```
ESTIMATED TIME TO PEAK         (MINS) =              28.00

LINK S16.0             1.000

ESTIMATED VOLUME (CU METRES*10**3) =              19.83
ESTIMATED PEAK FLOW          (CUMECS) =               23.
ESTIMATED TIME TO PEAK         (MINS) =              15.00

LINK S15.0             1.000

ESTIMATED VOLUME (CU METRES*10**3) =              6.374
ESTIMATED PEAK FLOW          (CUMECS) =               4.4
ESTIMATED TIME TO PEAK         (MINS) =              15.00

LINK D9                1.000

ESTIMATED VOLUME (CU METRES*10**3) =              293.9
ESTIMATED PEAK FLOW          (CUMECS) =               83.
ESTIMATED TIME TO PEAK         (MINS) =              30.00

LINK S17.0             1.000

ESTIMATED VOLUME (CU METRES*10**3) =              28.95
ESTIMATED PEAK FLOW          (CUMECS) =               28.
ESTIMATED TIME TO PEAK         (MINS) =              15.00

LINK S17.1             1.000

ESTIMATED VOLUME (CU METRES*10**3) =              39.38
ESTIMATED PEAK FLOW          (CUMECS) =               40.
ESTIMATED TIME TO PEAK         (MINS) =              15.00

LINK S18.0             1.000

ESTIMATED VOLUME (CU METRES*10**3) =              8.864
ESTIMATED PEAK FLOW          (CUMECS) =               4.8
ESTIMATED TIME TO PEAK         (MINS) =              15.00

LINK D10               1.000

ESTIMATED VOLUME (CU METRES*10**3) =              342.0
ESTIMATED PEAK FLOW          (CUMECS) =               87.
ESTIMATED TIME TO PEAK         (MINS) =              15.00

LINK S19.0             1.000

ESTIMATED VOLUME (CU METRES*10**3) =              12.19
ESTIMATED PEAK FLOW          (CUMECS) =               14.
ESTIMATED TIME TO PEAK         (MINS) =              15.00

LINK S20.0             1.000

ESTIMATED VOLUME (CU METRES*10**3) =              8.923
ESTIMATED PEAK FLOW          (CUMECS) =               5.5
ESTIMATED TIME TO PEAK         (MINS) =              15.00

LINK Outlet            1.000

ESTIMATED VOLUME (CU METRES*10**3) =              363.0
ESTIMATED PEAK FLOW          (CUMECS) =               95.
ESTIMATED TIME TO PEAK         (MINS) =              19.00
```

```
##############################################################################
#####
Existing - 100 year re-run - Hyder Sept 2010

Results for period from  0: 0.0  1/ 1/1990
                     to  8:20.0  1/ 1/1990
##############################################################################
#####
```

ROUTING INCREMENT (MINS) = 1.00
STORM DURATION (MINS) = 25.
RETURN PERIOD (YRS) = 100.
BX = 1.0000
TOTAL OF FIRST SUB-AREAS (ha) = 689.69
TOTAL OF SECOND SUB-AREAS (ha) = 386.68
TOTAL OF ALL SUB-AREAS (ha) = 1076.37

SUMMARY OF CATCHMENT AND RAINFALL DATA

Link Label	Catch. Area #1 (ha)	Area #2	Slope #1 (%)	Slope #2	% Impervious #1 (%)	% Impervious #2	Pern #1	Pern #2	B #1	B #2	Link No.
S1.0	189.00	0.000	1.700	0.000	5.000	0.000	.050	0.00	.4083	0.000	1.000
S3.0	6.840	6.840	1.200	1.200	5.000	100.0	.050	.015	.0865	.0037	2.000
D1	.00001	0.000	.0010	0.000	0.000	0.000	.025	0.00	.0021	0.000	1.001
S2.0	28.000	0.000	.3000	0.000	5.000	0.000	.050	0.00	.3594	0.000	3.000
B	17.350	8.701	.5000	.5000	0.000	100.0	.050	.015	.2700	.0065	4.000
B1	1.073	0.000	.5000	0.000	5.000	0.000	.050	0.00	.0511	0.000	5.000
S2.1	47.903	2.521	.5000	.5000	0.000	100.0	.050	.015	.4578	.0034	3.001
S4.0	10.150	10.150	.7000	.7000	5.000	100.0	.050	.015	.1389	.0059	6.000
S1.1	29.650	0.000	.3000	0.000	5.000	0.000	.050	0.00	.3703	0.000	7.000
D2	.00001	0.000	.0010	0.000	0.000	0.000	.025	0.00	.0021	0.000	1.002
S5.0	6.430	6.430	1.200	1.200	5.000	100.0	.050	.015	.0837	.0036	8.000
D3	.00001	0.000	.0010	0.000	0.000	0.000	.025	0.00	.0021	0.000	1.003
S1.2	42.887	0.000	.7000	0.000	5.000	0.000	.050	0.00	.2940	0.000	9.000
S7.0	73.180	73.180	.5000	.5000	5.000	100.0	.050	.015	.4591	.0196	10.00
D4	.00001	0.000	.0010	0.000	0.000	0.000	.025	0.00	.0021	0.000	1.004
S9.0	3.960	3.960	1.200	1.200	5.000	100.0	.050	.015	.0651	.0028	11.00
A	13.232	14.221	.7000	.7000	0.000	100.0	.050	.025	.1983	.0142	12.00
S6.0	28.014	1.474	.7000	.7000	0.000	100.0	.050	.025	.2928	.0044	12.00
D5	.00001	0.000	.0010	0.000	0.000	0.000	.025	0.00	.0021	0.000	1.005
S10.0	12.890	0.000	.6000	0.000	5.000	0.000	.050	0.00	.1699	0.000	13.00
S8.0	22.360	22.360	.4000	.4000	5.000	100.0	.050	.015	.2770	.0118	14.00
S8.1	5.100	5.110	.4000	.4000	5.000	100.0	.050	.015	.1284	.0055	14.00
D6	.00001	0.000	.0010	0.000	0.000	0.000	.025	0.00	.0021	0.000	1.006

S12.0	14.350	14.350	.6000	.6000	5.000	100.0	.050	.015	.1797	.0077	15.00
S11.0	7.370	7.370	1.100	1.100	5.000	100.0	.050	.015	.0939	.0040	16.00
D7	.00001	0.000	.0010	0.000	0.000	0.000	.025	0.00	.0021	0.000	1.007
S13.0	45.840	45.840	1.500	1.500	5.000	100.0	.050	.015	.2080	.0089	17.00
S14.0	0.4000	3.590	.4000	.4000	5.000	100.0	.050	.015	.0342	.0046	18.00
S14.1	3.590	3.590	.5000	.5000	5.000	100.0	.050	.025	.0957	.0082	18.00
D8	.00001	0.000	.0010	0.000	0.000	0.000	.025	0.00	.0021	0.000	1.008
S16.0	4.430	39.830	.6000	.6000	5.000	100.0	.050	.015	.0975	.0131	19.00
S15.0	11.550	6.720	2.700	2.700	5.000	100.0	.050	.015	.0758	.0024	20.00
D9	.00001	0.000	.0010	0.000	0.000	0.000	.025	0.00	.0021	0.000	1.009
S17.0	21.600	49.340	.8000	.8000	5.000	100.0	.050	.015	.1925	.0126	21.00
S17.1	2.320	20.920	.5000	.5000	5.000	100.0	.050	.015	.0763	.0102	21.00
S18.0	19.320	7.470	1.900	1.900	5.000	100.0	.050	.015	.1180	.0031	22.00
D10	.00001	0.000	.0010	0.000	0.000	0.000	.025	0.00	.0021	0.000	1.010
S19.0	2.720	24.440	.6000	.6000	5.000	100.0	.050	.015	.0757	.0101	23.00
S20.0	18.180	8.270	3.000	3.000	5.000	100.0	.050	.015	.0910	.0026	24.00
Outlet	.00001	0.000	.0010	0.000	0.000	0.000	.025	0.00	.0021	0.000	1.011

Link Label	Average Intensity (mm/h)	Init. Loss #1 (mm)	Init. Loss #2 (mm)	Cont. Loss #1 (mm/h)	Cont. Loss #2 (mm/h)	Excess Rain #1 (mm)	Excess Rain #2 (mm)	Peak Inflow (m^3/s)	Time to Peak	Link Lag mins
S1.0	116.00	20.00	0.000	2.500	0.000	27.667	0.000	5.603	26.00	5.000
S3.0	116.00	20.00	1.500	2.500	0.000	27.667	46.833	4.048	15.00	5.000
D1	116.00	20.00	0.000	2.500	0.000	27.667	0.000	7.013	30.00	5.000
S2.0	116.00	20.00	0.000	2.500	0.000	27.667	0.000	0.4304	26.00	13.00
B	116.00	20.00	1.500	2.500	0.000	27.667	46.833	5.083	15.00	0.000
B1	116.00	20.00	0.000	2.500	0.000	27.667	0.000	0.0607	26.00	0.000
S2.1	116.00	20.00	1.500	2.500	0.000	27.667	46.833	6.838	15.00	0.000
S4.0	116.00	20.00	1.500	2.500	0.000	27.667	46.833	5.912	15.00	0.000
S1.1	116.00	20.00	0.000	2.500	0.000	27.667	0.000	0.4602	26.00	0.000
D2	116.00	20.00	0.000	2.500	0.000	27.667	0.000	14.985	15.00	7.000
S5.0	116.00	20.00	1.500	2.500	0.000	27.667	46.833	3.809	15.00	0.000
D3	116.00	20.00	0.000	2.500	0.000	27.667	0.000	16.384	22.00	3.000
S1.2	116.00	20.00	0.000	2.500	0.000	27.667	0.000	1.114	26.00	0.000
S7.0	116.00	20.00	1.500	2.500	0.000	27.667	46.833	41.400	15.00	1.000
D4	116.00	20.00	0.000	2.500	0.000	27.667	0.000	52.688	16.00	1.500

S9.0	116.00	20.00	1.500	2.500	0.000	27.667	46.833	2.383	15.00 0.000
A	116.00	20.00	1.500	2.500	0.000	27.667	46.833	7.999	15.00 0.000
S6.0	116.00	20.00	1.500	2.500	0.000	27.667	46.833	9.108	15.00 0.000
D5	116.00	20.00	0.000	2.500	0.000	27.667	0.000	59.249	18.00 1.500
S10.0	116.00	20.00	0.000	2.500	0.000	27.667	0.000	0.4175	26.00 0.000
S8.0	116.00	20.00	1.500	2.500	0.000	27.667	46.833	12.798	15.00 0.000
S8.1	116.00	20.00	1.500	2.500	0.000	27.667	46.833	15.756	15.00 9.000
D6	116.00	20.00	0.000	2.500	0.000	27.667	0.000	71.818	20.00 6.000
S12.0	116.00	20.00	1.500	2.500	0.000	27.667	46.833	8.315	15.00 0.000
S11.0	116.00	20.00	1.500	2.500	0.000	27.667	46.833	4.341	15.00 0.000
D7	116.00	20.00	0.000	2.500	0.000	27.667	0.000	75.502	26.00 2.500
S13.0	116.00	20.00	1.500	2.500	0.000	27.667	46.833	26.781	15.00 0.000
S14.0	116.00	20.00	1.500	2.500	0.000	27.667	46.833	2.042	14.00 0.000
S14.1	116.00	20.00	1.500	2.500	0.000	27.667	46.833	4.112	15.00 9.000
D8	116.00	20.00	0.000	2.500	0.000	27.667	0.000	80.283	28.00 2.500
S16.0	116.00	20.00	1.500	2.500	0.000	27.667	46.833	22.569	15.00 0.000
S15.0	116.00	20.00	1.500	2.500	0.000	27.667	46.833	4.366	15.00 0.000
D9	116.00	20.00	0.000	2.500	0.000	27.667	0.000	82.591	30.00 5.000
S17.0	116.00	20.00	1.500	2.500	0.000	27.667	46.833	28.209	15.00 0.000
S17.1	116.00	20.00	1.500	2.500	0.000	27.667	46.833	40.067	15.00 0.000
S18.0	116.00	20.00	1.500	2.500	0.000	27.667	46.833	4.824	15.00 0.000
D10	116.00	20.00	0.000	2.500	0.000	27.667	0.000	86.749	15.00 4.300
S19.0	116.00	20.00	1.500	2.500	0.000	27.667	46.833	13.871	15.00 0.000
S20.0	116.00	20.00	1.500	2.500	0.000	27.667	46.833	5.481	15.00 0.000
Outlet	116.00	20.00	0.000	2.500	0.000	27.667	0.000	94.559	19.00 0.000

LINK S1.0 2.000

ESTIMATED VOLUME (CU METRES*10**3) = 78.80
ESTIMATED PEAK FLOW (CUMECS) = 10.
ESTIMATED TIME TO PEAK (MINS) = 46.00

LINK S3.0 2.000

ESTIMATED VOLUME (CU METRES*10**3) = 7.176
ESTIMATED PEAK FLOW (CUMECS) = 3.4
ESTIMATED TIME TO PEAK (MINS) = 13.00

LINK D1 2.000

ESTIMATED VOLUME (CU METRES*10**3) = 85.94
ESTIMATED PEAK FLOW (CUMECS) = 12.
ESTIMATED TIME TO PEAK (MINS) = 50.00

```
LINK S2.0              2.000

ESTIMATED VOLUME (CU METRES*10**3) =              11.12
ESTIMATED PEAK FLOW         (CUMECS) =               0.83
ESTIMATED TIME TO PEAK         (MINS) =              46.00

LINK B                 2.000

ESTIMATED VOLUME (CU METRES*10**3) =              12.45
ESTIMATED PEAK FLOW         (CUMECS) =                4.4
ESTIMATED TIME TO PEAK         (MINS) =              15.00

LINK B1                2.000

ESTIMATED VOLUME (CU METRES*10**3) =             0.4576
ESTIMATED PEAK FLOW         (CUMECS) =               0.13
ESTIMATED TIME TO PEAK         (MINS) =              45.00

LINK S2.1              2.000

ESTIMATED VOLUME (CU METRES*10**3) =              44.36
ESTIMATED PEAK FLOW         (CUMECS) =                5.7
ESTIMATED TIME TO PEAK         (MINS) =              15.00

LINK S4.0              2.000

ESTIMATED VOLUME (CU METRES*10**3) =              10.57
ESTIMATED PEAK FLOW         (CUMECS) =                5.1
ESTIMATED TIME TO PEAK         (MINS) =              14.00

LINK S1.1              2.000

ESTIMATED VOLUME (CU METRES*10**3) =              11.76
ESTIMATED PEAK FLOW         (CUMECS) =               0.86
ESTIMATED TIME TO PEAK         (MINS) =              46.00

LINK D2                2.000

ESTIMATED VOLUME (CU METRES*10**3) =              152.6
ESTIMATED PEAK FLOW         (CUMECS) =                16.
ESTIMATED TIME TO PEAK         (MINS) =              55.00

LINK S5.0              2.000

ESTIMATED VOLUME (CU METRES*10**3) =              6.747
ESTIMATED PEAK FLOW         (CUMECS) =                3.2
ESTIMATED TIME TO PEAK         (MINS) =              13.00

LINK D3                2.000

ESTIMATED VOLUME (CU METRES*10**3) =              159.2
ESTIMATED PEAK FLOW         (CUMECS) =                17.
ESTIMATED TIME TO PEAK         (MINS) =              52.00

LINK S1.2              2.000

ESTIMATED VOLUME (CU METRES*10**3) =              17.66
ESTIMATED PEAK FLOW         (CUMECS) =                2.0
ESTIMATED TIME TO PEAK         (MINS) =              46.00

LINK S7.0              2.000

ESTIMATED VOLUME (CU METRES*10**3) =              74.95
ESTIMATED PEAK FLOW         (CUMECS) =                35.
ESTIMATED TIME TO PEAK         (MINS) =              15.00

LINK D4                2.000

ESTIMATED VOLUME (CU METRES*10**3) =              251.7
ESTIMATED PEAK FLOW         (CUMECS) =                43.
```

```
ESTIMATED TIME TO PEAK         (MINS) =              17.00

LINK S9.0              2.000

ESTIMATED VOLUME (CU METRES*10**3) =              4.125
ESTIMATED PEAK FLOW         (CUMECS) =               2.0
ESTIMATED TIME TO PEAK         (MINS) =             13.00

LINK A                 2.000

ESTIMATED VOLUME (CU METRES*10**3) =              14.37
ESTIMATED PEAK FLOW         (CUMECS) =               6.7
ESTIMATED TIME TO PEAK         (MINS) =             16.00

LINK S6.0              2.000

ESTIMATED VOLUME (CU METRES*10**3) =              26.68
ESTIMATED PEAK FLOW         (CUMECS) =               7.5
ESTIMATED TIME TO PEAK         (MINS) =             16.00

LINK D5                2.000

ESTIMATED VOLUME (CU METRES*10**3) =              282.4
ESTIMATED PEAK FLOW         (CUMECS) =               51.
ESTIMATED TIME TO PEAK         (MINS) =             19.00

LINK S10.0             2.000

ESTIMATED VOLUME (CU METRES*10**3) =              5.441
ESTIMATED PEAK FLOW         (CUMECS) =              0.80
ESTIMATED TIME TO PEAK         (MINS) =             46.00

LINK S8.0              2.000

ESTIMATED VOLUME (CU METRES*10**3) =              23.07
ESTIMATED PEAK FLOW         (CUMECS) =               11.
ESTIMATED TIME TO PEAK         (MINS) =             15.00

LINK S8.1              2.000

ESTIMATED VOLUME (CU METRES*10**3) =              28.39
ESTIMATED PEAK FLOW         (CUMECS) =               14.
ESTIMATED TIME TO PEAK         (MINS) =             15.00

LINK D6                2.000

ESTIMATED VOLUME (CU METRES*10**3) =              316.2
ESTIMATED PEAK FLOW         (CUMECS) =               63.
ESTIMATED TIME TO PEAK         (MINS) =             22.00

LINK S12.0             2.000

ESTIMATED VOLUME (CU METRES*10**3) =              14.98
ESTIMATED PEAK FLOW         (CUMECS) =               7.2
ESTIMATED TIME TO PEAK         (MINS) =             15.00

LINK S11.0             2.000

ESTIMATED VOLUME (CU METRES*10**3) =              7.730
ESTIMATED PEAK FLOW         (CUMECS) =               3.7
ESTIMATED TIME TO PEAK         (MINS) =             14.00

LINK D7                2.000

ESTIMATED VOLUME (CU METRES*10**3) =              338.6
ESTIMATED PEAK FLOW         (CUMECS) =               69.
ESTIMATED TIME TO PEAK         (MINS) =             28.00

LINK S13.0             2.000
```

```
ESTIMATED VOLUME (CU METRES*10**3) =                47.78
ESTIMATED PEAK FLOW          (CUMECS) =                23.
ESTIMATED TIME TO PEAK          (MINS) =               14.00

LINK S14.0              2.000

ESTIMATED VOLUME (CU METRES*10**3) =                2.402
ESTIMATED PEAK FLOW          (CUMECS) =               1.8
ESTIMATED TIME TO PEAK          (MINS) =               14.00

LINK S14.1              2.000

ESTIMATED VOLUME (CU METRES*10**3) =                6.160
ESTIMATED PEAK FLOW          (CUMECS) =               3.5
ESTIMATED TIME TO PEAK          (MINS) =               15.00

LINK D8                 2.000

ESTIMATED VOLUME (CU METRES*10**3) =                392.5
ESTIMATED PEAK FLOW          (CUMECS) =                84.
ESTIMATED TIME TO PEAK          (MINS) =               30.00

LINK S16.0              2.000

ESTIMATED VOLUME (CU METRES*10**3) =                26.66
ESTIMATED PEAK FLOW          (CUMECS) =                20.
ESTIMATED TIME TO PEAK          (MINS) =               15.00

LINK S15.0              2.000

ESTIMATED VOLUME (CU METRES*10**3) =                9.086
ESTIMATED PEAK FLOW          (CUMECS) =               3.5
ESTIMATED TIME TO PEAK          (MINS) =               15.00

LINK D9                 2.000

ESTIMATED VOLUME (CU METRES*10**3) =                428.1
ESTIMATED PEAK FLOW          (CUMECS) =                95.
ESTIMATED TIME TO PEAK          (MINS) =               33.00

LINK S17.0              2.000

ESTIMATED VOLUME (CU METRES*10**3) =                39.80
ESTIMATED PEAK FLOW          (CUMECS) =                25.
ESTIMATED TIME TO PEAK          (MINS) =               15.00

LINK S17.1              2.000

ESTIMATED VOLUME (CU METRES*10**3) =                53.80
ESTIMATED PEAK FLOW          (CUMECS) =                35.
ESTIMATED TIME TO PEAK          (MINS) =               15.00

LINK S18.0              2.000

ESTIMATED VOLUME (CU METRES*10**3) =                12.86
ESTIMATED PEAK FLOW          (CUMECS) =               3.8
ESTIMATED TIME TO PEAK          (MINS) =               15.00

LINK D10                2.000

ESTIMATED VOLUME (CU METRES*10**3) =                494.5
ESTIMATED PEAK FLOW          (CUMECS) =             0.11E+03
ESTIMATED TIME TO PEAK          (MINS) =               38.00

LINK S19.0              2.000

ESTIMATED VOLUME (CU METRES*10**3) =                16.35
ESTIMATED PEAK FLOW          (CUMECS) =                12.
ESTIMATED TIME TO PEAK          (MINS) =               15.00
```

```
 LINK S20.0             2.000

 ESTIMATED VOLUME (CU METRES*10**3) =                  12.88
 ESTIMATED PEAK FLOW          (CUMECS) =                4.3
 ESTIMATED TIME TO PEAK          (MINS) =              15.00

 LINK Outlet            2.000

 ESTIMATED VOLUME (CU METRES*10**3) =                  523.5
 ESTIMATED PEAK FLOW          (CUMECS) =               0.12E+03
 ESTIMATED TIME TO PEAK          (MINS) =              42.00


################################################################################
#####
Existing - 100 year re-run - Hyder Sept 2010

Results for period from  0: 0.0  1/ 1/1990
                    to  8:20.0  1/ 1/1990
################################################################################
#####

                                   ROUTING INCREMENT (MINS) =       1.00
                                   STORM DURATION (MINS)    =       45.
                                   RETURN PERIOD (YRS)      =      100.
                                   BX                       =   1.0000
                                   TOTAL OF FIRST SUB-AREAS  (ha) =     689.69
                                   TOTAL OF SECOND SUB-AREAS (ha) =     386.68
                                   TOTAL OF ALL SUB-AREAS (ha)    =    1076.37

     SUMMARY OF CATCHMENT AND RAINFALL DATA
 Link      Catch. Area      Slope     % Impervious     Pern        B        Link
 Label      #1     #2      #1    #2      #1    #2     #1    #2    #1   #2    No.
            (ha)                (%)           (%)
S1.0      189.00  0.000  1.700 0.000  5.000 0.000  .050 0.00  .4083 0.000  1.000
S3.0       6.840  6.840  1.200 1.200  5.000 100.0  .050 .015  .0865 .0037  2.000
D1        .00001  0.000  .0010 0.000  0.000 0.000  .025 0.00  .0021 0.000  1.001
S2.0      28.000  0.000  .3000 0.000  5.000 0.000  .050 0.00  .3594 0.000  3.000
B         17.350  8.701  .5000 .5000  0.000 100.0  .050 .015  .2700 .0065  4.000
B1         1.073  0.000  .5000 0.000  5.000 0.000  .050 0.00  .0511 0.000  5.000
S2.1      47.903  2.521  .5000 .5000  0.000 100.0  .050 .015  .4578 .0034  3.001
S4.0      10.150 10.150  .7000 .7000  5.000 100.0  .050 .015  .1389 .0059  6.000
S1.1      29.650  0.000  .3000 0.000  5.000 0.000  .050 0.00  .3703 0.000  7.000
D2        .00001  0.000  .0010 0.000  0.000 0.000  .025 0.00  .0021 0.000  1.002
S5.0       6.430  6.430  1.200 1.200  5.000 100.0  .050 .015  .0837 .0036  8.000
D3        .00001  0.000  .0010 0.000  0.000 0.000  .025 0.00  .0021 0.000  1.003
S1.2      42.887  0.000  .7000 0.000  5.000 0.000  .050 0.00  .2940 0.000  9.000
S7.0      73.180 73.180  .5000 .5000  5.000 100.0  .050 .015  .4591 .0196  10.00
D4        .00001  0.000  .0010 0.000  0.000 0.000  .025 0.00  .0021 0.000  1.004
S9.0       3.960  3.960  1.200 1.200  5.000 100.0  .050 .015  .0651 .0028  11.00
```

A	13.232	14.221	.7000	.7000	0.000	100.0	.050	.025	.1983	.0142	12.00
S6.0	28.014	1.474	.7000	.7000	0.000	100.0	.050	.025	.2928	.0044	12.00
D5	.00001	0.000	.0010	0.000	0.000	0.000	.025	0.00	.0021	0.000	1.005
S10.0	12.890	0.000	.6000	0.000	5.000	0.000	.050	0.00	.1699	0.000	13.00
S8.0	22.360	22.360	.4000	.4000	5.000	100.0	.050	.015	.2770	.0118	14.00
S8.1	5.100	5.110	.4000	.4000	5.000	100.0	.050	.015	.1284	.0055	14.00
D6	.00001	0.000	.0010	0.000	0.000	0.000	.025	0.00	.0021	0.000	1.006
S12.0	14.350	14.350	.6000	.6000	5.000	100.0	.050	.015	.1797	.0077	15.00
S11.0	7.370	7.370	1.100	1.100	5.000	100.0	.050	.015	.0939	.0040	16.00
D7	.00001	0.000	.0010	0.000	0.000	0.000	.025	0.00	.0021	0.000	1.007
S13.0	45.840	45.840	1.500	1.500	5.000	100.0	.050	.015	.2080	.0089	17.00
S14.0	0.4000	3.590	.4000	.4000	5.000	100.0	.050	.015	.0342	.0046	18.00
S14.1	3.590	3.590	.5000	.5000	5.000	100.0	.050	.025	.0957	.0082	18.00
D8	.00001	0.000	.0010	0.000	0.000	0.000	.025	0.00	.0021	0.000	1.008
S16.0	4.430	39.830	.6000	.6000	5.000	100.0	.050	.015	.0975	.0131	19.00
S15.0	11.550	6.720	2.700	2.700	5.000	100.0	.050	.015	.0758	.0024	20.00
D9	.00001	0.000	.0010	0.000	0.000	0.000	.025	0.00	.0021	0.000	1.009
S17.0	21.600	49.340	.8000	.8000	5.000	100.0	.050	.015	.1925	.0126	21.00
S17.1	2.320	20.920	.5000	.5000	5.000	100.0	.050	.015	.0763	.0102	21.00
S18.0	19.320	7.470	1.900	1.900	5.000	100.0	.050	.015	.1180	.0031	22.00
D10	.00001	0.000	.0010	0.000	0.000	0.000	.025	0.00	.0021	0.000	1.010
S19.0	2.720	24.440	.6000	.6000	5.000	100.0	.050	.015	.0757	.0101	23.00
S20.0	18.180	8.270	3.000	3.000	5.000	100.0	.050	.015	.0910	.0026	24.00
Outlet	.00001	0.000	.0010	0.000	0.000	0.000	.025	0.00	.0021	0.000	1.011

Link Label	Average Intensity (mm/h)	Init. Loss #1 (mm)	Init. Loss #2 (mm)	Cont. Loss #1 (mm/h)	Cont. Loss #2 (mm/h)	Excess Rain #1 (mm)	Excess Rain #2 (mm)	Peak Inflow (m^3/s)	Time to Peak	Link Lag mins
S1.0	85.000	20.00	0.000	2.500	0.000	42.375	0.000	10.212	46.00	5.000
S3.0	85.000	20.00	1.500	2.500	0.000	42.375	62.250	3.444	13.00	5.000
D1	85.000	20.00	0.000	2.500	0.000	42.375	0.000	11.519	50.00	5.000
S2.0	85.000	20.00	0.000	2.500	0.000	42.375	0.000	0.8285	46.00	13.00
B	85.000	20.00	1.500	2.500	0.000	42.375	62.250	4.354	15.00	0.000
B1	85.000	20.00	0.000	2.500	0.000	42.375	0.000	0.1265	45.00	0.000
S2.1	85.000	20.00	1.500	2.500	0.000	42.375	62.250	5.665	15.00	0.000
S4.0	85.000	20.00	1.500	2.500	0.000	42.375	62.250	5.089	14.00	0.000
S1.1	85.000	20.00	0.000	2.500	0.000	42.375	0.000	0.8635	46.00	0.000

D2	85.000	20.00	0.000	2.500	0.000	42.375	0.000	15.956	55.00 7.000
S5.0	85.000	20.00	1.500	2.500	0.000	42.375	62.250	3.244	13.00 0.000
D3	85.000	20.00	0.000	2.500	0.000	42.375	0.000	16.654	52.00 3.000
S1.2	85.000	20.00	0.000	2.500	0.000	42.375	0.000	2.047	46.00 0.000
S7.0	85.000	20.00	1.500	2.500	0.000	42.375	62.250	35.468	15.00 1.000
D4	85.000	20.00	0.000	2.500	0.000	42.375	0.000	42.828	17.00 1.500
S9.0	85.000	20.00	1.500	2.500	0.000	42.375	62.250	2.000	13.00 0.000
A	85.000	20.00	1.500	2.500	0.000	42.375	62.250	6.743	16.00 0.000
S6.0	85.000	20.00	1.500	2.500	0.000	42.375	62.250	7.545	16.00 0.000
D5	85.000	20.00	0.000	2.500	0.000	42.375	0.000	51.121	19.00 1.500
S10.0	85.000	20.00	0.000	2.500	0.000	42.375	0.000	0.8003	46.00 0.000
S8.0	85.000	20.00	1.500	2.500	0.000	42.375	62.250	11.051	15.00 0.000
S8.1	85.000	20.00	1.500	2.500	0.000	42.375	62.250	13.610	15.00 9.000
D6	85.000	20.00	0.000	2.500	0.000	42.375	0.000	62.719	22.00 6.000
S12.0	85.000	20.00	1.500	2.500	0.000	42.375	62.250	7.183	15.00 0.000
S11.0	85.000	20.00	1.500	2.500	0.000	42.375	62.250	3.695	14.00 0.000
D7	85.000	20.00	0.000	2.500	0.000	42.375	0.000	68.936	28.00 2.500
S13.0	85.000	20.00	1.500	2.500	0.000	42.375	62.250	23.020	14.00 0.000
S14.0	85.000	20.00	1.500	2.500	0.000	42.375	62.250	1.793	14.00 0.000
S14.1	85.000	20.00	1.500	2.500	0.000	42.375	62.250	3.534	15.00 9.000
D8	85.000	20.00	0.000	2.500	0.000	42.375	0.000	84.452	30.00 2.500
S16.0	85.000	20.00	1.500	2.500	0.000	42.375	62.250	19.763	15.00 0.000
S15.0	85.000	20.00	1.500	2.500	0.000	42.375	62.250	3.452	15.00 0.000
D9	85.000	20.00	0.000	2.500	0.000	42.375	0.000	95.023	33.00 5.000
S17.0	85.000	20.00	1.500	2.500	0.000	42.375	62.250	24.559	15.00 0.000
S17.1	85.000	20.00	1.500	2.500	0.000	42.375	62.250	34.955	15.00 0.000
S18.0	85.000	20.00	1.500	2.500	0.000	42.375	62.250	3.816	15.00 0.000
D10	85.000	20.00	0.000	2.500	0.000	42.375	0.000	109.90	38.00 4.300
S19.0	85.000	20.00	1.500	2.500	0.000	42.375	62.250	12.162	15.00 0.000
S20.0	85.000	20.00	1.500	2.500	0.000	42.375	62.250	4.263	15.00 0.000
Outlet	85.000	20.00	0.000	2.500	0.000	42.375	0.000	116.44	42.00 0.000

LINK S1.0 3.000

ESTIMATED VOLUME (CU METRES*10**3) = 95.08
ESTIMATED PEAK FLOW (CUMECS) = 13.
ESTIMATED TIME TO PEAK (MINS) = 61.00

```
LINK S3.0              3.000

ESTIMATED VOLUME (CU METRES*10**3) =                 8.409
ESTIMATED PEAK FLOW         (CUMECS) =                 3.9
ESTIMATED TIME TO PEAK         (MINS) =               25.00

LINK D1                3.000

ESTIMATED VOLUME (CU METRES*10**3) =                 103.5
ESTIMATED PEAK FLOW         (CUMECS) =                  15.
ESTIMATED TIME TO PEAK         (MINS) =               65.00

LINK S2.0              3.000

ESTIMATED VOLUME (CU METRES*10**3) =                 13.50
ESTIMATED PEAK FLOW         (CUMECS) =                 1.1
ESTIMATED TIME TO PEAK         (MINS) =               61.00

LINK B                 3.000

ESTIMATED VOLUME (CU METRES*10**3) =                 14.80
ESTIMATED PEAK FLOW         (CUMECS) =                 4.9
ESTIMATED TIME TO PEAK         (MINS) =               25.00

LINK B1                3.000

ESTIMATED VOLUME (CU METRES*10**3) =                0.5491
ESTIMATED PEAK FLOW         (CUMECS) =                0.14
ESTIMATED TIME TO PEAK         (MINS) =               52.00

LINK S2.1              3.000

ESTIMATED VOLUME (CU METRES*10**3) =                 53.49
ESTIMATED PEAK FLOW         (CUMECS) =                 6.8
ESTIMATED TIME TO PEAK         (MINS) =               25.00

LINK S4.0              3.000

ESTIMATED VOLUME (CU METRES*10**3) =                 12.39
ESTIMATED PEAK FLOW         (CUMECS) =                 5.7
ESTIMATED TIME TO PEAK         (MINS) =               25.00

LINK S1.1              3.000

ESTIMATED VOLUME (CU METRES*10**3) =                 14.31
ESTIMATED PEAK FLOW         (CUMECS) =                 1.1
ESTIMATED TIME TO PEAK         (MINS) =               61.00

LINK D2                3.000

ESTIMATED VOLUME (CU METRES*10**3) =                 183.6
ESTIMATED PEAK FLOW         (CUMECS) =                  20.
ESTIMATED TIME TO PEAK         (MINS) =               60.00

LINK S5.0              3.000

ESTIMATED VOLUME (CU METRES*10**3) =                 7.893
ESTIMATED PEAK FLOW         (CUMECS) =                 3.7
ESTIMATED TIME TO PEAK         (MINS) =               25.00

LINK D3                3.000

ESTIMATED VOLUME (CU METRES*10**3) =                 191.3
ESTIMATED PEAK FLOW         (CUMECS) =                  21.
ESTIMATED TIME TO PEAK         (MINS) =               67.00

LINK S1.2              3.000

ESTIMATED VOLUME (CU METRES*10**3) =                 21.46
```

```
ESTIMATED PEAK FLOW         (CUMECS) =                2.6
ESTIMATED TIME TO PEAK         (MINS) =               61.00

LINK S7.0              3.000

ESTIMATED VOLUME (CU METRES*10**3) =               87.80
ESTIMATED PEAK FLOW         (CUMECS) =                39.
ESTIMATED TIME TO PEAK         (MINS) =               25.00

LINK D4                3.000

ESTIMATED VOLUME (CU METRES*10**3) =               300.5
ESTIMATED PEAK FLOW         (CUMECS) =                52.
ESTIMATED TIME TO PEAK         (MINS) =               26.00

LINK S9.0              3.000

ESTIMATED VOLUME (CU METRES*10**3) =               4.865
ESTIMATED PEAK FLOW         (CUMECS) =                2.3
ESTIMATED TIME TO PEAK         (MINS) =               25.00

LINK A                 3.000

ESTIMATED VOLUME (CU METRES*10**3) =               16.85
ESTIMATED PEAK FLOW         (CUMECS) =                7.4
ESTIMATED TIME TO PEAK         (MINS) =               25.00

LINK S6.0              3.000

ESTIMATED VOLUME (CU METRES*10**3) =               31.69
ESTIMATED PEAK FLOW         (CUMECS) =                8.6
ESTIMATED TIME TO PEAK         (MINS) =               25.00

LINK D5                3.000

ESTIMATED VOLUME (CU METRES*10**3) =               337.0
ESTIMATED PEAK FLOW         (CUMECS) =                60.
ESTIMATED TIME TO PEAK         (MINS) =               28.00

LINK S10.0             3.000

ESTIMATED VOLUME (CU METRES*10**3) =               6.514
ESTIMATED PEAK FLOW         (CUMECS) =                1.0
ESTIMATED TIME TO PEAK         (MINS) =               61.00

LINK S8.0              3.000

ESTIMATED VOLUME (CU METRES*10**3) =               27.07
ESTIMATED PEAK FLOW         (CUMECS) =                12.
ESTIMATED TIME TO PEAK         (MINS) =               25.00

LINK S8.1              3.000

ESTIMATED VOLUME (CU METRES*10**3) =               33.33
ESTIMATED PEAK FLOW         (CUMECS) =                15.
ESTIMATED TIME TO PEAK         (MINS) =               25.00

LINK D6                3.000

ESTIMATED VOLUME (CU METRES*10**3) =               376.7
ESTIMATED PEAK FLOW         (CUMECS) =                69.
ESTIMATED TIME TO PEAK         (MINS) =               30.00

LINK S12.0             3.000

ESTIMATED VOLUME (CU METRES*10**3) =               17.55
ESTIMATED PEAK FLOW         (CUMECS) =                8.0
ESTIMATED TIME TO PEAK         (MINS) =               25.00

LINK S11.0             3.000
```

```
ESTIMATED VOLUME (CU METRES*10**3) =                9.058
ESTIMATED PEAK FLOW          (CUMECS) =                4.2
ESTIMATED TIME TO PEAK          (MINS) =               24.00

LINK D7                 3.000

ESTIMATED VOLUME (CU METRES*10**3) =                403.1
ESTIMATED PEAK FLOW          (CUMECS) =                 75.
ESTIMATED TIME TO PEAK          (MINS) =               36.00

LINK S13.0              3.000

ESTIMATED VOLUME (CU METRES*10**3) =                56.04
ESTIMATED PEAK FLOW          (CUMECS) =                 26.
ESTIMATED TIME TO PEAK          (MINS) =               24.00

LINK S14.0              3.000

ESTIMATED VOLUME (CU METRES*10**3) =                2.770
ESTIMATED PEAK FLOW          (CUMECS) =                1.9
ESTIMATED TIME TO PEAK          (MINS) =               24.00

LINK S14.1              3.000

ESTIMATED VOLUME (CU METRES*10**3) =                7.157
ESTIMATED PEAK FLOW          (CUMECS) =                3.9
ESTIMATED TIME TO PEAK          (MINS) =               25.00

LINK D8                 3.000

ESTIMATED VOLUME (CU METRES*10**3) =                466.1
ESTIMATED PEAK FLOW          (CUMECS) =                 87.
ESTIMATED TIME TO PEAK          (MINS) =               39.00

LINK S16.0              3.000

ESTIMATED VOLUME (CU METRES*10**3) =                30.70
ESTIMATED PEAK FLOW          (CUMECS) =                 21.
ESTIMATED TIME TO PEAK          (MINS) =               25.00

LINK S15.0              3.000

ESTIMATED VOLUME (CU METRES*10**3) =                10.71
ESTIMATED PEAK FLOW          (CUMECS) =                4.4
ESTIMATED TIME TO PEAK          (MINS) =               25.00

LINK D9                 3.000

ESTIMATED VOLUME (CU METRES*10**3) =                507.4
ESTIMATED PEAK FLOW          (CUMECS) =                 96.
ESTIMATED TIME TO PEAK          (MINS) =               42.00

LINK S17.0              3.000

ESTIMATED VOLUME (CU METRES*10**3) =                46.21
ESTIMATED PEAK FLOW          (CUMECS) =                 27.
ESTIMATED TIME TO PEAK          (MINS) =               25.00

LINK S17.1              3.000

ESTIMATED VOLUME (CU METRES*10**3) =                62.36
ESTIMATED PEAK FLOW          (CUMECS) =                 38.
ESTIMATED TIME TO PEAK          (MINS) =               25.00

LINK S18.0              3.000

ESTIMATED VOLUME (CU METRES*10**3) =                15.17
ESTIMATED PEAK FLOW          (CUMECS) =                4.9
ESTIMATED TIME TO PEAK          (MINS) =               25.00
```

```
 LINK D10                3.000

 ESTIMATED VOLUME (CU METRES*10**3) =                  584.7
 ESTIMATED PEAK FLOW          (CUMECS) =                0.11E+03
 ESTIMATED TIME TO PEAK          (MINS) =               47.00

 LINK S19.0              3.000

 ESTIMATED VOLUME (CU METRES*10**3) =                  18.86
 ESTIMATED PEAK FLOW          (CUMECS) =                 13.
 ESTIMATED TIME TO PEAK          (MINS) =               25.00

 LINK S20.0              3.000

 ESTIMATED VOLUME (CU METRES*10**3) =                  15.23
 ESTIMATED PEAK FLOW          (CUMECS) =                 5.7
 ESTIMATED TIME TO PEAK          (MINS) =               25.00

 LINK Outlet             3.000

 ESTIMATED VOLUME (CU METRES*10**3) =                  618.6
 ESTIMATED PEAK FLOW          (CUMECS) =                0.11E+03
 ESTIMATED TIME TO PEAK          (MINS) =               51.00


################################################################################
#####
Existing - 100 year re-run - Hyder Sept 2010

Results for period from  0: 0.0  1/ 1/1990
                    to  8:20.0  1/ 1/1990
################################################################################
#####

                                  ROUTING INCREMENT (MINS) =       1.00
                                  STORM DURATION (MINS)    =       60.
                                  RETURN PERIOD (YRS)      =       100.
                                  BX                       =    1.0000
                                  TOTAL OF FIRST SUB-AREAS  (ha) =     689.69
                                  TOTAL OF SECOND SUB-AREAS (ha) =     386.68
                                  TOTAL OF ALL SUB-AREAS (ha)    =    1076.37

     SUMMARY OF CATCHMENT AND RAINFALL DATA
 Link      Catch. Area      Slope     % Impervious      Pern         B        Link
 Label      #1     #2      #1    #2      #1    #2     #1    #2    #1   #2     No.
             (ha)                (%)          (%)
S1.0       189.00  0.000  1.700 0.000  5.000 0.000  .050 0.00  .4083 0.000  1.000

S3.0        6.840  6.840  1.200 1.200  5.000 100.0  .050 .015  .0865 .0037  2.000

D1         .00001  0.000  .0010 0.000  0.000 0.000  .025 0.00  .0021 0.000  1.001

S2.0       28.000  0.000  .3000 0.000  5.000 0.000  .050 0.00  .3594 0.000  3.000

B          17.350  8.701  .5000 .5000  0.000 100.0  .050 .015  .2700 .0065  4.000

B1          1.073  0.000  .5000 0.000  5.000 0.000  .050 0.00  .0511 0.000  5.000

S2.1       47.903  2.521  .5000 .5000  0.000 100.0  .050 .015  .4578 .0034  3.001

S4.0       10.150 10.150  .7000 .7000  5.000 100.0  .050 .015  .1389 .0059  6.000

S1.1       29.650  0.000  .3000 0.000  5.000 0.000  .050 0.00  .3703 0.000  7.000

D2         .00001  0.000  .0010 0.000  0.000 0.000  .025 0.00  .0021 0.000  1.002
```

S5.0	6.430	6.430	1.200	1.200	5.000	100.0	.050	.015	.0837	.0036	8.000
D3	.00001	0.000	.0010	0.000	0.000	0.000	.025	0.00	.0021	0.000	1.003
S1.2	42.887	0.000	.7000	0.000	5.000	0.000	.050	0.00	.2940	0.000	9.000
S7.0	73.180	73.180	.5000	.5000	5.000	100.0	.050	.015	.4591	.0196	10.00
D4	.00001	0.000	.0010	0.000	0.000	0.000	.025	0.00	.0021	0.000	1.004
S9.0	3.960	3.960	1.200	1.200	5.000	100.0	.050	.015	.0651	.0028	11.00
A	13.232	14.221	.7000	.7000	0.000	100.0	.050	.025	.1983	.0142	12.00
S6.0	28.014	1.474	.7000	.7000	0.000	100.0	.050	.025	.2928	.0044	12.00
D5	.00001	0.000	.0010	0.000	0.000	0.000	.025	0.00	.0021	0.000	1.005
S10.0	12.890	0.000	.6000	0.000	5.000	0.000	.050	0.00	.1699	0.000	13.00
S8.0	22.360	22.360	.4000	.4000	5.000	100.0	.050	.015	.2770	.0118	14.00
S8.1	5.100	5.110	.4000	.4000	5.000	100.0	.050	.015	.1284	.0055	14.00
D6	.00001	0.000	.0010	0.000	0.000	0.000	.025	0.00	.0021	0.000	1.006
S12.0	14.350	14.350	.6000	.6000	5.000	100.0	.050	.015	.1797	.0077	15.00
S11.0	7.370	7.370	1.100	1.100	5.000	100.0	.050	.015	.0939	.0040	16.00
D7	.00001	0.000	.0010	0.000	0.000	0.000	.025	0.00	.0021	0.000	1.007
S13.0	45.840	45.840	1.500	1.500	5.000	100.0	.050	.015	.2080	.0089	17.00
S14.0	0.4000	3.590	.4000	.4000	5.000	100.0	.050	.015	.0342	.0046	18.00
S14.1	3.590	3.590	.5000	.5000	5.000	100.0	.050	.025	.0957	.0082	18.00
D8	.00001	0.000	.0010	0.000	0.000	0.000	.025	0.00	.0021	0.000	1.008
S16.0	4.430	39.830	.6000	.6000	5.000	100.0	.050	.015	.0975	.0131	19.00
S15.0	11.550	6.720	2.700	2.700	5.000	100.0	.050	.015	.0758	.0024	20.00
D9	.00001	0.000	.0010	0.000	0.000	0.000	.025	0.00	.0021	0.000	1.009
S17.0	21.600	49.340	.8000	.8000	5.000	100.0	.050	.015	.1925	.0126	21.00
S17.1	2.320	20.920	.5000	.5000	5.000	100.0	.050	.015	.0763	.0102	21.00
S18.0	19.320	7.470	1.900	1.900	5.000	100.0	.050	.015	.1180	.0031	22.00
D10	.00001	0.000	.0010	0.000	0.000	0.000	.025	0.00	.0021	0.000	1.010
S19.0	2.720	24.440	.6000	.6000	5.000	100.0	.050	.015	.0757	.0101	23.00
S20.0	18.180	8.270	3.000	3.000	5.000	100.0	.050	.015	.0910	.0026	24.00
Outlet	.00001	0.000	.0010	0.000	0.000	0.000	.025	0.00	.0021	0.000	1.011

Link Label	Average Intensity (mm/h)	Init. Loss #1 (mm)	Init. Loss #2 (mm)	Cont. Loss #1 (mm/h)	Cont. Loss #2 (mm/h)	Excess Rain #1 (mm)	Excess Rain #2 (mm)	Peak Inflow (m^3/s)	Time to Peak	Link Lag mins
S1.0	73.000	20.00	0.000	2.500	0.000	51.083	0.000	13.314	61.00	5.000
S3.0	73.000	20.00	1.500	2.500	0.000	51.083	71.500	3.915	25.00	5.000

D1	73.000	20.00	0.000	2.500	0.000	51.083	0.000	14.534	65.00	5.000
S2.0	73.000	20.00	0.000	2.500	0.000	51.083	0.000	1.085	61.00	13.00
B	73.000	20.00	1.500	2.500	0.000	51.083	71.500	4.865	25.00	0.000
B1	73.000	20.00	0.000	2.500	0.000	51.083	0.000	0.1435	52.00	0.000
S2.1	73.000	20.00	1.500	2.500	0.000	51.083	71.500	6.769	25.00	0.000
S4.0	73.000	20.00	1.500	2.500	0.000	51.083	71.500	5.653	25.00	0.000
S1.1	73.000	20.00	0.000	2.500	0.000	51.083	0.000	1.128	61.00	0.000
D2	73.000	20.00	0.000	2.500	0.000	51.083	0.000	20.320	60.00	7.000
S5.0	73.000	20.00	1.500	2.500	0.000	51.083	71.500	3.687	25.00	0.000
D3	73.000	20.00	0.000	2.500	0.000	51.083	0.000	21.029	67.00	3.000
S1.2	73.000	20.00	0.000	2.500	0.000	51.083	0.000	2.592	61.00	0.000
S7.0	73.000	20.00	1.500	2.500	0.000	51.083	71.500	38.608	25.00	1.000
D4	73.000	20.00	0.000	2.500	0.000	51.083	0.000	51.865	26.00	1.500
S9.0	73.000	20.00	1.500	2.500	0.000	51.083	71.500	2.307	25.00	0.000
A	73.000	20.00	1.500	2.500	0.000	51.083	71.500	7.373	25.00	0.000
S6.0	73.000	20.00	1.500	2.500	0.000	51.083	71.500	8.591	25.00	0.000
D5	73.000	20.00	0.000	2.500	0.000	51.083	0.000	59.538	28.00	1.500
S10.0	73.000	20.00	0.000	2.500	0.000	51.083	0.000	1.030	61.00	0.000
S8.0	73.000	20.00	1.500	2.500	0.000	51.083	71.500	12.093	25.00	0.000
S8.1	73.000	20.00	1.500	2.500	0.000	51.083	71.500	14.944	25.00	9.000
D6	73.000	20.00	0.000	2.500	0.000	51.083	0.000	69.140	30.00	6.000
S12.0	73.000	20.00	1.500	2.500	0.000	51.083	71.500	7.959	25.00	0.000
S11.0	73.000	20.00	1.500	2.500	0.000	51.083	71.500	4.198	24.00	0.000
D7	73.000	20.00	0.000	2.500	0.000	51.083	0.000	75.018	36.00	2.500
S13.0	73.000	20.00	1.500	2.500	0.000	51.083	71.500	25.743	24.00	0.000
S14.0	73.000	20.00	1.500	2.500	0.000	51.083	71.500	1.934	24.00	0.000
S14.1	73.000	20.00	1.500	2.500	0.000	51.083	71.500	3.888	25.00	9.000
D8	73.000	20.00	0.000	2.500	0.000	51.083	0.000	87.120	39.00	2.500
S16.0	73.000	20.00	1.500	2.500	0.000	51.083	71.500	21.197	25.00	0.000
S15.0	73.000	20.00	1.500	2.500	0.000	51.083	71.500	4.428	25.00	0.000
D9	73.000	20.00	0.000	2.500	0.000	51.083	0.000	95.915	42.00	5.000
S17.0	73.000	20.00	1.500	2.500	0.000	51.083	71.500	26.719	25.00	0.000
S17.1	73.000	20.00	1.500	2.500	0.000	51.083	71.500	37.886	25.00	0.000
S18.0	73.000	20.00	1.500	2.500	0.000	51.083	71.500	4.883	25.00	0.000
D10	73.000	20.00	0.000	2.500	0.000	51.083	0.000	108.67	47.00	4.300

S19.0	73.000	20.00	1.500	2.500	0.000	51.083	71.500	13.090	25.00	0.000
S20.0	73.000	20.00	1.500	2.500	0.000	51.083	71.500	5.655	25.00	0.000
Outlet	73.000	20.00	0.000	2.500	0.000	51.083	0.000	114.67	51.00	0.000

LINK S1.0 4.000

ESTIMATED VOLUME (CU METRES*10**3) = 117.4
ESTIMATED PEAK FLOW (CUMECS) = 16.
ESTIMATED TIME TO PEAK (MINS) = 82.00

LINK S3.0 4.000

ESTIMATED VOLUME (CU METRES*10**3) = 10.01
ESTIMATED PEAK FLOW (CUMECS) = 4.3
ESTIMATED TIME TO PEAK (MINS) = 30.00

LINK D1 4.000

ESTIMATED VOLUME (CU METRES*10**3) = 127.5
ESTIMATED PEAK FLOW (CUMECS) = 17.
ESTIMATED TIME TO PEAK (MINS) = 81.00

LINK S2.0 4.000

ESTIMATED VOLUME (CU METRES*10**3) = 17.13
ESTIMATED PEAK FLOW (CUMECS) = 1.4
ESTIMATED TIME TO PEAK (MINS) = 91.00

LINK B 4.000

ESTIMATED VOLUME (CU METRES*10**3) = 18.04
ESTIMATED PEAK FLOW (CUMECS) = 5.2
ESTIMATED TIME TO PEAK (MINS) = 30.00

LINK B1 4.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.6719
ESTIMATED PEAK FLOW (CUMECS) = 0.15
ESTIMATED TIME TO PEAK (MINS) = 57.00

LINK S2.1 4.000

ESTIMATED VOLUME (CU METRES*10**3) = 67.24
ESTIMATED PEAK FLOW (CUMECS) = 7.5
ESTIMATED TIME TO PEAK (MINS) = 30.00

LINK S4.0 4.000

ESTIMATED VOLUME (CU METRES*10**3) = 14.88
ESTIMATED PEAK FLOW (CUMECS) = 6.1
ESTIMATED TIME TO PEAK (MINS) = 30.00

LINK S1.1 4.000

ESTIMATED VOLUME (CU METRES*10**3) = 18.13
ESTIMATED PEAK FLOW (CUMECS) = 1.5
ESTIMATED TIME TO PEAK (MINS) = 91.00

LINK D2 4.000

ESTIMATED VOLUME (CU METRES*10**3) = 227.7
ESTIMATED PEAK FLOW (CUMECS) = 25.
ESTIMATED TIME TO PEAK (MINS) = 86.00

LINK S5.0 4.000

```
ESTIMATED VOLUME (CU METRES*10**3) =                9.411
ESTIMATED PEAK FLOW          (CUMECS) =                4.0
ESTIMATED TIME TO PEAK          (MINS) =               30.00

LINK D3                 4.000

ESTIMATED VOLUME (CU METRES*10**3) =                237.1
ESTIMATED PEAK FLOW          (CUMECS) =                 26.
ESTIMATED TIME TO PEAK          (MINS) =               91.00

LINK S1.2               4.000

ESTIMATED VOLUME (CU METRES*10**3) =                26.71
ESTIMATED PEAK FLOW          (CUMECS) =                3.2
ESTIMATED TIME TO PEAK          (MINS) =               90.00

LINK S7.0               4.000

ESTIMATED VOLUME (CU METRES*10**3) =                106.2
ESTIMATED PEAK FLOW          (CUMECS) =                 41.
ESTIMATED TIME TO PEAK          (MINS) =               30.00

LINK D4                 4.000

ESTIMATED VOLUME (CU METRES*10**3) =                369.9
ESTIMATED PEAK FLOW          (CUMECS) =                 53.
ESTIMATED TIME TO PEAK          (MINS) =               31.00

LINK S9.0               4.000

ESTIMATED VOLUME (CU METRES*10**3) =                5.812
ESTIMATED PEAK FLOW          (CUMECS) =                2.5
ESTIMATED TIME TO PEAK          (MINS) =               30.00

LINK A                  4.000

ESTIMATED VOLUME (CU METRES*10**3) =                20.15
ESTIMATED PEAK FLOW          (CUMECS) =                7.9
ESTIMATED TIME TO PEAK          (MINS) =               30.00

LINK S6.0               4.000

ESTIMATED VOLUME (CU METRES*10**3) =                38.73
ESTIMATED PEAK FLOW          (CUMECS) =                9.4
ESTIMATED TIME TO PEAK          (MINS) =               30.00

LINK D5                 4.000

ESTIMATED VOLUME (CU METRES*10**3) =                414.5
ESTIMATED PEAK FLOW          (CUMECS) =                 61.
ESTIMATED TIME TO PEAK          (MINS) =               33.00

LINK S10.0              4.000

ESTIMATED VOLUME (CU METRES*10**3) =                8.030
ESTIMATED PEAK FLOW          (CUMECS) =                1.2
ESTIMATED TIME TO PEAK          (MINS) =               76.00

LINK S8.0               4.000

ESTIMATED VOLUME (CU METRES*10**3) =                32.58
ESTIMATED PEAK FLOW          (CUMECS) =                 13.
ESTIMATED TIME TO PEAK          (MINS) =               30.00

LINK S8.1               4.000

ESTIMATED VOLUME (CU METRES*10**3) =                40.08
ESTIMATED PEAK FLOW          (CUMECS) =                 16.
ESTIMATED TIME TO PEAK          (MINS) =               30.00
```

```
LINK D6                 4.000

ESTIMATED VOLUME (CU METRES*10**3) =                462.6
ESTIMATED PEAK FLOW          (CUMECS) =                 71.
ESTIMATED TIME TO PEAK          (MINS) =              35.00

LINK S12.0              4.000

ESTIMATED VOLUME (CU METRES*10**3) =                20.97
ESTIMATED PEAK FLOW          (CUMECS) =                8.5
ESTIMATED TIME TO PEAK          (MINS) =              30.00

LINK S11.0              4.000

ESTIMATED VOLUME (CU METRES*10**3) =                10.79
ESTIMATED PEAK FLOW          (CUMECS) =                4.6
ESTIMATED TIME TO PEAK          (MINS) =              30.00

LINK D7                 4.000

ESTIMATED VOLUME (CU METRES*10**3) =                494.2
ESTIMATED PEAK FLOW          (CUMECS) =                 75.
ESTIMATED TIME TO PEAK          (MINS) =              41.00

LINK S13.0              4.000

ESTIMATED VOLUME (CU METRES*10**3) =                67.02
ESTIMATED PEAK FLOW          (CUMECS) =                 28.
ESTIMATED TIME TO PEAK          (MINS) =              29.00

LINK S14.0              4.000

ESTIMATED VOLUME (CU METRES*10**3) =                3.264
ESTIMATED PEAK FLOW          (CUMECS) =                2.0
ESTIMATED TIME TO PEAK          (MINS) =              29.00

LINK S14.1              4.000

ESTIMATED VOLUME (CU METRES*10**3) =                8.517
ESTIMATED PEAK FLOW          (CUMECS) =                4.2
ESTIMATED TIME TO PEAK          (MINS) =              30.00

LINK D8                 4.000

ESTIMATED VOLUME (CU METRES*10**3) =                569.7
ESTIMATED PEAK FLOW          (CUMECS) =                 86.
ESTIMATED TIME TO PEAK          (MINS) =              44.00

LINK S16.0              4.000

ESTIMATED VOLUME (CU METRES*10**3) =                36.19
ESTIMATED PEAK FLOW          (CUMECS) =                 22.
ESTIMATED TIME TO PEAK          (MINS) =              30.00

LINK S15.0              4.000

ESTIMATED VOLUME (CU METRES*10**3) =                12.86
ESTIMATED PEAK FLOW          (CUMECS) =                5.0
ESTIMATED TIME TO PEAK          (MINS) =              30.00

LINK D9                 4.000

ESTIMATED VOLUME (CU METRES*10**3) =                618.8
ESTIMATED PEAK FLOW          (CUMECS) =                 98.
ESTIMATED TIME TO PEAK          (MINS) =              33.00

LINK S17.0              4.000

ESTIMATED VOLUME (CU METRES*10**3) =                54.89
ESTIMATED PEAK FLOW          (CUMECS) =                 28.
```

```
 ESTIMATED TIME TO PEAK          (MINS) =              30.00

 LINK S17.1              4.000

 ESTIMATED VOLUME (CU METRES*10**3) =                73.92
 ESTIMATED PEAK FLOW          (CUMECS) =                40.
 ESTIMATED TIME TO PEAK          (MINS) =              30.00

 LINK S18.0              4.000

 ESTIMATED VOLUME (CU METRES*10**3) =                18.27
 ESTIMATED PEAK FLOW          (CUMECS) =                 5.5
 ESTIMATED TIME TO PEAK          (MINS) =              30.00

 LINK D10                4.000

 ESTIMATED VOLUME (CU METRES*10**3) =                710.9
 ESTIMATED PEAK FLOW          (CUMECS) =             0.11E+03
 ESTIMATED TIME TO PEAK          (MINS) =              38.00

 LINK S19.0              4.000

 ESTIMATED VOLUME (CU METRES*10**3) =                22.23
 ESTIMATED PEAK FLOW          (CUMECS) =                14.
 ESTIMATED TIME TO PEAK          (MINS) =              30.00

 LINK S20.0              4.000

 ESTIMATED VOLUME (CU METRES*10**3) =                18.31
 ESTIMATED PEAK FLOW          (CUMECS) =                 6.5
 ESTIMATED TIME TO PEAK          (MINS) =              30.00

 LINK Outlet             4.000

 ESTIMATED VOLUME (CU METRES*10**3) =                751.4
 ESTIMATED PEAK FLOW          (CUMECS) =             0.12E+03
 ESTIMATED TIME TO PEAK          (MINS) =              42.00



################################################################################
#####
Existing - 100 year re-run - Hyder Sept 2010

Results for period from  0: 0.0  1/ 1/1990
                     to 13:20.0  1/ 1/1990
################################################################################
#####


                                ROUTING INCREMENT (MINS) =       1.00
                                STORM DURATION (MINS)    =       90.
                                RETURN PERIOD (YRS)      =      100.
                                BX                       =    1.0000
                                TOTAL OF FIRST SUB-AREAS  (ha) =     689.69
                                TOTAL OF SECOND SUB-AREAS (ha) =     386.68
                                TOTAL OF ALL SUB-AREAS (ha)    =    1076.37


     SUMMARY OF CATCHMENT AND RAINFALL DATA
 Link      Catch. Area      Slope    % Impervious     Pern        B       Link
 Label      #1     #2      #1    #2     #1    #2     #1    #2    #1   #2     No.
             (ha)              (%)          (%)
S1.0       189.00  0.000  1.700 0.000  5.000 0.000  .050 0.00  .4083 0.000  1.000

S3.0        6.840  6.840  1.200 1.200  5.000 100.0  .050 .015  .0865 .0037  2.000

D1         .00001  0.000  .0010 0.000  0.000 0.000  .025 0.00  .0021 0.000  1.001
```

S2.0	28.000	0.000	.3000	0.000	5.000	0.000	.050	0.00	.3594	0.000	3.000
B	17.350	8.701	.5000	.5000	0.000	100.0	.050	.015	.2700	.0065	4.000
B1	1.073	0.000	.5000	0.000	5.000	0.000	.050	0.00	.0511	0.000	5.000
S2.1	47.903	2.521	.5000	.5000	0.000	100.0	.050	.015	.4578	.0034	3.001
S4.0	10.150	10.150	.7000	.7000	5.000	100.0	.050	.015	.1389	.0059	6.000
S1.1	29.650	0.000	.3000	0.000	5.000	0.000	.050	0.00	.3703	0.000	7.000
D2	.00001	0.000	.0010	0.000	0.000	0.000	.025	0.00	.0021	0.000	1.002
S5.0	6.430	6.430	1.200	1.200	5.000	100.0	.050	.015	.0837	.0036	8.000
D3	.00001	0.000	.0010	0.000	0.000	0.000	.025	0.00	.0021	0.000	1.003
S1.2	42.887	0.000	.7000	0.000	5.000	0.000	.050	0.00	.2940	0.000	9.000
S7.0	73.180	73.180	.5000	.5000	5.000	100.0	.050	.015	.4591	.0196	10.00
D4	.00001	0.000	.0010	0.000	0.000	0.000	.025	0.00	.0021	0.000	1.004
S9.0	3.960	3.960	1.200	1.200	5.000	100.0	.050	.015	.0651	.0028	11.00
A	13.232	14.221	.7000	.7000	0.000	100.0	.050	.025	.1983	.0142	12.00
S6.0	28.014	1.474	.7000	.7000	0.000	100.0	.050	.025	.2928	.0044	12.00
D5	.00001	0.000	.0010	0.000	0.000	0.000	.025	0.00	.0021	0.000	1.005
S10.0	12.890	0.000	.6000	0.000	5.000	0.000	.050	0.00	.1699	0.000	13.00
S8.0	22.360	22.360	.4000	.4000	5.000	100.0	.050	.015	.2770	.0118	14.00
S8.1	5.100	5.110	.4000	.4000	5.000	100.0	.050	.015	.1284	.0055	14.00
D6	.00001	0.000	.0010	0.000	0.000	0.000	.025	0.00	.0021	0.000	1.006
S12.0	14.350	14.350	.6000	.6000	5.000	100.0	.050	.015	.1797	.0077	15.00
S11.0	7.370	7.370	1.100	1.100	5.000	100.0	.050	.015	.0939	.0040	16.00
D7	.00001	0.000	.0010	0.000	0.000	0.000	.025	0.00	.0021	0.000	1.007
S13.0	45.840	45.840	1.500	1.500	5.000	100.0	.050	.015	.2080	.0089	17.00
S14.0	0.4000	3.590	.4000	.4000	5.000	100.0	.050	.015	.0342	.0046	18.00
S14.1	3.590	3.590	.5000	.5000	5.000	100.0	.050	.025	.0957	.0082	18.00
D8	.00001	0.000	.0010	0.000	0.000	0.000	.025	0.00	.0021	0.000	1.008
S16.0	4.430	39.830	.6000	.6000	5.000	100.0	.050	.015	.0975	.0131	19.00
S15.0	11.550	6.720	2.700	2.700	5.000	100.0	.050	.015	.0758	.0024	20.00
D9	.00001	0.000	.0010	0.000	0.000	0.000	.025	0.00	.0021	0.000	1.009
S17.0	21.600	49.340	.8000	.8000	5.000	100.0	.050	.015	.1925	.0126	21.00
S17.1	2.320	20.920	.5000	.5000	5.000	100.0	.050	.015	.0763	.0102	21.00
S18.0	19.320	7.470	1.900	1.900	5.000	100.0	.050	.015	.1180	.0031	22.00
D10	.00001	0.000	.0010	0.000	0.000	0.000	.025	0.00	.0021	0.000	1.010
S19.0	2.720	24.440	.6000	.6000	5.000	100.0	.050	.015	.0757	.0101	23.00

S20.0	18.180	8.270	3.000	3.000	5.000	100.0	.050	.015	.0910	.0026	24.00
Outlet	.00001	0.000	.0010	0.000	0.000	0.000	.025	0.00	.0021	0.000	1.011

Link Label	Average Intensity (mm/h)	Init. Loss #1 (mm)	Init. Loss #2 (mm)	Cont. Loss #1 (mm/h)	Cont. Loss #2 (mm/h)	Excess Rain #1 (mm)	Excess Rain #2 (mm)	Peak Inflow (m^3/s)	Time to Peak	Link Lag mins
S1.0	57.000	20.00	0.000	2.500	0.000	62.375	0.000	16.062	82.00	5.000
S3.0	57.000	20.00	1.500	2.500	0.000	62.375	84.000	4.288	30.00	5.000
D1	57.000	20.00	0.000	2.500	0.000	62.375	0.000	17.180	81.00	5.000
S2.0	57.000	20.00	0.000	2.500	0.000	62.375	0.000	1.404	91.00	13.00
B	57.000	20.00	1.500	2.500	0.000	62.375	84.000	5.225	30.00	0.000
B1	57.000	20.00	0.000	2.500	0.000	62.375	0.000	0.1477	57.00	0.000
S2.1	57.000	20.00	1.500	2.500	0.000	62.375	84.000	7.467	30.00	0.000
S4.0	57.000	20.00	1.500	2.500	0.000	62.375	84.000	6.100	30.00	0.000
S1.1	57.000	20.00	0.000	2.500	0.000	62.375	0.000	1.462	91.00	0.000
D2	57.000	20.00	0.000	2.500	0.000	62.375	0.000	25.086	86.00	7.000
S5.0	57.000	20.00	1.500	2.500	0.000	62.375	84.000	4.041	30.00	0.000
D3	57.000	20.00	0.000	2.500	0.000	62.375	0.000	25.690	91.00	3.000
S1.2	57.000	20.00	0.000	2.500	0.000	62.375	0.000	3.235	90.00	0.000
S7.0	57.000	20.00	1.500	2.500	0.000	62.375	84.000	41.123	30.00	1.000
D4	57.000	20.00	0.000	2.500	0.000	62.375	0.000	53.470	31.00	1.500
S9.0	57.000	20.00	1.500	2.500	0.000	62.375	84.000	2.525	30.00	0.000
A	57.000	20.00	1.500	2.500	0.000	62.375	84.000	7.882	30.00	0.000
S6.0	57.000	20.00	1.500	2.500	0.000	62.375	84.000	9.372	30.00	0.000
D5	57.000	20.00	0.000	2.500	0.000	62.375	0.000	60.569	33.00	1.500
S10.0	57.000	20.00	0.000	2.500	0.000	62.375	0.000	1.202	76.00	0.000
S8.0	57.000	20.00	1.500	2.500	0.000	62.375	84.000	12.917	30.00	0.000
S8.1	57.000	20.00	1.500	2.500	0.000	62.375	84.000	15.965	30.00	9.000
D6	57.000	20.00	0.000	2.500	0.000	62.375	0.000	70.576	35.00	6.000
S12.0	57.000	20.00	1.500	2.500	0.000	62.375	84.000	8.544	30.00	0.000
S11.0	57.000	20.00	1.500	2.500	0.000	62.375	84.000	4.579	30.00	0.000
D7	57.000	20.00	0.000	2.500	0.000	62.375	0.000	75.383	41.00	2.500
S13.0	57.000	20.00	1.500	2.500	0.000	62.375	84.000	27.711	29.00	0.000
S14.0	57.000	20.00	1.500	2.500	0.000	62.375	84.000	2.043	29.00	0.000
S14.1	57.000	20.00	1.500	2.500	0.000	62.375	84.000	4.151	30.00	9.000
D8	57.000	20.00	0.000	2.500	0.000	62.375	0.000	86.355	44.00	2.500
S16.0	57.000	20.00	1.500	2.500	0.000	62.375	84.000	22.413	30.00	0.000

S15.0	57.000	20.00	1.500	2.500	0.000	62.375	84.000	5.023	30.00 0.000
D9	57.000	20.00	0.000	2.500	0.000	62.375	0.000	97.944	33.00 5.000
S17.0	57.000	20.00	1.500	2.500	0.000	62.375	84.000	28.399	30.00 0.000
S17.1	57.000	20.00	1.500	2.500	0.000	62.375	84.000	40.211	30.00 0.000
S18.0	57.000	20.00	1.500	2.500	0.000	62.375	84.000	5.521	30.00 0.000
D10	57.000	20.00	0.000	2.500	0.000	62.375	0.000	113.37	38.00 4.300
S19.0	57.000	20.00	1.500	2.500	0.000	62.375	84.000	13.805	30.00 0.000
S20.0	57.000	20.00	1.500	2.500	0.000	62.375	84.000	6.541	30.00 0.000
Outlet	57.000	20.00	0.000	2.500	0.000	62.375	0.000	121.10	42.00 0.000

```
 LINK S1.0              5.000

 ESTIMATED VOLUME (CU METRES*10**3) =              134.4
 ESTIMATED PEAK FLOW         (CUMECS) =               17.
 ESTIMATED TIME TO PEAK         (MINS) =            86.00

 LINK S3.0              5.000

 ESTIMATED VOLUME (CU METRES*10**3) =              11.36
 ESTIMATED PEAK FLOW         (CUMECS) =                4.0
 ESTIMATED TIME TO PEAK         (MINS) =            33.00

 LINK D1                5.000

 ESTIMATED VOLUME (CU METRES*10**3) =              145.8
 ESTIMATED PEAK FLOW         (CUMECS) =               19.
 ESTIMATED TIME TO PEAK         (MINS) =            90.00

 LINK S2.0              5.000

 ESTIMATED VOLUME (CU METRES*10**3) =              19.80
 ESTIMATED PEAK FLOW         (CUMECS) =                1.7
 ESTIMATED TIME TO PEAK         (MINS) =           120.00

 LINK B                 5.000

 ESTIMATED VOLUME (CU METRES*10**3) =              20.57
 ESTIMATED PEAK FLOW         (CUMECS) =                4.9
 ESTIMATED TIME TO PEAK         (MINS) =            35.00

 LINK B1                5.000

 ESTIMATED VOLUME (CU METRES*10**3) =             0.7674
 ESTIMATED PEAK FLOW         (CUMECS) =              0.16
 ESTIMATED TIME TO PEAK         (MINS) =            65.00

 LINK S2.1              5.000

 ESTIMATED VOLUME (CU METRES*10**3) =              76.89
 ESTIMATED PEAK FLOW         (CUMECS) =                6.8
 ESTIMATED TIME TO PEAK         (MINS) =            35.00

 LINK S4.0              5.000

 ESTIMATED VOLUME (CU METRES*10**3) =              16.79
 ESTIMATED PEAK FLOW         (CUMECS) =                5.7
 ESTIMATED TIME TO PEAK         (MINS) =            34.00

 LINK S1.1              5.000
```

```
ESTIMATED VOLUME (CU METRES*10**3) =                20.93
ESTIMATED PEAK FLOW          (CUMECS) =                1.8
ESTIMATED TIME TO PEAK          (MINS) =              120.00

LINK D2                 5.000

ESTIMATED VOLUME (CU METRES*10**3) =                260.4
ESTIMATED PEAK FLOW          (CUMECS) =                 28.
ESTIMATED TIME TO PEAK          (MINS) =              100.00

LINK S5.0               5.000

ESTIMATED VOLUME (CU METRES*10**3) =                10.68
ESTIMATED PEAK FLOW          (CUMECS) =                3.8
ESTIMATED TIME TO PEAK          (MINS) =              33.00

LINK D3                 5.000

ESTIMATED VOLUME (CU METRES*10**3) =                271.0
ESTIMATED PEAK FLOW          (CUMECS) =                 28.
ESTIMATED TIME TO PEAK          (MINS) =              107.00

LINK S1.2               5.000

ESTIMATED VOLUME (CU METRES*10**3) =                30.39
ESTIMATED PEAK FLOW          (CUMECS) =                3.5
ESTIMATED TIME TO PEAK          (MINS) =              101.00

LINK S7.0               5.000

ESTIMATED VOLUME (CU METRES*10**3) =                120.4
ESTIMATED PEAK FLOW          (CUMECS) =                 38.
ESTIMATED TIME TO PEAK          (MINS) =              35.00

LINK D4                 5.000

ESTIMATED VOLUME (CU METRES*10**3) =                421.8
ESTIMATED PEAK FLOW          (CUMECS) =                 50.
ESTIMATED TIME TO PEAK          (MINS) =              36.00

LINK S9.0               5.000

ESTIMATED VOLUME (CU METRES*10**3) =                6.576
ESTIMATED PEAK FLOW          (CUMECS) =                2.3
ESTIMATED TIME TO PEAK          (MINS) =              33.00

LINK A                  5.000

ESTIMATED VOLUME (CU METRES*10**3) =                22.85
ESTIMATED PEAK FLOW          (CUMECS) =                7.3
ESTIMATED TIME TO PEAK          (MINS) =              36.00

LINK S6.0               5.000

ESTIMATED VOLUME (CU METRES*10**3) =                44.18
ESTIMATED PEAK FLOW          (CUMECS) =                8.6
ESTIMATED TIME TO PEAK          (MINS) =              36.00

LINK D5                 5.000

ESTIMATED VOLUME (CU METRES*10**3) =                472.5
ESTIMATED PEAK FLOW          (CUMECS) =                 59.
ESTIMATED TIME TO PEAK          (MINS) =              38.00

LINK S10.0              5.000

ESTIMATED VOLUME (CU METRES*10**3) =                9.220
ESTIMATED PEAK FLOW          (CUMECS) =                1.3
ESTIMATED TIME TO PEAK          (MINS) =              86.00
```

```
LINK S8.0              5.000

ESTIMATED VOLUME (CU METRES*10**3) =                36.96
ESTIMATED PEAK FLOW          (CUMECS) =                12.
ESTIMATED TIME TO PEAK          (MINS) =               35.00

LINK S8.1              5.000

ESTIMATED VOLUME (CU METRES*10**3) =                45.44
ESTIMATED PEAK FLOW          (CUMECS) =                15.
ESTIMATED TIME TO PEAK          (MINS) =               35.00

LINK D6                5.000

ESTIMATED VOLUME (CU METRES*10**3) =                527.1
ESTIMATED PEAK FLOW          (CUMECS) =                68.
ESTIMATED TIME TO PEAK          (MINS) =               41.00

LINK S12.0             5.000

ESTIMATED VOLUME (CU METRES*10**3) =                23.79
ESTIMATED PEAK FLOW          (CUMECS) =                 8.0
ESTIMATED TIME TO PEAK          (MINS) =               35.00

LINK S11.0             5.000

ESTIMATED VOLUME (CU METRES*10**3) =                12.24
ESTIMATED PEAK FLOW          (CUMECS) =                 4.3
ESTIMATED TIME TO PEAK          (MINS) =               33.00

LINK D7                5.000

ESTIMATED VOLUME (CU METRES*10**3) =                563.1
ESTIMATED PEAK FLOW          (CUMECS) =                72.
ESTIMATED TIME TO PEAK          (MINS) =               47.00

LINK S13.0             5.000

ESTIMATED VOLUME (CU METRES*10**3) =                75.85
ESTIMATED PEAK FLOW          (CUMECS) =                26.
ESTIMATED TIME TO PEAK          (MINS) =               34.00

LINK S14.0             5.000

ESTIMATED VOLUME (CU METRES*10**3) =                3.665
ESTIMATED PEAK FLOW          (CUMECS) =                 2.0
ESTIMATED TIME TO PEAK          (MINS) =               34.00

LINK S14.1             5.000

ESTIMATED VOLUME (CU METRES*10**3) =                9.603
ESTIMATED PEAK FLOW          (CUMECS) =                 3.9
ESTIMATED TIME TO PEAK          (MINS) =               35.00

LINK D8                5.000

ESTIMATED VOLUME (CU METRES*10**3) =                648.5
ESTIMATED PEAK FLOW          (CUMECS) =                84.
ESTIMATED TIME TO PEAK          (MINS) =               50.00

LINK S16.0             5.000

ESTIMATED VOLUME (CU METRES*10**3) =                40.62
ESTIMATED PEAK FLOW          (CUMECS) =                21.
ESTIMATED TIME TO PEAK          (MINS) =               35.00

LINK S15.0             5.000

ESTIMATED VOLUME (CU METRES*10**3) =                14.57
```

```
 ESTIMATED PEAK FLOW          (CUMECS) =                4.5
 ESTIMATED TIME TO PEAK          (MINS) =              35.00

 LINK D9                 5.000

 ESTIMATED VOLUME (CU METRES*10**3) =              703.7
 ESTIMATED PEAK FLOW          (CUMECS) =               91.
 ESTIMATED TIME TO PEAK          (MINS) =              53.00

 LINK S17.0              5.000

 ESTIMATED VOLUME (CU METRES*10**3) =              61.84
 ESTIMATED PEAK FLOW          (CUMECS) =               27.
 ESTIMATED TIME TO PEAK          (MINS) =              35.00

 LINK S17.1              5.000

 ESTIMATED VOLUME (CU METRES*10**3) =              83.20
 ESTIMATED PEAK FLOW          (CUMECS) =               38.
 ESTIMATED TIME TO PEAK          (MINS) =              35.00

 LINK S18.0              5.000

 ESTIMATED VOLUME (CU METRES*10**3) =              20.84
 ESTIMATED PEAK FLOW          (CUMECS) =              4.9
 ESTIMATED TIME TO PEAK          (MINS) =              35.00

 LINK D10                5.000

 ESTIMATED VOLUME (CU METRES*10**3) =              807.6
 ESTIMATED PEAK FLOW          (CUMECS) =             0.11E+03
 ESTIMATED TIME TO PEAK          (MINS) =              41.00

 LINK S19.0              5.000

 ESTIMATED VOLUME (CU METRES*10**3) =              24.94
 ESTIMATED PEAK FLOW          (CUMECS) =               13.
 ESTIMATED TIME TO PEAK          (MINS) =              35.00

 LINK S20.0              5.000

 ESTIMATED VOLUME (CU METRES*10**3) =              20.82
 ESTIMATED PEAK FLOW          (CUMECS) =              5.7
 ESTIMATED TIME TO PEAK          (MINS) =              35.00

 LINK Outlet             5.000

 ESTIMATED VOLUME (CU METRES*10**3) =              853.3
 ESTIMATED PEAK FLOW          (CUMECS) =             0.11E+03
 ESTIMATED TIME TO PEAK          (MINS) =              45.00



#############################################################################
#####
Existing - 100 year re-run - Hyder Sept 2010

Results for period from  0: 0.0  1/ 1/1990
                     to 13:20.0  1/ 1/1990
#############################################################################
#####


                              ROUTING INCREMENT (MINS) =       1.00
                              STORM DURATION (MINS)    =       120.
                              RETURN PERIOD (YRS)      =       100.
                              BX                       =     1.0000
                              TOTAL OF FIRST SUB-AREAS  (ha) =     689.69
                              TOTAL OF SECOND SUB-AREAS (ha) =     386.68
```

TOTAL OF ALL SUB-AREAS (ha) = 1076.37

SUMMARY OF CATCHMENT AND RAINFALL DATA

Link Label	Catch. Area #1 (ha)	#2	Slope #1 (%)	#2	% Impervious #1 (%)	#2	Pern #1	#2	B #1	#2	Link No.
S1.0	189.00	0.000	1.700	0.000	5.000	0.000	.050	0.00	.4083	0.000	1.000
S3.0	6.840	6.840	1.200	1.200	5.000	100.0	.050	.015	.0865	.0037	2.000
D1	.00001	0.000	.0010	0.000	0.000	0.000	.025	0.00	.0021	0.000	1.001
S2.0	28.000	0.000	.3000	0.000	5.000	0.000	.050	0.00	.3594	0.000	3.000
B	17.350	8.701	.5000	.5000	0.000	100.0	.050	.015	.2700	.0065	4.000
B1	1.073	0.000	.5000	0.000	5.000	0.000	.050	0.00	.0511	0.000	5.000
S2.1	47.903	2.521	.5000	.5000	0.000	100.0	.050	.015	.4578	.0034	3.001
S4.0	10.150	10.150	.7000	.7000	5.000	100.0	.050	.015	.1389	.0059	6.000
S1.1	29.650	0.000	.3000	0.000	5.000	0.000	.050	0.00	.3703	0.000	7.000
D2	.00001	0.000	.0010	0.000	0.000	0.000	.025	0.00	.0021	0.000	1.002
S5.0	6.430	6.430	1.200	1.200	5.000	100.0	.050	.015	.0837	.0036	8.000
D3	.00001	0.000	.0010	0.000	0.000	0.000	.025	0.00	.0021	0.000	1.003
S1.2	42.887	0.000	.7000	0.000	5.000	0.000	.050	0.00	.2940	0.000	9.000
S7.0	73.180	73.180	.5000	.5000	5.000	100.0	.050	.015	.4591	.0196	10.00
D4	.00001	0.000	.0010	0.000	0.000	0.000	.025	0.00	.0021	0.000	1.004
S9.0	3.960	3.960	1.200	1.200	5.000	100.0	.050	.015	.0651	.0028	11.00
A	13.232	14.221	.7000	.7000	0.000	100.0	.050	.025	.1983	.0142	12.00
S6.0	28.014	1.474	.7000	.7000	0.000	100.0	.050	.025	.2928	.0044	12.00
D5	.00001	0.000	.0010	0.000	0.000	0.000	.025	0.00	.0021	0.000	1.005
S10.0	12.890	0.000	.6000	0.000	5.000	0.000	.050	0.00	.1699	0.000	13.00
S8.0	22.360	22.360	.4000	.4000	5.000	100.0	.050	.015	.2770	.0118	14.00
S8.1	5.100	5.110	.4000	.4000	5.000	100.0	.050	.015	.1284	.0055	14.00
D6	.00001	0.000	.0010	0.000	0.000	0.000	.025	0.00	.0021	0.000	1.006
S12.0	14.350	14.350	.6000	.6000	5.000	100.0	.050	.015	.1797	.0077	15.00
S11.0	7.370	7.370	1.100	1.100	5.000	100.0	.050	.015	.0939	.0040	16.00
D7	.00001	0.000	.0010	0.000	0.000	0.000	.025	0.00	.0021	0.000	1.007
S13.0	45.840	45.840	1.500	1.500	5.000	100.0	.050	.015	.2080	.0089	17.00
S14.0	0.4000	3.590	.4000	.4000	5.000	100.0	.050	.015	.0342	.0046	18.00
S14.1	3.590	3.590	.5000	.5000	5.000	100.0	.050	.025	.0957	.0082	18.00
D8	.00001	0.000	.0010	0.000	0.000	0.000	.025	0.00	.0021	0.000	1.008
S16.0	4.430	39.830	.6000	.6000	5.000	100.0	.050	.015	.0975	.0131	19.00
S15.0	11.550	6.720	2.700	2.700	5.000	100.0	.050	.015	.0758	.0024	20.00

D9	.00001	0.000	.0010	0.000	0.000	0.000	.025	0.00	.0021	0.000	1.009
S17.0	21.600	49.340	.8000	.8000	5.000	100.0	.050	.015	.1925	.0126	21.00
S17.1	2.320	20.920	.5000	.5000	5.000	100.0	.050	.015	.0763	.0102	21.00
S18.0	19.320	7.470	1.900	1.900	5.000	100.0	.050	.015	.1180	.0031	22.00
D10	.00001	0.000	.0010	0.000	0.000	0.000	.025	0.00	.0021	0.000	1.010
S19.0	2.720	24.440	.6000	.6000	5.000	100.0	.050	.015	.0757	.0101	23.00
S20.0	18.180	8.270	3.000	3.000	5.000	100.0	.050	.015	.0910	.0026	24.00
Outlet	.00001	0.000	.0010	0.000	0.000	0.000	.025	0.00	.0021	0.000	1.011

Link Label	Average Intensity (mm/h)	Init. Loss #1 (mm)	#2	Cont. Loss #1 (mm/h)	#2	Excess Rain #1 (mm)	#2	Peak Inflow (m^3/s)	Time to Peak	Link Lag mins
S1.0	47.800	20.00	0.000	2.500	0.000	71.517	0.000	17.390	86.00	5.000
S3.0	47.800	20.00	1.500	2.500	0.000	71.517	94.100	3.990	33.00	5.000
D1	47.800	20.00	0.000	2.500	0.000	71.517	0.000	18.680	90.00	5.000
S2.0	47.800	20.00	0.000	2.500	0.000	71.517	0.000	1.684	120.0	13.00
B	47.800	20.00	1.500	2.500	0.000	71.517	94.100	4.906	35.00	0.000
B1	47.800	20.00	0.000	2.500	0.000	71.517	0.000	0.1558	65.00	0.000
S2.1	47.800	20.00	1.500	2.500	0.000	71.517	94.100	6.797	35.00	0.000
S4.0	47.800	20.00	1.500	2.500	0.000	71.517	94.100	5.739	34.00	0.000
S1.1	47.800	20.00	0.000	2.500	0.000	71.517	0.000	1.759	120.0	0.000
D2	47.800	20.00	0.000	2.500	0.000	71.517	0.000	27.758	100.0	7.000
S5.0	47.800	20.00	1.500	2.500	0.000	71.517	94.100	3.752	33.00	0.000
D3	47.800	20.00	0.000	2.500	0.000	71.517	0.000	28.479	107.0	3.000
S1.2	47.800	20.00	0.000	2.500	0.000	71.517	0.000	3.519	101.0	0.000
S7.0	47.800	20.00	1.500	2.500	0.000	71.517	94.100	38.284	35.00	1.000
D4	47.800	20.00	0.000	2.500	0.000	71.517	0.000	49.535	36.00	1.500
S9.0	47.800	20.00	1.500	2.500	0.000	71.517	94.100	2.344	33.00	0.000
A	47.800	20.00	1.500	2.500	0.000	71.517	94.100	7.342	36.00	0.000
S6.0	47.800	20.00	1.500	2.500	0.000	71.517	94.100	8.621	36.00	0.000
D5	47.800	20.00	0.000	2.500	0.000	71.517	0.000	59.242	38.00	1.500
S10.0	47.800	20.00	0.000	2.500	0.000	71.517	0.000	1.303	86.00	0.000
S8.0	47.800	20.00	1.500	2.500	0.000	71.517	94.100	12.117	35.00	0.000
S8.1	47.800	20.00	1.500	2.500	0.000	71.517	94.100	14.988	35.00	9.000
D6	47.800	20.00	0.000	2.500	0.000	71.517	0.000	67.949	41.00	6.000
S12.0	47.800	20.00	1.500	2.500	0.000	71.517	94.100	8.046	35.00	0.000

S11.0	47.800	20.00	1.500	2.500	0.000	71.517	94.100	4.264	33.00	0.000
D7	47.800	20.00	0.000	2.500	0.000	71.517	0.000	72.454	47.00	2.500
S13.0	47.800	20.00	1.500	2.500	0.000	71.517	94.100	26.094	34.00	0.000
S14.0	47.800	20.00	1.500	2.500	0.000	71.517	94.100	1.956	34.00	0.000
S14.1	47.800	20.00	1.500	2.500	0.000	71.517	94.100	3.903	35.00	9.000
D8	47.800	20.00	0.000	2.500	0.000	71.517	0.000	83.538	50.00	2.500
S16.0	47.800	20.00	1.500	2.500	0.000	71.517	94.100	21.307	35.00	0.000
S15.0	47.800	20.00	1.500	2.500	0.000	71.517	94.100	4.466	35.00	0.000
D9	47.800	20.00	0.000	2.500	0.000	71.517	0.000	91.010	53.00	5.000
S17.0	47.800	20.00	1.500	2.500	0.000	71.517	94.100	27.016	35.00	0.000
S17.1	47.800	20.00	1.500	2.500	0.000	71.517	94.100	38.270	35.00	0.000
S18.0	47.800	20.00	1.500	2.500	0.000	71.517	94.100	4.933	35.00	0.000
D10	47.800	20.00	0.000	2.500	0.000	71.517	0.000	105.66	41.00	4.300
S19.0	47.800	20.00	1.500	2.500	0.000	71.517	94.100	13.213	35.00	0.000
S20.0	47.800	20.00	1.500	2.500	0.000	71.517	94.100	5.706	35.00	0.000
Outlet	47.800	20.00	0.000	2.500	0.000	71.517	0.000	114.40	45.00	0.000

LINK S1.0 6.000

ESTIMATED VOLUME (CU METRES*10**3) = 160.3
ESTIMATED PEAK FLOW (CUMECS) = 18.
ESTIMATED TIME TO PEAK (MINS) = 117.00

LINK S3.0 6.000

ESTIMATED VOLUME (CU METRES*10**3) = 13.35
ESTIMATED PEAK FLOW (CUMECS) = 2.5
ESTIMATED TIME TO PEAK (MINS) = 45.00

LINK D1 6.000

ESTIMATED VOLUME (CU METRES*10**3) = 173.7
ESTIMATED PEAK FLOW (CUMECS) = 19.
ESTIMATED TIME TO PEAK (MINS) = 121.00

LINK S2.0 6.000

ESTIMATED VOLUME (CU METRES*10**3) = 23.41
ESTIMATED PEAK FLOW (CUMECS) = 1.9
ESTIMATED TIME TO PEAK (MINS) = 149.00

LINK B 6.000

ESTIMATED VOLUME (CU METRES*10**3) = 24.24
ESTIMATED PEAK FLOW (CUMECS) = 2.9
ESTIMATED TIME TO PEAK (MINS) = 45.00

LINK B1 6.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.9167
ESTIMATED PEAK FLOW (CUMECS) = 0.14
ESTIMATED TIME TO PEAK (MINS) = 76.00

```
LINK S2.1              6.000

ESTIMATED VOLUME (CU METRES*10**3) =                91.33
ESTIMATED PEAK FLOW          (CUMECS) =                 6.7
ESTIMATED TIME TO PEAK          (MINS) =              150.00

LINK S4.0              6.000

ESTIMATED VOLUME (CU METRES*10**3) =                19.83
ESTIMATED PEAK FLOW          (CUMECS) =                 3.4
ESTIMATED TIME TO PEAK          (MINS) =               45.00

LINK S1.1              6.000

ESTIMATED VOLUME (CU METRES*10**3) =                24.75
ESTIMATED PEAK FLOW          (CUMECS) =                 2.0
ESTIMATED TIME TO PEAK          (MINS) =              150.00

LINK D2                6.000

ESTIMATED VOLUME (CU METRES*10**3) =                309.6
ESTIMATED PEAK FLOW          (CUMECS) =                  29.
ESTIMATED TIME TO PEAK          (MINS) =              120.00

LINK S5.0              6.000

ESTIMATED VOLUME (CU METRES*10**3) =                12.55
ESTIMATED PEAK FLOW          (CUMECS) =                 2.4
ESTIMATED TIME TO PEAK          (MINS) =               45.00

LINK D3                6.000

ESTIMATED VOLUME (CU METRES*10**3) =                322.1
ESTIMATED PEAK FLOW          (CUMECS) =                  30.
ESTIMATED TIME TO PEAK          (MINS) =              127.00

LINK S1.2              6.000

ESTIMATED VOLUME (CU METRES*10**3) =                36.42
ESTIMATED PEAK FLOW          (CUMECS) =                 3.7
ESTIMATED TIME TO PEAK          (MINS) =              121.00

LINK S7.0              6.000

ESTIMATED VOLUME (CU METRES*10**3) =                141.9
ESTIMATED PEAK FLOW          (CUMECS) =                  23.
ESTIMATED TIME TO PEAK          (MINS) =               45.00

LINK D4                6.000

ESTIMATED VOLUME (CU METRES*10**3) =                500.4
ESTIMATED PEAK FLOW          (CUMECS) =                  44.
ESTIMATED TIME TO PEAK          (MINS) =              121.00

LINK S9.0              6.000

ESTIMATED VOLUME (CU METRES*10**3) =                7.746
ESTIMATED PEAK FLOW          (CUMECS) =                 1.5
ESTIMATED TIME TO PEAK          (MINS) =               45.00

LINK A                 6.000

ESTIMATED VOLUME (CU METRES*10**3) =                26.85
ESTIMATED PEAK FLOW          (CUMECS) =                 4.5
ESTIMATED TIME TO PEAK          (MINS) =               45.00

LINK S6.0              6.000

ESTIMATED VOLUME (CU METRES*10**3) =                52.15
ESTIMATED PEAK FLOW          (CUMECS) =                 5.6
```