  32   35  40  48  61  83  114 148 202  210  176  137  106  84  66  57   51   46   41   37   33   30  29   28  26   22  15
1.0 10   11   15  19  21  24   26  29  32  36  41   50  65 116  176  203  190  156 122  85  67   56   49   44   40   35   32  30   28  26   23  16

1.5  7    9   11  13  14  16   17  19  21  23  25   28  31  42   67  110  157  187 183 146 104   72   55   48   43   39   35  32   29  27   24  17
2.0  4    6    7   9  10  10   11  12  13  14  15   17  18  22   27   36   53   83 123 175 175  124   77   57   49   44   40  35   30  28   25  18
2.5  3    4    5   7   7   8    8   9   9  10  11   12  13  15   18   22   27   36  53  97 146  166  119   76   57   49   44  39   32  29   25  18
3.0  1    2    3   5   5   6    6   6   7   8   8    9   9  11   12   15   17   21  27  43  76  135  158  114   75   57   48  43   35  30   26  19
----+---+--+-+-+-+--+---+--+--+---+--+-+-+--+-+-+--+-+-+--+-+-+--+-+-+--+-+-+--+-+-+--+-+-+--+-+-+--+
        IA/P = 0.30                                  * * * TC = 0.5 HR * * *                            IA/P = 0.30
----+---+--+-+-+-+--+---+--+--+---+--+-+-+--+-+-+--+-+-+--+-+-+--+-+-+--+-+-+--+-+-+--+-+-+--+-+-+--+
0.0  0    0    0   1   6  22   64 123 168 174 165  143 126 100   84   74   68   65  63  60  57   54   51   47   42   40   40  39   38  36   32  22
.10  0    0    0   1   5  16   48  98 144 164 165  150 134 106   87   77   70   66  63  60  58   55   51   47   42   40   39  38   38  36   32  22
.20  0    0    0   0   1   3   12  36  77 122 150  160 154 126  101   85   75   69  65  62  59   56   52   48   44   41   40  39   38  37   33  23
.30  0    0    0   0   0   2    9  27  60 101 134  151 153 132  107   89   77   70  66  63  60   56   53   49   44   41   40  40   38  37   33  23

.40  0    0    0   0   0   2    6  20  47  83 117  140 148 125  102   86   76   69  64  61  57   54   50   46   42   40   40  39   37  33   23
.50  0    0    0   0   0   1    5  15  36  68 101  127 144 130  108   90   78   71  65  62  58   54   50   46   42   40   40  39   37  33   23
.75  0    0    0   0   0   0    2   6  17  36  60   87 125 133  121  103   88   78  68  63  59   55   52   47   43   41   40  39   37  34   24
1.0  0    0    0   0   0   0    0   0   1   3   9   21  62 106  130  126  112   96  78  69  62   57   54   50   46   42   40  39   38  34   25

1.5  0    0    0   0   0   0    0   0   0   0   0    1   6  23   56   92  115  120 106  87  71   62   57   53   49   45   42  40   38  35   26
2.0  0    0    0   0   0   0    0   0   0   0   0    0   0   3   14   36   67  104 113  96  74   63   58   54   50   46   40  39   36  27
2.5  0    0    0   0   0   0    0   0   0   0   0    0   0   0    1    5   15   47  85 109  93   73   63   57   53   49   42  40   37  28
3.0  0    0    0   0   0   0    0   0   0   0   0    0   0   0    0    1    9   32  77 105  90   72   62   57   53   45   40  38   30
----+---+--+-+-+-+--+---+--+--+---+--+-+-+--+-+-+--+-+-+--+-+-+--+-+-+--+-+-+--+-+-+--+-+-+--+-+-+--+
        IA/P = 0.50                                  * * * TC = 0.5 HR * * *                            IA/P = 0.50
----+---+--+-+-+-+--+---+--+--+---+--+-+-+--+-+-+--+-+-+--+-+-+--+-+-+--+-+-+--+-+-+--+-+-+--+-+-+--+
0.0  0    0    0   0   0   0    0   1   4  10  18   26  33  41   45   47   49   50  50  50  50   50   50   50   50   50   50  49   49  48   46  33
.10  0    0    0   0   0   0    0   1   3   8  15   22  30  39   44   47   49   50  50  50  50   50   50   50   50   50   49  49   48  46   34
.20  0    0    0   0   0   0    0   2   6  12  19   26  37  43   46   48   50   50  50  50  50   50   50   50   50   50   49  49   48  46   34
.30  0    0    0   0   0   0    0   1   4   9  16   23  34  41   45   48   49   50  50  50  50   50   50   50   50   50   49  49   49  46   34

.40  0    0    0   0   0   0    0   1   3   7  13   19  31  39   44   47   49   50  50  50  50   50   50   50   50   49   49  49   46   34
.50  0    0    0   0   0   0    0   1   2   6  10   16  28  37   43   46   48   50  50  50  50   50   50   50   50   49   49  49   46   34
.75  0    0    0   0   0   0    0   0   1   3   6   10  20  30   38   43   46   48  50  50  50   50   50   50   50   49   49  47   35
1.0  0    0    0   0   0   0    0   0   0   0   0    0   3  10   20   30   38   43  47  49  50   50   50   50   50   50   49  47   36

1.5  0    0    0   0   0   0    0   0   0   0   0    0   0   2    6   14   23   31  41  46  49   50   50   50   50   50   49  48   38
2.0  0    0    0   0   0   0    0   0   0   0   0    0   0   0    2    6   13   25  36  45  49   50   50   50   50   50   49  48   39
2.5  0    0    0   0   0   0    0   0   0   0   0    0   0   0    0    1    4   12  23  37  46   49   50   50   50   50   49  48   40
3.0  0    0    0   0   0   0    0   0   0   0   0    0   0   0    0    0    2    8  21  37  46   49   50   50   50   49   48  42
----+---+--+-+-+-+--+---+--+--+---+--+-+-+--+-+-+--+-+-+--+-+-+--+-+-+--+-+-+--+-+-+--+-+-+--+-+-+--+
        RAINFALL TYPE = I                            * * * TC = 0.5 HR * * *                            SHEET  5 OF 10
```

Exhibit 5-I: Tabular hydrograph unit discharges (csm/in) for type I rainfall distribution – continued

HYDROGRAPH TIME (HOURS)

IA/P = 0.10 — TC = 0.75 HR

TRVL TIME (hr)	9.0	9.3	9.6	9.9	10.0	10.1	10.2	10.3	10.4	10.5	10.6	10.7	10.8	11.0	11.2	11.4	11.6	11.8	12.0	12.3	12.6	13.0	13.5	14.0	14.5	15.0	15.5	16.0	17.0	18.0	20.0	24.0
0.0	16	22	30	41	47	59	82	119	167	209	229	233	212	161	122	97	80	69	62	56	51	46	42	38	33	31	29	28	27	25	22	14
.10	14	19	26	35	39	44	54	72	104	146	188	215	227	197	150	116	93	77	68	59	53	48	43	39	35	31	30	29	27	25	22	15
.20	13	16	22	30	33	37	42	50	65	91	128	168	200	218	183	142	110	89	75	63	56	49	44	40	36	32	30	29	27	26	22	15
.30	12	16	21	28	31	35	39	46	59	80	112	149	183	214	191	151	118	94	79	65	57	50	45	41	36	32	30	29	27	26	22	15
.40	12	15	20	27	30	33	37	43	54	71	98	132	166	207	197	161	126	100	83	67	58	51	45	41	37	33	30	29	27	26	22	15
.50	11	13	18	24	26	29	32	36	41	49	64	87	117	178	204	186	152	120	96	74	62	53	47	42	38	34	31	29	28	26	23	15
.75	10	12	15	21	23	25	28	31	35	40	49	63	83	136	180	190	171	142	115	85	69	57	49	44	39	35	32	30	28	26	23	16
1.0	8	10	12	16	17	19	21	23	25	28	31	35	42	66	110	158	186	180	157	116	86	65	53	46	42	38	34	31	28	27	23	16
1.5	5	7	8	10	11	12	13	14	15	17	18	20	22	27	35	52	83	124	159	174	147	102	69	54	47	42	38	34	30	28	24	17
2.0	3	5	6	8	8	9	9	10	11	12	13	14	15	18	22	27	36	52	80	131	165	148	99	68	54	47	42	38	31	28	25	18
2.5	2	3	4	5	6	6	7	7	8	9	9	10	11	12	14	17	21	26	35	63	107	157	141	96	67	54	46	42	34	29	26	19
3.0	1	1	2	3	4	4	4	5	5	6	6	7	7	8	10	11	13	15	19	26	42	86	151	141	101	71	55	47	38	31	27	20

IA/P = 0.30 — TC = 0.75 HR

TRVL TIME (hr)	9.0	9.3	9.6	9.9	10.0	10.1	10.2	10.3	10.4	10.5	10.6	10.7	10.8	11.0	11.2	11.4	11.6	11.8	12.0	12.3	12.6	13.0	13.5	14.0	14.5	15.0	15.5	16.0	17.0	18.0	20.0	24.0
0.0	0	0	0	0	1	4	14	35	69	105	131	143	146	124	104	89	79	72	68	64	60	56	53	49	44	41	40	40	38	37	33	23
.10	0	0	0	0	0	1	3	10	27	55	88	117	134	142	118	100	87	77	71	66	62	58	54	50	46	42	40	40	39	37	33	23
.20	0	0	0	0	0	0	2	7	20	43	73	102	123	137	123	105	90	80	73	66	62	58	54	50	46	42	40	40	39	37	33	23
.30	0	0	0	0	0	0	1	5	15	34	60	88	128	134	118	101	88	78	69	64	60	55	52	48	43	41	40	40	39	37	34	24
.40	0	0	0	0	0	0	0	1	4	12	27	49	75	118	131	121	105	91	80	71	65	60	56	52	48	44	41	40	39	37	34	24
.50	0	0	0	0	0	0	0	1	3	9	21	39	87	122	128	116	101	88	75	68	62	57	53	49	45	42	40	40	39	38	34	24
.75	0	0	0	0	0	0	0	0	1	4	10	21	56	95	118	121	110	98	82	72	64	58	54	50	46	42	41	40	39	38	34	25
1.0	0	0	0	0	0	0	0	0	0	0	1	2	12	39	76	106	119	115	98	82	69	61	57	53	49	44	42	40	40	38	35	26
1.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	14	37	67	95	112	105	85	69	61	56	52	48	44	40	39	36	27
2.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4	15	35	74	102	107	84	69	61	56	52	48	41	39	37	28
2.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	5	23	55	94	103	82	68	60	56	52	44	40	37	29
3.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	15	50	93	100	81	68	60	55	47	41	38	30

IA/P = 0.50 — TC = 0.75 HR

TRVL TIME (hr)	9.0	9.3	9.6	9.9	10.0	10.1	10.2	10.3	10.4	10.5	10.6	10.7	10.8	11.0	11.2	11.4	11.6	11.8	12.0	12.3	12.6	13.0	13.5	14.0	14.5	15.0	15.5	16.0	17.0	18.0	20.0	24.0
0.0	0	0	0	0	0	0	0	0	1	2	5	10	17	29	37	42	45	48	49	49	49	49	49	49	49	49	49	49	49	49	47	34
.10	0	0	0	0	0	0	0	0	0	2	4	8	14	26	35	41	45	47	49	49	49	49	49	49	49	49	49	49	49	49	47	35
.20	0	0	0	0	0	0	0	0	1	3	7	11	23	33	39	44	47	48	49	49	49	49	49	49	49	49	49	49	49	49	47	35
.30	0	0	0	0	0	0	0	0	1	2	5	9	20	30	38	43	46	48	49	49	49	49	49	49	49	49	49	49	49	49	47	35
.40	0	0	0	0	0	0	0	0	1	2	4	8	17	28	36	41	45	47	49	49	49	49	49	49	49	49	49	49	49	49	47	35
.50	0	0	0	0	0	0	0	0	0	0	1	3	6	15	25	34	40	44	47	48	49	49	49	49	49	49	49	49	49	49	47	35
.75	0	0	0	0	0	0	0	0	0	1	1	3	9	18	27	35	40	44	47	48	49	49	49	49	49	49	49	49	49	49	47	36
1.0	0	0	0	0	0	0	0	0	0	0	0	1	4	10	18	27	35	40	45	48	49	49	49	49	49	49	49	49	49	49	48	37
1.5	0	0	0	0	0	0	0	0	0	0	0	0	0	2	6	13	21	29	38	44	48	49	49	49	49	49	49	49	49	49	48	38
2.0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4	9	15	26	36	44	48	49	49	49	49	49	49	49	49	49	48	39
2.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4	11	21	34	44	48	48	48	48	48	48	48	48	48	40
3.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	8	19	35	44	48	48	48	48	48	48	48	48	48	48	48	42

RAINFALL TYPE = I   * * * TC = 0.75 HR * * *   SHEET 6 OF 10

Exhibit 5-I: Tabular hydrograph unit discharges (csm/in) for type I rainfall distribution – continued

```
TRVL---------------------------------------------------------------HYDROGRAPH TIME(HOURS)-----------------------------------------------------
TIME    9.3       9.9     10.1      10.3      10.5      10.7    11.0      11.4      11.8    12.3      13.0      14.0      15.0      16.0      18.0    24.0
(hr)9.0       9.6      10.0      10.2      10.4      10.6      10.8     11.2       11.6     12.0     12.6      13.5      14.5      15.5      17.0    20.0
----+---+--+-+-+---+-+---+---+---+---+--+-+-+---+-+---+---+--+-+-+---+-+---+---+--+-+-+---+-+---+---+--+-+-+---+--+---+-+---+--+---+-+--+
          IA/P = 0.10                                         * * * TC = 1.0 HR * * *                                          IA/P = 0.10
----+---+--+-+-+---+-+---+---+---+---+--+-+-+---+-+---+---+--+-+-+---+-+---+---+--+-+-+---+-+---+---+--+-+-+---+--+---+-+---+--+---+-+--+
0.0 14   19   25   34  38  46  58  79 106 136 165 186 202 185 153 122 101  85  74  63  56  50  44  40  35  32  30  29  27  26  22  15
.10 13   18   24   32  36  42  53  70  94 122 151 174 194 188 160 130 106  89  77  65  57  50  44  40  36  32  30  29  27  26  22  15
.20 12   15   21   28  31  34  40  49  63  83 109 137 162 190 180 152 124 102  86  70  61  53  46  41  37  33  31  29  27  26  22  15
.30 12   15   20   26  29  33  37  45  57  75  98 124 149 187 183 159 131 107  90  73  62  53  47  42  37  33  31  29  28  26  23  15

.40 10   13   17   23  25  28  31  35  42  52  67  88 112 160 183 176 151 125 103  81  67  56  48  43  39  35  31  30  28  26  23  15
.50 10   13   16   22  24  27  30  33  39  48  61  79 101 148 181 181 157 131 108  84  69  58  49  43  39  35  32  30  28  26  23  16
.75  9   11   14   19  21  23  26  29  33  38  47  59  75 115 153 172 167 148 125  96  77  62  51  45  40  36  33  30  28  27  23  16
1.0  8    9   11   15  16  17  19  21  23  26  29  33  40  61  95 134 162 169 157 126  97  72  57  49  43  39  35  32  29  27  24  16

1.5  5    6    8   10  10  11  12  13  14  16  17  19  21  25  33  48  74 107 138 160 148 111  76  59  50  44  39  35  30  28  25  17
2.0  3    4    6    7   8   8   9   9  10  11  12  13  14  17  20  25  33  48  71 115 153 153 108  75  58  49  43  39  32  29  25  18
2.5  2    3    4    5   5   6   6   7   7   8   9   9  10  12  14  16  20  25  33  56  94 139 147 104  74  58  49  43  34  30  26  19
3.0  1    1    2    3   3   4   4   4   5   5   6   6   7   8   9  10  12  14  17  24  38  76 131 143 108  78  60  50  39  32  27  20
----+---+--+-+-+---+-+---+---+---+---+--+-+-+---+-+---+---+--+-+-+---+-+---+---+--+-+-+---+-+---+---+--+-+-+---+--+---+-+---+--+---+-+--+
          IA/P = 0.30                                         * * * TC = 1.0 HR * * *                                          IA/P = 0.30
----+---+--+-+-+---+-+---+---+---+---+--+-+-+---+-+---+---+--+-+-+---+-+---+---+--+-+-+---+-+---+---+--+-+-+---+--+---+-+---+--+---+-+--+
0.0  0    0    0    0   1   2   7  17  34  55  79  99 114 128 114 100  89  80  74  68  63  59  54  51  46  43  41  40  39  37  33  23
.10  0    0    0    0   0   0   2   5  13  27  46  68  89 116 124 110  98  87  79  71  65  60  56  52  48  43  41  40  39  37  34  24
.20  0    0    0    0   0   0   1   4  10  21  37  58  78 109 121 113 101  90  81  72  66  61  56  52  48  44  41  40  39  37  34  24
.30  0    0    0    0   0   0   0   1   3   8  17  31  49  87 113 118 109  98  87  76  69  63  57  53  49  45  42  40  39  38  34  24

.40  0    0    0    0   0   0   0   1   2   6  13  25  41  78 107 117 111 101  90  78  70  63  58  54  50  45  42  41  39  38  34  25
.50  0    0    0    0   0   0   0   0   2   5  10  20  34  69 100 115 113 103  93  80  71  64  58  54  50  46  42  41  39  38  34  25
.75  0    0    0    0   0   0   0   0   1   2   5  10  31  61  90 107 110 104  90  79  69  61  56  52  48  44  41  40  38  35  25
1.0  0    0    0    0   0   0   0   0   0   0   1   3  12  33  61  89 105 109  99  86  73  64  58  54  50  45  42  40  38  35  26

1.5  0    0    0    0   0   0   0   0   0   0   0   0   1   4  13  31  55  80 104 104  88  73  63  58  53  49  45  41  39  36  27
2.0  0    0    0    0   0   0   0   0   0   0   0   0   0   0   2   8  20  51  82 100  90  74  64  58  54  50  42  40  37  28
2.5  0    0    0    0   0   0   0   0   0   0   0   0   0   0   0   1   3  13  37  76  98  88  73  64  58  53  45  41  38  30
3.0  0    0    0    0   0   0   0   0   0   0   0   0   0   0   0   0   2   9  34  77  95  86  73  63  58  49  42  38  31
----+---+--+-+-+---+-+---+---+---+---+--+-+-+---+-+---+---+--+-+-+---+-+---+---+--+-+-+---+-+---+---+--+-+-+---+--+---+-+---+--+---+-+--+
          IA/P = 0.50                                         * * * TC = 1.0 HR * * *                                          IA/P = 0.50
----+---+--+-+-+---+-+---+---+---+---+--+-+-+---+-+---+---+--+-+-+---+-+---+---+--+-+-+---+-+---+---+--+-+-+---+--+---+-+---+--+---+-+--+
0.0  0    0    0    0   0   0   0   0   1   3   5   9  18  28  35  40  44  47  48  48  48  48  48  48  48  48  48  48  48  47  35
.10  0    0    0    0   0   0   0   0   1   2   4   7  16  25  33  39  43  46  48  48  48  48  48  48  48  48  48  48  48  47  35
.20  0    0    0    0   0   0   0   0   1   2   3   6  14  23  31  38  42  45  47  48  48  48  48  48  48  48  48  48  48  47  36
.30  0    0    0    0   0   0   0   0   0   1   3   5  12  21  29  36  41  44  47  48  48  48  48  48  48  48  48  48  48  47  36

.40  0    0    0    0   0   0   0   0   0   1   2   4  10  19  27  34  40  44  47  48  48  48  48  48  48  48  48  48  48  47  36
.50  0    0    0    0   0   0   0   0   0   1   2   3   8  16  25  33  38  43  46  48  48  48  48  4&  48  48  48  48  48  47  36
.75  0    0    0    0   0   0   0   0   0   1   2   3   8  15  23  30  36  41  45  47  48  48  48  48  48  48  48  48  48  47  36
1.0  0    0    0    0   0   0   0   0   0   0   0   2   5  11  19  27  33  41  45  47  48  48  48  48  48  48  48  48  48  37

1.5  0    0    0    0   0   0   0   0   0   0   0   1   2   5  11  17  28  37  44  47  48  48  48  48  48  48  48  48  48  39
2.0  0    0    0    0   0   0   0   0   0   0   0   0   1   3   7  16  26  38  45  47  48  48  48  48  48  48  48  48  40
2.5  0    0    0    0   0   0   0   0   0   0   0   0   0   1   5  12  24  38  45  47  47  47  47  47  47  47  41
3.0  0    0    0    0   0   0   0   0   0   0   0   0   0   1   5  14  29  40  46  47  47  47  47  47  47  47  42
----+---+--+-+-+---+-+---+---+---+---+--+-+-+---+-+---+---+--+-+-+---+-+---+---+--+-+-+---+-+---+---+--+-+-+---+--+---+-+---+--+---+-+--+
    RAINFALL TYPE = I                                         * * * TC = 1.0 HR * * *                                          SHEET 7 OF 10
```

Exhibit 5-I: Tabular hydrograph unit discharges (csm/in) for type I rainfall distribution – continued

TRVL ——————————————————————————————— HYDROGRAPH TIME (HOURS) ———————————————————————————————

IA/P = 0.10 — TC = 1.25 HR

TRVL TIME (hr)	9.0	9.3	9.6	9.9	10.0	10.1	10.2	10.3	10.4	10.5	10.6	10.7	10.8	11.0	11.2	11.4	11.6	11.8	12.0	12.3	12.6	13.0	13.5	14.0	14.5	15.0	15.5	16.0	17.0	18.0	20.0	24.0
0.0	12	16	22	29	33	38	47	61	80	103	127	149	164	180	163	138	115	98	85	71	62	53	47	41	37	33	31	29	27	26	22	15
.10	11	14	19	25	28	31	36	44	55	72	92	116	138	167	175	156	132	111	95	77	66	56	48	43	38	34	31	30	28	26	23	15
.20	11	14	18	24	27	30	34	40	50	65	83	105	127	160	172	160	138	116	99	80	68	57	49	43	39	34	31	30	28	26	23	15
.30	10	12	16	21	23	25	28	32	38	46	58	75	95	136	164	169	154	132	112	89	74	61	51	45	40	36	32	30	28	26	23	16
.40	9	12	15	20	22	24	27	30	35	42	53	68	86	126	157	167	157	137	117	92	76	62	52	46	40	36	33	30	28	26	23	16
.50	9	11	13	17	19	21	23	26	29	33	39	49	61	97	134	160	165	152	132	104	84	67	55	47	42	37	33	31	28	27	23	16
.75	7	9	11	14	15	17	18	20	22	25	28	32	38	59	90	124	150	159	152	126	101	77	60	51	45	40	35	32	29	27	24	17
1.0	6	8	10	12	13	14	15	17	19	20	23	25	29	40	60	91	123	148	157	144	118	88	66	54	47	41	37	33	29	27	24	17
1.5	4	6	7	9	9	10	11	12	13	14	15	16	18	22	28	40	59	85	114	145	150	121	86	65	54	46	41	37	31	28	25	13
2.0	2	3	5	6	6	7	7	8	9	9	10	11	11	13	16	19	24	33	47	80	119	144	124	90	68	55	47	42	33	29	26	19
2.5	1	2	3	4	4	5	5	6	6	7	7	8	8	10	11	13	16	19	24	38	65	111	140	120	88	67	54	47	37	31	27	20
3.0	1	1	2	2	3	3	3	4	4	5	5	5	6	7	8	9	11	13	15	21	32	62	114	136	116	86	66	54	41	33	27	20

IA/P = 0.30 — TC = 1.25 HR

TRVL TIME (hr)	9.0	9.3	9.6	9.9	10.0	10.1	10.2	10.3	10.4	10.5	10.6	10.7	10.8	11.0	11.2	11.4	11.6	11.8	12.0	12.3	12.6	13.0	13.5	14.0	14.5	15.0	15.5	16.0	17.0	18.0	20.0	24.0
0.0	0	0	0	0	0	1	4	10	21	35	53	71	86	106	115	104	94	86	79	72	66	61	56	52	48	44	41	40	39	37	34	24
.10	0	0	0	0	0	0	1	3	8	16	29	45	62	92	107	113	101	92	84	75	69	63	58	53	49	45	42	41	39	38	34	24
.20	0	0	0	0	0	0	1	2	6	13	23	37	54	84	104	110	104	94	86	77	70	64	58	54	49	45	42	41	39	38	34	24
.30	0	0	0	0	0	0	0	0	2	4	10	19	31	62	90	106	109	101	92	81	73	66	60	55	51	46	43	41	39	38	34	25
.40	0	0	0	0	0	0	0	0	1	3	8	15	26	55	83	102	107	103	94	83	74	67	60	56	51	47	43	41	39	38	35	25
.50	0	0	0	0	0	0	0	0	0	1	3	6	12	33	62	38	103	106	100	88	78	69	62	57	53	48	44	42	40	38	35	25
.75	0	0	0	0	0	0	0	0	0	0	0	1	3	12	31	56	80	97	103	97	87	75	65	59	55	50	46	43	40	39	35	26
1.0	0	0	0	0	0	0	0	0	0	0	0	0	1	4	13	32	56	79	95	101	94	80	69	61	56	52	48	44	40	39	36	27
1.5	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4	13	30	51	81	98	94	79	68	61	56	52	47	42	39	36	36	28
2.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	5	13	37	66	95	95	78	68	61	56	51	44	40	37	29
2.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	9	26	61	93	89	77	67	60	55	47	41	38	30
3.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	6	24	64	91	87	76	66	60	50	43	39	31

IA/P = 0.50 — TC = 1.25 HR

TRVL TIME (hr)	9.0	9.3	9.6	9.9	10.0	10.1	10.2	10.3	10.4	10.5	10.6	10.7	10.8	11.0	11.2	11.4	11.6	11.8	12.0	12.3	12.6	13.0	13.5	14.0	14.5	15.0	15.5	16.0	17.0	18.0	20.0	24.0
0.0	0	0	0	0	0	0	0	0	1	2	3	6	13	21	29	35	40	43	47	47	47	47	47	47	47	47	47	47	47	47	47	36
.10	0	0	0	0	0	0	0	0	0	1	3	5	11	19	27	34	39	42	47	47	47	47	47	47	47	47	47	47	47	47	47	36
.20	0	0	0	0	0	0	0	0	0	1	2	4	9	17	25	32	37	41	46	47	47	47	47	47	47	47	47	47	47	47	47	36
.30	0	0	0	0	0	0	0	0	0	1	2	3	8	15	23	30	36	40	45	47	47	47	47	47	47	47	47	47	47	47	47	36
.40	0	0	0	0	0	0	0	0	0	0	1	2	7	13	21	28	35	39	45	47	47	47	47	47	47	47	47	47	47	47	47	37
.50	0	0	0	0	0	0	0	0	0	0	1	2	6	12	19	27	33	38	44	46	47	47	47	47	47	47	47	47	47	47	47	37
.75	0	0	0	0	0	0	0	0	0	0	0	1	3	8	14	21	28	34	41	45	47	47	47	47	47	47	47	47	47	47	47	37
1.0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	5	11	17	24	34	41	46	47	47	47	47	47	47	47	47	47	47	38
1.5	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	5	10	19	29	39	45	47	47	47	47	47	47	47	47	47	47	40
2.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	9	18	30	41	46	47	47	47	47	47	47	47	47	47	41
2.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	7	17	31	41	46	47	47	47	47	47	47	47	47	47	42
3.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	6	18	32	42	46	47	47	47	47	47	47	47	47	47	43

RAINFALL TYPE = I   * * * TC = 1.25 HR * * *   SHEET 8 OF 10

Exhibit 5-I: Tabular hydrograph unit discharges (csm/in) for type I rainfall distribution – continued

```
TRVL----------------------------------------------------------HYDROGRAPH TIME(HOURS)----------------------------------------------------
TIME    9.3     9.9    10.1    10.3    10.5    10.7    11.0    11.4    11.8    12.3    13.0    14.0    15.0    16.0    18.0    24.0
(hr)9.0     9.6    10.0    10.2    10.4    10.6    10.8    11.2    11.6    12.0    12.6    13.5    14.5    15.5    17.0    20.0
     ----+---+--+-+-+--+-+--+--+-+--+-+--+--+---+--+--+---+-+-+---+--+-+--+-+--+--+---+-+--+-+--+---+--+---+--+--+-+--+-+--+
          IA/P = 0.10                               * * * TC = 1.5 HR * * *                                    IA/P = 0.10
     ----+---+--+-+-+--+-+--+--+-+--+-+--+--+---+--+--+---+-+-+---+--+-+--+-+--+--+---+-+--+-+--+---+--+---+--+--+-+--+-+--+
0.0 11  14   19  25  28  32  39  48  60  76  94 112 129 151 163 147 130 112  97  81  69  59  50  44  39  35  32  30  28  26  23  15
.10 10  12   16  22  24  27  30  36  44  55  69  86 103 135 152 159 143 125 108  88  75  62  52  46  41  36  32  30  28  26  23  16
.20  9  11   14  19  21  23  25  29  34  41  50  63  78 112 140 155 152 138 121  98  81  67  55  43  42  37  33  31  28  27  23  16
.30  9  11   14  18  20  22  24  27  31  38  46  57  71 104 133 151 154 141 125 101  84  68  56  48  43  38  34  31  29  27  23  16

.40  8  10   13  17  19  21  23  26  30  35  42  52  65  96 126 147 152 144 129 105  87  70  57  49  43  38  34  31  29  27  23  16
.50  8   9   12  15  17  18  20  22  25  28  33  39  48  73 104 131 148 151 140 117  95  75  60  51  45  40  35  32  29  27  24  17
.75  7   8   11  13  15  16  18  19  21  24  27  32  38  56  82 110 133 146 144 127 106  83  65  54  47  41  36  33  29  27  24  17
1.0  5   7    9  11  11  12  13  15  16  18  19  22  24  32  47  69  96 122 139 145 127  99  74  60  51  44  39  35  30  28  24  17

1.5  4   5    6   8   8   9  10  10  11  12  13  14  16  19  24  32  46  66  90 124 139 128  97  73  59  50  44  39  32  29  25  18
2.0  2   3    4   5   5   6   6   7   7   8   9   9  10  12  14  17  21  27  38  63  96 135 129 100  76  61  51  44  35  30  26  19
2.5  1   2    2   3   4   4   4   5   5   6   6   7   7   8  10  11  14  16  20  31  51  91 132 124  98  75  60  51  39  32  27  20
3.0  0   1    1   2   2   2   2   3   3   3   4   4   5   6   7   8   9  10  12  16  23  42  86 123 128 101  77  62  45  35  28  21
     ----+---+--+-+-+--+-+--+--+-+--+-+--+--+---+--+--+---+-+-+---+--+-+--+-+--+--+---+-+--+-+--+---+--+---+--+--+-+--+-+--+
          IA/P = 0.30                               * * * TC = 1.5 HR * * *                                    IA/P = 0.30
     ----+---+--+-+-+--+-+--+--+-+--+-+--+--+---+--+--+---+-+-+---+--+-+--+-+--+--+---+-+--+-+--+---+--+---+--+--+-+--+-+--+
0.0  0   0    0   0   0   1   3   7  13  21  33  46  60  83  97 106  97  90  84  76  70  64  59  54  50  45  43  41  39  38  34  25
.10  0   0    0   0   0   0   1   2   5  10  18  28  40  66  86  98 103  95  88  80  73  66  60  55  51  47  43  41  39  38  35  25
.20  0   0    0   0   0   0   0   1   4   8  14  23  34  60  81  95 101  97  90  81  74  67  61  56  52  47  44  41  40  38  35  25
.30  0   0    0   0   0   0   0   0   1   3   6  12  19  41  65  85  98 100  95  85  77  69  62  57  53  48  44  42  40  38  35  25

.40  0   0    0   0   0   0   0   1   2   5   9  16  36  59  80  94  99  96  87  79  70  63  58  53  49  45  42  40  38  35  26
.50  0   0    0   0   0   0   0   0   1   2   4   8  13  31  54  75  91  98  97  88  80  71  64  58  54  49  45  42  40  38  35  26
.75  0   0    0   0   0   0   0   0   0   1   2   4  13  28  49  69  85  95  95  87  76  67  61  56  51  47  44  40  39  36  26
1.0  0   0    0   0   0   0   0   0   0   0   0   0   1   5  13  29  49  69  84  95  92  81  71  63  58  53  49  45  41  39  36  27

1.5  0   0    0   0   0   0   0   0   0   0   0   0   0   1   3   9  20  35  63  84  92  83  72  64  58  54  49  43  40  37  28
2.0  0   0    0   0   0   0   0   0   0   0   0   0   0   0   0   1   3   9  25  50  79  90  81  71  63  58  53  45  41  38  29
2.s  0   0    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   1   6  18  46  79  88  80  70  63  57  49  42  38  31
3.0  0   0    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   1   4  17  50  79  87  79  70  62  52  45  39  32
     ----+---+--+-+-+--+-+--+--+-+--+-+--+--+---+--+--+---+-+-+---+--+-+--+-+--+--+---+-+--+-+--+---+--+---+--+--+-+--+-+--+
          IA/P = 0.50                               * * * TC = 1.5 HR * * *                                    IA/P = 0.50
     ----+---+--+-+-+--+-+--+--+-+--+-+--+--+---+--+--+---+-+-+---+--+-+--+-+--+--+---+-+--+-+--+---+--+---+--+--+-+--+-+--+
0.0  0   0    0   0   0   0   0   0   0   0   1   2   3   8  15  22  29  34  39  44  46  46  46  46  46  46  46  46  46  46  46  37
.10  0   0    0   0   0   0   0   0   0   0   1   2   5  10  17  24  30  35  41  46  46  46  46  46  46  46  46  46  46  46  46  37
.20  0   0    0   0   0   0   0   0   0   0   1   1   4   9  15  22  28  34  40  45  46  46  46  46  46  46  46  46  46  46  46  37
.30  0   0    0   0   0   0   0   0   0   0   0   1   3   7  13  20  27  33  39  44  46  46  46  46  46  46  46  46  46  46  46  38

.40  0   0    0   0   0   0   0   0   0   0   0   1   3   6  12  18  25  31  38  44  46  46  46  46  46  46  46  46  46  46  46  38
.50  0   0    0   0   0   0   0   0   0   0   0   1   2   5  10  17  23  30  37  43  46  46  46  46  46  46  46  46  46  46  46  38
.75  0   0    0   0   0   0   0   0   0   0   0   0   1   3   7  12  19  25  33  40  45  46  46  46  46  46  46  46  46  46  46  38
1.0  0   0    0   0   0   0   0   0   0   0   0   0   1   2   5  10  15  25  33  42  46  46  46  46  46  46  46  46  46  46  46  39

1.5  0   0    0   0   0   0   0   0   0   0   0   0   0   1   3   7  14  23  34  43  46  46  46  46  46  46  46  46  46  46  46  40
2.0  0   0    0   0   0   0   0   0   0   0   0   0   0   0   1   5  11  22  35  43  46  46  46  46  46  46  46  46  46  46  46  42
2.0  0   0    0   0   0   0   0   0   0   0   0   0   0   0   1   3  10  23  36  43  46  46  46  46  46  46  46  46  46  46  46  43
3.0  0   n    0   0   0   0   0   0   0   0   0   0   0   0   1   4  14  27  38  44  46  46  46  46  46  46  46  46  46  46  46  44
     ----+---+--+-+-+--+-+--+--+-+--+-+--+--+---+--+--+---+-+-+---+--+-+--+-+--+--+---+-+--+-+--+---+--+---+--+--+-+--+-+--+
          RAINFALL TYPE = I                         * * * TC = 1.5 HR * * *                                    SHEET  9 OF 10
```

Exhibit 5-I: Tabular hydrograph unit discharges (csm/in) for type I rainfall distribution – continued

HYDROGRAPH TIME (HOURS)

IA/P = 0.10 — * * * TC = 2.0 HR * * *

TRVL TIME (hr)	9.0	9.3	9.6	9.9	10.0	10.1	10.2	10.3	10.4	10.5	10.6	10.7	10.8	11.0	11.2	11.4	11.6	11.8	12.0	12.3	12.6	13.0	13.5	14.0	14.5	15.0	15.5	16.0	17.0	18.0	20.0	24.0
0.0	9	11	14	19	21	24	28	33	40	49	59	70	82	106	123	138	138	125	115	97	83	70	59	50	44	39	35	32	29	27	23	16
.10	8	10	13	17	18	20	23	26	31	37	45	54	65	89	110	125	135	130	123	106	90	75	62	53	46	40	36	33	29	27	24	16
.20	8	10	12	16	17	19	22	25	29	34	41	50	60	83	105	121	132	131	125	109	92	77	63	53	46	41	36	33	29	27	24	17
.30	7	9	11	14	15	17	18	21	23	27	32	38	46	66	89	109	123	131	129	117	100	82	66	56	48	42	38	34	30	28	24	17
.40	7	8	10	13	15	16	18	20	22	25	30	35	43	61	83	104	120	131	131	119	103	84	68	57	49	43	38	34	30	28	24	17
.50	6	8	10	13	14	15	17	19	21	24	28	33	39	56	78	99	116	127	130	121	106	86	69	58	50	44	39	35	30	28	24	17
.75	5	7	8	11	12	13	14	15	16	18	20	23	27	38	53	73	93	111	123	127	118	98	77	63	54	47	41	37	31	28	25	17
1.0	4	5	7	8	9	10	11	12	13	14	15	17	18	24	32	45	63	83	102	122	126	113	89	71	59	51	44	39	32	29	25	18
1.5	3	4	5	6	7	7	8	8	9	10	10	11	12	15	18	23	32	44	60	88	111	123	110	87	70	58	50	44	35	30	26	19
2.0	1	2	3	4	5	5	5	6	6	7	7	8	9	10	12	14	18	23	31	49	74	106	121	107	86	69	58	49	38	32	27	20
2.5	1	1	2	2	3	3	3	4	4	4	5	5	6	7	8	9	11	13	16	22	35	62	101	118	108	88	71	59	44	35	28	21
3.0	0	0	1	1	1	2	2	2	3	3	3	3	4	5	5	6	8	9	10	14	19	34	67	103	116	105	86	70	50	39	29	21

IA/P = 0.30 — * * * TC = 2.0 HR * * *

TRVL TIME (hr)	9.0	9.3	9.6	9.9	10.0	10.1	10.2	10.3	10.4	10.5	10.6	10.7	10.8	11.0	11.2	11.4	11.6	11.8	12.0	12.3	12.6	13.0	13.5	14.0	14.5	15.0	15.5	16.0	17.0	18.0	20.0	24.0
0.0	0	0	0	0	0	0	1	3	6	10	16	23	31	49	65	77	84	92	86	80	75	69	63	58	53	49	45	43	40	38	35	26
.10	0	0	0	0	0	0	0	1	2	5	9	13	19	35	53	68	79	85	90	83	77	71	64	59	55	50	46	43	40	39	35	26
.20	0	0	0	0	0	0	0	0	1	2	4	7	11	24	40	57	71	81	89	89	80	73	66	61	56	51	47	44	41	39	35	26
.30	0	0	0	0	0	0	0	0	1	1	3	6	9	20	36	53	68	78	84	88	81	74	67	61	56	52	48	44	41	39	36	26
.40	0	0	0	0	0	0	0	0	0	0	1	2	5	12	24	40	57	70	80	87	84	76	69	63	58	53	49	45	41	39	36	27
.50	0	0	0	0	0	0	0	0	0	0	1	2	4	10	21	36	53	67	77	87	85	77	69	63	58	54	49	46	41	39	36	27
.75	0	0	0	0	0	0	0	0	0	0	0	1	2	6	14	26	41	56	69	82	85	80	72	65	60	55	51	47	42	40	36	27
1.0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4	10	20	34	49	68	81	85	77	69	63	58	53	49	43	40	37	28
1.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4	10	19	38	58	78	83	76	68	62	57	53	45	41	37	29
2.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	4	13	29	55	77	82	75	68	62	57	48	43	38	30
2.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	6	22	51	75	81	75	68	62	53	45	39	32
3.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	6	25	54	75	80	75	68	57	48	43	33

IA/P = 0.50 — * * * TC = 2.0 HR * * *

TRVL TIME (hr)	9.0	9.3	9.6	9.9	10.0	10.1	10.2	10.3	10.4	10.5	10.6	10.7	10.8	11.0	11.2	11.4	11.6	11.8	12.0	12.3	12.6	13.0	13.5	14.0	14.5	15.0	15.5	16.0	17.0	18.0	20.0	24.0
0.0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	4	8	13	18	24	29	36	41	46	46	46	46	46	46	46	46	46	38
.10	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	3	7	12	17	22	28	35	40	45	46	46	46	46	46	46	46	38
.20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	4	8	13	18	24	31	38	44	46	46	46	46	46	46	46	39
.30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4	7	12	17	22	30	37	43	45	46	46	46	46	46	46	39
.40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	6	11	16	21	29	36	42	45	46	46	46	46	46	39
.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	5	9	14	20	28	35	42	45	45	45	45	45	39
.75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	5	9	13	18	26	33	41	45	45	45	45	39
1.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	5	9	16	24	33	42	45	45	45	45	40
1.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	4	8	15	25	36	43	45	45	42
2.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	6	14	26	37	43	45	45	43
2.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	6	15	27	37	43	45	45	45	45	45	44
3.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	3	19	30	39	44	45	45	45	45	45

RAINFALL TYPE = I   * * * TC = 2.0 HR * * *   SHEET 10 OF 10

Exhibit 5-IA: Tabular hydrograph unit discharges (csm/in) for type IA rainfall distribution

```
TRVL----------------------------------------------------------HYDROGRAPH TIME(HOURS)------------------------------------------------------
TIME    7.3       7.9       8.1       8.3       8.5       8.7      9.0        9.4         9.8      10.3      11.0      12.0      13.0      14.0      16.0      22.0
(hr)7.0      7.6       8.0       8.2       8.4       8.6       8.8      9.2        9.6       10.0      10.6      11.5      12.5      13.5      15.0      18.0
    ----+---+--+-+-+---+--+---+--+---+--+---+--+---+--+--+-+--+--+--+-+--+--+--+-+---+--+--+-+---+--+---+--+--+-+---+--+---+--+--+-+---+--+
         IA/P = 0.10                                           * * * TC = 0.1 HR * * *                                        IA/P = 0.10
    ----+---+--+-+-+---+--+---+--+---+--+---+--+---+--+--+-+--+--+--+-+--+--+--+-+---+--+--+-+---+--+---+--+--+-+---+--+---+--+--+-+---+--+
0.0 28   36   50 143 154 163 140 103  87  76  68  67  65  61  54  49  45  44  44  41  40  39  36  33  32  32  31  30  30  29  26  21
.10 27   32   43 104 130 146 157 145 117  97  83  73  69  65  59  53  48  45  45  42  40  39  37  34  33  32  32  31  30  29  27  22
.20 26   29   37  59  89 116 136 150 147 127 107  91  79  68  63  57  52  47  45  44  41  39  37  35  33  32  32  31  30  29  27  22
.30 25   28   35  53  77 103 125 142 145 133 116  99  86  71  65  59  53  48  46  44  41  39  38  35  33  32  32  31  30  29  27  22

.40 24   26   31  41  49  68  91 114 132 141 136 122 107  82  70  63  57  52  48  45  43  40  38  36  33  32  32  31  30  29  27  22
.50 24   26   30  39  46  60  81 103 123 135 135 127 114  88  73  65  59  53  49  45  43  40  39  36  33  33  32  31  30  29  27  22
.75 20   24   27  32  35  39  47  60  76  94 111 122 125 114  94  79  68  61  55  48  45  42  39  37  35  33  32  32  30  30  27  22
1.0 16   20   24  27  28  30  32  36  41  49  62  77  94 118 122 104  86  74  65  55  49  44  41  39  36  34  33  32  31  30  28  23

1.5 12   15   18  22  23  24  25  27  28  30  32  36  42  61  86 107 112 104  91  73  60  50  44  41  38  36  34  33  31  30  28  23
2.0  7   10   12  15  16  18  19  20  21  22  24  25  26  30  36  50  69  90 106 103  87  67  52  45  41  39  36  34  32  31  29  24
2.5  4    6    8  11  12  13  14  15  16  17  18  19  21  23  26  30  36  49  66  91 101  89  66  51  44  41  38  36  33  31  29  25
3.0  2    3    5   7   8   9  10  11  11  12  13  14  16  18  20  23  25  29  36  55  79  98  86  65  51  44  41  38  34  32  30  25
    ----+---+--+-+-+---+--+---+--+---+--+---+--+---+--+--+-+--+--+--+-+--+--+--+-+---+--+--+-+---+--+---+--+--+-+---+--+---+--+--+-+---+--+
         IA/P = 0.30                                           * * * TC = 0.1 HR * * *                                        IA/P = 0.30
    ----+---+--+-+-+---+--+---+--+---+--+---+--+---+--+--+-+--+--+--+-+--+--+--+-+---+--+--+-+---+--+---+--+--+-+---+--+---+--+--+-+---+--+
0.0  0    0    1  45  65  89  78  64  59  54  54  53  51  50  48  45  44  43  43  43  42  42  41  40  40  40  40  40  39  39  38  33
.10  0    0    0  18  36  55  78  78  69  62  57  55  53  51  50  47  44  44  43  43  42  42  41  40  40  40  40  40  39  39  38  34
.20  0    0    0  13  29  46  67  74  71  65  60  56  54  52  50  48  45  44  43  43  43  42  41  41  40  40  40  40  39  39  38  34
.30  0    0    0  10  22  38  58  69  70  67  62  58  56  52  51  48  46  44  44  43  43  42  41  41  40  40  40  40  39  39  38  34

,40  0    0    0   2   7  17  31  49  62  67  67  64  60  55  52  50  48  45  44  43  43  42  42  41  40  40  40  40  39  39  38  34
,50  0    0    0   1   5  13  25  41  55  63  66  64  61  56  53  51  48  46  44  43  43  42  42  41  40  40  40  40  39  39  38  34
.75  0    0    0   0   0   2   6  13  24  36  47  55  61  61  57  54  51  49  47  44  43  43  42  41  41  40  40  40  40  39  38  34
1.0  0    0    0   0   1   3   8  15  25  36  46  53  60  59  55  53  50  48  45  44  43  42  42  41  40  40  40  40  39  38  35

1.5  0    0    0   0   0   0   0   1   2   5   9  15  31  47  55  57  56  53  50  46  44  43  42  41  41  40  40  40  39  39  35
2.0  0    0    0   0   0   0   0   0   0   0   0   1   5  15  28  42  51  55  54  51  47  44  43  42  41  41  40  40  39  39  36
2.5  0    0    0   0   0   0   0   0   0   0   0   0   0   2   6  14  26  38  50  54  52  47  44  43  42  41  40  40  40  40  39  36
3.0  0    0    0   0   0   0   0   0   0   0   0   0   0   0   2   6  13  29  43  53  51  47  44  43  42  41  40  40  39  37
    ----+---+--+-+-+---+--+---+--+---+--+---+--+---+--+--+-+--+--+--+-+--+--+--+-+---+--+--+-+---+--+---+--+--+-+---+--+---+--+--+-+---+--+
         IA/P = 0.50                                           * * * TC = 0.1 HR * * *                                        IA/P = 0.50
    ----+---+--+-+-+---+--+---+--+---+--+---+--+---+--+--+-+--+--+--+-+--+--+--+-+---+--+--+-+---+--+---+--+--+-+---+--+---+--+--+-+---+--+
0,0  0    0    0   0   0   0   0   0   0   0   0   0   0   2   7  12  14  18  21  23  26  30  32  33  37  38  41  42  46  48  53  49
.10  0    0    0   0   0   0   0   0   0   0   0   0   0   0   4   9  12  15  19  22  25  29  32  32  35  39  41  42  45  48  53  49
.20  0    0    0   0   0   0   0   0   0   0   0   0   0   0   3   7  11  14  18  22  24  28  32  32  35  39  41  42  45  48  53  49
.30  0    0    0   0   0   0   0   0   0   0   0   0   0   0   0   4   8  12  15  20  23  27  31  31  34  39  40  41  45  48  53  49

.40  0    0    0   0   0   0   0   0   0   0   0   0   0   0   1   5   9  13  18  22  25  30  31  33  37  39  41  44  47  53  49
.50  0    0    0   0   0   0   0   0   0   0   0   0   0   0   0   2   6  10  tS  20  24  29  31  32  36  39  41  44  47  53  53
.75  0    0    0   0   0   0   0   0   0   0   0   0   0   0   0   0   2   6  11  16  21  26  30  31  34  38  40  43  46  53  53
1.0  0    0    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   1   6  11  17  23  28  31  32  35  39  42  45  53  53

1.5  0    0    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   2   8  17  23  28  31  32  35  40  43  49  52
2.0  0    0    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   2   9  17  23  28  31  32  38  42  48  52
2.5  0    0    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   3  10  18  24  28  31  36  40  47  52
3.0  0    0    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   4  11  18  24  28  33  39  45  52
    ----+---+--+-+-+---+--+---+--+---+--+---+--+---+--+--+-+--+--+--+-+--+--+--+-+---+--+--+-+---+--+---+--+--+-+---+--+---+--+--+-+---+--+
         RAINFALL TYPE = IA                                    * * * TC = 0.1 HR * * *                                        SHEET  1 OF 10
```

Exhibit 5-IA: Tabular hydrograph unit discharges (csm/in) for type IA rainfall distribution – continued

```
TRVL----------------------------------------------------HYDROGRAPH TIME(HOURS)------------------------------------------
TIME   7.3    7.9    8.1    8.3    8.5    8.7    9.0    9.4    9.8  10.3  11.0  12.0  13.0  14.0  16.0  22.0
(hr)7.0    7.6    8.0    8.2    8.4    8.6    8.8    9.2    9.6  10.0  10.6  11.5  12.5  13.5  15.0  18.0
+ - - -+ - - + -- + - + -+ - +-- +- - + --+ + -- -- + - +-- + -+-- + - +- -+ -- + -- +---+-- +-- +---+-- + --+- + --+
            IA/P = 0.10                              * * * TC = 0.2 HR * * *                           IA/P = 0.10
----+ ---+ -- + - + +-- +- + +---+ - +- + +- -+ -- + - + +- - +-- + -- +---+-- +-- +---+-- + --+- + --+
0.0 27    34    46 124 143 153 153 127 103  87  76  68  67  63  57  51  47  45  44  42  40  39  36  33  33  32  32  31  30  29  27  21
.10 27    33    44 108 131 146 151 135 113  96  83  73  69  65  59  53  48  45  45  42  40  39  37  33  33  32  32  31  30  29  27  22
.20 26    29    38  67  95 119 137 146 139 122 105  90  79  69  63  57  52  47  45  44  41  39  37  34  33  32  32  31  30  29  27  22
.30 25    27    33  45  60  83 107 127 140 139 128 112  97  76  68  62  56  50  47  45  42  40  38  35  33  33  32  31  30  29  27  22

.40 24    27    32  43  54  73  96 117 132 137 131 118 104  81  70  63  57  52  48  45  43  40  38  36  33  33  32  32  30  29  27  22
.50 23    25    29  37  41  50  65  86 106 124 132 131 123  98  79  69  62  56  51  46  44  41  39  37  34  33  32  32  30  29  27  22
.75 20    24    27  33  36  41  50  63  80  97 112 121 123 111  93  78  68  61  55  48  45  42  39  37  34  33  32  32  30  30  27  22
1.0 16    20    24  27  29  31  33  37  43  52  65  81  96 120 120 102  85  73  64  55  49  44  41  39  36  34  33  32  31  30  28  23

1.5 12    15    19  22  23  24  26  27  28  30  33  37  44  63  88 107 111 102  89  72  60  50  44  41  38  36  34  33  32  30  28  23
2.0  7    10    12  16  17  18  19  20  22  23  24  25  27  30  38  52  71  91 105 101  86  66  52  45  41  39  36  34  32  31  29  24
2.5  4     6     9  11  12  13  14  15  16  17  19  20  21  23  26  30  38  50  68  92 101  88  65  51  44  41  38  36  33  31  29  25
3.0  2     3     5   7   7   8   9  10  11  12  13  14  15  17  19  22  24  28  33  49  72  97  89  68  53  45  41  39  34  32  30  25
----+ ---+ -- + - + +-- +- + +---+ - +- + +- -+ -- + - + +- - +-- + -- +---+-- +-- +---+-- + --+- + --+
            IA/P = 0.30                              * * * TC = 0.2 HR * * *                           IA/P = 0.30
+ - - -+ ---+ -- + - + +-- +- + +---+ - +- + +- -+ -- + - + +- - +-- + -- +---+-- +-- +---+-- + --+- + --+
0.0  0     0     0  26  45  64  76  74  65  59  55  53  52  51  49  46  44  44  43  43  42  42  41  40  40  40  40  40  39  39  38  33
.10  0     0     0  20  37  55  69  72  67  62  57  54  53  52  50  47  44  44  43  43  42  42  41  40  40  40  40  40  39  39  38  34
.20  0     0     0   5  15  30  47  61  68  68  64  59  56  53  52  49  46  44  44  43  43  42  42  41  40  40  40  40  39  39  38  34
.30  0     0     0   4  11  23  39  54  64  66  65  61  58  54  52  50  47  45  44  43  43  42  42  41  40  40  40  40  39  39  38  34

.40  0     0     0   3   8  18  32  47  58  64  64  62  59  55  52  50  48  45  44  43  43  42  42  41  40  40  40  40  39  38  34
.50  0     0     0   0   2   6  14  26  40  52  60  63  62  58  54  52  50  47  45  44  43  42  42  41  40  40  40  40  39  38  34
.75  0     0     0   0   1   3   7  14  24  35  45  53  57  59  56  54  51  49  47  44  43  43  42  41  41  40  40  40  40  39  38  34
1.0  0     0     0   0   0   0   1   4   8  15  25  35  44  56  58  56  54  51  49  46  44  43  42  42  41  40  40  40  40  39  39  35

1.5  0     0     0   0   0   0   0   0   1   2   5   9  23  38  50  55  56  54  51  47  44  43  42  42  41  40  40  40  39  39  35
2.0  0     0     0   0   0   0   0   0   0   0   1   1   6  15  27  40  49  54  54  51  47  44  43  42  41  41  40  40  40  39  39  36
2.5  0     0     0   0   0   0   0   0   0   0   0   0   0   2   6  14  25  36  49  53  51  47  44  43  42  41  41  40  40  39  39  36
3.0  0     0     0   0   0   0   0   0   0   0   0   0   0   0   1   2   6  13  28  42  52  51  47  44  43  42  41  40  40  39  37
----+ ---+ -- + - + +-- +- + +---+ - +- + +- -+ -- + - + +- - +-- + -- +---+-- +-- +---+-- + --+- + --+
            IA/P = 0.50                              * * * TC = 0.2 HR * * *                           IA/P = 0.50
+ - - -+ ---+ -- + - + +-- +- + +---+ - +- + +- -+ -- + - + +- - +-- + -- +---+-- +-- +---+-- + --+- + --+
0.0  0     0     0   0   0   0   0   0   0   0   0   0   0   0   5  10  13  16  19  23  25  29  32  33  36  39  41  42  46  48  50  49
.10  0     0     0   0   0   0   0   0   0   0   0   0   0   0   2   6  10  14  17  21  24  28  31  32  35  40  41  42  45  48  50  49
.20  0     0     0   0   0   0   0   0   0   0   0   0   0   0   0   3   7  11  15  19  23  26  31  31  34  39  40  41  45  48  50  49
.30  0     0     0   0   0   0   0   0   0   0   0   0   0   0   0   1   4   8  12  17  21  25  30  31  33  37  39  41  44  47  50  50

.40  0     0     0   0   0   0   0   0   0   0   0   0   0   0   0   0   2   5   9  15  19  23  28  31  32  35  39  41  44  47  50  50
.50  0     0     0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   3   6  12  17  22  27  31  32  34  39  40  43  46  50  50
.75  0     0     0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   1   4   9  14  20  25  30  31  33  37  39  42  46  50  50
1.0  0     0     0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   1   4   9  16  22  27  31  32  35  38  42  45  49  50

1.5  0     0     0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   3   8  17  23  28  31  32  35  40  43  49  50
2.0  0     0     0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   2   9  17  23  28  31  32  38  42  48  50
2.5  0     0     0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   2   9  16  22  27  30  35  40  46  50
3.0  0     0     0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   3   9  17  23  27  33  38  45  50
----+ ---+ -- + - + +-- +- + +---+ - +- + +- -+ -- + - + +- - +-- + -- +---+-- +-- +---+-- + --+- + --+
        RAINFALL TYPE = IA                          * * * TC = 0.2 HR * * *                       SHEET 2 OF 10
```

Exhibit 5-IA: Tabular hydrograph unit discharges (csm/in) for type IA rainfall distribution – continued

HYDROGRAPH TIME (HOURS)

IA/P = 0.10 * * * TC = 0.3 HR * * *

TRVL TIME (hr)	7.0	7.3	7.6	7.9	8.0	8.1	8.2	8.3	8.4	8.5	8.6	8.7	8.8	9.0	9.2	9.4	9.6	9.8	10.0	10.3	10.6	11.0	11.5	12.0	12.5	13.0	13.5	14.0	15.0	16.0	18.0	22.0+
0.0	26	31	41	92	120	138	145	144	125	105	90	78	71	66	60	54	49	46	45	43	40	39	37	34	33	32	32	31	30	29	27	22
.10	26	30	39	80	106	128	139	142	131	113	98	85	76	68	62	56	51	47	45	43	41	39	37	34	33	32	32	31	30	29	27	22
.20	25	28	34	51	70	94	117	131	139	133	120	105	92	74	67	60	54	49	46	44	42	40	38	35	33	33	32	31	30	29	27	22
.30	24	26	31	40	47	62	84	106	123	133	133	124	112	87	73	65	59	53	49	45	43	40	39	36	33	33	32	32	30	29	27	22
.40	23	26	30	38	44	56	75	95	114	127	131	127	117	93	76	67	60	55	50	46	43	40	39	36	34	33	32	32	30	29	27	22
.50	21	25	28	34	37	42	51	67	86	104	119	127	127	110	88	74	66	59	53	47	45	41	39	37	34	33	32	32	30	30	27	22
.75	19	23	26	31	33	36	42	51	64	80	96	109	119	116	102	85	73	65	58	50	46	43	40	38	35	33	33	32	31	30	28	23
1.0	15	19	23	26	27	29	31	33	37	44	53	66	80	106	116	109	93	79	69	58	51	45	41	39	37	34	33	32	31	30	28	23
1.5	11	14	17	21	22	23	24	26	27	29	31	34	38	53	75	97	109	106	96	78	64	52	45	41	39	36	34	33	32	30	28	24
2.0	6	9	11	14	16	17	18	19	20	21	23	24	25	28	34	44	61	81	97	103	91	71	54	46	42	39	37	34	32	31	29	24
2.5	4	5	8	10	11	12	13	14	15	16	17	19	20	22	25	28	34	44	58	84	95	92	70	54	46	41	39	36	33	32	29	25
3.0	2	3	5	7	7	8	9	10	11	12	13	14	15	17	19	22	24	28	33	49	71	96	89	68	53	45	41	39	34	32	30	25

IA/P = 0.30 * * * TC = 0.3 HR * * *

TRVL TIME (hr)	7.0	7.3	7.6	7.9	8.0	8.1	8.2	8.3	8.4	8.5	8.6	8.7	8.8	9.0	9.2	9.4	9.6	9.8	10.0	10.3	10.6	11.0	11.5	12.0	12.5	13.0	13.5	14.0	15.0	16.0	18.0	22.0+
0.0	0	0	0	13	28	45	63	69	69	65	60	55	53	53	51	48	45	44	43	43	42	42	42	40	40	40	40	40	39	39	38	34
.10	0	0	0	9	21	37	54	64	67	65	62	57	54	53	51	49	46	44	43	43	42	42	42	41	40	40	40	40	40	39	38	34
.20	0	0	0	7	17	30	46	58	64	65	63	59	56	53	52	49	46	44	44	43	42	42	42	41	40	40	40	40	40	39	38	34
.30	0	0	0	1	5	13	25	39	52	60	63	63	60	55	53	51	49	46	44	43	43	42	42	41	40	40	40	40	40	39	38	34
.40	0	0	0	1	4	10	20	33	45	55	61	62	61	56	54	52	49	46	45	43	43	42	42	41	40	40	40	40	40	39	38	34
.50	0	0	0	1	3	7	15	27	39	50	57	60	61	57	54	52	50	47	45	44	43	42	42	41	40	40	40	40	40	39	38	34
.75	0	0	0	0	1	3	8	15	24	34	43	51	55	58	56	54	52	49	47	44	43	43	42	41	41	40	40	40	40	39	38	34
1.0	0	0	0	0	0	0	2	4	9	16	25	34	49	56	57	55	53	50	47	44	43	42	42	41	40	40	40	40	40	39	39	35
1.5	0	0	0	0	0	0	0	0	1	3	5	10	23	37	49	54	55	54	51	47	44	43	42	42	41	40	40	40	39	39	39	35
2.0	0	0	0	0	0	0	0	0	0	0	0	1	3	10	21	33	44	51	54	52	48	44	43	42	41	41	40	40	40	39	39	36
2.5	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4	10	19	30	45	53	53	48	44	43	42	41	41	40	40	40	39	37
3.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4	9	23	37	50	52	47	44	43	42	41	40	40	40	39	37

IA/P = 0.50 * * * TC = 0.3 HR * * *

TRVL TIME (hr)	7.0	7.3	7.6	7.9	8.0	8.1	8.2	8.3	8.4	8.5	8.6	8.7	8.8	9.0	9.2	9.4	9.6	9.8	10.0	10.3	10.6	11.0	11.5	12.0	12.5	13.0	13.5	14.0	15.0	16.0	18.0	22.0+
0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	7	11	14	18	22	24	28	32	32	35	40	41	42	45	48	48	48
.10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4	8	12	15	20	23	27	31	31	34	39	40	41	45	48	48	48
.20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	5	9	13	18	21	25	30	31	33	37	39	41	44	47	48	48
.30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4	8	12	17	21	25	30	31	33	37	39	41	44	47	48	48
.40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	5	9	14	19	23	28	31	32	35	39	41	44	47	48	48	48
.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4	10	15	21	26	30	31	33	38	40	43	46	48	48	48
.75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	7	13	19	24	29	31	33	36	39	42	46	48	48	48
1.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4	9	16	22	27	31	32	35	38	42	45	48	48	48
1.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	8	16	23	27	31	32	35	40	43	48	48	48	48
2.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	8	16	22	27	30	32	38	42	47	48	48
2.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	9	16	22	27	30	35	40	46	48	48
3.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	9	17	23	27	33	38	45	48	48

RAINFALL TYPE = IA * * * TC = 0.3 HR * * * SHEET 3 OF 10

Exhibit 5-IA: Tabular hydrograph unit discharges (csm/in) for type IA rainfall distribution – continued

```
TRVL----------------------------------------------------HYDROGRAPH TIME(HOURS)-----------------------------------------------
TIME   7.3     7.9     8.1     8.3     8.5     8.7    9.0      9.4      9.8   10.3    11.0    12.0    13.0    14.0    16.0    22.0
(hr)7.0     7.6     8.0     8.2     8.4     8.6    8.8    9.2      9.6    10.0  10.6    11.5    12.5    13.5    15.0    18.0    +
```

IA/P = 0.10   * * * TC = 0.4 HR * * *

TRVL TIME (hr)	7.0	7.3	7.6	7.9	8.0	8.1	8.2	8.3	8.4	8.5	8.6	8.7	8.8	9.0	9.2	9.4	9.6	9.8	10.0	10.3	10.6	11.0	11.5	12.0	12.5	13.0	13.5	14.0	15.0	16.0	18.0	22.0+
0.0	26	29	37	67	93	117	134	137	136	121	105	91	81	70	64	58	52	48	46	44	41	40	37	34	33	33	32	31	30	29	27	22
.10	25	29	36	60	82	105	124	133	135	126	112	98	87	73	66	59	53	49	46	44	41	40	38	34	33	33	32	31	30	29	27	22
.20	24	27	32	43	55	73	94	114	127	132	128	117	104	83	71	64	58	52	48	45	43	40	38	35	33	33	32	32	30	29	27	22
.30	24	26	31	41	50	65	85	104	119	128	128	121	110	88	74	66	59	54	49	46	43	40	39	35	34	33	32	32	30	29	27	22
.40	22	25	28	35	39	46	59	76	95	111	122	126	122	104	85	72	64	58	52	47	44	41	39	37	34	33	32	32	30	29	27	22
.50	20	23	26	31	34	37	43	54	69	86	103	116	123	117	98	82	71	63	56	49	46	42	40	38	34	33	33	32	30	30	27	22
.75	16	20	24	27	29	31	33	37	43	53	65	80	94	116	116	101	86	74	65	56	49	44	41	39	36	34	33	32	31	30	28	23
1.0	14	18	22	25	26	27	29	31	34	38	45	54	67	93	111	113	101	87	75	62	53	47	42	40	37	34	33	33	31	30	28	23
1.5	10	13	16	20	21	22	23	24	26	27	29	31	34	45	64	86	102	107	101	84	69	55	46	42	39	37	34	33	32	30	28	24
2.0	6	8	11	13	14	16	17	18	19	20	21	23	24	27	31	39	52	71	88	102	96	76	57	47	42	40	37	35	33	31	29	24
2.5	3	5	7	9	10	11	12	13	14	15	16	17	18	21	23	26	31	38	51	75	94	98	74	57	47	42	39	37	33	32	30	25
3.0	1	2	4	6	7	7	8	9	10	11	12	13	14	16	18	20	23	26	30	43	64	89	95	72	56	47	42	39	34	33	30	25

IA/P = 0.30   * * * TC = 0.4 HR * * *

TRVL TIME (hr)	7.0	7.3	7.6	7.9	8.0	8.1	8.2	8.3	8.4	8.5	8.6	8.7	8.8	9.0	9.2	9.4	9.6	9.8	10.0	10.3	10.6	11.0	11.5	12.0	12.5	13.0	13.5	14.0	15.0	16.0	18.0	22.0+
0.0	0	0	0	6	15	29	46	60	65	65	63	59	56	53	52	49	47	44	44	43	42	42	42	41	40	40	40	40	40	39	38	34
.10	0	0	0	4	12	23	38	53	61	63	63	60	57	54	53	50	47	45	44	43	42	42	42	41	40	40	40	40	40	39	38	34
.20	0	0	0	3	9	19	32	46	56	61	62	61	59	55	53	51	48	45	44	43	43	42	42	41	40	40	40	40	40	39	38	34
.30	0	0	0	2	7	15	26	39	50	57	61	61	59	56	53	51	49	46	44	44	43	42	42	41	40	40	40	40	40	39	38	34
.40	0	0	0	0	2	5	11	21	33	44	53	58	60	58	55	53	51	48	45	44	43	42	42	41	40	40	40	40	40	39	38	34
.50	0	0	0	0	1	4	9	17	28	39	48	55	59	59	56	53	51	49	46	44	43	42	42	41	40	40	40	40	40	39	38	34
.75	0	0	0	0	0	2	4	9	16	25	34	43	49	57	57	55	53	50	48	45	44	43	42	41	41	40	40	40	40	39	39	35
1.0	0	0	0	0	0	0	1	2	5	10	17	25	34	48	55	56	55	53	50	47	45	43	42	42	41	40	40	40	40	39	39	35
1.5	0	0	0	0	0	0	0	0	0	1	3	6	16	30	43	51	55	55	52	49	45	43	42	42	41	40	40	40	40	40	39	36
2.0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	2	6	15	27	39	47	53	49	45	43	42	42	41	40	40	40	39	36
2.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	7	14	25	40	50	52	49	45	43	42	41	41	40	39	37
3.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	7	18	32	47	52	48	45	43	42	41	40	40	39	37

IA/P = 0.50   * * * TC = 0.4 HR * * *

TRVL TIME (hr)	7.0	7.3	7.6	7.9	8.0	8.1	8.2	8.3	8.4	8.5	8.6	8.7	8.8	9.0	9.2	9.4	9.6	9.8	10.0	10.3	10.6	11.0	11.5	12.0	12.5	13.0	13.5	14.0	15.0	16.0	18.0	22.0+
0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	5	9	13	16	20	23	27	31	32	34	39	40	42	45	47	47	47	47
.10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	6	10	13	18	22	26	30	31	33	38	39	41	45	47	47	47	47
.20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	7	11	16	20	24	29	31	33	36	39	41	44	47	47	47
.30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4	8	13	18	23	28	31	32	35	39	41	43	47	47	47
.40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	5	11	16	21	26	30	32	34	38	40	43	46	47	47	47
.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	8	13	19	25	29	31	33	37	39	42	46	47	47	47
.75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	6	11	17	23	28	31	32	35	39	42	45	47	47	47
1.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	6	12	20	25	29	31	33	37	41	44	47	47	47
1.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	5	13	20	26	30	31	34	40	43	47	47	47
2.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	6	14	21	26	30	32	37	41	47	47	47
2.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	7	15	21	26	30	34	40	46	47	47
3.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	8	15	22	27	32	38	45	47	47

RAINFALL TYPE = IA   * * * TC = 0.4 HR * * *   SHEET 4 OF 10

Exhibit 5-IA: Tabular hydrograph unit discharges (csm/in) for type IA rainfall distribution – continued

HYDROGRAPH TIME (HOURS)

IA/P = 0.10 * * * TC = 0.5 HR * * *

TRVL TIME (hr)	7.0	7.3	7.6	7.9	8.0	8.1	8.2	8.3	8.4	8.5	8.6	8.7	8.8	9.0	9.2	9.4	9.6	9.8	10.0	10.3	10.6	11.0	11.5	12.0	12.5	13.0	13.5	14.0	15.0	16.0	18.0	22.0
0.0	25	28	34	53	72	94	115	129	130	129	117	104	92	76	68	61	55	50	47	44	42	40	38	34	33	33	32	31	30	29	27	22
.10	24	27	33	49	64	84	105	121	127	128	121	109	98	80	70	63	57	51	48	45	42	40	38	34	33	33	32	32	30	29	27	22
.20	23	26	30	39	46	58	75	95	112	122	126	123	114	93	78	69	61	55	50	46	44	41	39	36	34	33	32	32	30	29	27	22
.30	21	24	27	34	37	43	53	68	86	103	116	123	123	108	89	76	67	60	54	48	45	42	39	37	34	33	33	32	30	30	27	22
.40	20	24	27	32	35	40	49	61	78	95	109	118	121	111	93	79	69	62	55	49	45	42	40	37	34	33	33	32	30	30	27	22
.50	18	22	25	29	31	34	38	45	56	70	87	101	113	118	106	89	77	67	60	52	47	43	40	38	35	33	33	32	31	30	28	23
.75	15	19	23	26	27	29	31	34	38	45	54	67	80	104	112	106	93	80	70	59	51	46	41	39	36	34	33	33	31	30	28	23
1.0	13	16	20	24	25	26	27	29	31	34	39	46	56	80	102	110	105	93	81	66	56	48	43	40	38	35	33	33	31	30	28	23
1.5	9	12	15	18	20	21	22	23	24	26	27	29	31	39	55	75	94	104	103	89	74	58	48	43	40	37	35	33	32	31	29	24
2.0	5	7	10	12	13	14	15	17	18	19	20	21	23	25	29	35	45	62	79	100	100	81	61	49	43	40	38	35	33	31	29	25
2.5	3	4	6	8	9	10	11	12	13	14	15	16	17	20	22	25	28	34	45	67	88	96	79	60	49	43	40	37	33	32	30	25
3.0	1	2	3	5	6	7	7	8	9	10	11	12	13	15	17	19	21	24	28	38	56	83	93	77	59	48	43	40	35	33	30	26

IA/P = 0.30 * * * TC = 0.5 HR * * *

TRVL TIME (hr)	7.0	7.3	7.6	7.9	8.0	8.1	8.2	8.3	8.4	8.5	8.6	8.7	8.8	9.0	9.2	9.4	9.6	9.8	10.0	10.3	10.6	11.0	11.5	12.0	12.5	13.0	13.5	14.0	15.0	16.0	18.0	22.0
0.0	0	0	0	2	8	18	31	46	57	61	61	61	58	54	53	51	48	45	44	44	43	42	42	41	40	40	40	40	40	39	38	34
.10	0	0	0	2	6	14	25	39	51	58	60	61	59	55	53	51	49	46	44	44	43	42	42	41	40	40	40	40	40	39	38	34
.20	0	0	0	0	1	4	11	21	33	45	54	58	60	58	55	53	51	48	46	44	43	42	42	41	40	40	40	40	40	39	38	34
.30	0	0	0	0	1	3	8	16	27	39	49	55	59	59	55	53	51	49	46	44	43	42	42	41	40	40	40	40	40	39	39	34
.40	0	0	0	0	1	2	6	13	23	34	44	51	56	58	56	54	52	49	47	44	43	42	42	41	40	40	40	40	40	39	39	34
.50	0	0	0	0	0	0	2	5	10	18	29	39	47	56	57	55	53	51	49	45	44	43	42	41	41	40	40	40	40	39	39	35
.75	0	0	0	0	0	0	1	2	5	10	17	25	34	48	54	56	55	53	50	47	45	43	42	41	41	40	40	40	40	39	39	35
1.0	0	0	0	0	0	0	0	0	1	3	6	11	26	41	51	55	55	54	50	47	44	43	42	41	41	40	40	40	40	39	39	35
1.5	0	0	0	0	0	0	0	0	0	0	0	1	4	11	23	36	47	52	54	52	48	44	43	42	41	40	40	40	40	40	39	36
2.0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	7	16	27	38	49	53	51	47	44	42	42	41	40	40	40	40	39	36
2.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	7	15	30	43	52	50	46	44	42	42	41	40	40	40	39	37
3.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	10	23	40	51	50	46	44	42	42	40	40	40	39	37

IA/P = 0.50 * * * TC = 0.5 HR * * *

TRVL TIME (hr)	7.0	7.3	7.6	7.9	8.0	8.1	8.2	8.3	8.4	8.5	8.6	8.7	8.8	9.0	9.2	9.4	9.6	9.8	10.0	10.3	10.6	11.0	11.5	12.0	12.5	13.0	13.5	14.0	15.0	16.0	18.0	22.0
0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	7	11	14	19	22	26	30	31	34	38	40	41	45	46	46	46
.10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4	8	12	17	21	25	29	31	33	37	39	41	44	46	46	46	46
.20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	5	9	14	19	23	28	31	32	35	39	41	43	46	46	46	46
.30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	6	12	17	22	27	31	32	34	38	40	43	46	46	46
.40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	5	11	16	21	26	30	32	34	38	40	43	46	46	46
.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	8	13	19	25	29	31	33	37	39	42	46	46	46
.75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	6	11	17	23	28	31	32	35	39	42	45	46	46
1.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4	11	18	24	29	31	33	36	41	44	46	46
1.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4	11	19	24	29	31	33	39	42	46	46
2.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	5	12	19	25	29	31	37	41	46	46
2.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	6	13	20	25	29	34	39	45	46
3.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	7	14	20	26	32	37	44	46

RAINFALL TYPE = IA   * * * TC = 0.5 HR * * *   SHEET 5 OF 10

Exhibit 5-IA: Tabular hydrograph unit discharges (csm/in) for type IA rainfall distribution – continued

TRVL -- HYDROGRAPH TIME (HOURS) --

IA/P = 0.10 * * * TC = 0.75 HR * * *

TRVL TIME (hr)	7.0	7.3	7.6	7.9	8.0	8.1	8.2	8.3	8.4	8.5	8.6	8.7	8.8	9.0	9.2	9.4	9.6	9.8	10.0	10.3	10.6	11.0	11.5	12.0	12.5	13.0	13.5	14.0	15.0	16.0	18.0	22.0
0.0	22	25	29	38	45	56	71	87	103	114	117	117	111	95	81	72	65	58	53	48	45	41	39	36	33	33	33	32	30	29	27	22
.10	21	25	28	36	42	51	64	79	95	108	114	116	113	99	85	74	66	60	54	48	45	42	39	37	34	33	33	32	30	30	27	22
.20	19	23	26	32	35	39	47	58	72	87	101	110	114	109	95	82	72	65	58	51	47	43	40	38	34	33	33	32	31	30	27	23
.30	19	22	26	31	33	37	44	54	66	80	94	104	112	110	98	85	75	67	60	52	47	43	40	38	34	33	33	32	31	30	28	23
.40	17	21	24	28	30	32	36	41	49	61	74	87	99	111	106	94	82	73	65	56	49	45	41	39	35	33	33	33	31	30	28	23
.50	16	20	23	27	29	31	34	39	46	56	68	81	93	109	107	97	85	75	67	57	50	45	41	39	36	33	33	33	31	30	28	23
.75	15	18	22	25	27	28	31	34	38	45	54	64	75	95	104	102	93	83	74	62	54	47	42	40	37	34	33	33	31	30	28	23
1.0	12	15	18	22	23	24	25	27	29	31	34	39	46	65	85	100	103	98	88	74	62	52	45	41	39	35	33	33	32	30	28	23
1.5	7	10	12	15	17	18	19	20	21	22	24	25	26	31	39	53	71	87	99	99	85	68	53	46	41	39	36	34	33	31	29	24
2.0	4	6	8	11	12	13	14	15	16	17	18	19	21	23	26	31	39	51	67	88	95	86	67	53	45	41	38	36	33	32	29	25
2.5	2	3	5	7	8	9	10	11	11	12	13	14	16	18	20	23	26	30	38	56	77	93	84	66	52	45	41	38	34	33	30	25
3.0	0	1	2	4	4	5	6	6	7	8	8	9	10	12	14	16	18	21	24	30	42	67	90	84	68	54	46	42	36	33	30	26

IA/P = 0.30 * * * TC = 0.75 HR * * *

TRVL TIME (hr)	7.0	7.3	7.6	7.9	8.0	8.1	8.2	8.3	8.4	8.5	8.6	8.7	8.8	9.0	9.2	9.4	9.6	9.8	10.0	10.3	10.6	11.0	11.5	12.0	12.5	13.0	13.5	14.0	15.0	16.0	18.0	22.0
0.0	0	0	0	0	2	4	10	19	29	39	48	53	56	56	54	53	51	49	46	44	44	42	42	40	40	40	40	40	40	39	39	34
.10	0	0	0	0	1	3	8	15	24	34	43	50	54	56	54	53	52	49	47	45	44	42	42	41	40	40	40	40	40	39	39	34
.20	0	0	0	0	0	1	2	6	12	20	30	39	46	54	55	54	53	51	49	46	44	43	42	41	40	40	40	40	40	39	39	35
.30	0	0	0	0	0	1	2	5	10	17	25	34	42	52	55	54	53	51	49	46	44	43	42	42	40	40	40	40	40	39	39	35
.40	0	0	0	0	0	0	1	4	8	14	21	30	38	50	55	55	53	52	50	47	45	43	42	42	40	40	40	40	40	39	39	35
.50	0	0	0	0	0	0	1	3	6	11	18	26	34	47	53	54	54	52	50	47	45	43	42	42	40	40	40	40	40	39	39	35
.75	0	0	0	0	0	0	1	3	6	10	16	23	37	47	52	53	53	52	49	46	44	42	42	41	40	40	40	40	40	40	39	35
1.0	0	0	0	0	0	0	0	0	0	1	2	4	7	17	30	42	50	53	53	51	49	45	43	42	41	40	40	40	40	40	39	36
1.5	0	0	0	0	0	0	0	0	0	0	0	1	4	11	21	33	43	49	52	51	48	45	43	42	41	40	40	40	40	40	39	36
2.0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4	11	20	30	43	50	51	48	45	43	42	41	40	40	40	40	39	37
2.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	5	10	23	36	48	51	47	44	43	42	41	40	40	40	39	37
3.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	7	17	34	48	50	47	44	43	42	40	40	40	39	38

IA/P = 0.50 * * * TC = 0.75 HR * * *

TRVL TIME (hr)	7.0	7.3	7.6	7.9	8.0	8.1	8.2	8.3	8.4	8.5	8.6	8.7	8.8	9.0	9.2	9.4	9.6	9.8	10.0	10.3	10.6	11.0	11.5	12.0	12.5	13.0	13.5	14.0	15.0	16.0	18.0	22.0
0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	6	10	15	19	23	28	31	32	36	39	41	44	44	44	44	44
.10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4	7	12	17	22	27	30	32	34	38	40	43	44	44	44	44
.20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	5	10	15	20	25	30	31	33	37	39	43	44	44	44	44
.30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	7	12	18	24	29	31	33	36	39	42	44	44	44	44
.40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	5	10	16	22	27	30	32	35	38	42	44	44	44	44
.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	7	14	21	26	30	31	34	38	41	44	44	44	44
.75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	5	11	19	24	29	31	33	36	41	44	44	44	44
1.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	8	16	22	27	30	32	35	40	43	44	44	44
1.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	9	16	23	27	30	32	38	42	44	44	44
2.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	10	17	23	28	30	36	40	44	44	44
2.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4	11	18	23	28	33	39	44	44
3.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4	10	17	23	30	36	43	44

RAINFALL TYPE = IA * * * TC = 0.75 HR * * * SHEET 6 OF 10

```
TRVL--------------------------------------------------------------HYDROGRAPH TIME(HOURS)------------------------------------------------
TIME    7.3       7.9       8.1       8.3       8.5       8.7       9.0          9.4         9.8      10.3     11.0     12.0     13.0     14.0     16.0     22.0
(hr)7.0      7.6       8.0       8.2       8.4       8.6       8.8       9.2          9.6      10.0     10.6     11.5     12.5     13.5     15.0     18.0
+ -- +---+ -- + - + - + + +-- +-- +-- + --+ +-- +-- + --+ + --+-- +     * * * TC = 1.0 HR * * *     +---+ -- + - +-- +-- + --+-- +-- + --+ - + --+
        IA/P = 0.10                                                        * * * TC = 1.0 HR * * *                              IA/P = 0.10
 ----+---+ -- + - + - + + +-- +-- +-- + --+ +-- +-- + --+ + --+-- +-- +---+ -- + - +-- +-- + --+-- +-- + --+ - + --+
0.0 19   23   26  33  37  43  52  63  76  88  97  104 108 102  91  81  72  65  59  52  48  43  40  38  34  33  33  32  31  30  28  23
.10 19   22   26  32  35  41  48  58  70  82  92  100 105 103  94  83  75  67  61  53  48  44  40  38  35  33  33  32  31  30  28  23
.20 17   21   24  28  30  34  38  45  54  65  76  87  96  104 100  91  81  73  66  57  51  45  41  39  36  33  33  33  31  30  28  23
.30 16   20   23  27  29  32  36  42  50  60  71  81  91  103 101  93  84  75  67  58  52  46  42  39  36  34  33  33  31  30  28  23

.40 15   18   22  25  27  29  31  35  40  46  55  65  76  94  102  99  91  81  73  63  55  48  43  40  37  34  33  33  31  30  28  23
.50 14   18   21  25  26  28  30  33  37  43  51  61  71  90  101 101  93  84  75  64  56  49  43  40  37  34  33  33  31  30  28  23
.75 13   16   19  23  24  25  27  29  32  37  42  49  58  76  91  98  96  89  81  70  60  51  45  41  38  35  34  33  32  30  28  23
1.0 10   13   16  19  20  22  23  24  26  27  30  33  37  50  67  83  94  97  93  81  70  58  48  43  40  37  34  33  32  31  29  24

1.5  6    8   10  13  14  15  16  18  19  20  21  22  24  27  33  42  56  71  84  93  89  75  59  49  44  40  37  35  33  31  29  24
2.0  3    5    7   9  10  11  12  13  14  15  16  17  18  21  23  27  32  41  53  74  88  91  74  59  49  43  40  37  34  32  30  25
2.5  1    2    4   6   7   7   8   9  10  11  11  12  13  16  18  20  23  26  32  45  64  84  89  72  58  48  43  40  34  33  30  26
3.0  0    1    2   3   3   4   4   5   6   6   7   8   9  10  12  14  16  18  21  26  35  55  81  87  73  59  50  44  37  34  31  26
 ----+---+ -- + - + - + + +-- +-- +-- + --+ +-- +-- + --+ + --+-- +-- +---+ -- + - +-- +-- + --+-- +-- + --+ - + --+
        IA/P = 0.30                                                        * * * TC = 1.0 HR * * *                              IA/P = 0.30
 ----+---+ -- + - + - + + +-- +-- +-- + --+ +-- +-- + --+ + --+-- +-- +---+ -- + - +-- +-- + --+-- +-- + --+ - + --+
0.0  0    0    0   0   1   2   5  10  16  23  31  38  44  51  53  52  52  50  48  46  44  43  42  41  40  40  40  40  40  40  39  35
.10  0    0    0   0   1   2   4   8  13  20  27  35  46  51  53  52  52  51  50  47  45  44  42  42  40  40  40  40  40  40  39  35
.20  0    0    0   0   0   1   3   6  11  17  24  31  43  50  52  52  52  51  50  47  45  44  42  42  40  40  40  40  40  40  39  35
.30  0    0    0   0   0   0   1   2   5   9  14  21  28  40  48  52  52  52  50  48  46  44  43  42  40  40  40  40  40  40  39  35

.40  0    0    0   0   0   0   0   1   2   4   7  12  18  31  42  49  52  52  51  49  47  45  43  42  41  40  40  40  40  40  39  35
.50  0    0    0   0   0   0   0   1   1   3   6  10  15  28  39  47  51  52  51  49  47  45  43  42  41  40  40  40  40  40  39  35
.75  0    0    0   0   0   0   0   0   1   1   3   6   9  19  31  41  47  50  51  50  48  46  43  42  41  40  40  40  40  40  39  36
1.0  0    0    0   0   0   0   0   0   0   0   1   2   6  14  25  36  44  49  51  50  47  45  43  42  41  40  40  40  40  40  39  36

1.5  0    0    0   0   0   0   0   0   0   0   0   0   1   2   6  13  23  33  44  49  50  47  44  43  42  41  40  40  40  40  39  37
2.0  0    0    0   0   0   0   0   0   0   0   0   0   0   1   2   6  13  25  38  48  50  47  44  43  42  41  40  40  40  40  39  37
2.5  0    0    0   0   0   0   0   0   0   0   0   0   0   0   0   1   3   9  19  36  48  49  47  44  43  42  40  40  40  40  39  38
3.0  0    0    0   0   0   0   0   0   0   0   0   0   0   0   0   0   2   6  18  37  47  49  46  44  43  41  40  40  40  40  39  38
 ----+---+ -- + - + - + + +-- +-- +-- + --+ +-- +-- + --+ + --+-- +-- +---+ -- + - +-- +-- + --+-- +-- + --+ - + --+
        IA/P = 0.50                                                        * * * TC = 1.0 HR * * *                              IA/P = 0.50
 ----+---+ -- + - + - + + +-- +-- +-- + --+ +-- +-- + --+ + --+-- +-- +---+ -- + - +-- +-- + --+-- +-- + --+ - + --+
0.0  0    0    0   0   0   0   0   0   0   0   0   0   0   0   0   2   4   7  11  16  21  26  30  32  34  38  40  43  43  43  43  43
.10  0    0    0   0   0   0   0   0   0   0   0   0   0   0   0   1   2   5   9  14  19  25  29  31  33  37  39  42  43  43  43  43
.20  0    0    0   0   0   0   0   0   0   0   0   0   0   0   0   0   1   3   7  11  17  23  28  30  32  36  39  42  43  43  43  43
.30  0    0    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   1   5   9  15  21  27  30  32  35  38  41  43  43  43  43

.40  0    0    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   1   3   7  13  20  25  29  31  34  37  41  43  43  43  43
.50  0    0    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   2   5  11  18  24  28  31  33  36  41  43  43  43  43
.75  0    0    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   1   3   8  16  22  27  30  32  35  40  43  43  43  43
1.0  0    0    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   2   6  13  20  25  29  31  34  39  42  43  43  43

1.5  0    0    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   2   7  14  20  25  29  31  37  41  43  43  43
2.0  0    0    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   2   7  14  20  26  29  34  39  43  43  43
2.5  0    0    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   3   8  15  21  26  32  37  43  43  43
3.0  0    0    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   3   8  14  20  29  34  42  43  43
 ----+---+ -- + - + - + + +-- +-- +-- + --+ +-- +-- + --+ + --+-- +-- +---+ -- + - +-- +-- + --+-- +-- + --+ - + --+
        RAINFALL TYPE = IA                                                * * * TC = 1.0 HR * * *                              SHEET 7 OF 10
```

Exhibit 5-IA: Tabular hydrograph unit discharges (csm/in) for type IA rainfall distribution – continued

HYDROGRAPH TIME (HOURS)

IA/P = 0.10 — * * * TC = 1.25 HR * * *

TRVL TIME (hr)	7.0	7.3	7.6	7.9	8.0	8.1	8.2	8.3	8.4	8.5	8.6	8.7	8.8	9.0	9.2	9.4	9.6	9.8	10.0	10.3	10.6	11.0	11.5	12.0	12.5	13.0	13.5	14.0	15.0	16.0	18.0	22.0
0.0	17	21	24	29	33	37	43	52	61	71	81	89	95	100	94	86	78	71	64	57	51	46	42	39	35	34	33	33	31	30	28	23
.10	16	19	23	27	29	31	35	41	48	57	66	76	85	96	99	92	84	76	69	60	54	47	43	40	36	34	34	33	31	30	28	23
.20	15	19	22	26	28	30	33	38	45	53	62	71	80	93	97	93	86	78	71	62	55	48	43	40	37	34	34	33	31	30	28	23
.30	14	17	20	24	25	27	29	32	36	42	49	58	67	84	95	96	91	84	76	66	58	50	44	41	38	35	34	33	31	30	28	23
.40	13	16	20	23	25	26	28	31	34	39	46	54	62	80	92	96	93	86	78	68	59	51	45	41	38	35	34	33	31	30	28	23
.50	12	15	18	21	23	24	25	27	29	33	37	43	50	67	83	93	95	91	84	73	63	54	46	42	39	36	34	33	32	30	28	23
.75	10	13	16	20	21	22	23	25	27	29	32	36	42	55	71	84	93	93	88	78	68	57	49	43	40	37	34	34	32	31	28	24
1.0	8	10	13	16	17	19	20	21	22	23	25	27	29	37	49	63	78	88	92	88	78	65	53	46	42	39	36	34	33	31	29	24
1.5	5	7	9	12	13	14	15	16	17	18	19	20	22	25	29	36	47	60	73	87	89	79	64	53	46	42	38	36	33	32	29	25
2.0	2	4	6	8	9	10	10	11	12	13	14	15	16	19	21	24	29	36	45	64	80	87	77	63	52	46	41	38	34	32	30	25
2.5	1	2	3	4	5	6	6	7	8	8	9	10	11	13	15	17	19	22	26	35	49	72	85	78	65	53	46	42	36	33	30	26
3.0	0	1	1	2	3	3	4	4	5	5	6	7	7	9	11	12	14	17	19	23	31	47	73	84	76	63	53	46	38	34	31	26

IA/P = 0.30 — * * * TC = 1.25 HR * * *

TRVL TIME (hr)	7.0	7.3	7.6	7.9	8.0	8.1	8.2	8.3	8.4	8.5	8.6	8.7	8.8	9.0	9.2	9.4	9.6	9.8	10.0	10.3	10.6	11.0	11.5	12.0	12.5	13.0	13.5	14.0	15.0	16.0	18.0	22.0
0.0	0	0	0	0	0	1	3	6	10	15	22	28	34	43	48	51	51	51	49	47	45	44	43	42	40	40	40	40	40	40	39	35
.10	0	0	0	0	0	0	1	2	5	8	13	19	25	36	45	49	51	50	50	48	46	44	43	42	40	40	40	40	40	40	39	35
.20	0	0	0	0	0	0	1	2	4	7	11	16	22	34	43	48	50	50	50	48	46	44	43	42	41	40	40	40	40	40	39	35
.30	0	0	0	0	0	0	1	1	3	5	9	14	19	31	40	46	49	50	50	48	46	45	43	42	41	40	40	40	40	40	39	35
.40	0	0	0	0	0	0	0	1	2	4	8	12	17	28	38	45	49	50	50	49	47	45	43	42	41	40	40	40	40	40	39	35
.50	0	0	0	0	0	0	0	1	2	4	6	10	14	25	36	43	48	50	50	49	47	45	43	42	41	40	40	40	40	40	39	35
.75	0	0	0	0	0	0	0	0	0	1	2	3	6	13	23	33	41	46	49	50	48	46	44	43	42	40	40	40	40	40	39	36
1.0	0	0	0	0	0	0	0	0	0	0	1	2	6	14	23	32	40	46	49	49	47	45	43	42	41	40	40	40	40	40	39	36
1.5	0	0	0	0	0	0	0	0	0	0	0	0	1	2	6	13	21	30	41	47	49	47	45	43	42	41	40	40	40	40	39	37
2.0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	6	12	23	35	45	48	47	45	43	42	41	40	40	40	40	40	37
2.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	8	18	33	45	48	46	44	43	42	40	40	40	40	40	38
3.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	6	17	34	45	48	46	44	43	41	40	40	40	40	40	38

IA/P = 0.50 — * * * TC = 1.25 HR * * *

TRVL TIME (hr)	7.0	7.3	7.6	7.9	8.0	8.1	8.2	8.3	8.4	8.5	8.6	8.7	8.8	9.0	9.2	9.4	9.6	9.8	10.0	10.3	10.6	11.0	11.5	12.0	12.5	13.0	13.5	14.0	15.0	16.0	18.0	22.0
0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	5	9	14	19	24	28	31	33	37	39	42	42	42	42
.10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	7	11	17	23	27	30	32	36	38	42	42	42	42
.20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	5	9	15	21	26	29	32	35	38	41	42	42	42	42
.30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	7	13	19	25	29	31	34	37	41	42	42	42	42
.40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	5	11	17	23	28	30	33	36	40	42	42	42	42
.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	8	15	22	26	30	32	35	40	42	42	42	42
.75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	7	13	20	25	29	31	34	39	42	42	42	42
1.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4	11	17	23	27	30	33	38	42	42	42	42
1.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	5	11	18	23	28	30	36	40	42	42
2.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	6	12	18	24	28	33	39	42	42
2.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	6	13	19	24	31	37	42	42
3.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	6	12	18	28	33	42	42

RAINFALL TYPE = IA   * * * TC = 1.25 HR * * *   SHEET 8 OF 10

```
TRVL--------------------------------------------------------HYDROGRAPH TIME(HOURS)---------------------------------------
TIME   7.3     7.9    8.1     8.3     8.5     8.7    9.0     9.4      9.8    10.3   11.0    12.0    13.0    14.0    16.0    22.0
(hr)7.0     7.6    8.0     8.2     8.4     8.6    8.8    9.2      9.6     10.0   10.6    11.5    12.5    13.5    15.0    18.0
----+--- +-- + - + - + -- + - +-- +-- + --+ - +- + - + - + -- + - +-- +-- + --+ - +- + - + - + -- + - +--+ - +--+ - + --+
        IA/P = 0.10                                  * * * TC = 1.5 HR * * *                          IA/P = 0.10
----+--- +-- + - + - + -- + - +-- +-- + --+ - +- + - + - + -- + - +-- +-- + --+ - +- + - + - + -- + - +--+ - +--+ - + --+
0.0 15   19  22  27  29  32  37  42  49  57  65  73  80  89  94  89  83  76  70  62  55  49  44  40  37  35  34  33  31  30  28  23
.10 14   17  20  24  26  28  31  35  40  46  53  61  69  82  90  92  87  81  74  65  58  51  45  41  38  35  34  33  31  30  28  23
.20 13   16  20  23  25  27  29  33  37  43  50  57  65  79  88  91  88  82  76  67  59  52  46  42  38  35  34  33  32  30  28  23
.30 12   15  18  22  23  24  26  28  31  35  41  47  54  69  81  89  90  86  81  71  63  54  47  43  39  36  34  34  32  30  28  24

.40 11   14  18  21  22  24  25  27  30  34  38  44  51  65  78  87  90  87  82  73  64  55  48  43  40  36  34  34  32  30  28  24
.50 10   13  16  19  20  22  23  24  26  29  32  36  41  54  69  81  88  89  86  77  68  58  50  44  41  37  35  34  32  31  29  24
.75  9   11  14  18  19  20  21  22  24  26  28  31  35  46  58  71  82  88  88  81  73  62  52  46  42  38  35  34  32  31  29  24
1.0  7    9  11  14  15  16  18  19  20  21  22  24  26  32  40  52  65  76  84  87  81  70  58  49  44  40  37  35  33  31  29  24

1.5  4    6   8  10  11  12  13  14  15  16  17  18  19  22  26  31  39  50  62  77  85  81  69  57  49  44  40  37  34  32  30  25
2.0  2    3   5   7   7   8   9  10  11  12  12  13  14  17  19  22  25  31  38  53  69  83  80  68  56  48  43  40  35  33  30  25
2.5  1    1   2   3   4   5   5   6   6   7   8   9   9  11  13  15  17  20  23  30  41  61  82  82  69  58  49  44  37  34  31  26
3.0  0    0   1   2   2   2   3   3   4   4   5   5   6   8   9  11  13  15  17  21  27  40  63  80  78  68  57  49  40  35  31  27
----+--- +-- + - + - + -- + - +-- +-- + --+ - +- + - + - + -- + - +-- +-- + --+ - +- + - + - + -- + - +--+ - +--+ - + --+
        IA/P = 0.30                                  * * * TC = 1.5 HR * * *                          IA/P = 0.30
----+--- +-- + - + - + -- + - +-- +-- + --+ - +- + - + - + -- + - +-- +-- + --+ - +- + - + - + -- + - +--+ - +--+ - + --+
0.0  0    0   0   0   0   1   2   4   6  10  14  19  24  34  41  46  48  49  48  47  46  44  43  42  41  40  40  40  40  40  39  35
.10  0    0   0   0   0   0   1   1   3   5   8  12  17  27  36  42  46  48  49  48  46  45  43  42  41  40  40  40  40  40  39  36
.20  0    0   0   0   0   0   0   1   2   4   7  10  15  24  33  41  45  48  49  48  47  45  43  43  41  40  40  40  40  40  39  36
.30  0    0   0   0   0   0   1   2   3   6   9  13  22  31  39  44  47  48  48  47  45  44  43  41  40  40  40  40  40  39  36

.40  0    0   0   0   0   0   0   0   1   1   3   5   7  15  24  33  40  45  47  48  47  46  44  43  42  40  40  40  40  40  39  36
.50  0    0   0   0   0   0   0   0   1   2   4   6  13  22  31  38  44  47  48  48  46  44  43  42  40  40  40  40  40  39  36
.75  0    0   0   0   0   0   0   0   1   1   2   4   9  16  24  33  39  44  47  48  47  45  43  42  41  40  40  40  40  40  39  36
1.0  0    0   0   0   0   0   0   0   0   0   0   1   2   6  12  20  29  36  44  47  48  46  44  43  42  40  40  40  40  40  40  36

1.5  0    0   0   0   0   0   0   0   0   0   0   0   0   1   3   6  12  19  30  39  46  47  46  44  43  42  40  40  40  40  40  37
2.0  0    0   0   0   0   0   0   0   0   0   0   0   0   0   1   2   4   8  17  28  40  46  47  45  44  42  41  40  40  40  40  37
2.5  0    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   1   2   6  13  26  40  47  47  45  43  42  40  40  40  40  38
3.0  0    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   1   4  12  28  41  46  46  45  43  41  40  40  40  38
----+--- +-- + - + - + -- + - +-- +-- + --+ - +- + - + - + -- + - +-- +-- + --+ - +- + - + - + -- + - +--+ - +--+ - + --+
        IA/P = 0.50                                  * * * TC = 1.5 HR * * *                          IA/P = 0.50
----+--- +-- + - + - + -- + - +-- +-- + --+ - +- + - + - + -- + - +-- +-- + --+ - +- + - + - + -- + - +--+ - +--+ - + --+
0.0  0    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   1   2   3   7  11  16  22  27  30  32  35  38  42  42  42  42
.10  0    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   1   1   4   7  13  19  24  28  31  34  37  41  42  42  42
.20  0    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   1   3   7  12  19  24  28  31  33  36  41  42  42  42
.30  0    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   1   3   6  12  18  23  28  30  33  36  40  42  42  42

.40  0    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   1   3   6  11  17  23  27  30  33  36  40  42  42  42
.50  0    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   1   2   5  10  17  22  27  30  32  36  40  41  41  41
.75  0    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   1   2   5  10  16  22  26  29  32  35  40  41  41  41
1.0  0    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   2   5  11  17  23  27  30  33  38  41  41  41

1.5  0    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   1   5  12  18  23  27  30  36  40  41  41
2.0  0    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   2   6  12  18  24  28  33  39  41  41
2.5  0    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   2   7  13  19  24  31  36  41  41
3.0  0    0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   1   3   7  13  19  28  34  41  41
----+--- +-- + - + - +-- + - +-- +-- + --+ - +- + - + - + -- + - +-- + - +- +- + - + - + -- + - +--+ - +--+ - + --+
        RAINFALL TYPE = IA                           * * * TC = 1.5 HR * * *                          SHEET 9 OF 10
```

Exhibit 5-IA: Tabular hydrograph unit discharges (csm/in) for type IA rainfall distribution – continued

HYDROGRAPH TIME(HOURS)

IA/P = 0.10 * * * TC = 2.0 HR * * * IA/P = 0.10

TRVL TIME (hr)	7.0	7.3	7.6	7.9	8.0	8.1	8.2	8.3	8.4	8.5	8.6	8.7	8.8	9.0	9.2	9.4	9.6	9.8	10.0	10.3	10.6	11.0	11.5	12.0	12.5	13.0	13.5	14.0	15.0	16.0	18.0	22.0
0.0	12	15	18	22	24	26	28	32	36	41	46	52	58	68	76	80	84	79	76	68	62	55	48	44	40	37	35	34	32	31	28	24
.10	11	13	16	20	21	23	25	27	30	34	38	43	49	60	70	77	83	83	78	72	65	57	50	45	41	38	36	34	32	31	29	24
.20	9	12	15	18	19	21	22	24	26	29	32	36	41	52	63	72	78	82	81	75	68	60	52	46	42	39	36	35	32	31	29	24
.30	9	12	14	18	19	20	21	23	25	28	31	34	39	49	60	70	77	81	81	76	70	61	53	47	43	39	36	35	33	31	29	24
.40	9	11	14	17	18	19	21	22	24	26	29	33	37	47	57	67	75	80	81	77	71	62	53	47	43	39	37	35	33	31	29	24
.50	7	10	12	15	17	18	19	20	21	23	25	28	31	39	49	60	69	76	81	79	74	65	56	49	44	40	37	35	33	31	29	24
.75	6	9	11	14	15	16	17	18	20	21	23	25	27	34	42	52	62	70	76	79	76	68	59	51	46	41	38	36	33	31	29	24
1.0	5	6	9	11	12	13	14	15	16	17	18	20	21	25	30	38	47	57	66	76	79	75	64	55	49	44	40	37	34	32	29	25
1.5	3	4	6	8	8	9	10	11	12	13	14	15	16	18	21	24	30	37	45	59	71	78	73	63	55	48	43	40	35	33	30	25
2.0	1	2	3	4	5	5	6	7	7	8	9	10	10	12	14	16	19	22	26	36	48	65	77	73	64	56	49	44	37	34	31	26
2.5	0	1	1	2	3	3	4	4	5	5	6	6	7	8	10	12	14	16	18	23	31	46	66	76	72	63	55	48	40	35	31	27
3.0	0	0	1	1	1	2	2	2	3	3	3	4	4	5	7	8	10	11	13	17	21	30	49	67	75	71	63	54	43	37	32	27

IA/P = 0.30 * * * TC = 2.0 HR * * * IA/P = 0.30

TRVL TIME (hr)	7.0	7.3	7.6	7.9	8.0	8.1	8.2	8.3	8.4	8.5	8.6	8.7	8.8	9.0	9.2	9.4	9.6	9.8	10.0	10.3	10.6	11.0	11.5	12.0	12.5	13.0	13.5	14.0	15.0	16.0	18.0	22.0
0.0	0	0	0	0	0	0	1	2	3	5	7	10	13	20	27	34	39	42	44	47	45	45	44	43	42	40	40	40	40	40	39	36
.10	0	0	0	0	0	0	1	1	2	4	6	8	15	22	29	35	40	43	45	46	45	44	43	42	41	40	40	40	40	40	40	36
.20	0	0	0	0	0	0	0	1	1	2	3	5	10	17	24	31	36	41	44	46	45	44	43	42	41	40	40	40	40	40	40	36
.30	0	0	0	0	0	0	0	0	0	1	2	3	4	9	15	22	29	35	39	44	46	45	44	43	42	41	40	40	40	40	40	36
.40	0	0	0	0	0	0	0	0	0	1	1	2	4	8	14	20	27	33	38	43	46	46	44	43	42	41	40	40	40	40	40	36
.50	0	0	0	0	0	0	0	0	0	1	1	2	5	9	15	22	29	35	41	44	45	45	44	43	42	40	40	40	40	40	40	36
.75	0	0	0	0	0	0	0	0	0	0	1	1	3	6	11	17	24	30	38	42	45	45	44	43	42	41	40	40	40	40	40	37
1.0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	5	9	14	21	30	38	43	45	44	44	43	41	40	40	40	40	40	37
1.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	4	8	16	25	36	43	45	44	43	42	41	40	40	40	40	38
2.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	6	12	24	36	43	45	44	43	42	40	40	40	40	38
2.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4	12	25	37	43	45	44	43	41	40	40	40	40	38
3.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4	13	26	37	43	44	44	42	40	40	40	40	39

IA/P = 0.50 * * * TC = 2.0 HR * * * IA/P = 0.50

TRVL TIME (hr)	7.0	7.3	7.6	7.9	8.0	8.1	8.2	8.3	8.4	8.5	8.6	8.7	8.8	9.0	9.2	9.4	9.6	9.8	10.0	10.3	10.6	11.0	11.5	12.0	12.5	13.0	13.5	14.0	15.0	16.0	18.0	22.0
0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	4	7	12	18	23	27	30	33	36	40	40	40	40
.10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	5	10	16	21	26	29	32	35	40	40	40	40
.20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	4	8	14	20	25	28	31	34	39	40	40	40
.30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	6	12	18	23	27	30	33	38	40	40	40
.40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	5	11	16	22	26	29	32	38	40	40	40
.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4	9	15	20	25	28	31	37	40	40	40
.75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	7	13	19	24	27	30	36	40	40	40
1.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	8	14	20	24	28	34	39	40	40
1.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	5	10	16	21	25	32	37	40	40
2.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	5	11	16	21	29	35	40	40
2.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	6	11	17	26	32	40	40
3.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	6	11	21	29	39	40

RAINFALL TYPE = IA * * * TC = 2.0 HR * * * SHEET 10 OF 10

Exhibit 5-II: Tabular hydrograph unit discharges (csm/in) for type II rainfall distribution

TRVL TIME (hr) — HYDROGRAPH TIME (HOURS)

TRVL TIME (hr)	11.0	11.3	11.6	11.9	12.0	12.1	12.2	12.3	12.4	12.5	12.6	12.7	12.8	13.0	13.2	13.4	13.6	13.8	14.0	14.3	14.6	15.0	15.5	16.0	16.5	17.0	17.5	18.0	19.0	20.0	22.0	26.0
IA/P = 0.10																												*** * * TC = 0.1 HR * * ***				IA/P = 0.10
0.0	24	34	53	334	647	1010	623	217	147	123	104	86	76	66	57	51	46	42	38	34	32	29	26	23	21	20	19	18	15	13	12	0
.10	21	29	43	134	267	520	847	701	378	224	157	122	98	75	64	56	50	45	41	36	33	30	27	24	21	20	19	18	16	13	12	0
.20	18	25	35	61	110	215	418	704	702	486	312	209	151	94	73	62	54	49	44	38	34	31	28	25	22	21	19	18	16	14	12	0
.30	17	23	33	56	92	174	337	582	662	545	389	269	190	109	79	65	56	50	45	39	35	32	29	25	22	21	20	18	16	14	12	0
.40	15	20	28	41	51	78	142	272	478	601	563	447	328	172	104	76	63	55	49	42	37	33	29	26	23	21	20	19	17	14	12	0
.50	14	19	26	39	47	68	117	220	392	531	553	482	380	209	121	84	67	57	51	43	38	33	30	27	23	21	20	19	17	14	12	0
.75	12	15	21	29	33	38	49	73	126	224	343	432	464	385	252	156	103	76	62	50	43	36	31	28	25	22	21	19	17	15	12	0
1.0	9	12	15	21	23	26	29	33	40	55	86	148	238	406	434	317	205	130	89	62	50	41	34	30	27	24	22	20	18	16	12	0
1.5	7	8	10	14	15	16	18	20	22	25	29	34	45	101	220	339	373	320	234	131	80	53	40	34	30	27	24	21	19	17	12	2
2.0	4	6	7	9	9	10	11	12	13	15	16	18	20	25	37	72	150	252	336	312	216	109	58	42	34	30	27	24	20	18	13	8
2.5	3	4	5	6	7	7	8	8	9	10	11	12	13	16	19	25	39	75	142	262	308	229	108	58	41	34	30	27	22	19	14	11
3.0	1	2	3	4	4	5	5	6	6	7	7	8	8	10	12	14	17	22	31	76	169	288	236	122	64	43	35	30	24	20	16	11
IA/P = 0.30																												*** * * TC = 0.1 HR * * ***				IA/P = 0.30
0.0	0	0	0	154	568	936	524	217	172	149	126	107	97	86	76	69	63	58	53	48	46	42	38	34	31	30	28	27	24	20	19	0
.10	0	0	0	19	109	415	762	603	346	230	176	143	119	96	84	74	68	62	57	50	47	44	40	35	32	30	29	27	24	21	19	0
.20	0	0	0	0	13	77	302	609	605	432	297	217	167	115	94	81	73	66	60	53	48	45	41	37	33	31	29	28	25	21	19	0
.30	0	0	0	0	9	54	219	479	563	476	357	263	199	129	99	85	75	68	62	54	49	45	41	37	33	31	29	28	25	21	19	0
.40	0	0	0	0	0	6	38	159	372	500	484	399	309	183	123	96	82	73	66	58	51	46	42	38	34	31	30	28	25	22	19	0
.50	0	0	0	0	0	4	27	115	287	429	465	421	346	213	138	103	86	76	68	59	52	47	43	39	34	32	30	29	25	22	19	0
.75	0	0	0	0	0	0	1	10	46	132	246	338	381	341	243	165	119	94	80	67	58	50	45	41	37	33	31	29	26	23	19	0
1.0	0	0	0	0	0	0	0	1	4	22	69	149	241	357	331	246	170	122	96	76	64	54	47	42	38	34	32	30	27	24	19	0
1.5	0	0	0	0	0	0	0	0	0	0	0	1	4	41	142	258	310	285	224	142	97	71	55	47	43	39	35	32	29	25	20	4
2.0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	10	49	130	221	279	255	182	108	70	55	47	42	38	34	30	27	20	11
2.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	14	52	119	224	256	193	107	70	55	47	42	38	32	28	22	17
3.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	9	52	141	240	199	117	74	56	48	43	35	30	24	18
IA/P = 0.50																												*** * * TC = 0.1 HR * * ***				IA/P = 0.50
0.0	0	0	0	0	70	539	377	196	171	154	134	117	108	99	89	83	77	72	67	61	59	56	51	46	43	42	40	38	34	30	28	0
.10	0	0	0	0	47	375	376	256	199	169	146	126	114	102	92	85	79	73	68	62	59	56	52	47	43	42	40	38	34	30	28	0
.20	0	0	0	0	0	31	260	338	283	227	189	160	138	112	99	90	83	77	72	64	60	57	53	48	44	42	41	39	35	30	28	0
.30	0	0	0	0	0	0	21	180	285	284	246	208	176	131	110	97	88	82	76	68	62	59	54	50	45	43	41	39	36	31	28	0
.40	0	0	0	0	0	0	14	125	232	266	253	223	192	142	115	100	91	83	77	69	63	59	55	50	45	43	41	40	36	31	28	0
.50	0	0	0	0	0	0	9	86	183	239	248	231	205	154	122	104	93	85	79	71	64	59	55	51	46	43	41	40	36	32	28	0
.75	0	0	0	0	0	0	3	31	87	147	190	211	213	184	147	121	103	92	84	75	67	61	57	52	47	44	42	40	37	32	28	0
1.0	0	0	0	0	0	0	0	0	1	13	45	92	141	205	197	165	134	112	98	84	75	65	59	55	50	46	43	41	38	34	28	0
1.5	0	0	0	0	0	0	0	0	0	0	0	2	9	51	118	170	183	167	143	111	92	77	65	59	54	50	45	43	39	35	28	2
2.0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	15	51	103	148	168	156	127	96	76	65	58	54	49	45	41	37	29	12
2.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	9	31	69	131	159	140	101	78	66	59	54	50	43	39	31	24
3.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	11	46	101	151	134	99	77	65	59	54	45	41	33	26

RAINFALL TYPE = II   * * * TC = 0.1 HR * * *   SHEET 1 OF 10

Exhibit 5-II: Tabular hydrograph unit discharges (csm/in) for type II rainfall distribution – continued

```
TRVL-------------------------------------------------------HYDROGRAPH TIME(HOURS)-------------------------------------------------
TIME   11.3      11.9   12.1     12.3     12.5     12.7    13.0     13.4     13.8   14.3    15.0     16.0    17.0    18.0    20.0   26.0
(hr)11.0   11.6     12.0   12.2    12.4    12.6     12.8   13.2     13.6   14.0   14.6     15.5    16.5    17.5   19.0    22.0
```

IA/P = 0.10 — TC = 0.2 HR

TRVL TIME (hr)	11.0	11.3	11.6	11.9	12.0	12.1	12.2	12.3	12.4	12.5	12.6	12.7	12.8	13.0	13.2	13.4	13.6	13.8	14.0	14.3	14.6	15.0	15.5	16.0	16.5	17.0	17.5	18.0	19.0	20.0	22.0	26.0
0.0	23	31	47	209	403	739	800	481	250	166	128	102	86	70	61	54	49	44	40	35	33	30	27	24	21	20	19	18	16	13	12	0
.10	19	26	39	86	168	325	601	733	565	355	229	161	122	83	69	59	53	47	43	37	34	31	28	25	22	21	19	18	16	14	12	0
.20	17	23	32	49	74	136	262	488	652	594	435	298	207	115	81	67	58	51	46	40	35	32	29	26	23	21	20	19	16	14	12	0
.30	16	22	30	46	64	112	212	396	566	585	485	360	258	139	90	71	60	53	48	41	36	32	29	26	23	21	20	19	16	14	12	0
.40	14	19	25	37	43	57	94	173	322	485	551	507	409	227	129	87	68	58	52	44	38	33	30	27	24	21	20	19	17	14	12	0
.50	13	18	24	35	40	52	80	142	262	410	504	506	441	269	153	98	73	61	53	45	39	34	30	27	24	22	20	19	17	15	12	0
.75	10	13	17	23	26	30	34	40	55	86	150	247	349	438	360	240	151	101	75	57	47	39	33	29	26	23	21	20	18	15	12	0
1.0	9	11	14	19	21	24	26	30	35	44	62	101	167	337	413	353	245	157	104	68	53	42	35	31	28	24	22	20	18	16	12	0
1.5	6	8	10	13	14	15	17	19	21	23	26	30	37	73	166	288	356	337	264	154	91	57	42	35	30	27	24	22	19	17	13	3
2.0	4	5	7	8	9	10	10	11	12	14	15	16	18	23	31	55	114	206	291	324	239	125	63	44	35	31	28	24	20	18	14	9
2.5	3	4	5	6	6	7	7	8	9	9	10	11	12	15	18	22	32	58	111	227	298	246	122	63	43	35	31	27	22	19	15	11
3.0	1	2	3	4	4	4	5	5	6	6	7	7	8	9	11	13	16	19	27	59	138	280	248	137	70	46	36	31	25	21	16	11

IA/P = 0.30 — TC = 0.2 HR

TRVL TIME (hr)	11.0	11.3	11.6	11.9	12.0	12.1	12.2	12.3	12.4	12.5	12.6	12.7	12.8	13.0	13.2	13.4	13.6	13.8	14.0	14.3	14.6	15.0	15.5	16.0	16.5	17.0	17.5	18.0	19.0	20.0	22.0	26.0
0.0	0	0	0	39	180	545	697	497	276	198	158	130	110	93	81	73	67	61	56	49	46	43	39	35	32	30	29	27	24	21	19	0
.10	0	0	0	2	27	129	407	600	532	361	252	190	150	108	90	79	71	65	59	52	48	44	41	36	32	31	29	28	25	21	19	0
.20	0	0	0	2	19	92	302	501	521	415	306	228	176	119	95	82	73	67	61	53	48	45	41	37	33	31	29	28	25	21	19	0
.30	0	0	0	0	1	13	66	223	408	484	438	350	269	163	114	93	80	72	65	57	51	46	42	38	34	31	30	28	25	22	19	0
.40	0	0	0	0	1	9	47	164	327	431	436	379	306	189	127	98	83	74	67	58	52	47	43	38	34	31	30	28	25	22	19	0
.50	0	0	0	0	0	0	6	33	120	258	374	415	391	271	173	121	95	81	72	62	55	48	44	40	35	32	30	29	26	22	19	0
.75	0	0	0	0	0	0	2	13	50	126	221	302	348	323	240	167	121	96	81	68	59	50	45	41	37	33	31	29	26	23	19	0
1.0	0	0	0	0	0	0	0	0	1	6	24	69	139	285	331	280	204	145	109	82	68	56	48	43	39	35	32	30	27	24	19	0
1.5	0	0	0	0	0	0	0	0	0	0	0	0	1	16	79	186	271	288	247	165	110	76	58	49	44	40	35	32	29	26	20	5
2.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	24	80	163	235	262	202	123	76	58	49	43	39	35	30	27	21	13
2.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	6	28	77	179	242	207	120	75	57	48	43	39	32	29	22	17
3.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	30	101	207	227	130	80	59	49	44	35	30	24	18

IA/P = 0.50 — TC = 0.2 HR

TRVL TIME (hr)	11.0	11.3	11.6	11.9	12.0	12.1	12.2	12.3	12.4	12.5	12.6	12.7	12.8	13.0	13.2	13.4	13.6	13.8	14.0	14.3	14.6	15.0	15.5	16.0	16.5	17.0	17.5	18.0	19.0	20.0	22.0	26.0
0.0	0	0	0	0	7	98	371	322	221	182	158	137	120	104	94	86	80	74	69	62	60	57	52	47	44	42	40	39	35	30	28	0
.10	0	0	0	0	4	67	270	305	249	204	174	149	130	108	97	88	82	76	71	64	60	57	53	48	44	42	41	39	35	30	28	0
.20	0	0	0	0	0	3	45	195	268	255	221	189	163	125	106	95	87	80	75	67	62	58	54	49	45	43	41	39	35	31	28	0
.30	0	0	0	0	0	2	31	140	226	245	229	203	176	134	111	98	89	82	76	68	62	59	55	50	45	43	41	39	36	31	28	0
.40	0	0	0	0	0	1	21	101	184	225	228	211	188	144	117	101	91	84	78	69	63	59	55	50	45	43	41	40	36	31	28	0
.50	0	0	0	0	0	0	1	14	72	146	199	218	213	175	137	113	99	89	82	73	66	60	56	52	47	43	42	40	36	32	28	0
.75	0	0	0	0	0	0	0	5	28	71	121	162	186	193	161	133	112	98	88	78	70	62	57	53	48	44	42	41	37	33	28	0
1.0	0	0	0	0	0	0	0	0	0	2	13	38	77	154	186	174	147	122	105	89	78	68	60	56	51	46	43	42	38	34	28	0
1.5	0	0	0	0	0	0	0	0	0	0	0	0	2	22	71	129	163	168	150	120	98	80	67	60	55	51	46	43	40	36	28	4
2.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	25	65	112	146	157	134	103	79	67	60	55	50	46	41	38	29	14
2.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	8	26	60	117	148	136	101	79	66	59	54	50	43	39	31	24
3.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	9	40	90	142	130	99	78	66	59	54	45	41	33	26

RAINFALL TYPE = II   * * * TC = 0.2 HR * * *   SHEET 2 OF 10

Exhibit 5-II: Tabular hydrograph unit discharges (csm/in) for type II rainfall distribution – continued

```
TRVL------------------------------------------------------HYDROGRAPH TIME(HOURS)------------------------------------------------------
TIME   11.3       11.9      12.1      12.3      12.5      12.7    13.0      13.4        13.8    14.3     15.0      16.0      17.0      18.0      20.0    26.0
(hr)11.0   11.6       12.0      12.2      12.4      12.6      12.8    13.2      13.6      14.0    14.6      15.5      16.5      17.5      19.0      22.0
----+---+--+-+-+-+--+---+---+---+--+---+---+--+---+---+--+---+---+--+---+---+--+---+--+---+--+---+--+---+--+---+--+---+-+--+
        IA/P = 0.10                                    * * * TC = 0.3 HR * * *                                          IA/P = 0.10
----+---+--+-+-+-+--+---+---+---+--+---+---+--+---+---+--+---+---+--+---+---+--+---+---+--+---+--+---+--+---+--+---+--+---+-+--+
0.0 20   28   41 118 235 447 676 676 459 283 196 146 114  80   66  57  51   46  42  37  33   31  28  24  22   20  19  18   16  13  12   0
.10 19   26   39  99 189 361 571 641 520 362 251 181 136  89   70  60  53   48  43  37  34   31  28  25  22   21  19  18   16  14  12   0
.20 17   23   32  53  83 154 292 478 587 542 422 308 223 127   86  68  58   52  46  40  35   32  29  26  23   21  20  19   16  14  12   0
.30 16   22   30  49  72 127 237 398 524 536 460 359 268 151   97  73  61   53  48  41  36   32  29  26  23   21  20  19   16  14  12   0

.40 14   19   25  37  45  63 105 193 330 459 510 477 398 237  139  92  70   59  52  44  38   34  30  27  24   21  20  19   17  14  12   0
.50 13   18   24  35  42  56  89 158 272 397 472 475 424 274  163 104  76   62  54  46  39   34  30  27  24   22  20  19   17  15  12   0
.75 11   14   19  26  30  34  42  59  95 160 250 339 417 398  299 196 128   89  69  54  45   37  32  29  26   23  21  20   17  15  12   0
1.0  9   11   14  19  21  24  27  30  36  46  68 109 174 328  396 346 248  163 109  70  54   43  35  31  28   24  22  20   18  16  12   0

1.5  6    8   10  13  14  15  17  19  21  23  26  31  38  77  169 282 347  330 264 158  94   58  42  35  31   27  24  22   19  17  13   3
2.0  4    5    7   8   9  10  10  11  12  14  15  16  18  23   32  57 116  205 285 317 239  128  64  44  36   31  28  25   20  18  14   9
2.5  2    4    5   6   6   7   7   8   9   9  10  11  12  15   18  23  33   60 113 223 293  245 125  65  44   35  31  27   22  19  15  11
3.0  1    2    3   4   4   4   5   5   6   6   7   7   8   9   11  13  16   20  27  61 138  275 246 139  72   46  36  31   25  21  16  11
----+---+--+-+-+-+--+---+---+---+--+---+---+--+---+---+--+---+---+--+---+---+--+---+---+--+---+--+---+--+---+--+---+--+---+-+--+
        IA/P = 0.30                                    * * * TC = 0.3 HR * * *                                          IA/P = 0.30
----+---+--+-+-+-+--+---+---+---+--+---+---+--+---+---+--+---+---+--+---+---+--+---+---+--+---+--+---+--+---+--+---+--+---+-+--+
0.0  0    0    0  11  64 251 525 574 454 303 221 173 140 104   88  77  70   64  58  51  47   44  40  36  32   31  29  28   24  21  19   0
.10  0    0    0   7  45 183 411 520 476 360 268 205 133 101   85  76  69   62  55  49  45   41  37  33  31   30  28  25   21  19   0
.20  0    0    0   5  32 132 318 452 468 396 310 240 151 109   90  78  70   64  56  50  46   42  38  33  31   30  28  25   22  19   0
.30  0    0    0   0   3  22  96 244 383 440 411 344 217 142  105  87  76   69  60  53  47   43  39  35  32   30  29  26   22  19   0

.40  0    0    0   0   2  16  69 186 317 399 407 365 246 160  115  92  79   71  61  54  48   43  39  35  32   30  29  26   22  19   0
.50  0    0    0   0   2  11  50 140 258 352 389 327 223 149  110  89  77   66  57  50  45   41  36  33  31   29  26  23   19   0
.75  0    0    0   0   0   1   4  20  63 135 219 290 335 281  205 146 110   89  72  62  52   46  42  38  34   31  30  27   23  19   0
1.0  0    0    0   0   0   0   0   0   2   9  32  78 216 320  306 243 176  128  90  72  59   49  44  40  36   33  31  28   24  19   1

1.5  0    0    0   0   0   0   0   0   0   0   0   2  20  84  185 264 281  246 168 112  77   58  49  44  40   36  32  29   26  20   5
2.0  0    0    0   0   0   0   0   0   0   0   0   0   0   1   12  50 121  200 257 224 141   83  61  50  44   40  36  31   28  21  14
2.5  0    0    0   0   0   0   0   0   0   0   0   0   0   0    3  16  51  145 239 223 137   82  60  50  44   40  33  29   22  17
3.0  0    0    0   0   0   0   0   0   0   0   0   0   0   0    0   2  19   74 184 224 146   89  63  51  45   36  31  24  18
----+---+--+-+-+-+--+---+---+---+--+---+---+--+---+---+--+---+---+--+---+---+--+---+---+--+---+--+---+--+---+--+---+--+---+-+--+
        IA/P = 0.50                                    * * * TC = 0.3 HR * * *                                          IA/P = 0.50
----+---+--+-+-+-+--+---+---+---+--+---+---+--+---+---+--+---+---+--+---+---+--+---+---+--+---+--+---+--+---+--+---+--+---+-+--+
0.0  0    0    0   0   1  25 151 299 277 219 187 162 141 113  100  90  84   78  72  65  61   58  53  48  44   42  41  39   35  31  28   0
.10  0    0    0   0   1  17 106 235 263 234 202 175 152 120  104  93  85   79  73  66  61   58  54  49  44   42  41  39   35  31  28   0
.20  0    0    0   0   0  12  75 182 236 234 213 188 144 116  101  91  84   78  70  63  59   55  50  45  43   41  40  36   31  28   0
.30  0    0    0   0   0   8  52 138 203 224 217 197 154 123  105  94  86   79  71  64  59   55  51  46  43   42  40  36   32  28   0

.40  0    0    0   0   0   5  37 105 170 206 213 203 164 131  110  97  88   81  72  65  60   56  51  46  43   42  40  36   32  28   0
.50  0    0    0   0   0   0   4  26  78 140 184 203 191 155  126 107  95   86  76  69  62   57  53  48  44   42  41  37   33  28   0
.75  0    0    0   0   0   0   1  10  34  73 117 153 184 173  146 122 105   94  82  73  64   58  54  49  45   43  41  37   33  28   0
1.0  0    0    0   0   0   0   0   0   0   4  17  42 114 168  178 159 134  114  94  82  70   61  57  52  47   44  42  39   35  28   0

1.5  0    0    0   0   0   0   0   0   0   0   0   1  10  44   98 144 163  157 130 105  84   69  61  56  52   47  44  40   36  29   6
2.0  0    0    0   0   0   0   0   0   0   0   0   0   0   2   14  44  87  127 153 141 110   83  69  61  56   51  47  42   38  30  17
2.5  0    0    0   0   0   0   0   0   0   0   0   0   0   0    4  16  42   97 138 145 107   82  68  60  55   51  43  40   32  25
3.0  0    0    0   0   0   0   0   0   0   0   0   0   0   0    0   1   5   27  71 127 139  105  81  68  60   55  46  41   33  27
----+---+--+-+-+-+--+---+---+---+--+---+---+--+---+---+--+---+---+--+---+---+--+---+---+--+---+--+---+--+---+--+---+--+---+-+--+
        RAINFALL TYPE = II                             * * * TC = 0.3 HR * * *                                          SHEET  3 OF 10
```

Exhibit 5-II: Tabular hydrograph unit discharges (csm/in) for type II rainfall distribution – continued

HYDROGRAPH TIME (HOURS)

IA/P = 0.10   * * * TC = 0.4 HR * * *

TRVL TIME (hr)	11.0	11.3	11.6	11.9	12.0	12.1	12.2	12.3	12.4	12.5	12.6	12.7	12.8	13.0	13.2	13.4	13.6	13.8	14.0	14.3	14.6	15.0	15.5	16.0	16.5	17.0	17.5	18.0	19.0	20.0	22.0	26.0
0.0	18	25	36	77	141	271	468	592	574	431	298	216	163	104	77	63	55	49	44	38	34	31	28	25	22	21	20	18	16	14	12	0
.10	18	24	34	67	116	219	385	523	557	473	357	263	196	119	84	67	57	51	46	39	35	32	29	25	22	21	20	19	16	14	12	0
.20	15	20	28	44	59	97	179	316	454	523	489	401	309	178	112	81	65	56	49	42	37	33	30	26	23	21	20	19	17	14	12	0
.30	15	20	27	41	53	82	147	260	389	478	486	429	349	210	129	89	69	58	51	43	38	33	30	27	24	21	20	19	17	14	12	0
.40	13	17	23	33	38	48	71	121	214	331	429	467	442	308	189	120	85	66	56	47	41	35	31	28	24	22	20	19	17	15	12	0
.50	12	16	22	31	36	44	62	102	176	279	379	438	440	339	218	137	94	71	59	49	42	35	31	28	25	22	21	19	17	15	12	0
.75	10	13	17	24	26	30	35	45	65	106	170	251	326	393	341	245	164	112	81	59	48	39	33	30	26	23	21	20	18	15	12	0
1.0	8	10	13	17	19	21	24	27	31	37	50	75	118	251	360	376	292	205	138	83	60	45	36	32	28	25	22	21	18	16	12	1
1.5	6	7	9	12	13	14	15	17	19	21	23	26	31	56	121	224	311	333	293	192	115	66	45	36	31	28	25	22	19	17	13	4
2.0	4	5	6	8	8	9	10	10	11	12	14	15	16	20	27	43	85	159	243	306	264	154	74	47	37	32	28	25	21	18	14	9
2.5	2	3	4	5	6	6	7	7	8	9	9	10	11	13	16	20	27	46	85	184	285	262	147	74	47	37	32	28	22	19	15	11
3.0	1	2	2	3	4	4	4	5	5	6	6	7	7	8	10	12	14	17	23	47	109	227	268	160	83	50	38	32	25	21	16	11

IA/P = 0.30   * * * TC = 0.4 HR * * *

TRVL TIME (hr)	11.0	11.3	11.6	11.9	12.0	12.1	12.2	12.3	12.4	12.5	12.6	12.7	12.8	13.0	13.2	13.4	13.6	13.8	14.0	14.3	14.6	15.0	15.5	16.0	16.5	17.0	17.5	18.0	19.0	20.0	22.0	26.0
0.0	0	0	0	4	26	113	296	480	495	413	306	234	186	127	100	84	74	67	61	54	49	45	41	37	33	31	29	28	25	21	19	0
.10	0	0	0	0	2	18	81	224	395	462	430	347	272	172	121	96	82	73	66	57	51	46	42	38	34	31	30	28	25	22	19	0
.20	0	0	0	0	2	13	59	169	320	414	424	373	305	196	134	103	85	75	67	59	52	47	43	39	34	32	30	29	25	22	19	0
.30	0	0	0	0	0	1	9	42	127	255	361	403	383	274	181	127	99	83	73	63	55	48	44	40	36	32	30	29	26	23	19	0
.40	0	0	0	0	0	1	6	30	94	202	308	372	379	298	203	141	106	87	76	65	56	49	44	40	36	32	31	29	26	23	19	0
.50	0	0	0	0	0	0	4	21	70	158	258	334	364	270	187	133	102	85	70	60	51	46	41	37	33	31	30	26	23	19		0
.75	0	0	0	0	0	0	2	8	30	76	145	219	321	305	241	177	130	102	78	65	55	47	43	38	34	32	30	27	24	19		0
1.0	0	0	0	0	0	0	0	0	1	4	15	42	150	267	308	272	209	154	103	79	62	51	45	41	37	33	31	28	25	19		1
1.5	0	0	0	0	0	0	0	0	0	0	0	1	10	51	136	226	274	263	195	131	85	62	51	45	41	36	33	29	26	20		6
2.0	0	0	0	0	0	0	0	0	0	0	0	0	1	6	31	86	162	252	239	162	93	64	52	45	41	37	31	28	21			15
2.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	9	33	112	202	235	155	92	64	52	45	41	33	29	23			18
3.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	21	76	182	221	148	90	63	51	45	36	31	24			18

IA/P = 0.50   * * * TC = 0.4 HR * * *

TRVL TIME (hr)	11.0	11.3	11.6	11.9	12.0	12.1	12.2	12.3	12.4	12.5	12.6	12.7	12.8	13.0	13.2	13.4	13.6	13.8	14.0	14.3	14.6	15.0	15.5	16.0	16.5	17.0	17.5	18.0	19.0	20.0	22.0	26.0
0.0	0	0	0	0	0	7	59	168	245	257	213	186	163	128	109	96	88	81	75	67	62	58	54	50	45	43	41	39	35	31	28	0
.10	0	0	0	0	0	5	41	125	205	240	222	198	154	123	106	94	86	79	71	64	60	56	51	46	43	42	40	36	32	28		0
.20	0	0	0	0	0	3	28	93	168	216	220	205	164	131	110	97	88	81	72	65	60	56	51	46	43	42	40	36	32	28		0
.30	0	0	0	0	0	2	20	69	135	189	209	192	155	126	107	95	86	77	69	62	57	53	48	44	42	41	37	33	28			0
.40	0	0	0	0	0	0	1	14	50	106	161	193	202	163	133	112	98	89	78	70	62	58	53	48	44	42	41	37	33	28		0
.50	0	0	0	0	0	0	1	9	37	83	135	174	194	171	140	117	102	91	80	71	63	58	54	49	45	43	41	37	33	28		0
.75	0	0	0	0	0	0	0	3	15	40	76	147	177	169	146	124	107	90	79	68	60	56	51	47	43	42	38	34	28			0
1.0	0	0	0	0	0	0	0	0	1	7	21	78	141	173	167	146	125	101	86	73	63	58	53	48	45	42	39	35	28			1
1.5	0	0	0	0	0	0	0	0	0	0	0	5	26	71	121	153	159	139	113	89	72	63	57	53	48	44	40	37	29			7
2.0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	16	45	86	138	150	125	93	74	64	58	53	48	42	39	31			20
2.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4	17	59	112	143	121	91	73	63	57	53	45	40	33			26
3.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	11	40	101	138	117	90	73	63	57	48	42	34			27

RAINFALL TYPE = II   * * * TC = 0.4 HR * * *   SHEET 4 OF 10

```
TRVL-------------------------------------------------------------HYDROGRAPH TIME(HOURS)------------------------------------------------
TIME   11.3      11.9     12.1      12.3     12.5     12.7    13.0      13.4      13.8    14.3     15.0     16.0     17.0    18.0     20.0    26.0
(hr)11.0     11.6     12.0     12.2     12.4     12.6    12.8    13.2      13.6     14.0    14.6      15.5     16.5     17.5    19.0     22.0
  ----+---+ -- + - + -+ + +--+- -- +--- +-- + --+-- + - + -- + - + -- + -+-- + -+-- + -+ -+--+ --+-- +--+- + --+
          IA/P = 0.10                                       * * * TC = 0.5 HR * * *                                    IA/P = 0.10
  ----+---+ -- + - + -+ + +--+- -- +--- +-- + --+-- + - + -- + - + -- + -+-- + -+-- + -+ -+--+ --+-- +--+- + --+
0.0 17    23    32   57   94  170  308  467  529  507  402  297 226 140    96   74    61    53   47   41   36    32   29   26   23    21   20   19    16   14   12    0
.10 16    22    30   51   80  140  252  395  484  499  434  343 265 162   108   80    65    55   49   42   36    33   29   26   23    21   20   19    16   14   12    0
.20 14    19    25   38   47   69  116  207  332  434  477  449 378 238   149  101    77    62   53   45   39    34   30   27   24    22   20   19    17   14   12    0
.30 13    18    24   35   43   60   97  170  278  382  446  448 401 270   171  114    83    66   56   46   40    34   31   27   24    22   20   19    17   15   12    0

.40 12    15    21   29   33   40   53   83  141  233  332  408 434 361   243  157   107    79   64   51   43    36   32   28   25    22   21   20    17   15   12    0
.50 11    15    20   28   31   37   48   71  118  194  286  367 412 378   271  178   119    86   68   53   44    37   32   29   25    23   21   20    17   15   12    0
.75  9    11    14   19   21   24   27   31   37   49   74  118 182 319   374  328   244   169  117   76   56    43   35   31   28    25   22   21    18   16   12    1
1.0  7     9    12   16   17   19   21   24   27   32   40   55  83 188   309  359   322   245 172  102   68    49   38   32   29    26   23   21    19   16   12    1

1.5  5     7     8   11   12   13   14   15   17   19   21   23  27  43    89  175   269   322 309  225  140    77   49   38   32    29   25   23    20   17   13    5
2.0  3     4     6    7    8    8    9   10   10   11   12   14  15  18    23   35    65   123 202  297  280   181   88   52   39    33   29   26    21   19   14   10
2.5  2     3     4    5    5    6    6    7    7    8    9    9  10  12    15   18    24    36  66  150  244   278  171   87   52    39   33   29    23   20   15   11
3.0  1     1     2    3    3    4    4    4    5    5    6    6   7   8     9   11    13    16  20   37   86   198  263  182   96    56   40   33    26   21   16   11
  ----+---+ -- + - + -+ + +--+- -- +--- +-- + --+-- + - + -- + - + -- + -+-- + -+-- + -+ -+--+ --+-- +--+- + --+
          IA/P = 0.30                                       * * * TC = 0.5 HR * * *                                    IA/P = 0.30
  ----+---+ -- + - + -+ + +--+- -- +--- +-- + --+-- + - + -- + - + -- + -+-- + -+-- + -+ -+--+ --+-- +--+- + --+
0.0  0     0     0    1    9   53  157  314  433  439  379  299 237 159   118   95    81    71   65   56   50    46   42   38   34    31   30   28    25   22   19    0
.10  0     0     0    1    6   37  117  248  372  416  391  330 218   150  113    92    79   70   60   53    47   43   39   35    32   30   29    26   22   19    0
.20  0     0     0    1    4   26   87  194  313  382  388  349 244   167  122    97    82   72   62   54    48   43   39   35    32   30   29    26   22   19    0
.30  0     0     0    0    0    3   19   64  151  259  341  372 316   223  156   117    94   80   67   58    50   45   41   36    33   31   29    26   23   19    0

.40  0     0     0    0    0    0    2   13   47  116  211  298 354 328   245  172   127   100   83   69   59    51   45   41   37    33   31   29    26   23   19    0
.50  0     0     0    0    0    0    1    9   34   89  170  255 341 303   225  161   120    96   76   64   54    47   42   38   34    31   30   27    24   19    0
.75  0     0     0    0    0    0    1    4   14   41   89  152 270 305   268  207   155   118   87   70   57    48   44   39   35    32   30   27    24   19    0
1.0  0     0     0    0    0    0    0    0    0    2    7   22  98 212   295  285   237  181  120   88   67    53   46   42   38    34   31   28    25   19    2

1.5  0     0     0    0    0    0    0    0    0    0    0    0   5  30    95  183   249  265  217  152   96    66   53   46   41    37   34   30    26   20    8
2.0  0     0     0    0    0    0    0    0    0    0    0    0   0   3    18   59   125  221  245  182  105    69   54   47   42    38   32   28    22   16
2.5  0     0     0    0    0    0    0    0    0    0    0    0   0   0     1    5    21   84  174  230  172   103   69   54   46    42   34   30    23   18
3.0  0     0     0    0    0    0    0    0    0    0    0    0   0   0     0    0     1   13   56  157  217   163  101   68   53    46   37   31    25   18
  ----+---+ -- + - + -+ + +--+- -- +--- +-- + --+-- + - + -- + - + -- + -+-- + -+-- + -+ -+--+ --+-- +--+- + --+
          IA/P = 0.50                                       * * * TC = 0.5 HR * * *                                    IA/P = 0.50
  ----+---+ -- + - + -+ + +--+- -- +--- +-- + --+-- + - + -- + - + -- + -+-- + -+-- + -+ -+--+ --+-- +--+- + --+
0.0  0     0     0    0    0    2   26   89  170  217  229  200 179 144   119  104    93    85   78   70   64    59   55   51   46    43   41   40    36   32   28    0
.10  0     0     0    0    0    1   18   65  135  190  216  205 170   137  115   101    91   83   74   67    61   56   52   47    44   42   40    36   32   28    0
.20  0     0     0    0    0    1   12   47  106  162  198  203 178   145  121   105    94   85   76   68    61   57   52   48    44   42   40    37   32   28    0
.30  0     0     0    0    0    0    1    8   34   82  135  177 194   168  139   117   102   92   80   71    63   58   54   49    45   43   41    37   33   28    0

.40  0     0     0    0    0    0    0    6   25   63  111  155 189   174  146   122   106   94   82   73    64   58   54   50    45   43   41    37   33   28    0
.50  0     0     0    0    0    0    0    4   18   48   90  133 184   177  152   128   110   97   84   74    65   59   55   50    45   43   41    38   33   28    0
.75  0     0     0    0    0    0    0    1    7   22   47   80 142   169  164   144   124  108   91   79    68   61   56   51    47   44   42    38   34   28    0
1.0  0     0     0    0    0    0    0    0    0    1    3   11  51   112  155  166   154  134  109   91    76   65   59   54    49   45   43    39   35   28    2

1.5  0     0     0    0    0    0    0    0    0    0    0    0   2    16   50    97   136  154  145  121    95   75   64   58    54   49   45    41   37   29   10
2.0  0     0     0    0    0    0    0    0    0    0    0    0   0     0    4    18    47   86  134  146   125   94   75   64    58   53   49    42   39   31   21
2.5  0     0     0    0    0    0    0    0    0    0    0    0   0     0    0     3    11   44   95  140   127   97   77   65    58   54   45    41   33   26
3.3  0     0     0    0    0    0    0    0    0    0    0    0   0     0    0     0     1    7   29   86   135   122   95   76   65    58   49   43    35   27
  ----+---+ -- + - + -+ + +--+- -- +--- +-- + --+-- + - + -- + - + -- + -+-- + -+-- + -+ -+--+ --+-- +--+- + --+
          RAINFALL TYPE = II                                * * * TC = 0.5 HR * * *                                    SHEET 5 OF 10
```

Exhibit 5-II: Tabular hydrograph unit discharges (csm/in) for type II rainfall distribution – continued

HYDROGRAPH TIME (HOURS)

RAINFALL TYPE = II   * * * TC = 0.75 HR * * *   SHEET 6 OF 10

IA/P = 0.10   * * * TC = 0.75 HR * * *

TRVL TIME (hr)	11.0	11.3	11.6	11.9	12.0	12.1	12.2	12.3	12.4	12.5	12.6	12.7	12.8	13.0	13.2	13.4	13.6	13.8	14.0	14.3	14.6	15.0	15.5	16.0	16.5	17.0	17.5	18.0	19.0	20.0	22.0	26.0
0.0	13	18	24	36	46	68	115	194	294	380	424	410	369	252	172	123	93	74	61	49	41	35	31	27	24	22	20	19	17	15	12	0
.10	13	17	23	34	42	59	97	162	250	337	395	405	381	279	191	135	100	79	65	51	42	36	31	28	25	22	21	19	17	15	12	0
.20	11	15	20	28	32	39	52	82	135	211	295	362	391	351	255	178	127	95	75	57	46	38	32	29	26	23	21	20	17	15	12	0
.30	11	14	19	26	30	36	47	70	113	179	256	326	379	360	277	196	140	103	80	60	48	38	33	29	26	23	21	20	18	15	12	0
.40	10	12	16	22	25	28	33	42	61	96	151	221	291	367	336	255	182	131	98	69	54	42	34	30	27	24	22	20	18	16	12	0
.50	9	12	16	21	24	27	31	39	53	82	128	190	258	358	343	274	200	144	106	74	56	43	35	30	27	24	22	20	18	16	12	0
.75	8	10	13	17	18	21	23	26	31	39	55	82	122	230	314	329	281	217	161	104	72	51	38	33	29	26	23	21	19	16	12	1
1.0	6	8	10	13	14	15	17	19	21	23	27	32	42	89	177	272	319	303	249	163	105	66	45	36	31	27	24	22	19	17	13	3
1.5	4	6	7	9	10	10	11	12	14	15	16	18	20	27	46	90	163	241	295	275	204	119	66	45	35	31	27	24	20	18	13	7
2.0	3	4	5	6	7	7	8	9	9	10	11	12	13	16	20	28	48	89	151	245	274	213	115	65	44	35	30	27	22	19	14	10
2.5	1	2	3	4	4	5	5	6	6	7	7	8	8	10	12	14	17	24	37	86	170	260	219	127	71	47	36	31	24	20	16	11
3.0	1	1	2	3	3	3	4	4	4	5	5	5	6	7	8	10	11	14	17	30	64	157	247	205	122	70	46	36	27	22	17	12

IA/P = 0.30   * * * TC = 0.75 HR * * *

TRVL TIME (hr)	11.0	11.3	11.6	11.9	12.0	12.1	12.2	12.3	12.4	12.5	12.6	12.7	12.8	13.0	13.2	13.4	13.6	13.8	14.0	14.3	14.6	15.0	15.5	16.0	16.5	17.0	17.5	18.0	19.0	20.0	22.0	26.0
0.0	0	0	0	0	1	6	30	86	174	266	326	348	328	246	181	138	110	92	79	66	57	49	44	40	36	32	31	29	26	23	19	0
.10	0	0	0	0	0	1	4	22	65	137	223	292	329	303	228	170	131	106	89	73	61	52	46	41	37	33	31	29	26	23	19	0
.20	0	0	0	0	0	0	3	15	48	108	185	256	305	321	245	184	141	112	93	75	63	53	46	42	37	34	31	30	27	23	19	0
.30	0	0	0	0	0	0	2	11	36	84	151	221	277	308	260	199	152	120	98	78	65	54	47	42	38	34	31	30	27	23	19	0
.40	0	0	0	0	0	0	0	1	8	27	65	122	188	286	301	243	187	144	114	87	71	57	48	43	39	35	32	30	27	24	19	1
.50	0	0	0	0	0	0	0	1	6	20	50	98	158	263	292	254	200	155	122	91	74	59	49	44	40	35	32	30	27	24	19	1
.75	0	0	0	0	0	0	0	0	2	8	23	51	140	231	269	253	211	167	119	90	68	53	46	42	37	34	31	28	25	22	19	2
1.0	0	0	0	0	0	0	0	0	0	0	0	1	4	29	96	186	249	261	231	169	120	84	61	50	44	40	36	33	29	26	20	5
1.5	0	0	0	0	0	0	0	0	0	0	0	0	0	1	8	34	91	163	220	241	197	131	83	61	50	44	40	35	31	27	21	12
2.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	11	36	85	174	226	200	127	82	60	49	44	39	32	29	22	17
2.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	6	37	105	196	214	135	87	62	51	44	36	31	24	18
3.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	24	96	205	189	130	85	62	50	39	32	26	18

IA/P = 0.50   * * * TC = 0.75 HR * * *

TRVL TIME (hr)	11.0	11.3	11.6	11.9	12.0	12.1	12.2	12.3	12.4	12.5	12.6	12.7	12.8	13.0	13.2	13.4	13.6	13.8	14.0	14.3	14.6	15.0	15.5	16.0	16.5	17.0	17.5	18.0	19.0	20.0	22.0	26.0
0.0	0	0	0	0	0	0	2	16	45	92	137	166	185	170	146	125	110	98	89	79	70	63	58	53	48	44	42	41	37	33	28	0
.10	0	0	0	0	0	0	0	1	11	34	73	115	149	180	163	141	122	107	96	84	74	65	59	54	50	45	43	41	38	33	28	0
.20	0	0	0	0	0	0	0	1	8	25	57	96	131	173	166	146	126	111	99	86	76	66	59	55	50	46	43	41	38	34	28	0
.30	0	0	0	0	0	0	0	0	1	5	18	44	79	143	170	160	141	122	108	92	81	69	61	56	52	47	44	42	38	34	28	1
.40	0	0	0	0	0	0	0	0	0	4	14	34	64	127	166	162	145	127	111	95	82	70	62	57	52	47	44	42	38	34	28	1
.50	0	0	0	0	0	0	0	0	0	0	2	10	26	82	138	162	157	140	123	103	88	75	64	58	53	49	45	43	39	35	28	2
.75	0	0	0	0	0	0	0	0	0	0	1	4	12	47	98	139	154	148	135	113	96	80	67	60	55	50	46	43	39	36	29	3
1.0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	30	73	119	146	151	134	113	91	74	63	58	53	48	45	41	37	29	7
1.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	9	30	66	105	143	143	117	90	73	63	57	52	48	42	39	30	18
2.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	11	30	77	121	137	114	88	72	63	57	52	44	40	32	25
2.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	19	55	111	132	111	87	71	62	56	47	42	34	27
3.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	12	51	112	128	108	86	71	62	51	44	36	27

Exhibit 5-II: Tabular hydrograph unit discharges (csm/in) for type II rainfall distribution – continued

```
TRVL--------------------------------------------------------------HYDROGRAPH TIME(HOURS)----------------------------------------
TIME   11.3     11.9    12.1     12.3     12.5     12.7     13.0    13.4    13.8     14.3    15.0     16.0     17.0    18.0     20.0    26.0
(hr)11.0    11.6    12.0    12.2     12.4     12.6     12.8    13.2    13.6    14.0    14.6     15.5     16.5    17.5    19.0     22.0
---- +---+ -- + - +---+ -- +--- + -- +-- + --+ -- + -+ --+ -- + -+ --+ --+ --+ -- + --+---+ -- +---+ -- + ---+ --+---+ --+ - + --+
          IA/P = 0.10                                          * * * TC = 1.0 HR * * *                                    IA/P = 0.10
---- +---+ -- + - +---+ -- +--- + -- +-- + --+ -- + -+ --+ -- + -+ --+ --+ --+ -- + --+---+ -- +---+ -- + ---+ --+---+ --+ - + --+
0.0 11  15  20  29  35  47  72 112 168 231 289 329 357 313 239 175 133 103  83  63  50  40  33  29  26  23  21  20  17  15  12   0
.10 10  13  17  24  27  33  42  62  95 144 202 260 306 340 293 222 165 126  98  72  56  43  35  30  27  24  22  20  18  15  12   0
.20 10  13  17  23  26  30  38  54  82 123 176 232 281 332 303 238 179 136 105  76  59  45  35  30  27  24  22  20  18  16  12   1
.30  9  12  16  22  24  28  35  48  70 105 152 205 256 323 310 254 193 146 113  81  61  46  36  31  27  24  22  20  18  16  12   1

.40  8  11  14  19  21  23  27  32  42  61  91 132 181 276 318 294 237 181 138  95  70  51  39  32  28  25  23  21  18  16  12   1
.50  8  10  13  18  20  22  25  30  38  53  78 114 159 253 311 300 251 195 149 102  74  53  40  33  29  25  23  21  18  16  12   1
.75  7   8  11  14  16  17  19  21  25  30  38  53  76 146 228 284 293 256 208 143  99  66  46  36  31  27  24  22  19  17  13   2
1.0  5   7   8  11  12  13  14  16  17  19  22  25  31  57 111 188 256 286 272 208 144  90  56  41  33  29  26  23  20  17  13   4

1.5  4   5   6   8   8   9  10  11  12  13  14  15  17  22  33  59 107 171 231 268 235 157  88  56  41  33  29  25  21  18  14   8
2.0  2   3   4   5   5   6   6   7   7   8   9   9  10  12  15  19  27  44  78 157 231 252 167  96  59  42  34  29  23  20  15  11
2.5  1   2   2   3   4   4   4   5   5   6   6   7   7   8  10  12  15  19  27  58 120 214 241 159  94  59  42  34  26  21  16  11
3.0  0   1   1   2   2   3   3   3   4   4   4   5   5   6   7   8  10  12  14  22  44 113 214 231 152  91  58  42  29  23  17  12
---- +---+ -- + - +---+ -- +--- + -- +-- + --+ -- + -+ --+ -- + -+ --+ --+ --+ -- + --+---+ -- +---+ -- + ---+ --+---+ --+ - + --+
          IA/P = 0.30                                          * * * TC = 1.0 HR * * *                                    IA/P = 0.30
---- +---+ -- + - +---+ -- +--- + -- +-- + --+ -- + -+ --+ -- + -+ --+ --+ --+ -- + --+---+ -- +---+ -- + ---+ --+---+ --+ - + --+
0.0  0   0   0   0   1   4  16  42  83 137 195 243 271 292 227 178 143 117  98  79  66  55  47  42  38  34  31  30  27  23  19   0
.10  0   0   0   0   0   0   3  12  32  66 113 168 218 279 260 213 169 136 113  88  72  59  49  43  39  35  32  30  27  24  19   1
.20  0   0   0   0   0   0   2   9  24  52  93 143 193 271 271 225 180 145 119  92  75  60  50  44  39  35  32  30  27  24  19   1
.30  0   0   0   0   0   0   1   6  18  41  75 120 169 246 264 234 191 153 125  96  78  62  51  44  40  36  33  31  27  24  19   1

.40  0   0   0   0   0   0   1   4  14  32  61 100 190 251 259 222 181 146 109  86  67  53  46  41  37  33  31  28  25  19   2
.50  0   0   0   0   0   0   1   3  10  24  49  83 168 237 254 230 191 155 115  90  69  54  47  42  37  34  31  28  25  19   2
.75  0   0   0   0   0   0   0   0   1   4  12  25  76 150 213 239 228 198 149 112  82  61  50  44  39  35  32  29  26  20   4
1.0  0   0   0   0   0   0   0   0   0   0   1   2  15  51 113 182 226 234 197 150 104  72  56  47  42  38  34  30  27  20   7

1.5  0   0   0   0   0   0   0   0   0   0   0   0   0   4  18  51 104 162 220 210 158 102  71  56  47  42  37  31  28  22  13
2.0  0   0   0   0   0   0   0   0   0   0   0   0   0   0   1   5  20  49 121 187 209 152 100  70  55  47  41  34  29  23  17
2.5  0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   2   7  32  87 171 199 146  98  69  54  46  37  31  24  18
3.0  0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   2  13  62 158 192 151 103  73  56  41  34  26  18
---- +---+ -- + - +---+ -- +--- + -- +-- + --+ -- + -+ --+ -- + -+ --+ --+ --+ -- + --+---+ -- +---+ -- + ---+ --+---+ --+ - + --+
          IA/P = 0.50                                          * * * TC = 1.0 HR * * *                                    IA/P = 0.50
---- +---+ -- + - +---+ -- +--- + -- +-- + --+ -- + -+ --+ -- + -+ --+ --+ --+ -- + --+---+ -- +---+ -- + ---+ --+---+ --+ - + --+
0.0  0   0   0   0   0   0   1   7  21  42  71 101 126 160 154 138 123 110 100  87  77  67  60  55  50  46  43  41  38  34  28   1
.10  0   0   0   0   0   0   1   5  15  33  58  87 134 156 149 134 120 108  93  82  71  62  57  52  47  44  42  38  34  28   1
.20  0   0   0   0   0   0   1   4  12  26  48  74 123 153 153 137 123 111  95  84  72  63  57  52  47  44  42  38  34  28   1
.30  0   0   0   0   0   0   3   9  20  38  62 111 143 150 140 127 114  98  86  73  63  58  53  48  45  42  39  35  28   1

.40  0   0   0   0   0   0   0   2   6  16  31  75 120 145 148 137 123 106  91  77  66  59  54  49  45  43  39  35  29   2
.50  0   0   0   0   0   0   0   1   5  12  25  64 109 139 146 139 127 108  94  79  67  60  55  50  46  43  39  36  29   3
.75  0   0   0   0   0   0   0   0   2   5  12  39  78 115 136 140 134 117 101  84  70  62  56  51  47  44  40  36  29   4
1.0  0   0   0   0   0   0   0   0   0   1   7  26  59  96 125 139 133 117  97  78  66  59  54  49  46  41  37  29   8

1.5  0   0   0   0   0   0   0   0   0   0   0   2   9  26  54  86 123 133 119  95  77  66  59  54  49  43  39  31  17
2.0  0   0   0   0   0   0   0   0   0   0   0   0   3  10  25  64 104 129 116  93  76  65  58  53  45  41  33  24
2.5  0   0   0   0   0   0   0   0   0   0   0   0   0   2  10  34  84 125 117  96  78  66  59  49  43  35  27
3.0  0   0   0   0   0   0   0   0   0   0   0   0   0   0   1   6  32  89 122 114  94  77  66  53  45  37  27
---- +---+ -- + - +---+ -- +--- + -- +-- + --+ -- + -+ --+ -- + -+ --+ --+ --+ -- + --+---+ -- +---+ -- + ---+ --+---+ --+ - + --+
          RAINFALL TYPE = II                                   * * * TC = 1.0 HR * * *                                    SHEET 7 OF 10
```

Exhibit 5-II: Tabular hydrograph unit discharges (csm/in) for type II rainfall distribution – continued

TRVL ——————————————————————————————HYDROGRAPH TIME (HOURS)——————————————————————————————

IA/P = 0.10   * * * TC = 1.25 HR * * *

TRVL TIME (hr)	11.0	11.3	11.6	11.9	12.0	12.1	12.2	12.3	12.4	12.5	12.6	12.7	12.8	13.0	13.2	13.4	13.6	13.8	14.0	14.3	14.6	15.0	15.5	16.0	16.5	17.0	17.5	18.0	19.0	20.0	22.0	26.0
0.0	10	13	18	25	29	38	54	81	118	163	213	256	284	311	266	212	163	129	104	78	61	47	37	31	27	24	22	20	18	16	12	1
.10	10	13	17	23	27	34	47	69	102	143	189	234	267	297	274	226	175	138	111	82	64	48	38	31	27	24	22	20	18	16	12	1
.20	9	11	15	20	22	26	31	42	60	88	124	168	212	280	292	261	212	166	131	95	72	53	40	33	28	25	23	21	18	16	12	1
.30	8	11	14	19	21	24	29	38	53	76	108	148	190	263	288	268	224	177	140	101	76	55	41	34	29	25	23	21	18	16	12	2
.40	8	10	13	18	20	23	27	34	46	66	94	130	170	245	282	273	235	188	149	107	80	58	42	34	29	26	23	21	19	16	12	2
.50	7	9	12	16	17	19	22	25	31	41	58	82	114	190	256	279	262	222	178	127	93	65	46	36	31	27	24	22	19	17	13	2
.75	6	8	10	14	15	17	19	21	25	31	41	56	78	139	207	254	265	245	208	152	110	75	51	39	32	28	25	22	19	17	13	3
1.0	5	6	8	10	11	13	14	15	17	19	22	26	33	60	109	173	230	261	255	208	153	100	64	46	36	30	26	24	20	18	13	5
1.5	3	4	5	7	7	8	9	9	10	11	12	13	15	19	27	45	79	130	186	247	239	180	108	68	48	37	31	27	22	19	14	10
2.0	2	3	4	5	6	6	7	7	8	8	9	10	11	13	16	22	35	59	98	171	236	236	156	95	62	44	35	30	23	20	15	11
2.5	1	2	2	3	4	4	4	5	5	5	6	6	7	8	10	12	14	19	28	58	114	197	226	163	102	65	46	36	26	21	16	11
3.0	0	1	1	2	2	2	2	3	3	3	4	4	4	5	6	7	9	10	13	19	35	88	184	218	169	109	70	49	31	24	18	12

IA/P = 0.30   * * * TC = 1.25 HR * * *

TRVL TIME (hr)	11.0	11.3	11.6	11.9	12.0	12.1	12.2	12.3	12.4	12.5	12.6	12.7	12.8	13.0	13.2	13.4	13.6	13.8	14.0	14.3	14.6	15.0	15.5	16.0	16.5	17.0	17.5	18.0	19.0	20.0	22.0	26.0
0.0	0	0	0	0	0	2	9	25	50	86	130	174	208	253	235	201	164	136	115	92	76	61	51	44	39	35	32	30	27	24	19	1
.10	0	0	0	0	0	1	6	19	40	71	110	153	217	247	227	191	157	131	103	84	66	53	46	41	36	33	31	28	24	21	19	2
.20	0	0	0	0	0	1	4	14	31	58	93	133	202	239	231	199	165	138	108	87	68	55	47	41	37	33	31	28	25	21	19	2
.30	0	0	0	0	0	0	1	3	10	24	46	77	152	210	236	222	190	158	122	97	74	58	49	43	38	34	32	28	25	22	20	3
.40	0	0	0	0	0	0	0	0	2	8	19	37	64	134	196	232	225	198	166	127	101	77	59	50	43	38	35	32	28	25	20	3
.50	0	0	0	0	0	0	0	0	2	6	14	30	82	151	206	228	217	189	146	113	85	64	52	45	40	36	33	29	26	23	20	5
.75	0	0	0	0	0	0	0	0	1	2	7	15	49	105	164	205	218	205	166	129	95	69	55	47	41	37	33	29	26	23	20	6
1.0	0	0	0	0	0	0	0	0	0	0	0	1	9	32	77	134	185	214	203	166	120	83	63	52	45	39	35	30	27	21	16	10
1.5	0	0	0	0	0	0	0	0	0	0	0	0	0	2	11	33	72	121	184	203	171	117	82	62	51	44	39	32	29	22	18	15
2.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	7	21	67	132	194	174	123	86	64	52	45	35	31	24	22	18
2.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	13	46	121	187	166	119	84	63	52	45	39	32	25	22	18
3.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	8	44	129	180	160	116	83	63	52	44	35	27	18

IA/P = 0.50   * * * TC = 1.25 HR * * *

TRVL TIME (hr)	11.0	11.3	11.6	11.9	12.0	12.1	12.2	12.3	12.4	12.5	12.6	12.7	12.8	13.0	13.2	13.4	13.6	13.8	14.0	14.3	14.6	15.0	15.5	16.0	16.5	17.0	17.5	18.0	19.0	20.0	22.0	26.0
0.0	0	0	0	0	0	0	1	5	13	26	44	68	91	125	142	142	128	117	107	94	83	72	63	57	52	47	44	42	38	34	28	2
.10	0	0	0	0	0	0	0	3	10	20	36	57	100	129	140	136	125	114	100	88	76	65	59	54	49	45	43	39	35	29	28	3
.20	0	0	0	0	0	0	0	0	3	10	20	30	48	90	122	139	139	127	117	102	90	77	66	60	54	49	45	43	39	35	29	3
.30	0	0	0	0	0	0	0	0	0	2	5	12	24	59	98	126	137	134	125	109	96	82	69	61	56	51	46	44	40	36	29	4
.40	0	0	0	0	0	0	0	0	1	4	10	19	51	89	119	134	136	127	112	98	83	70	62	56	51	47	44	40	36	29	28	5
.50	0	0	0	0	0	0	0	0	1	3	7	15	43	79	112	131	135	129	114	100	85	71	63	57	52	47	44	40	36	29	28	6
.75	0	0	0	0	0	0	0	0	0	0	1	3	15	39	71	102	123	130	125	112	94	78	67	60	54	49	46	41	37	29	28	9
1.0	0	0	0	0	0	0	0	0	0	0	0	0	1	4	17	40	71	101	121	129	121	103	84	71	62	56	51	47	42	38	30	13
1.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	10	26	51	92	119	125	105	86	72	63	57	52	44	40	32	23
2.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	11	35	72	112	122	103	85	71	63	56	47	42	34	26
2.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	7	24	66	111	119	101	83	71	62	51	44	37	27
3.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4	23	71	110	116	99	82	70	55	46	37	27

RAINFALL TYPE = II   * * * TC = 1.25 HR * * *   SHEET 8 OF 10

Exhibit 5-II: Tabular hydrograph unit discharges (csm/in) for type II rainfall distribution – continued

```
TRVL------------------------------------------------------------HYDROGRAPH TIME(HOURS)------------------------------------------------------------
TIME   11.3       11.9     12.1       12.3       12.5       12.7     13.0       13.4       13.8    14.3       15.0       16.0       17.0       18.0       20.0       26.0
(hr)11.0      11.6       12.0      12.2       12.4       12.6       12.8     13.2       13.6      14.0    14.6       15.5       16.5       17.5       19.0       22.0
----+---+--+-+-+---+---+----+---+--+-- + --+--+-- + - +--+ --+-- + -+--+ -- + -+---+---+--+--- +-- + - +--+---+-- +---+--+-- + --+---+-- + - +--+
        IA/P = 0.10                                         * * * TC = 1.5 HR * * *                                                IA/P = 0.10
----+---+--+-+-+---+---+----+---+--+-- + --+--+-- + - +--+ --+-- + -+--+ -- + -+---+---+--+--- +-- + - +--+---+-- +---+--+-- + --+---+-- + - +--+
0.0  9   11   15   21   25   31   41   58   82  112  147  184 216 255  275 236 198  159 129  98   76   57   43   35   30   25   23   21   18   16   12    1
.10  8   10   13   18   20   23   28   37   51   72   98  131 166 226  265 254 226  187 151 113   86   63   46   37   31   26   23   21   19   16   13    2
.20  8   10   13   17   19   22   26   33   45   63   87  116 149 212  259 259 233  197 160 119   90   66   48   38   32   27   24   22   19   16   13    2
.30  7    9   12   16   18   21   24   30   40   55   76  103 134 197  244 255 238  206 169 125   95   68   49   38   32   27   24   22   19   17   13    2

.40  7    8   11   14   15   17   19   23   28   36   49   67  91 151  208 247 252  230 196 146  109   77   54   41   34   29   25   22   19   17   13    3
.50  6    8   10   13   15   16   18   21   26   33   43   59  80 136  194 238 249  235 204 154  115   81   56   42   34   29   25   23   20   17   13    3
.75  5    7    8   11   12   13   14   16   18   21   25   32  42  76  125 179 222  240 233 193  148  102   67   48   38   32   27   24   20   18   13    5
1.0  4    5    7    8    9   10   11   12   13   14   16   18  22  34   59 101 152  201 236 230  193  135   86   59   44   35   30   26   21   18   14    7

1.5  3    4    5    6    6    7    8    8    9   10   11   12  13  16   22  34  58   95 141 203  226  197 131   84   58   43   35   29   23   20   15   10
2.0  1    2    3    4    4    5    5    6    6    7    7    8   9  10   12  16  22   34  56 110  172  218 187  126   82   57   43   34   25   21   16   11
2.5  1    1    2    2    3    3    3    4    4    4    5    5   6   7    8   9  11   14  18  34   69  141 210  190  133   87   60   44   30   23   17   12
3.0  0    0    1    1    2    2    2    2    3    3    3    3   4   5    5   6   8    9  11  16   27   66 149  204  181  128   85   58   35   25   18   12
----+---+--+-+-+---+---+----+---+--+-- + --+--+-- + - +--+ --+-- + -+--+ -- + -+---+---+--+--- +-- + - +--+---+-- +---+--+-- + --+---+-- + - +--+
        IA/P = 0.30                                         * * * TC = 1.5 HR * * *                                                IA/P = 0.30
----+---+--+-+-+---+---+----+---+--+-- + --+--+-- + - +--+ --+-- + -+--+ -- + -+---+---+--+--- +-- + - +--+---+-- +---+--+-- + --+---+-- + - +--+
0.0  0    0    0    0    0    1    6   15   31   53   80  112 144 193  225 208 186  157 134 108   89   70   56   48   42   37   34   31   28   25   20    2
.10  0    0    0    0    0    0    1    4   12   25   43   68  97 157  198 219 203  178 151 120   98   77   60   50   44   38   35   32   28   25   20    3
.20  0    0    0    0    0    0    0    1    3    9   19   35  57 114  168 201 213  196 171 135  108   84   64   53   46   40   36   33   29   26   20    4
.30  0    0    0    0    0    0    0    1    2    7   15   29  48 100  155 193 210  200 177 140  113   87   66   54   46   41   36   33   29   26   20    5

.40  0    0    0    0    0    0    0    2    5   12   23   39  87 141  184 207 202  182 146 117   89   68   55   47   41   36   33   29   26   20    5
.50  0    0    0    0    0    0    0    0    1    4    9   18  51 101  153 190 205  197 164 131   99   73   58   49   43   38   34   30   26   20    7
.75  0    0    0    0    0    0    0    0    0    2    4    9  30   68  116 160 189  197 179 147  110   80   62   52   45   39   35   30   27   21    8
1.0  0    0    0    0    0    0    0    0    0    0    0    0   1   5   20   49  92  138 175 195  178  137   97   72   57   48   42   37   31   28   21   12

1.5  0    0    0    0    0    0    0    0    0    0    0    0   0   0    1   7  21   47  85 145  187  178 133   95   71   57   48   42   34   29   23   16
2.0  0    0    0    0    0    0    0    0    0    0    0    0   0   0    0   1   4   13  45  97  162  180 138   99   74   58   49   38   32   25   18
2.5  0    0    0    0    0    0    0    0    0    0    0    0   0   0    0   0   1    8  31   89  161  174 133   97   72   58   42   34   26   18
3.0  0    0    0    0    0    0    0    0    0    0    0    0   0   0    0   0   0    1   5  29   98  160  169  129   95   71   48   37   28   19
----+---+--+-+-+---+---+----+---+--+-- + --+--+-- + - +--+ --+-- + -+--+ -- + -+---+---+--+--- +-- + - +--+---+-- +---+--+-- + --+---+-- + - +--+
        IA/P = 0.50                                         * * * TC = 1.5 HR * * *                                                IA/P = 0.50
----+---+--+-+-+---+---+----+---+--+-- + --+--+-- + - +--+ --+-- + -+--+ -- + -+---+---+--+--- +-- + - +--+---+-- +---+--+-- + --+---+-- + - +--+
.0   0    0    0    0    0    0    0    3    8   16   27   42  59  92  116 128 130  121 112 100   90   78   67   60   55   50   46   43   39   35   29    4
.10  0    0    0    0    0    0    0    2    6   12   22   35  51  84  110 125 128  123 114 102   91   79   68   61   55   50   46   43   39   35   29    4
.20  0    0    0    0    0    0    0    1    4   10   18   29  60  91  114 126 128  120 108  97   83   71   63   57   52   47   44   40   36   29    5
.30  0    0    0    0    0    0    0    1    3    8   14   24  52  83  108 123 126  122 110  98   85   72   63   57   52   48   44   40   36   29    6

.40  0    0    0    0    0    0    0    1    2    6   12   31  60  90  112 124 126  116 104  90   75   66   59   54   49   45   41   37   29    8
.50  0    0    0    0    0    0    0    0    2    4    9   26   53  83  106 121 125  118 106  91   77   67   60   54   49   46   41   37   29    8
.75  0    0    0    0    0    0    0    0    1    2    5   16   36  62   88 108 119  122 112  97   81   69   62   56   51   47   42   38   30   11
1.0  0    0    0    0    0    0    0    0    0    0    3   10   26  49   75  98 118  121 108  90   76   66   59   54   49   43   39   31   16

1.5  0    0    0    0    0    0    0    0    0    0    0    1    3  11   25  45  80  107 118 106   89   75   65   59   53   45   41   32   23
2.0  0    0    0    0    0    0    0    0    0    0    0    0    1   4   11  32  63  100 115 104   87   74   65   58   48   42   34   26
2.5  0    0    0    0    0    0    0    0    0    0    0    0    0   0    1   4  16   48  94 113  105   89   76   66   53   45   36   27
3.0  0    0    0    0    0    0    0    0    0    0    0    0    0   0    0   0   3   15  54  96  111  103   88   75   58   48   38   28
----+---+--+-+-+---+---+----+---+--+-- + --+--+-- + - +--+ --+-- + -+--+ -- + -+---+---+--+--- +-- + - +--+---+-- +---+--+-- + --+---+-- + - +--+
   RAINFALL TYPE = II                                       * * * TC = 1.5 HR * * *                                              SHEET 9 OF 10
```

Exhibit 5-II: Tabular hydrograph unit discharges (csm/in) for type II rainfall distribution – continued

HYDROGRAPH TIME (HOURS)

IA/P = 0.10 * * * TC = 2.0 HR * * * IA/P = 0.10

TRVL TIME (hr)	11.0	11.3	11.6	11.9	12.0	12.1	12.2	12.3	12.4	12.5	12.6	12.7	12.8	13.0	13.2	13.4	13.6	13.8	14.0	14.3	14.6	15.0	15.5	16.0	16.5	17.0	17.5	18.0	19.0	20.0	22.0	26.0
0.0	7	9	12	16	18	21	27	36	49	64	82	104	127	171	201	226	208	193	171	132	105	79	58	45	36	30	26	23	20	17	13	3
.10	6	8	10	14	15	17	20	25	33	43	57	74	94	139	179	204	218	205	188	150	118	88	63	48	38	32	27	24	20	17	13	4
.20	6	8	10	13	14	16	19	23	29	39	51	66	84	128	169	198	213	207	192	157	123	91	65	49	39	33	28	24	20	17	13	4
.30	6	7	9	12	14	15	18	21	27	35	45	59	76	117	159	191	211	208	196	163	128	95	68	51	40	33	28	25	20	18	13	4
.40	5	6	8	11	12	13	15	17	20	24	31	41	53	87	128	167	197	209	205	180	145	106	75	55	43	35	30	26	21	18	14	5
.50	5	6	8	10	11	13	14	16	18	22	28	37	48	78	118	158	190	208	208	185	151	111	77	57	44	36	30	26	21	18	14	5
.75	4	6	7	9	10	11	12	13	15	18	22	27	35	58	91	129	164	191	202	194	167	125	87	63	48	38	32	27	22	18	14	6
1.0	3	4	6	7	8	8	9	10	11	12	14	16	18	28	46	74	110	147	178	201	193	156	108	76	56	43	35	30	23	19	14	8
1.5	2	3	3	5	5	5	6	6	7	8	8	9	10	12	16	23	36	57	86	137	178	195	160	113	79	58	45	36	26	21	16	11
2.0	1	2	2	3	3	4	4	4	5	5	6	6	7	8	10	12	16	23	35	67	112	169	190	154	110	78	57	44	30	23	17	11
2.5	0	1	1	2	2	2	3	3	3	4	4	4	5	6	7	8	9	12	16	28	52	105	170	185	149	107	76	56	35	26	18	12
3.0	0	0	1	1	1	1	1	2	2	2	2	3	3	3	4	5	6	7	8	12	18	41	99	161	180	152	112	80	45	30	19	12

IA/P = 0.30 * * * TC = 2.0 HR * * * IA/P = 0.30

TRVL TIME (hr)	11.0	11.3	11.6	11.9	12.0	12.1	12.2	12.3	12.4	12.5	12.6	12.7	12.8	13.0	13.2	13.4	13.6	13.8	14.0	14.3	14.6	15.0	15.5	16.0	16.5	17.0	17.5	18.0	19.0	20.0	22.0	26.0
0.0	0	0	0	0	0	1	3	8	15	25	38	54	74	115	148	168	185	170	159	131	110	89	70	57	49	42	38	34	29	26	20	5
.10	0	0	0	0	0	0	0	2	6	12	21	32	47	85	124	153	169	180	168	145	120	96	75	60	51	44	39	35	30	26	20	6
.20	0	0	0	0	0	0	0	2	4	10	17	27	41	75	114	146	165	175	170	149	124	99	76	62	52	45	39	35	30	27	21	6
.30	0	0	0	0	0	0	0	0	1	3	7	14	23	49	86	122	151	170	174	160	136	107	82	66	54	47	41	37	31	27	21	8
.40	0	0	0	0	0	0	0	0	1	2	6	11	19	43	77	113	144	165	173	163	140	111	85	67	55	47	41	37	31	27	21	8
.50	0	0	0	0	0	0	0	0	1	2	4	9	16	37	68	104	136	160	171	165	144	114	87	69	56	48	42	37	31	27	21	9
.75	0	0	0	0	0	0	0	0	0	0	1	2	5	15	34	62	96	127	152	167	160	132	100	77	62	52	45	40	32	28	22	11
1.0	0	0	0	0	0	0	0	0	0	0	0	0	3	10	24	48	79	111	150	166	153	118	90	71	58	49	43	34	29	23	14	
1.5	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	10	24	45	88	130	161	148	115	88	70	57	48	37	31	24	17	
2.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4	10	32	68	122	157	143	113	87	68	56	42	34	26	18	
2.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4	16	51	114	153	144	116	89	70	49	38	27	19		
3.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	15	59	118	150	140	113	88	57	42	29	19			

IA/P = 0.50 * * * TC = 2.0 HR * * * IA/P = 0.50

TRVL TIME (hr)	11.0	11.3	11.6	11.9	12.0	12.1	12.2	12.3	12.4	12.5	12.6	12.7	12.8	13.0	13.2	13.4	13.6	13.8	14.0	14.3	14.6	15.0	15.5	16.0	16.5	17.0	17.5	18.0	19.0	20.0	22.0	26.0
0.0	0	0	0	0	0	0	0	1	4	8	13	20	28	51	73	92	104	111	112	106	97	86	75	66	60	54	49	46	41	37	30	7
.10	0	0	0	0	0	0	0	1	3	6	11	17	24	45	68	87	101	109	112	107	98	88	76	67	60	55	50	46	41	37	30	8
.20	0	0	0	0	0	0	0	1	2	5	9	14	21	40	62	82	98	107	111	108	100	89	77	68	61	55	50	47	41	37	30	8
.30	0	0	0	0	0	0	0	0	0	2	4	7	12	26	46	67	86	100	108	111	104	93	80	70	63	57	52	48	42	38	30	10
.40	0	0	0	0	0	0	0	0	0	1	3	6	10	22	41	62	81	96	106	110	105	94	81	71	63	57	52	48	42	38	30	11
.50	0	0	0	0	0	0	0	0	0	0	1	2	4	13	27	46	67	85	99	110	108	98	85	74	66	59	54	49	43	39	31	13
.75	0	0	0	0	0	0	0	0	0	0	0	1	2	7	18	33	52	71	88	104	108	102	89	77	68	61	55	50	44	39	31	15
1.0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	5	13	25	43	62	87	103	108	97	84	73	65	59	53	45	41	32	20
1.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	5	12	24	48	74	99	106	95	83	72	64	58	48	43	34	25
2.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	5	17	37	69	99	104	94	82	72	64	52	45	36	27
2.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	8	27	65	95	102	95	83	73	58	49	38	28
3.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	8	32	68	95	101	93	82	64	52	40	28

RAINFALL TYPE = II * * * TC = 2.0 HR * * * SHEET 10 OF 10

Exhibit 5-III: Tabular hydrograph unit discharges (csm/in) for type III rainfall distribution

```
TRVL--------------------------------------------------------HYDROGRAPH TIME(HOURS)------------------------------------------------
TIME   11.3      11.9      12.1      12.3      12.5      12.7    13.0      13.4      13.8    14.3    15.0    16.0    17.0    18.0    20.0    26.0
(hr)11.0     11.6      12.0      12.2      12.4      12.6      12.8    13.2      13.6      14.0    14.6    15.5    16.5    17.5    19.0    22.0
----+---+--+--+-+-+-+--+---+--+--+--+-+--+---+-+--+---+-+--+---+-+--+--+-+--+---+-+--+---+--+---+--+--+-+--+---+--+-+--+-+--+--+
        IA/P = 0.10                                      * * * TC = 0.1 HR * * *                              IA/P = 0.10
----+---+--+--+-+-+-+--+---+--+--+--+-+--+---+-+--+---+-+--+---+-+--+--+-+--+---+-+--+---+--+---+--+--+-+--+---+--+-+--+-+--+--+
0.0 29   38   57 172 241 425  662 531 345 265 191 130 101  83   68   62   58   54  50  44  41  37  32  27  23  21  19  16  14 13 11  0
.10 26   32   47  98 147 210  353 559 540 410 313 231 164 101   80   67   61   57  53  47  43  39  34  28  24  22  19  17  14 13 11  0
.20 25   31   44  86 127 182  296 471 517 446 357 273 200 117   86   70   63   58  54  48  44  39  34  29  24  22  20  17  14 13 11  0
.30 22   28   37  57  76 110  158 250 398 477 457 390 312 178  111   83   69   62  57  51  45  41  36  31  25  23  20  18  15 13 11  0

.40 21   27   35  53  68  96  137 213 336 430 448 410 345 210  128   90   72   64  58  52  46  41  36  31  26  23  20  18  15 13 11  0
.50 19   24   30  43  49  62   85 120 182 284 382 426 415 305  188  120   86   71  63  55  49  43  38  33  27  24  21  19  15 14 11  0
.75 17   22   27  37  41  49   62  84 120 181 258 327 375 353  264  177  120   88  72  59  52  45  39  34  29  25  22  20  15 14 11  0
1.0 13   17   22  27  30  33   37  43  52  66  91 131 190 315  358  307  220  149 104  72  60  50  43  37  32  27  23  21  16 14 12  0

1.5  9   11   14  18  19  21   23  25  27  29  33  37  44  70  134  229  304  318 269 172 106  68  52  44  38  33  28  24  19 15 12  2
2.0  6    8   10  13  14  15   16  17  19  20  22  24  26  32   45   73  130  207 271 292 216 121  68  51  43  37  32  27  21 16 13  6
2.5  3    4    6   8   9  10   10  11  12  13  14  16  17  20   23   29   38   57  97 189 271 244 136  75  53  44  38  33  24 19 14  9
3.0  1    2    4   5   6   6    7   8   8   9  10  11  12  14   16   19   23   28  38  74 146 256 226 131  74  53  44  37  27 21 14 10
----+---+--+--+-+-+-+--+---+--+--+--+-+--+---+-+--+---+-+--+---+-+--+--+-+--+---+-+--+---+--+---+--+--+-+--+---+--+-+--+-+--+--+
        IA/P = 0.30                                      * * * TC = 0.1 HR * * *                              IA/P = 0.30
----+---+--+--+-+-+-+--+---+--+--+--+-+--+---+-+--+---+-+--+---+-+--+--+-+--+---+-+--+---+--+---+--+--+-+--+---+--+-+--+-+--+--+
0.0  0    0    0  48 106 296  597 496 368 300 221 155 125 106   89   83   79   74  69  62  59  54  47  40  35  32  28  25  22 20 17  0
.10  0    0    0  35  82 225  473 488 408 336 260 190 147 113   94   85   80   75  70  63  59  54  48  40  35  32  29  25  22 20 17  0
.20  0    0    0   7  26  64  171 372 449 422 365 295 225 142  109   92   84   79  74  66  61  56  50  43  36  33  30  26  22 20 17  0
.30  0    0    0   5  19  49  130 291 397 414 381 323 258 161  118   96   86   80  75  68  62  57  50  43  37  33  30  27  22 20 17  0

.40  0    0    0   0   3  14   37  99 227 340 389 384 343 229  152  113   94   85  79  71  65  59  52  46  38  34  31  28  23 21 17  0
.50  0    0    0   0   2  10   28  75 177 286 355 374 354 256  170  123   99   87  80  73  66  60  53  46  39  35  31  28  23 21 18  0
.75  0    0    0   0   0   1    4  13  35  86 161 238 296 325  266  194  141  110  93  80  71  63  56  50  43  37  33  30  24 21 18  0
1.0  0    0    0   0   0   0    0   2   6  19  48  99 165 282  311  264  197  144 112  88  77  67  59  52  45  39  34  31  24 22 18  0

1.5  0    0    0   0   0   0    0   0   0   0   0   1   4  29   99  197  265  277 236 162 113  84  69  60  53  46  39  35  28 23 19  2
2.0  0    0    0   0   0   0    0   0   0   0   0   0   0   1    8   35   94  172 233 253 196 124  83  68  59  52  45  39  31 25 20  8
2.5  0    0    0   0   0   0    0   0   0   0   0   0   0   0    0    2   11   37  88 184 235 201 122  83  67  59  52  45  34 27 21 13
3.0  0    0    0   0   0   0    0   0   0   0   0   0   0   0    0    0    1    7  38 110 222 202 131  88  69  60  52  39  31 22 15
----+---+--+--+-+-+-+--+---+--+--+--+-+--+---+-+--+---+-+--+---+-+--+--+-+--+---+-+--+---+--+---+--+--+-+--+---+--+-+--+-+--+--+
        IA/P = 0.50                                      * * * TC = 0.1 HR * * *                              IA/P = 0.50
----+---+--+--+-+-+-+--+---+--+--+--+-+--+---+-+--+---+-+--+---+-+--+--+-+--+---+-+--+---+--+---+--+--+-+--+---+--+-+--+-+--+--+
0.0  0    0    0   0   0 107  226 282 258 209 155 130 123 107   97   95   91   87  82  78  74  69  61  52  47  43  39  35  32 29 25  0
.10  0    0    0   0   0  71  174 246 254 224 178 146 130 112  100   96   92   88  83  78  75  70  62  53  48  44  40  35  32 29 25  0
.20  0    0    0   0   0   0   48 132 208 239 229 195 162 127  109   99   95   91  87  80  77  72  65  56  49  45  41  36  32 30 25  0
.30  0    0    0   0   0   0   32  99 172 216 225 205 176 136  113  101   96   92  88  81  77  72  65  57  50  45  41  37  32 30 26  0

.40  0    0    0   0   0   0   21  73 139 191 213 208 164 131  111  100   95   91  85  79  74  68  60  51  47  43  38  33  30 26  0
.50  0    0    0   0   0   0   14  53 110 164 197 204 174 139  116  103   97   92  86  80  75  68  60  52  47  43  39  33  30 26  0
.75  0    0    0   0   0   0    5  22  54  96 137 166 180 159  134  115  103   96  89  83  77  70  63  54  48  44  40  33  31 26  0
1.0  0    0    0   0   0   0    0   0   2  10  29  60 132 175  169  146  124  109  97  89  81  74  67  59  52  47  43  34  31 27  0

1.5  0    0    0   0   0   0    0   0   0   0   0   2  17  58  112  150  159  148 122 104  91  81  74  67  59  51  46  38  32 28  1
2.0  0    0    0   0   0   0    0   0   0   0   0   0   0   4   20   54   98  133 149 133 108  90  80  73  66  58  51  42  34 29  7
2.5  0    0    0   0   0   0    0   0   0   0   0   0   0   0    2   12   35   87 131 141 111  92  81  74  66  59  46  38  30 18
3.0  0    0    0   0   0   0    0   0   0   0   0   0   0   0    1    4   22   63 120 136 110  91  81  73  66  51  42  31 22
----+---+--+--+-+-+-+--+---+--+--+--+-+--+---+-+--+---+-+--+---+-+--+--+-+--+---+-+--+---+--+---+--+--+-+--+---+--+-+--+-+--+--+
        RAINFALL TYPE = III                             * * * TC = 0.1 HR * * *                              SHEET 1 OF 10
```

Exhibit 5-III: Tabular hydrograph unit discharges (csm/in) for type III rainfall distribution – continued

```
TRVL-------------------------------------------------HYDROGRAPH TIME(HOURS)---------------------------------------
TIME   11.3    11.9   12.1   12.3   12.5   12.7   13.0    13.4    13.8    14.3   15.0   16.0   17.0   18.0   20.0   26.0
(hr)11.0   11.6   12.0   12.2   12.4   12.6   12.8   13.2   13.6   14.0   14.6   15.5   16.5   17.5   19.0   22.0
----+---+-- + - + -+-- +---+-- +---+--- + --+-- + -+--+ --+-- + -- +--+-+--+-- + --+--+-- +---+--+--+--- +--+-- + --+-- +

           IA/P = 0.10                              * * * TC = 0.2 HR * * *                        IA/P = 0.10

0.0  27  34  50 119 176 258 448 565 483 358 270 194 137  93  75  65  60  56  52  46  42  38  33  28  24  21  19  17  14  13  11   0
.10  24  30  42  70 103 151 222 372 501 489 402 314 234 128  91  73  64  59  55  49  44  40  35  30  25  22  20  17  15  13  11   0
.20  23  29  39  64  90 131 192 312 438 472 425 351 273 153 101  78  66  61  56  50  45  40  35  30  25  22  20  18  15  13  11   0
.30  21  26  33  48  59  79 114 166 263 380 441 431 378 238 141  96  75  65  60  53  47  42  37  32  26  23  21  18  15  13  11   0

.40  20  25  32  45  54  71  99 144 224 328 404 422 392 271 165 108  81  68  61  54  48  43  37  32  27  23  21  19  15  14  11   0
.50  18  22  28  38  43  51  64  88 125 191 282 363 402 356 241 151 102  78  66  57  51  44  39  34  28  24  22  19  15  14  11   0
.75  15  18  23  30  33  37  42  50  64  87 125 184 253 359 341 260 177 121  89  67  57  48  42  36  31  26  23  21  16  14  12   0
1.0  12  16  20  25  28  30  33  37  43  53  68  94 135 251 345 330 260 181 125  81  63  52  44  38  33  28  24  21  17  14  12   0

1.5   8  10  13  17  18  19  21  23  25  27  30  33  38  55  99 179 266 308 289 201 124  74  54  45  39  34  29  24  19  15  12   2
2.0   5   7   9  12  13  14  15  16  17  19  20  22  24  29  38  57  99 166 238 284 239 141  75  54  44  38  33  28  21  17  13   6
2.5   2   4   5   7   8   9  10  10  11  12  13  14  16  18  22  26  33  46  75 155 240 264 154  83  56  46  39  34  25  19  14   9
3.0   1   2   3   5   5   6   6   7   8   8   9  10  11  13  15  18  21  25  33  59 118 220 250 147  82  56  45  39  28  22  14  10

           IA/P = 0.30                              * * * TC = 0.2 HR * * *                        IA/P = 0.30

0.0   0   0   0  17  49 115 297 489 462 379 307 230 167 119  98  86  81  76  72  64  60  55  48  41  36  32  29  26  22  20  17   0
.10   0   0   0  12  37  89 228 402 442 400 338 266 200 131 104  89  82  78  73  65  61  56  49  42  36  33  29  26  22  20  17   0
.20   0   0   0   1   8  27  69 175 326 403 401 359 297 182 126 100  88  81  76  69  63  58  51  44  37  34  30  27  23  21  17   0
.30   0   0   0   1   6  20  52 134 262 356 386 368 321 208 140 107  91  83  78  70  64  58  52  45  38  34  31  27  23  21  17   0

.40   0   0   0   1   4  15  40 103 209 307 360 365 336 234 157 116  95  85  79  72  65  59  53  46  39  34  31  28  23  21  17   0
.50   0   0   0   0   0   3  11  30  78 165 260 327 352 305 213 147 111  93  84  75  68  61  55  48  41  35  32  29  23  21  18   0
.75   0   0   0   0   0   1   5  14  37  83 150 220 276 311 264 196 144 112  94  80  72  64  56  50  43  37  33  30  24  21  18   0
1.0   0   0   0   0   0   0   0   0   2   7  20  48  94 215 299 286 230 171 128  95  81  69  61  54  47  40  35  32  25  22  18   0

1.5   0   0   0   0   0   0   0   0   0   0   0   0   2  13  56 139 224 266 253 186 128  89  71  61  54  48  41  36  29  23  19   3
2.0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   3  17  58 126 196 245 214 140  89  71  61  54  47  40  32  25  20   9
2.5   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   1   5  21  57 145 228 213 136  89  70  60  53  46  35  28  21  13
3.0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   3  23  78 180 215 145  94  72  61  54  41  32  22  15

           IA/P = 0.50                              * * * TC = 0.2 HR * * *                        IA/P = 0.50

0.0   0   0   0   0   0  10 110 206 245 245 208 162 137 117 102  96  93  90  85  79  76  71  63  54  48  44  40  36  32  29  25   0
.10   0   0   0   0   0   7  76 163 217 235 217 181 152 122 106  98  94  90  86  80  76  71  64  55  49  45  41  36  32  29  25   0
.20   0   0   0   0   0   5  52 126 187 219 218 193 145 119 104  97  93  89  83  78  73  66  58  50  46  42  37  32  30  26       0
.30   0   0   0   0   0   0   3  36  96 156 198 211 199 155 125 108  99  94  90  84  79  74  67  59  51  46  42  38  32  30  26   0

.40   0   0   0   0   0   0   0   2  24  72 128 175 199 184 147 121 106  98  93  87  81  76  69  61  53  48  44  39  33  30  26   0
.50   0   0   0   0   0   0   0   1  17  54 103 151 183 194 156 127 109 100  95  88  82  76  70  62  54  48  44  40  33  30  26   0
.75   0   0   0   0   0   0   0   0   6  23  52  90 127 174 168 146 124 109 100  92  85  78  72  65  56  49  45  41  34  31  26   0
1.0   0   0   0   0   0   0   0   0   0   0   2  11  29  91 149 169 157 135 117 100  92  83  76  69  61  53  48  43  35  32  27   0

1.5   0   0   0   0   0   0   0   0   0   0   0   0   0   7  33  81 128 155 155 130 109  94  83  75  68  60  53  47  39  33  28   2
2.0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   1  10  34  72 112 145 139 114  93  82  74  67  60  52  43  35  29   9
2.5   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   3  12  33  83 126 139 112  92  81  74  67  59  47  38  30  18
3.0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   1   4  21  60 116 133 110  92  81  73  66  51  42  31  22

----+---+-- + - + -+-- +---+-- +---+--- + --+-- + -+--+ --+-- + -- +--+-+--+-- + --+--+-- +---+--+--+--- +--+-- + --+-- +
           RAINFALL TYPE = III                      * * * TC = 0.2 HR * * *                        sheet 2 of 10
```

Exhibit 5-III: Tabular hydrograph unit discharges (csm/in) for type III rainfall distribution – continued

```
TRVL------------------------------------------------------------HYDROGRAPH TIME(HOURS)------------------------------------------------------
TIME   11.3      11.9      12.1      12.3      12.5      12.7    13.0      13.4      13.8    14.3      15.0      16.0      17.0     18.0     20.0      26.0
(hr)11.0     11.6      12.0      12.2      12.4      12.6    12.8     13.2      13.6    14.0    14.6      15.5      16.5     17.5     19.0      22.0
----+---+--+-+--+-+--+-+--+---+--+--+---+--+---+--+---+--+-+---+--+---+--+---+--+-+--+--+-+--+---+--+---+--+--+-+---+--+--+-+---+--+
         IA/P = 0.10                                    * * * TC = 0.3 HR * * *                                          IA/P = 0.10
----+---+--+-+--+-+--+-+--+---+--+--+---+--+---+--+---+--+-+---+--+---+--+---+--+-+--+--+-+--+---+--+---+--+--+-+---+--+--+-+---+--+
0.0  25   31   44   84 124 181   287 441 498 451 358   276 204 118    87   70   63    58   54   48   44   39   34   29   24   22   20   17    14   13   11    0
.10  22   28   37   56  74 108   156 244 375 457 453   389 314 180   113   83   69    62   57   51   46   41   36   31   26   23   20   18    15   13   11    0
.20  21   27   35   53  67  94   136 208 319 411 439   406 345 212   130   91   73    64   59   52   46   42   36   31   26   23   21   18    15   13   11    0
.30  19   24   30   42  49  61    83 118 178 272 365   414 409 305   190  121   87    71   63   55   49   43   38   33   27   24   21   19    15   14   11    0

.40  18   23   29   40  46  56    74 103 153 232 321   383 400 329   217  138   96    75   65   57   50   44   38   33   28   24   21   19    15   14   11    0
.50  16   21   26   34  38  43    52  67  91 132 199   280 349 383   297  196  128    91   73   60   53   46   40   35   30   25   22   20    16   14   11    0
.75  14   18   23   30  33  37    43  52  66  91 131   187 251 347   331  260  182   126   92   68   57   49   42   36   31   26   23   21    16   14   12    0
1.0  11   15   18   23  25  28    30  33  38  44  54    71  98 192   296  334  294   221  154   94   69   55   45   40   34   29   25   22    17   15   12    0

1.5   7    9   12   15  17  18    19  21  23  25  27    30  33  45    75  137  222   287  300  233  149   84   57   47   40   35   30   25    20   16   13    3
2.0   4    6    8   11  12  13    14  15  16  17  19    20  22  26    33   46   76   131  201  278  258  165   85   57   46   40   34   29    22   17   13    7
2.5   2    3    5    7   7   8     9  10  10  11  12    13  14  17    20   24   29    39   60  125  213  260  177   94   60   47   40   35    25   20   14    9
3.0   1    2    3    4   5   5     6   6   7   8   8     9  10  12    14   16   19    23   29   48   95  195  247  167   93   60   47   40    29   22   15   10
----+---+--+-+--+-+--+-+--+---+--+--+---+--+---+--+---+--+-+---+--+---+--+---+--+-+--+--+-+--+---+--+---+--+--+-+---+--+--+-+---+--+
         IA/P = 0.30                                    * * * TC = 0.3 HR * * *                                          IA/P = 0.30
----+---+--+-+--+-+--+-+--+---+--+--+---+--+---+--+---+--+-+---+--+---+--+---+--+-+--+--+-+--+---+--+---+--+--+-+---+--+--+-+---+--+
0.0   0    0    0    6  22  58   146 308 424 422 367   303 234 145   111   92   84    79   74   67   62   57   50   43   36   33   30   26    22   20   17    0
.10   0    0    0    4  16  44   112 243 364 402 379   328 266 166   120   97   86    80   75   68   62   57   51   44   37   33   30   27    22   21   17    0
.20   0    0    0    3  12  33    86 190 306 370 376   344 292 189   132  103   89    82   77   69   63   58   51   44   37   34   30   27    23   21   17    0
.30   0    0    0    0   2   8    25  65 149 254 331   361 350 261   175  126  100    88   31   73   66   60   53   46   39   35   31   28    23   21   18    0

.40   0    0    0    0   1   6    19  50 116 208 290   338 346 282   195  138  107    91   83   74   67   60   54   47   40   35   32   28    23   21   18    0
.50   0    0    0    0   0   1     4  14  38  90 168   250 308 333   256  180  131   103   89   78   71   63   56   49   42   36   33   29    23   21   18    0
.75   0    0    0    0   0   0     2   6  17  43  89   150 213 299   286  229  171   129  104   85   75   65   58   51   44   38   34   30    24   22   18    0
1.0   0    0    0    0   0   0     0   0   1   3   9    24  53 153   253  288  257   200  150  105   85   72   62   55   48   41   36   32    26   22   19    0

1.5   0    0    0    0   0   0     0   0   0   0   0     1   2  15    59  138  217   258  248  187  130   91   71   62   55   48   41   36    29   23   19    3
2.0   0    0    0    0   0   0     0   0   0   0   0     0   0   0     1    9   36    90  159  239  227  158   97   74   63   55   48   42    32   26   20   10
2.5   0    0    0    0   0   0     0   0   0   0   0     0   0   0     0    0    2    12   37  113  194  224  151   96   73   62   55   48    36   29   21   14
3.0   0    0    0    0   0   0     0   0   0   0   0     0   0   0     0    0    0     1    4   24   78  176  211  145   95   73   62   54    41   32   22   15
----+---+--+-+--+-+--+-+--+---+--+--+---+--+---+--+---+--+-+---+--+---+--+---+--+-+--+--+-+--+---+--+---+--+--+-+---+--+--+-+---+--+
         IA/P = 0.50                                    * * * TC = 0.3 HR * * *                                          IA/P = 0.50
----+---+--+-+--+-+--+-+--+---+--+--+---+--+---+--+---+--+-+---+--+---+--+---+--+-+--+--+-+--+---+--+---+--+--+-+---+--+--+-+---+--+
0.0   0    0    0    0   0   2    33 116 193 221 221   200 165 129   110   99   95    92   87   81   77   72   65   56   49   45   41   37    32   30   25    0
.10   0    0    0    0   0   1    23  85 157 200 214   205 178 138   115  102   96    92   88   82   77   73   66   57   50   46   42   37    32   30   26    0
.20   0    0    0    0   0   1    15  62 125 175 201   203 187 147   121  105   98    94   89   83   78   73   66   58   50   46   42   38    32   30   26    0
.30   0    0    0    0   0   0     0  10  45  99 149   184 197 174   140  117  104    97   93   86   80   75   69   61   52   47   43   39    33   30   26    0

.40   0    0    0    0   0   0     0   7  32  76 125   164 189 179   148  123  107    99   94   87   81   76   69   62   53   48   44   39    33   30   26    0
.50   0    0    0    0   0   0     0   0   5  23  59   103 144 183   169  141  119   105   98   90   84   78   71   64   55   49   45   41    33   31   26    0
.75   0    0    0    0   0   0     0   2   9  27  55    89 148 168   156  135  117   105   94   87   80   73   66   58   51   46   42   34    31   27    0
1.0   0    0    0    0   0   0     0   0   1   4  14    59 119 157   163  145  126   105   95   85   77   71   63   55   49   44   36   32    27    0

1.5   0    0    0    0   0   0     0   0   0   0   3    19  56 103   139  151  138   116   97   85   77   70   62   54   48   40   33   28     3
2.0   0    0    0    0   0   0     0   0   0   0   0     1   5  21    52   91  135   143  120   96   84   76   69   61   54   44   35   29    11
2.5   0    0    0    0   0   0     0   0   0   0   0     0   1   7    22   65  112   136  117   96   83   75   68   60   48   39   30    19
3.0   0    0    0    0   0   0     0   0   0   0   0     0   0   0     2   13   45   102  131  114   95   83   75   67   53   43   31    22
----+---+--+-+--+-+--+-+--+---+--+--+---+--+---+--+---+--+-+---+--+---+--+---+--+-+--+--+-+--+---+--+---+--+--+-+---+--+--+-+---+--+
         RAINFALL TYPE = III                           * * * TC = 0.3 HR * * *                                          SHEET  3 OF 10
```

Exhibit 5-III: Tabular hydrograph unit discharges (csm/in) for type III rainfall distribution – continued

```
TRVL----------------------------------------------------------HYDROGRAPH TIME(HOURS)----------------------------------------------------------
TIME   11.3     11.9     12.1     12.3     12.5     12.7    13.0     13.4     13.8    14.3     15.0     16.0     17.0     18.0     20.0    26.0
(hr)11.0    11.6     12.0     12.2     12.4     12.6     12.8    13.2     13.6    14.0     14.6     15.5     16.5     17.5     19.0     22.0
----+---+--+--+-+-+--+--+--+--+--+---+--+--+-+--+--+-+--+--+-+--+--+-+--+--+-+--+--+-+--+--+-+--+-+--+
             IA/P = 0.10                              * * * TC = 0.4 HR * * *                              IA/P = 0.10
----+---+--+--+-+-+--+--+--+--+--+---+--+--+-+--+--+-+--+--+-+--+--+-+--+--+-+--+--+-+--+--+-+--+-+--+
0.0 23   29   39   65   91  132  198  308  422  449  417  345 274 162  108  82  68   61  57  50   45   41   35   30   25   22   20   18   15   13   11    0
.10 20   26   33   48   60   80  114  170  262  368  422  418 370 242  149 102  79   67  60  53   47   42   37   32   27   23   21   18   15   13   11    0
.20 20   25   32   45   55   72  100  147  224  320  388  408 383 272  171 114  85   70  62  54   48   43   37   32   27   23   21   19   15   14   11    0
.30 17   22   28   38   43   51   65   88  127  191  277  351 389 349  244 157 108   81  68  58   51   45   39   34   29   24   22   19   15   14   11    0

.40 17   21   27   36   41   47   59   79  111  165  240  314 378 359  268 178 120   88  72  60   52   45   40   34   29   25   22   20   15   14   11    0
.50 15   19   24   31   34   38   44   54   71   98  142  207 278 364  332 243 163  113  84  65   56   48   41   36   31   26   23   20   16   14   12    0
.75 12   16   20   25   27   30   33   38   44   54   70   97 138 249  333 320 257  185 131  85   65   53   44   39   33   28   24   22   17   14   12    0
1.0 11   13   17   22   23   25   28   30   34   38   46   57  75 145  245 322 311  255 188 114   77   58   47   41   35   30   26   23   18   15   12    1

1.5  6    9   11   14   15   17   18   19   21   23   25   27  30  39   59 105 180  255 292 257  176   98   61   48   41   36   31   26   20   16   13    4
2.0  4    6    8   10   11   12   13   14   15   16   17   19  20  24   30  39  61  103 166 253  272  189   98   61   48   41   35   30   23   18   13    8
2.5  2    3    4    6    7    7    8    9   10   10   11   12  13  16   18  22  26   34  49 100  183  255  198  108   66   50   42   36   26   20   14    9
3.0  1    1    2    4    4    5    5    6    6    7    8    8   9  11   13  15  18   21  26  40   77  169  243  185  106   65   49   41   30   23   15   10
----+---+--+--+-+-+--+--+--+--+--+---+--+--+-+--+--+-+--+--+-+--+--+-+--+--+-+--+--+-+--+--+-+--+-+--+
             IA/P = 0.30                              * * * TC = 0.4 HR * * *                              IA/P = 0.30
----+---+--+--+-+-+--+--+--+--+--+---+--+--+-+--+--+-+--+--+-+--+--+-+--+--+-+--+--+-+--+--+-+--+-+--+

0.0  0    0    0    2   10   30   78  177  306  379  379  347 293 187  133 105  90   82  77  69   63   58   51   44   38   34   30   27   23   21   17    0
.10  0    0    0    2    7   22   59  138  250  336  365  353 313 212  146 112  94   84  78  71   64   59   52   45   38   34   31   27   23   21   17    0
.20  0    0    0    1    5   17   45  107  202  292  341  349 325 235  162 121  98   87  80  72   65   59   53   46   39   34   31   28   23   21   17    0
.30  0    0    0    0    1    4   12   34   83  162  249  310 336 298  215 152 116   96  85  76   68   61   55   48   41   36   32   29   23   21   18    0

.40  0    0    0    0    0    3    9   26   64  130  209  276 324 307  234 168 125  101  88  77   70   62   55   49   41   36   32   29   23   21   18    0
.50  0    0    0    0    0    2    7   19   49  103  173  242 313 285  216 157 119   98  82  73   65   57   51   44   37   33   30   24   22   18    0
.75  0    0    0    0    0    0    1    3    9   23   52   97 153 253  285 253 199  151 118  91   78   68   59   53   46   39   35   31   25   22   18    0
1.0  0    0    0    0    0    0    0    0    1    4   13   30 104 204  276 276 226  175 120  92   75   64   57   50   43   37   33   26   22   19    1

1.5  0    0    0    0    0    0    0    0    0    0    0    1   8  36   98 177 236  250 207 148   99   75   63   56   49   42   37   29   24   19    4
2.0  0    0    0    0    0    0    0    0    0    0    0    0   0   1    5  22  62  124 210 232  176  107   78   65   57   50   43   33   27   20   11
2.5  0    0    0    0    0    0    0    0    0    0    0    0   0   0    1   7  24   85 167 219  167  106   77   64   56   49   37   29   21   14
3.0  0    0    0    0    0    0    0    0    0    0    0    0   0   0    0   2  15   58 152 207  159  104   76   64   55   42   33   22   15
----+---+--+--+-+-+--+--+--+--+--+---+--+--+-+--+--+-+--+--+-+--+--+-+--+--+-+--+--+-+--+--+-+--+-+--+
             IA/P = 0.50                              * * * TC = 0.4 HR * * *                              IA/P = 0.50
----+---+--+--+-+-+--+--+--+--+--+---+--+--+-+--+--+-+--+--+-+--+--+-+--+--+-+--+--+-+--+--+-+--+-+--+
0.0  0    0    0    0    0    0   10   54  121  182  204  204 191 146  121 106  98   94  90  83   78   73   66   58   50   46   42   38   32   30   26    0
.10  0    0    0    0    0    0    7   38   94  153  187  198 193 155  128 110 100   95  91  84   79   74   67   59   51   46   42   38   32   30   26    0
.20  0    0    0    0    0    0    5   27   71  126  166  187 191 164  134 114 103   96  92  85   80   75   68   60   52   47   43   38   33   30   26    0
.30  0    0    0    0    0    0    0    3   19   54  102  145 173 185  155 129 111  101  95  88   82   76   70   62   54   48   44   40   33   31   26    0

.40  0    0    0    0    0    0    0    2   13   40   81  124 157 180  161 135 116  104  97  90   83   77   71   63   55   49   44   40   33   31   26    0
.50  0    0    0    0    0    0    0    0    1    9   30   64 104 163  174 154 130  113 102  93   86   79   73   66   57   50   46   42   34   31   27    0
.75  0    0    0    0    0    0    0    0    3   13   32   59 120 157  162 145 126  111  98  90   82   75   68   60   52   47   43   35   31   27    0
1.0  0    0    0    0    0    0    0    0    0    0    2    6  36   90  138 158 152  135 112  98   88   79   72   65   56   50   45   37   32   27    0

1.5  0    0    0    0    0    0    0    0    0    0    0    0   1  10   37  80 121  148 143 123  102   87   78   71   64   56   49   41   34   28    4
2.0  0    0    0    0    0    0    0    0    0    0    0    0   0   0    2  13  36   71 121 140  126  101   86   78   70   63   55   44   36   29   13
2.5  0    0    0    0    0    0    0    0    0    0    0    0   0   0    0   1   4   14  49  97  135  122  100   86   77   70   62   49   40   30   20
3.0  0    0    0    0    0    0    0    0    0    0    0    0   0   0    0   0   1    9  33  88  130  119   98   85   76   69   54   44   32   22
----+---+--+--+-+-+--+--+--+--+--+---+--+--+-+--+--+-+--+--+-+--+--+-+--+--+-+--+--+-+--+--+-+--+-+--+
        RAINFALL TYPE = III                          * * * TC = 0.4 HR * * *                              SHEET 4 OF 10
```

Exhibit 5-III: Tabular hydrograph unit discharges (csm/in) for type III rainfall distribution – continued

```
TRVL-------------------------------------------------------------HYDROGRAPH TIME(HOURS)-------------------------------------------------------
TIME   11.3   11.9   12.1   12.3   12.5   12.7   13.0   13.4   13.8   14.3   15.0   16.0   17.0   18.0   20.0   26.0
(hr)11.0   11.6   12.0   12.2   12.4   12.6   12.8   13.2   13.6   14.0   14.6   15.5   16.5   17.5   19.0   22.0
---------------------------------------------------------------------------------------------------------------------------------------------
          IA/P = 0.10                                * * * TC = 0.5 HR * * *                                   IA/P = 0.10
---------------------------------------------------------------------------------------------------------------------------------------------
0.0 21  27  35  54  70  97 144 217 316 397 411 388 330 214 139  99  78  67  60  52  47  42  36  31  26  23  21  18  15  13  11   0
.10 19  24  30  43  50  64  86 125 186 273 355 392 390 296 194 129  94  75  65  56  49  43  38  33  28  24  21  19  15  14  11   0
.20 18  23  29  40  47  58  77 109 161 235 315 367 382 318 218 145 103  80  68  57  50  44  39  33  28  24  22  19  15  14  11   0
.30 16  21  26  34  38  44  53  69  95 139 203 278 337 367 289 199 135  98  77  62  54  46  40  35  30  25  22  20  16  14  11   0

.40 16  20  25  33  36  41  49  62  84 121 176 244 306 358 306 220 151 107  83  64  55  47  41  35  30  25  23  20  16  14  12   0
.50 14  18  22  28  31  35  39  46  57  75 106 152 213 323 346 282 202 140 102  73  59  50  42  37  32  27  23  21  16  14  12   0
.75 12  16  20  25  28  30  34  38  45  56  75 104 145 246 319 308 252 187 135  89  67  53  44  39  33  28  24  22  17  14  12   0
1.0 10  12  16  20  22  23  25  28  31  34  39  47  60 110 197 280 309 279 220 138  90  63  49  42  37  31  26  23  18  15  12   1

1.5  6   8  10  13  14  15  17  18  19  21  23  25  27  34  49  82 143 218 283 271 203 116  68  51  43  37  32  27  21  16  13   4
2.0  3   5   7   9  10  11  12  13  14  15  16  17  19  22  27  34  50  82 135 226 265 211 114  67  50  42  37  31  23  18  13   8
2.5  2   3   4   6   7   7   8   9  10  10  11  12  13  16  18  22  26  34  50 102 182 249 197 111  67  50  42  36  26  20  14   9
3.0  1   1   2   3   4   4   5   5   6   6   7   8   8  10  12  14  16  19  23  34  63 144 238 201 121  72  52  43  31  23  15  10
---------------------------------------------------------------------------------------------------------------------------------------------
          IA/P = 0.30                                * * * TC = 0.5 HR * * *                                   IA/P = 0.30
---------------------------------------------------------------------------------------------------------------------------------------------
0.0  0   0   0   1   4  15  40 101 198 295 345 345 325 232 161 122 100  88  80  72  65  59  53  46  39  34  31  28  23  21  18   0
.10  0   0   0   1   3  11  30  77 158 249 313 335 329 253 178 132 106  91  82  73  66  60  53  47  40  35  31  28  23  21  18   0
.20  0   0   0   0   2   8  23  59 125 208 278 316 324 271 196 144 112  95  85  75  67  61  54  47  40  35  32  28  23  21  18   0
.30  0   0   0   0   0   2   6  17  45  98 171 242 291 313 249 182 136 108  92  80  71  63  56  49  42  36  33  29  24  21  18   0

.40  0   0   0   0   0   1   4  13  34  77 140 208 264 304 263 198 148 115  97  81  72  64  57  50  43  37  33  30  24  21  18   0
.50  0   0   0   0   0   0   1   3  10  26  60 113 177 276 295 244 185 140 111  88  77  67  59  52  45  39  34  31  24  22  18   0
.75  0   0   0   0   0   0   0   1   4  12  29  60 104 204 271 263 222 174 136 101  83  70  61  54  47  40  35  32  25  22  18   0
1.0  0   0   0   0   0   0   0   0   1   2   6  16  67 155 235 263 242 198 138 102  80  66  58  51  44  38  34  27  23  19  16   1

1.5  0   0   0   0   0   0   0   0   0   0   0   0   4  22  67 138 205 241 221 167 110  79  66  58  51  44  38  30  24  20   5
2.0  0   0   0   0   0   0   0   0   0   0   0   0   0   0   3  13  42  93 182 225 191 119  83  67  58  51  44  34  27  21  12
2.5  0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   1   4  15  62 139 213 180 117  82  67  58  51  38  30  22  15
3.0  0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   1  10  41 127 203 171 114  81  66  57  43  33  23  16
---------------------------------------------------------------------------------------------------------------------------------------------
          IA/P = 0.50                                * * * TC = 0.5 HR * * *                                   IA/P = 0.50
---------------------------------------------------------------------------------------------------------------------------------------------
0.0  0   0   0   0   0   0   3  24  68 124 174 190 190 162 133 114 103  97  92  85  80  75  68  60  52  47  43  39  33  30  26   0
.10  0   0   0   0   0   0   2  17  51 100 149 177 186 169 140 119 106  99  93  86  81  75  69  61  52  47  43  39  33  30  26   0
.20  0   0   0   0   0   0   1  12  38  79 126 160 181 173 147 124 109 101  95  88  81  76  69  62  53  48  44  39  33  30  26   0
.30  0   0   0   0   0   0   0   1   8  28  62 105 141 176 165 141 120 107  99  91  84  78  71  64  56  49  45  41  33  31  26   0

.40  0   0   0   0   0   0   1   6  20  48  86 123 172 172 146 125 111 101  92  85  79  72  65  56  50  45  41  34  31  26   0
.50  0   0   0   0   0   0   0   0   4  15  37  70 105 157 167 151 130 114 104  94  87  79  73  66  57  50  46  42  34  31  27   0
.75  0   0   0   0   0   0   0   0   0   1   6  17  37  91 139 157 150 134 119 103  93  84  76  69  62  54  48  44  35  32  27   0
1.0  0   0   0   0   0   0   0   0   0   0   1   3   9  40  91 135 153 149 135 113  99  88  79  72  65  57  50  45  37  32  27   1

1.5  0   0   0   0   0   0   0   0   0   0   0   0   0   0   5  24  59 101 132 144 130 107  90  80  73  65  57  51  41  34  29   6
2.0  0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   1   7  25  55 106 138 130 105  89  79  72  65  57  45  37  30  15
2.5  0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   2   9  36  81 133 133 104  88  79  71  64  50  41  31  21
3.0  0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   5  24  74 128 122 103  88  78  70  55  45  32  23
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          RAINFALL TYPE = III                        * * * TC = 0.5 HR * * *                                   SHEET  5 OF 10
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Exhibit 5-III: Tabular hydrograph unit discharges (csm/in) for type III rainfall distribution – continued

TRVL ── HYDROGRAPH TIME(HOURS) ──

IA/P = 0.10   * * * TC = 0.75 HR * * *

TRVL TIME (hr)	11.0	11.3	11.6	11.9	12.0	12.1	12.2	12.3	12.4	12.5	12.6	12.7	12.8	13.0	13.2	13.4	13.6	13.8	14.0	14.3	14.6	15.0	15.5	16.0	16.5	17.0	17.5	18.0	19.0	20.0	22.0	26.0
0.0	17	22	28	39	45	56	73	104	151	215	281	328	343	310	228	163	121	94	77	63	53	45	39	34	29	25	22	20	15	14	11	0
.10	17	21	27	37	42	51	66	91	131	187	250	302	336	319	247	179	131	101	82	65	55	46	40	35	29	25	22	20	16	14	11	0
.20	15	19	24	31	35	40	48	60	81	114	163	221	275	328	298	229	167	124	96	73	60	49	42	36	31	26	23	20	16	14	12	0
.30	14	18	23	30	33	38	44	55	72	100	142	194	248	320	305	245	182	135	103	76	62	50	42	37	31	27	23	21	16	14	12	0
.40	13	16	21	26	29	32	36	41	50	65	88	124	171	268	313	288	228	170	127	88	68	54	44	38	33	28	24	21	17	14	12	0
.50	12	16	20	25	28	30	34	39	46	59	78	109	150	244	306	294	242	184	138	94	71	56	45	39	34	28	24	22	17	14	12	0
.75	10	13	16	21	23	25	27	30	33	38	46	58	77	140	221	277	287	248	197	133	92	66	50	42	36	31	26	23	18	15	12	1
1.0	8	10	13	16	18	19	21	23	25	27	30	34	39	61	109	181	249	280	265	198	134	85	58	46	40	34	29	25	20	16	12	2
1.5	5	7	9	12	13	14	15	16	17	19	20	22	24	30	40	63	106	167	225	261	226	147	84	58	46	39	34	29	22	17	13	5
2.0	2	4	5	7	8	9	9	10	11	12	13	14	16	18	22	26	34	50	80	155	226	246	158	91	61	47	40	34	25	20	14	9
2.5	1	2	3	5	5	6	6	7	8	8	9	10	11	13	15	18	21	26	34	62	120	209	234	151	90	60	47	39	29	22	15	10
3.0	0	1	2	3	3	3	4	4	5	5	6	7	7	9	10	12	15	17	21	29	50	113	209	224	144	88	59	46	33	25	16	10

IA/P = 0.30   * * * TC = 0.75 HR * * *

TRVL TIME (hr)	11.0	11.3	11.6	11.9	12.0	12.1	12.2	12.3	12.4	12.5	12.6	12.7	12.8	13.0	13.2	13.4	13.6	13.8	14.0	14.3	14.6	15.0	15.5	16.0	16.5	17.0	17.5	18.0	19.0	20.0	22.0	26.0
0.0	0	0	0	0	1	3	8	24	58	113	182	243	283	287	233	178	139	114	98	83	73	64	56	50	43	37	33	30	24	21	18	0
.10	0	0	0	0	2	6	18	45	91	151	212	259	284	245	191	149	120	102	85	75	65	57	50	43	37	33	30	24	21	18	0	
.20	0	0	0	0	0	0	1	5	14	35	72	125	183	263	277	230	180	142	116	93	80	68	59	52	45	39	34	31	25	22	18	0
.30	0	0	0	0	0	0	1	3	10	26	57	102	156	245	270	240	192	151	122	96	82	69	60	53	46	39	35	31	25	22	18	0
.40	0	0	0	0	0	0	0	1	2	8	20	45	83	182	252	264	226	181	144	108	89	73	62	55	48	41	36	32	26	22	19	0
.50	0	0	0	0	0	0	0	2	6	15	35	67	158	235	259	235	192	153	113	92	75	63	56	49	42	36	33	26	22	19	1	
.75	0	0	0	0	0	0	0	0	1	2	7	35	100	178	232	242	217	163	121	90	71	61	54	47	40	35	28	23	19	2		
1.0	0	0	0	0	0	0	0	0	0	0	1	4	21	68	140	205	236	229	181	135	97	74	63	55	48	41	36	29	24	19	3	
1.5	0	0	0	0	0	0	0	0	0	0	0	0	0	2	13	42	94	155	221	212	158	103	77	64	56	49	42	33	26	20	10	
2.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4	15	42	113	184	209	151	101	76	63	55	48	36	29	21	14	
2.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	5	27	80	168	199	146	100	75	63	55	41	32	22	15	
3.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	10	56	154	191	151	105	78	64	48	37	24	16		

IA/P = 0.50   * * * TC = 0.75 HR * * *

TRVL TIME (hr)	11.0	11.3	11.6	11.9	12.0	12.1	12.2	12.3	12.4	12.5	12.6	12.7	12.8	13.0	13.2	13.4	13.6	13.8	14.0	14.3	14.6	15.0	15.5	16.0	16.5	17.0	17.5	18.0	19.0	20.0	22.0	26.0
0.0	0	0	0	0	0	0	0	3	13	37	71	108	140	167	156	136	120	108	101	92	85	78	72	64	56	50	45	41	34	31	26	0
.10	0	0	0	0	0	0	0	2	10	28	57	91	124	163	158	140	124	111	103	94	86	79	72	65	57	50	46	41	34	31	27	0
.20	0	0	0	0	0	0	0	1	7	21	45	76	135	159	153	136	120	109	98	90	82	74	67	59	52	47	43	35	31	27	0	
.30	0	0	0.	0	0	0	0	1	5	15	35	62	121	157	157	140	124	112	100	91	83	75	68	60	52	47	43	35	31	27	0	
.40	0	0	0	0	0	0	0	1	3	11	27	50	107	146	154	143	128	115	102	93	84	76	69	61	53	48	43	35	32	27	0	
.50	0	0	0	0	0	0	0	0	0	2	8	21	66	118	148	152	139	125	108	97	87	78	71	63	55	49	45	36	32	27	1	
.75	0	0	0	0	0	0	0	0	0	1	4	10	38	82	122	142	144	133	116	103	91	80	73	66	58	51	46	37	32	28	1	
1.0	0	0	0	0	0	0	0	0	0	0	0	0	5	24	60	102	132	142	133	116	99	86	77	70	62	55	49	40	33	28	3	
1.5	0	0	0	0	0	0	0	0	0	0	0	0	0	1	7	25	55	91	128	136	119	98	85	77	69	62	54	44	36	29	11	
2.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	9	25	66	109	131	116	97	85	76	69	61	48	39	30	18		
2.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	16	47	100	127	114	96	84	75	68	53	43	31	22			
3.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	10	44	102	124	112	95	83	75	59	47	33	23				

RAINFALL TYPE = III   * * * TC = 0.75 HR * * *   SHEET 6 OF 10

Exhibit 5-III: Tabular hydrograph unit discharges (csm/in) for type III rainfall distribution – continued

TRVL · HYDROGRAPH TIME(HOURS) ·

IA/P = 0.10   * * * TC = 1.0 HR * * *

TRVL TIME (hr)	11.0	11.3	11.6	11.9	12.0	12.1	12.2	12.3	12.4	12.5	12.6	12.7	12.8	13.0	13.2	13.4	13.6	13.8	14.0	14.3	14.6	15.0	15.5	16.0	16.5	17.0	17.5	18.0	19.0	20.0	22.0	26.0
0.0	15	19	24	32	37	44	54	71	98	136	181	227	264	297	270	215	164	128	103	78	64	52	43	36	31	26	23	21	16	14	12	0
.10	13	17	22	28	31	35	41	49	64	87	120	161	205	273	289	254	201	155	122	90	71	56	45	38	33	28	24	21	17	14	12	0
.20	13	16	21	27	29	33	38	46	58	77	105	142	184	257	285	263	214	167	130	95	74	57	46	39	33	28	24	22	17	14	12	0
.30	12	16	20	26	28	31	36	42	53	69	93	126	165	240	279	268	225	178	139	100	77	59	47	39	34	29	25	22	17	15	12	1
.40	11	14	18	23	25	27	30	34	40	48	62	83	112	185	251	276	256	213	168	118	87	65	50	41	35	30	26	23	18	15	12	1
.50	11	13	17	22	24	26	29	32	37	45	56	74	99	167	235	270	261	223	179	126	92	67	51	42	36	31	26	23	18	15	12	1
.75	8	10	13	17	18	19	21	23	25	28	31	36	44	72	122	186	239	258	243	189	136	90	62	48	40	34	29	25	20	16	12	2
1.0	6	9	11	14	15	17	18	20	21	23	25	28	32	46	75	124	185	234	253	226	170	110	71	53	43	37	31	27	21	16	13	4
1.5	4	6	8	10	11	12	13	14	15	16	17	19	21	25	32	46	74	118	170	230	239	179	108	70	52	43	36	31	23	18	13	7
2.0	2	3	4	6	7	7	8	9	10	10	11	12	13	16	18	22	28	38	58	111	179	228	185	116	75	54	44	37	27	21	14	9
2.5	1	1	2	4	4	5	5	6	6	7	8	8	9	11	13	15	18	22	28	46	87	167	219	176	113	73	54	43	31	23	15	10
3.0	0	0	1	2	2	2	3	3	3	4	4	5	5	7	8	10	12	14	16	21	32	68	156	210	179	120	78	56	37	27	16	11

IA/P = 0.30   * * * TC = 1.0 HR * * *

TRVL TIME (hr)	11.0	11.3	11.6	11.9	12.0	12.1	12.2	12.3	12.4	12.5	12.6	12.7	12.8	13.0	13.2	13.4	13.6	13.8	14.0	14.3	14.6	15.0	15.5	16.0	16.5	17.0	17.5	18.0	19.0	20.0	22.0	26.0
0.0	0	0	0	0	0	1	5	13	30	57	95	141	186	243	249	213	174	142	119	97	83	70	60	53	46	39	35	31	25	22	18	0
.10	0	0	0	0	0	1	3	10	23	46	79	120	164	230	245	221	183	150	125	101	85	72	61	53	46	40	35	31	25	22	18	0
.20	0	0	0	0	0	0	1	3	7	18	36	65	102	183	233	241	210	174	144	112	92	76	64	56	48	42	36	33	26	22	19	1
.30	0	0	0	0	0	0	1	2	6	14	29	53	86	163	221	237	217	183	151	117	95	78	65	56	49	42	37	33	26	22	19	1
.40	0	0	0	0	0	0	0	0	1	4	11	23	43	107	180	225	233	207	175	133	105	84	68	59	51	44	38	34	27	23	19	1
.50	0	0	0	0	0	0	0	0	1	3	8	18	34	91	162	214	230	213	183	139	109	86	70	60	52	45	39	34	27	23	19	1
.75	0	0	0	0	0	0	0	0	0	0	1	4	9	33	82	145	196	218	211	174	135	101	77	64	56	48	42	37	29	24	19	3
1.0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	11	37	85	144	192	214	199	160	116	85	69	59	51	44	38	30	25	20	5
1.5	0	0	0	0	0	0	0	0	0	0	0	0	0	1	7	23	56	104	174	203	177	123	89	71	60	52	45	35	27	21	11
2.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	8	24	73	139	194	169	120	87	70	59	51	39	30	22	14
2.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	15	51	127	186	162	117	86	69	59	44	34	23	16
3.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	6	35	117	180	164	122	90	71	51	39	25	16

IA/P = 0.50   * * * TC = 1.0 HR * * *

TRVL TIME (hr)	11.0	11.3	11.6	11.9	12.0	12.1	12.2	12.3	12.4	12.5	12.6	12.7	12.8	13.0	13.2	13.4	13.6	13.8	14.0	14.3	14.6	15.0	15.5	16.0	16.5	17.0	17.5	18.0	19.0	20.0	22.0	26.0
0.0	0	0	0	0	0	0	0	2	6	17	34	57	83	127	151	142	130	118	109	99	91	83	75	68	59	52	47	43	35	31	27	1
.10	0	0	0	0	0	0	0	1	5	13	27	47	71	117	146	144	133	121	112	101	92	84	76	68	60	53	48	43	35	32	27	1
.20	0	0	0	0	0	0	0	1	3	10	21	38	60	106	138	143	135	124	114	102	94	85	76	69	61	54	48	44	35	32	27	1
.30	0	0	0	0	0	0	0	0	0	2	7	16	31	73	114	139	142	132	121	108	98	88	79	71	64	56	50	45	36	32	27	1
.40	0	0	0	0	0	0	0	0	0	2	5	13	25	62	104	133	140	134	124	110	99	89	80	72	64	56	50	45	37	32	27	1
.50	0	0	0	0	0	0	0	0	0	0	1	4	10	35	74	112	134	138	131	117	104	93	82	74	67	59	52	47	38	33	28	2
.75	0	0	0	0	0	0	0	0	0	0	0	2	5	19	43	84	115	131	134	123	110	97	85	77	69	61	54	48	39	33	28	3
1.0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	6	21	49	84	113	129	132	119	103	89	80	72	64	56	50	41	34	28	5
1.5	0	0	0	0	0	0	0	0	o	0	0	0	0	0	1	7	21	46	75	113	128	120	102	88	79	71	63	56	45	37	29	12
2.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4	14	42	82	119	124	104	90	80	72	64	50	41	31	20
2.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	9	29	75	117	121	102	89	79	71	56	45	32	23
3.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	5	28	80	118	118	101	88	79	63	49	34	24

RAINFALL TYPE = III   * * * TC = 1.0 HR * * *

Exhibit 5-III: Tabular hydrograph unit discharges (csm/in) for type III rainfall distribution – continued

TRVL --HYDROGRAPH TIME(HOURS)--

IA/P = 0.10 * * * TC = 1.25 HR * * * IA/P = 0.10

TRVL TIME (hr)	11.0	11.3	11.6	11.9	12.0	12.1	12.2	12.3	12.4	12.5	12.6	12.7	12.8	13.0	13.2	13.4	13.6	13.8	14.0	14.3	14.6	15.0	15.5	16.0	16.5	17.0	17.5	18.0	19.0	20.0	22.0	26.0
0.0	13	17	22	28	32	37	44	56	75	100	133	170	206	255	264	236	194	155	125	95	75	59	47	39	33	28	24	22	17	14	12	1
.10	13	16	21	27	30	34	41	51	67	89	118	152	188	243	261	243	204	164	133	100	79	61	48	40	34	29	25	22	17	15	12	1
.20	11	15	18	24	26	29	33	38	47	60	79	105	137	203	248	256	232	193	156	115	88	67	51	42	35	30	26	23	18	15	12	1
.30	11	14	18	23	25	27	31	36	43	54	71	94	122	187	237	254	238	203	165	121	92	69	53	43	36	30	26	23	18	15	12	1
.40	10	12	16	20	22	24	26	29	34	40	49	64	84	140	201	242	250	228	193	142	106	77	57	46	38	32	27	24	19	15	12	1
.50	9	12	15	19	21	23	25	28	32	37	45	58	75	126	186	232	248	233	201	150	111	80	58	47	39	33	28	24	19	15	12	2
.75	8	11	14	17	19	20	22	24	27	31	36	44	56	93	144	196	230	237	220	174	131	91	64	50	41	34	29	25	20	16	12	2
1.0	6	8	11	14	15	16	17	19	20	22	25	28	32	46	74	119	170	213	234	218	174	120	79	58	46	38	32	27	21	17	13	4
1.5	3	5	7	9	9	10	11	12	13	14	16	17	18	22	27	38	58	91	134	197	223	194	128	83	60	47	39	33	24	19	14	7
2.0	2	3	4	6	6	7	8	8	9	10	11	12	13	15	18	22	27	38	57	106	166	214	184	124	82	59	47	39	28	21	14	9
2.5	1	1	2	3	3	4	4	5	5	6	7	7	8	10	11	13	16	19	24	38	68	137	206	186	130	87	62	48	33	24	15	10
3.0	0	0	1	2	2	2	2	3	3	4	4	5	5	6	8	9	11	13	16	21	31	66	145	200	178	126	85	61	39	28	17	11

IA/P = 0.30 * * * TC = 1.25 HR * * * IA/P = 0.30

TRVL TIME (hr)	11.0	11.3	11.6	11.9	12.0	12.1	12.2	12.3	12.4	12.5	12.6	12.7	12.8	13.0	13.2	13.4	13.6	13.8	14.0	14.3	14.6	15.0	15.5	16.0	16.5	17.0	17.5	18.0	19.0	20.0	22.0	26.0
0.0	0	0	0	0	0	1	2	7	18	35	61	94	130	192	222	218	191	161	136	110	93	77	65	56	48	41	36	32	26	22	19	1
.10	0	0	0	0	0	1	2	5	14	28	50	79	113	177	214	219	197	168	142	115	96	79	66	57	49	42	37	33	26	22	19	1
.20	0	0	0	0	0	0	1	4	10	22	41	66	97	162	205	217	202	175	149	119	99	81	67	58	50	43	37	33	26	23	19	1
.30	0	0	0	0	0	0	0	1	3	8	17	33	55	115	174	208	214	195	168	133	108	87	70	60	52	45	39	34	27	23	19	2
.40	0	0	0	0	0	0	0	1	2	6	14	26	45	100	159	200	212	199	174	138	112	89	72	61	53	45	39	35	28	23	19	2
.50	0	0	0	0	0	0	0	0	1	2	5	11	21	60	116	170	203	209	192	156	124	97	76	64	55	47	41	36	29	24	19	3
.75	0	0	0	0	0	0	0	0	0	1	2	5	11	35	79	131	175	201	201	172	140	107	82	67	58	50	43	37	30	24	20	4
1.0	0	0	0	0	0	0	0	0	0	0	0	0	1	6	23	57	105	153	186	198	172	131	95	75	63	54	47	41	32	25	20	7
1.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	8	24	54	96	157	189	174	127	94	74	63	54	46	35	28	21	12
2.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	9	24	69	127	182	167	124	93	74	62	53	40	31	22	15
2.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	10	35	99	176	167	129	96	76	63	46	35	23	16
3.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	6	34	107	171	161	125	94	75	53	40	25	17

IA/P = 0.50 * * * TC = 1.25 HR * * * IA/P = 0.50

TRVL TIME (hr)	11.0	11.3	11.6	11.9	12.0	12.1	12.2	12.3	12.4	12.5	12.6	12.7	12.8	13.0	13.2	13.4	13.6	13.8	14.0	14.3	14.6	15.0	15.5	16.0	16.5	17.0	17.5	18.0	19.0	20.0	22.0	26.0
0.0	0	0	0	0	0	0	0	1	4	10	21	36	55	95	123	138	131	122	114	104	95	86	78	70	62	55	49	44	36	32	27	1
.10	0	0	0	0	0	0	0	0	1	3	8	16	30	66	102	125	134	128	120	108	99	89	80	73	65	57	51	46	37	32	28	2
.20	0	0	0	0	0	0	0	0	0	2	6	13	24	57	94	120	132	130	122	110	101	91	81	73	66	58	51	46	37	33	28	2
.30	0	0	0	0	0	0	0	0	0	1	4	10	19	49	85	113	131	131	124	112	102	92	82	74	66	58	52	47	38	33	28	2
.40	0	0	0	0	0	0	0	0	0	1	3	8	16	42	76	106	126	130	125	114	104	93	83	75	67	59	52	47	38	33	28	3
.50	0	0	0	0	0	0	0	0	0	1	2	6	22	51	84	112	127	129	126	120	109	97	86	77	70	61	54	49	40	33	28	4
.75	0	0	0	0	0	0	0	0	0	0	0	1	3	12	32	61	91	113	125	123	114	101	89	80	72	64	56	50	41	34	28	5
1.0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	7	22	47	76	102	122	124	111	96	85	76	69	61	54	43	36	29	9
1.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	8	22	43	82	111	121	109	95	84	76	68	60	48	39	30	16
2.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	9	30	63	104	118	107	94	83	75	67	53	43	31	21
2.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	6	20	58	104	116	106	93	83	74	59	47	33	23
3.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	19	64	104	114	104	92	82	65	52	35	24

RAINFALL TYPE = III   * * * TC = 1.25 HR * * *   SHEET 8 OF 10

```
TRVL----------------------------------------------------------HYDROGRAPH TIME(HOURS)----------------------------------------------
TIME   11.3     11.9    12.1     12.3     12.5     12.7    13.0     13.4     13.8    14.3     15.0     16.0     17.0     18.0     20.0    26.0
(hr)11.0    11.6    12.0     12.2     12.4     12.6    12.8     13.2     13.6    14.0     14.6     15.5     16.5     17.5     19.0    22.0
----+---+--+-+-+--+---+--+---+--+--+---+--+---+---+--+---+-+-+---+--+---+-+-+---+--+---+-+-+---+--+---+--+---+--+-+---+-+--+-+--+
          IA/P = 0.10                                         * * * TC = 1.5 HR * * *                              IA/P = 0.10
----+---+--+-+-+--+---+--+---+--+--+---+--+---+---+--+---+-+-+---+--+---+-+-+---+--+---+-+-+---+--+---+--+---+--+-+---+-+--+-+--+
0.0 12  15   19  25  27  31  37  45  57  75  97 122 151 203 231 238 213 182 150 115  91  70  54  44  37  30  26  23  18  15  12   1
.10 10  13   17  21  23  26  29  34  41  52  67  87 111 165 210 233 227 205 173 131 102  77  58  46  39  32  27  24  19  15  12   1
.20 10  13   16  21  23  25  28  32  38  47  61  78 100 152 199 228 231 210 181 138 107  80  59  47  39  33  28  24  19  15  12   2
.30  9  12   15  20  22  24  27  30  36  44  55  70  90 139 188 221 228 215 188 145 112  83  61  48  40  33  28  24  19  15  12   2

.40  8  11   14  18  19  21  23  25  29  33  40  50  64 103 152 196 223 226 208 166 127  92  66  52  42  35  30  25  20  16  13   2
.50  8  10   13  17  18  20  22  24  27  31  37  46  58  93 140 186 216 224 212 173 133  96  69  53  43  36  30  26  20  16  13   3
.75  6   8   11  14  15  16  18  19  21  23  26  31  36  55  87 130 173 205 217 202 165 119  81  60  48  39  33  28  21  17  13   4
1.0  5   6    8  11  12  13  14  15  16  18  19  21  24  31  46  71 109 151 189 214 200 153 102  72  55  44  37  31  23  18  13   6

1.5  3   4    5   7   8   9  10  11  11  12  14  15  16  19  24  31  45  69 103 159 207 207 147  99  71  54  44  36  26  20  14   8
2.0  1   2    3   5   5   6   6   7   8   9   9  10  11  13  16  19  23  31  45  81 132 189 199 142  97  69  53  43  30  22  15  10
2.5  0   1    1   2   3   3   4   4   4   5   6   6   7   8  10  12  14  17  20  31  53 107 179 194 147 102  73  55  36  26  16  10
3.0  0   0    1   1   1   2   2   2   3   3   3   4   4   5   7   8  10  11  13  18  26  51 116 178 188 142 100  71  43  30  18  11
----+---+--+-+-+--+---+--+---+--+--+---+--+---+---+--+---+-+-+---+--+---+-+-+---+--+---+-+-+---+--+---+--+---+--+-+---+-+--+-+--+
          IA/P = 0.30                                         * * * TC = 1.5 HR * * *                              IA/P = 0.30
----+---+--+-+-+--+---+--+---+--+--+---+--+---+---+--+---+-+-+---+--+---+-+-+---+--+---+-+-+---+--+---+--+---+--+-+---+-+--+-+--+
0.0  0   0    0   0   0   1   2   5  11  22  38  59  84 138 180 200 195 176 154 125 105  86  71  60  52  44  39  34  27  23  19   2
.10  0   0    0   0   0   0   1   4   9  18  31  50  99 149 184 198 190 170 139 115  93  75  63  55  47  40  35  28  23  19   3
.20  0   0    0   0   0   0   1   3   7  14  25  41  86 137 176 195 192 175 144 119  95  76  64  55  47  41  36  28  24  19   3
.30  0   0    0   0   0   0   1   2   5  11  21  53 100 147 181 194 187 159 130 103  81  68  58  50  43  37  29  24  19   4

.40  0   0    0   0   0   0   0   2   4   9  17  45  88 136 172 192 189 164 135 106  83  69  59  51  43  38  30  24  20   4
.50  0   0    0   0   0   0   0   1   3   7  23  56 101 145 177 190 177 149 116  89  73  62  53  45  39  31  25  20   6
.75  0   0    0   0   0   0   0   0   1   3  13  35  71 113 151 176 184 162 128  97  77  65  55  48  41  32  26  20   7
1.0  0   0    0   0   0   0   0   0   0   2   8  24  53  92 132 174 182 153 114  88  72  61  52  45  34  27  21  10

1.5  0   0    0   0   0   0   0   0   0   0   0   3   9  24  50 103 152 175 148 112  87  71  60  51  38  30  22  14
2.0  0   0    0   0   0   0   0   0   0   0   0   0   2   6  24  62 127 170 151 116  89  73  61  45  34  23  16
2.5  0   0    0   0   0   0   0   0   0   0   0   0   0   0   4  16  58 131 165 146 113  88  72  52  39  25  16
3.0  0   0    0   0   0   0   0   0   0   0   0   0   0   0   2  16  67 134 161 142 111  87  60  44  27  17
----+---+--+-+-+--+---+--+---+--+--+---+--+---+---+--+---+-+-+---+--+---+-+-+---+--+---+-+-+---+--+---+--+---+--+-+---+-+--+-+--+
          IA/P = 0.50                                         * * * TC = 1.5 HR * * *                              IA/P = 0.50
----+---+--+-+-+--+---+--+---+--+--+---+--+---+---+--+---+-+-+---+--+---+-+-+---+--+---+-+-+---+--+---+--+---+--+-+---+-+--+-+--+
0.0  0   0    0   0   0   0   1   2   6  13  22  34  65  94 114 129 122 117 108 100  91  81  74  66  58  52  46  38  33  28   2
.10  0   0    0   0   0   0   0   2   5  10  18  42  73  99 116 126 121 112 104  94  84  76  68  60  53  48  39  33  28   3
.20  0   0    0   0   0   0   1   4   8  15  36  65  93 112 123 122 113 105  95  85  77  69  61  54  48  39  34  28   4
.30  0   0    0   0   0   0   0   1   3   6  20  44  72  97 114 122 118 109  99  88  79  71  63  56  50  41  34  28   5

.40  0   0    0   0   0   0   1   2   5  16  38  65  91 110 121 119 110 100  89  80  72  64  57  51  41  34  29   5
.50  0   0    0   0   0   0   0   1   4  13  33  59  85 105 118 120 112 101  90  81  73  65  57  51  41  35  29   6
.75  0   0    0   0   0   0   0   1   2   7  20  41  66  89 107 118 115 105  93  83  75  67  60  53  43  35  29   8
1.0  0   0    0   0   0   0   0   0   1   4  14  31  53  78 106 117 113 100  89  80  72  64  57  46  37  30  12

1.5  0   0    0   0   0   0   0   0   0   1   5  14  29  60  91 115 111  99  88  79  71  63  50  41  31  18
2.0  0   0    0   0   0   0   0   0   0   0   2   5  20  45  85 113 109  98  87  78  70  56  45  32  22
2.5  0   0    0   0   0   0   0   0   0   0   0   3  13  42  87 111 107  97  86  78  62  49  34  24
3.0  0   0    0   0   0   0   0   0   0   0   0   1   9  39  82 109 109  98  87  70  56  37  25
----+---+--+-+-+--+---+--+---+--+--+---+--+---+---+--+---+-+-+---+--+---+-+-+---+--+---+-+-+---+--+---+--+---+--+-+---+-+--+-+--+
      RAINFALL TYPE = III                                    * * * TC = 1.5 HR * * *                              SHEET 9 OF 10
```

Exhibit 5-III: Tabular hydrograph unit discharges (csm/in) for type III rainfall distribution – continued

```
TRVL------------------------------------------------------HYDROGRAPH TIME(HOURS)-----------------------------------------------
TIME   11.3     11.9     12.1     12.3     12.5     12.7    13.0     13.4     13.8    14.3     15.0     16.0     17.0    18.0    20.0   26.0
(hr)11.0     11.6     12.0     12.2     12.4     12.6    12.8     13.2     13.6    14.0     14.6    15.5     16.5    17.5    19.0   22.0
----+---+- -+ - +-- +--- +-- +-+-- + --+-- + -+ - + --+-+ -- + -- + -- +-+ - + -+-- + - +- -+- -+-- + - +-- + -+-- + --+
        IA/P = 0.10                                  * * * TC = 2.0 HR * * *                                   IA/P = 0.10
----+---+- -+ - +-- +--- +-- +-+-- + --+-- + -+ - + --+-+ -- + -- + -- +-+ - + -+-- + - +- -+- -+-- + - +-- + -+-- + --+
0.0   9  11  15  19  21  23  27  31  39  48  60  75  91 129 164 187 200 191 178 147 119  92  69  55  45  37  31  26  20  16  13   3
.10   8  10  13  17  18  20  22  25  29  36  44  55  68 101 139 170 189 197 188 163 132 101  75  59  47  39  33  28  21  17  13   3
.20   7  10  13  16  18  19  21  24  28  33  40  50  62  93 129 162 185 195 190 168 137 104  77  60  48  40  33  28  21  17  13   4
.30   7   9  12  15  17  18  20  23  26  31  37  46  56  85 120 154 179 193 191 172 142 108  80  62  49  41  34  29  21  17  13   4

.40   6   8  11  14  15  16  18  19  22  25  29  34  42  64  94 129 161 183 192 183 157 120  87  66  53  43  36  30  22  17  13   5
.50   6   8  10  13  14  16  17  19  21  23  27  32  38  58  87 121 153 177 191 185 162 124  90  68  54  44  36  31  22  18  13   5
.75   5   6   8  11  12  13  14  15  16  18  20  23  26  37  55  81 113 144 169 186 179 147 106  78  61  49  40  33  24  19  14   6
1.0   4   5   7   9  10  11  12  13  14  15  17  18  20  27  38  56  82 113 143 176 185 164 121  88  67  53  43  36  26  20  14   7

1.5   2   3   4   5   6   7   7   8   9  10  10  11  12  15  18  23  31  45  65 106 148 180 166 126  92  69  55  44  31  23  15   9
2.0   1   1   2   3   4   4   5   5   6   6   7   8   8  10  12  14  18  23  31  52  87 139 176 160 122  90  68  54  36  26  16  10
2.5   0   0   1   2   2   2   2   3   3   4   4   5   5   6   7   9  11  13  16  22  36  71 132 172 161 126  94  71  45  31  18  11
3.0   0   0   0   1   1   1   1   1   2   2   2   3   3   4   5   6   7   9  10  14  19  35  78 136 168 156 123  92  54  36  20  11
----+---+- -+ - +-- +--- +-- +-+-- + --+-- + -+ - + --+-+ -- + -- + -- +-+ - + -+-- + - +- -+- -+-- + - +-- + -+-- + --+
        IA/P = 0.30                                  * * * TC = 2.0 HR * * *                                   IA/P = 0.30
----+---+- -+ - +-- +--- +-- +-+-- + --+-- + -+ - + --+-+ -- + -- + -- +-+ - + -+-- + - +- -+- -+-- + - +-- + -+-- + --+
0.0   0   0   0   0   0   0   1   2   6  11  18  29  41  75 111 140 159 170 163 145 124 103  84  70  60  51  44  39  30  25  20   4
.10   0   0   0   0   0   0   1   2   4   9  15  24  50  84 118 145 160 167 155 134 110  89  74  63  54  46  40  31  25  20   5
.20   0   0   0   0   0   0   0   1   3   7  12  20  43  76 110 138 157 165 157 138 113  91  75  64  55  47  41  32  26  20   5
.30   0   0   0   0   0   0   0   0   1   3   5  10  17  38  68 101 131 152 164 159 141 116  93  77  65  56  48  41  32  26  20   6

.40   0   0   0   0   0   0   0   0   0   1   2   4   8  22  45  76 109 137 155 163 151 125  99  81  68  58  50  43  33  26  20   7
.50   0   0   0   0   0   0   0   0   1   1   3   7  18  39  69 101 130 151 162 153 128 101  83  69  59  51  44  34  27  20   7
.75   0   0   0   0   0   0   0   0   0   0   1   2   6  17  36  63  93 122 151 158 143 114  92  76  64  55  47  36  28  21   9
1.0   0   0   0   0   0   0   0   0   0   0   0   0   2   7  18  37  63  93 132 157 153 125 100  82  68  58  50  38  29  21  11

1.5   0   0   0   0   0   0   0   0   0   0   0   0   0   0   1   4  12  26  59 100 142 154 128 102  83  70  59  44  34  23  15
2.0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   2   5  18  43  93 142 150 125 101  82  69  50  38  24  16
2.5   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   3  12  41  98 141 147 122  99  81  58  43  26  17
3.0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   1   8  38  92 135 144 124 102  69  50  30  18
----+---+- -+ - +-- +--- +-- +-+-- + --+-- + -+ - + --+-+ -- + -- + -- +-+ - + -+-- + - +- -+- -+-- + - +-- + -+-- + --+
        IA/P = 0.50                                  * * * TC = 2.0 HR * * *                                   IA/P = 0.50
----+---+- -+ - +-- +--- +-- +-+-- + --+-- + -+ - + --+-+ -- + -- + -- +-+ - + -+-- + - +- -+- -+-- + - +-- + -+-- + --+
0.0   0   0   0   0   0   0   0   0   1   3   6  11  16  33  54  75  91 102 114 114 103  96  87  79  72  64  57  51  41  35  29   6
.10   0   0   0   0   0   0   0   0   1   2   5   9  14  29  49  70  87  99 106 113 104  97  88  80  72  65  58  52  42  35  29   6
.20   0   0   0   0   0   0   0   0   1   2   4   7  18  34  54  74  90 101 112 107  99  90  82  75  67  60  53  43  36  29   8
.30   0   0   0   0   0   0   0   0   0   0   1   3   6  15  30  49  69  86  98 111 108 100  91  83  75  68  60  54  43  36  29   8

.40   0   0   0   0   0   0   0   0   0   0   1   2   8  19  35  55  73  89 105 110 103  94  86  78  70  62  56  45  37  30  10
.50   0   0   0   0   0   0   0   0   0   0   1   2   6  16  31  50  69  85 102 109 104  95  86  78  71  63  56  45  37  30  11
.75   0   0   0   0   0   0   0   0   0   0   0   1   4  10  21  37  55  73  93 107 107  97  89  81  73  65  58  47  38  30  13
1.0   0   0   0   0   0   0   0   0   0   0   0   0   0   2   7  15  29  46  72  93 107 103  94  86  78  70  62  50  40  31  16

1.5   0   0   0   0   0   0   0   0   0   0   0   0   0   0   1   2   7  15  34  59  89 105 101  93  85  77  69  55  44  32  21
2.0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   1   3  10  25  55  90 104 100  92  84  76  61  49  34  23
2.5   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   2   7  24  59  91 103  99  91  83  68  54  36  25
3.0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   0   1   7  28  62  91 101  98  90  75  60  39  26
----+---+- -+ - +-- +--- +-- +-+-- + --+-- + -+ - + --+-+ -- + -- + -- +-+ - + -+-- + - +- -+- -+-- + - +-- + -+-- + --+
        RAINFALL TYPE = III                          * * * TC = 2.0 HR * * *                                   SHEET 10 OF 10
```