ESTIMATED VOLUME (CU METRES*10**3) = 0.2411
ESTIMATED PEAK FLOW (CUMECS) = 0.27
ESTIMATED TIME TO PEAK (MINS) = 13.00

LINK node13 3.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.3963E-01
ESTIMATED PEAK FLOW (CUMECS) = 0.53E-01
ESTIMATED TIME TO PEAK (MINS) = 15.00

LINK Roof 3.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.1900
ESTIMATED PEAK FLOW (CUMECS) = 0.20
ESTIMATED TIME TO PEAK (MINS) = 11.00

LINK PARK 2 3.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.4351
ESTIMATED PEAK FLOW (CUMECS) = 0.49
ESTIMATED TIME TO PEAK (MINS) = 15.00

LINK PARK 1 3.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.8795
ESTIMATED PEAK FLOW (CUMECS) = 1.0
ESTIMATED TIME TO PEAK (MINS) = 15.00

LINK Overflow 3.000

ESTIMATED VOLUME (CU METRES*10**3) = 1.269
ESTIMATED PEAK FLOW (CUMECS) = 1.4
ESTIMATED TIME TO PEAK (MINS) = 14.00

LINK CP 1.6 3.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.6513E-01
ESTIMATED PEAK FLOW (CUMECS) = 0.67E-01
ESTIMATED TIME TO PEAK (MINS) = 12.00

LINK CP 1.5 3.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.1629
ESTIMATED PEAK FLOW (CUMECS) = 0.17
ESTIMATED TIME TO PEAK (MINS) = 14.00

LINK CP 1.4 3.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.2328
ESTIMATED PEAK FLOW (CUMECS) = 0.23
ESTIMATED TIME TO PEAK (MINS) = 15.00

LINK Heritage 3.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.1454
ESTIMATED PEAK FLOW (CUMECS) = 0.18
ESTIMATED TIME TO PEAK (MINS) = 15.00

LINK CP 5.2 3.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.2850
ESTIMATED PEAK FLOW (CUMECS) = 0.31
ESTIMATED TIME TO PEAK (MINS) = 15.00

LINK CP 5.1 3.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.3270
ESTIMATED PEAK FLOW (CUMECS) = 0.32
ESTIMATED TIME TO PEAK (MINS) = 17.00

LINK CP 1.3 3.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.6902
ESTIMATED PEAK FLOW (CUMECS) = 0.59
ESTIMATED TIME TO PEAK (MINS) = 17.00

LINK CP 2.2 3.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.1210
ESTIMATED PEAK FLOW (CUMECS) = 0.12
ESTIMATED TIME TO PEAK (MINS) = 12.00

LINK CP 2.1 3.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.2234
ESTIMATED PEAK FLOW (CUMECS) = 0.23
ESTIMATED TIME TO PEAK (MINS) = 15.00

LINK CP 3.5 3.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.4186E-01
ESTIMATED PEAK FLOW (CUMECS) = 0.43E-01
ESTIMATED TIME TO PEAK (MINS) = 12.00

LINK CP 3.4 3.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.1303
ESTIMATED PEAK FLOW (CUMECS) = 0.13
ESTIMATED TIME TO PEAK (MINS) = 14.00

LINK CP3.3 3.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.2188
ESTIMATED PEAK FLOW (CUMECS) = 0.22
ESTIMATED TIME TO PEAK (MINS) = 15.00

LINK CP 3.2 3.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.3073
ESTIMATED PEAK FLOW (CUMECS) = 0.30
ESTIMATED TIME TO PEAK (MINS) = 15.00

LINK CP 3.1 3.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.5307
ESTIMATED PEAK FLOW (CUMECS) = 0.51
ESTIMATED TIME TO PEAK (MINS) = 15.00

LINK CP 4.1 3.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.8374E-01
ESTIMATED PEAK FLOW (CUMECS) = 0.87E-01
ESTIMATED TIME TO PEAK (MINS) = 12.00

LINK CP 6.3 3.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.1303
ESTIMATED PEAK FLOW (CUMECS) = 0.14
ESTIMATED TIME TO PEAK (MINS) = 12.00

LINK CP 6.2. 3.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.2653
ESTIMATED PEAK FLOW (CUMECS) = 0.27
ESTIMATED TIME TO PEAK (MINS) = 14.00

LINK CP 6.1 3.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.4003
ESTIMATED PEAK FLOW (CUMECS) = 0.40
ESTIMATED TIME TO PEAK (MINS) = 15.00

LINK Entry 3.000

ESTIMATED VOLUME (CU METRES*10**3) = 1.104
ESTIMATED PEAK FLOW (CUMECS) = 1.0
ESTIMATED TIME TO PEAK (MINS) = 15.00

LINK CP 1.1 3.000

ESTIMATED VOLUME (CU METRES*10**3) = 2.241
ESTIMATED PEAK FLOW (CUMECS) = 1.9
ESTIMATED TIME TO PEAK (MINS) = 16.00

LINK Landscape 3.000

ESTIMATED VOLUME (CU METRES*10**3) = 3.701
ESTIMATED PEAK FLOW (CUMECS) = 3.5
ESTIMATED TIME TO PEAK (MINS) = 17.00

LINK JUNCTION 1 3.000

ESTIMATED VOLUME (CU METRES*10**3) = 4.580
ESTIMATED PEAK FLOW (CUMECS) = 4.4
ESTIMATED TIME TO PEAK (MINS) = 19.00

LINK Beach 2 3.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.2197
ESTIMATED PEAK FLOW (CUMECS) = 0.23
ESTIMATED TIME TO PEAK (MINS) = 13.00

LINK Pools 3.000
WARNING 8 - LOSSES POSS. EXCEED RAIN

ESTIMATED VOLUME (CU METRES*10**3) = 0.000
ESTIMATED PEAK FLOW (CUMECS) = 0.0
ESTIMATED TIME TO PEAK (MINS) = 1.00

LINK Park 6 3.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.6738
ESTIMATED PEAK FLOW (CUMECS) = 0.80
ESTIMATED TIME TO PEAK (MINS) = 15.00

LINK Enviro 3.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.9064E-01
ESTIMATED PEAK FLOW (CUMECS) = 0.88E-01
ESTIMATED TIME TO PEAK (MINS) = 16.00

LINK Park 7 3.000

ESTIMATED VOLUME (CU METRES*10**3) = 1.076
ESTIMATED PEAK FLOW (CUMECS) = 1.1
ESTIMATED TIME TO PEAK (MINS) = 15.00

LINK Park 5 3.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.2242
ESTIMATED PEAK FLOW (CUMECS) = 0.24
ESTIMATED TIME TO PEAK (MINS) = 13.00

LINK Park 3 3.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.4084
ESTIMATED PEAK FLOW (CUMECS) = 0.51
ESTIMATED TIME TO PEAK (MINS) = 15.00

LINK Park 2#277 3.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.5645
ESTIMATED PEAK FLOW (CUMECS) = 0.70
ESTIMATED TIME TO PEAK (MINS) = 15.00

LINK Park 4 3.000

ESTIMATED VOLUME (CU METRES*10**3) = 1.457
ESTIMATED PEAK FLOW (CUMECS) = 1.7
ESTIMATED TIME TO PEAK (MINS) = 15.00

LINK Park 9 3.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.4230E-01
ESTIMATED PEAK FLOW (CUMECS) = 0.47E-01
ESTIMATED TIME TO PEAK (MINS) = 13.00

LINK Beach 1 3.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.3049
ESTIMATED PEAK FLOW (CUMECS) = 0.32
ESTIMATED TIME TO PEAK (MINS) = 13.00

LINK Park 8 3.000

ESTIMATED VOLUME (CU METRES*10**3) = 2.181
ESTIMATED PEAK FLOW (CUMECS) = 2.2
ESTIMATED TIME TO PEAK (MINS) = 15.00

LINK Junction 2 3.000

ESTIMATED VOLUME (CU METRES*10**3) = 3.931
ESTIMATED PEAK FLOW (CUMECS) = 4.1
ESTIMATED TIME TO PEAK (MINS) = 17.00

LINK Detention 3.000

ESTIMATED VOLUME (CU METRES*10**3) = 9.815

ESTIMATED PEAK FLOW (CUMECS) = 9.2
ESTIMATED TIME TO PEAK (MINS) = 19.00

iosd llkta 0 60
LINK RTA land 3.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.6437
ESTIMATED PEAK FLOW (CUMECS) = 0.41
ESTIMATED TIME TO PEAK (MINS) = 22.00

LINK RTA POND 3.000

ESTIMATED VOLUME (CU METRES*10**3) = 10.60
ESTIMATED PEAK FLOW (CUMECS) = 2.7
ESTIMATED TIME TO PEAK (MINS) = 33.00

iosd llkta 0 63
LINK Out 3.000

ESTIMATED VOLUME (CU METRES*10**3) = 10.39
ESTIMATED PEAK FLOW (CUMECS) = 2.7
ESTIMATED TIME TO PEAK (MINS) = 36.00

##
Wet n wild Sydney

Results for period from 0: 0.0 1/ 1/1990
to 2: 0.0 3/ 1/1990
##

ROUTING INCREMENT (MINS) = 1.00
STORM DURATION (MINS) = 30.
RETURN PERIOD (YRS) = 100.
BX = 1.0000
TOTAL OF FIRST SUB-AREAS (ha) = 28.30
TOTAL OF SECOND SUB-AREAS (ha) = 0.00
TOTAL OF ALL SUB-AREAS (ha) = 28.30

SUMMARY OF CATCHMENT AND RAINFALL DATA

Link Label	Catch. Area #1 (ha)	Catch. Area #2 (ha)	Slope #1 (%)	Slope #2 (%)	% Impervious #1 (%)	% Impervious #2 (%)	Pern #1	Pern #2	B #1	B #2	Link No.
Staff	0.5700	0.000	5.000	0.000	75.00	0.000	.025	0.00	.0014	0.000	1.000
node13	0.1300	0.000	5.000	0.000	5.000	0.000	.025	0.00	.0032	0.000	2.000
Roof	0.4100	0.000	12.00	0.000	100.0	0.000	.002	0.00	0.000	0.000	3.000
PARK 2	0.5400	0.000	3.000	0.000	50.00	0.000	.025	0.00	.0028	0.000	2.001
PARK 1	1.310	0.000	3.000	0.000	25.00	0.000	.025	0.00	.0070	0.000	2.002
Overflow	3.000	0.000	3.000	0.000	75.00	0.000	.025	0.00	.0044	0.000	4.000
CP 1.6	0.1400	0.000	3.000	0.000	100.0	0.000	.025	0.00	.0006	0.000	5.000
CP 1.5	0.2100	0.000	3.000	0.000	100.0	0.000	.025	0.00	.0008	0.000	5.001
CP 1.4	0.1500	0.000	3.000	0.000	100.0	0.000	.025	0.00	.0006	0.000	5.002
Heritage	0.4300	0.000	3.000	0.000	25.00	0.000	.035	0.00	.0050	0.000	6.000
CP 5.2	0.3000	0.000	3.000	0.000	100.0	0.000	.025	0.00	.0009	0.000	6.001
CP 5.1	0.0900	0.000	3.000	0.000	100.0	0.000	.025	0.00	.0005	0.000	6.002
CP 1.3	0.2800	0.000	3.000	0.000	100.0	0.000	.025	0.00	.0009	0.000	5.003
CP 2.2	0.2600	0.000	3.000	0.000	100.0	0.000	.025	0.00	.0009	0.000	7.000
CP 2.1	0.2200	0.000	3.000	0.000	100.0	0.000	.025	0.00	.0008	0.000	7.001
CP 3.5	0.0900	0.000	3.000	0.000	100.0	0.000	.025	0.00	.0005	0.000	8.000
CP 3.4	0.1900	0.000	3.000	0.000	100.0	0.000	.025	0.00	.0007	0.000	8.001
CP3.3	0.1900	0.000	3.000	0.000	100.0	0.000	.025	0.00	.0007	0.000	8.002
CP 3.2	0.1900	0.000	3.000	0.000	100.0	0.000	.025	0.00	.0007	0.000	8.003
CP 3.1	0.4800	0.000	3.000	0.000	100.0	0.000	.025	0.00	.0012	0.000	8.004
CP 4.1	0.1800	0.000	3.000	0.000	100.0	0.000	.025	0.00	.0007	0.000	9.000
CP 6.3	0.2800	0.000	3.000	0.000	100.0	0.000	.025	0.00	.0009	0.000	10.00
CP 6.2.	0.2900	0.000	3.000	0.000	100.0	0.000	.025	0.00	.0009	0.000	10.00
CP 6.1	0.2900	0.000	3.000	0.000	100.0	0.000	.025	0.00	.0009	0.000	10.00
Entry	0.1900	0.000	3.000	0.000	100.0	0.000	.025	0.00	.0007	0.000	8.005
CP 1.1	0.4800	0.000	3.000	0.000	100.0	0.000	.025	0.00	.0012	0.000	5.004
Landscape	0.6300	0.000	5.000	0.000	5.000	0.000	.035	0.00	.0093	0.000	4.001
JUNCTION 1.00001	0.000	.0100	0.000	0.000	0.000	.025	0.00	.0006	0.000	2.003	
Beach 2	0.4900	0.000	2.000	0.000	90.00	0.000	.025	0.00	.0017	0.000	11.00
Pools	1.400	0.000	.0011	0.000	100.0	0.000	.001	0.00	.0047	0.000	12.00
Park 6	1.770	0.000	3.000	0.000	50.00	0.000	.025	0.00	.0052	0.000	13.00
Enviro	0.3000	0.000	3.000	0.000	5.000	0.000	.035	0.00	.0082	0.000	14.00
Park 7	2.330	0.000	3.000	0.000	75.00	0.000	.025	0.00	.0038	0.000	14.00
Park 5	0.5000	0.000	3.000	0.000	90.00	0.000	.025	0.00	.0014	0.000	15.00
Park 3	1.150	0.000	5.000	0.000	35.00	0.000	.025	0.00	.0040	0.000	16.00
Park 2#277	1.590	0.000	5.000	0.000	35.00	0.000	.025	0.00	.0048	0.000	17.00

Park 4 0.5900 0.000 3.000 0.000 85.00 0.000 .025 0.00 .0016 0.000 15.00
Park 9 0.1000 0.000 3.000 0.000 75.00 0.000 .025 0.00 .0007 0.000 18.00
Beach 1 0.6800 0.000 2.000 0.000 90.00 0.000 .025 0.00 .0020 0.000 19.00
Park 8 0.8900 0.000 3.000 0.000 75.00 0.000 .025 0.00 .0023 0.000 15.00
Junction 2.00001 0.000 .0100 0.000 0.000 0.000 .025 0.00 .0006 0.000 13.00
Detention 2.550 0.000 5.000 0.000 20.00 0.000 .035 0.00 .0113 0.000 1.001
RTA land 2.100 0.000 3.000 0.000 5.000 0.000 .035 0.00 .0225 0.000 20.00
RTA POND 0.3400 0.000 3.000 0.000 75.00 0.000 .035 0.00 .0018 0.000 1.002
Out .00001 0.000 1.000 0.000 0.000 0.000 .025 0.00 0.000 0.000 1.003

Link Label	Average Intensity (mm/h)	Init. Loss #1 (mm)	Init. Loss #2	Cont. Loss #1 (mm/h)	Cont. Loss #2	Excess Rain #1 (mm)	Excess Rain #2	Peak Inflow (m^3/s)	Time to Peak	Link Lag mins
Staff	95.157	0.000	0.000	0.000	0.000	42.339	0.000	0.2670	13.00	2.000
node13	95.157	0.000	0.000	0.000	0.000	30.470	0.000	0.0529	15.00	0.000
Roof	95.157	0.000	0.000	0.000	0.000	46.579	0.000	0.1951	11.00	0.000
PARK 2	95.157	0.000	0.000	0.000	0.000	38.100	0.000	0.4915	15.00	2.000
PARK 1	95.157	0.000	0.000	0.000	0.000	33.861	0.000	1.032	15.00	2.000
Overflow	95.157	0.000	0.000	0.000	0.000	42.339	0.000	1.392	14.00	2.000
CP 1.6	95.157	0.000	0.000	0.000	0.000	46.579	0.000	0.0675	12.00	2.000
CP 1.5	95.157	0.000	0.000	0.000	0.000	46.579	0.000	0.1672	14.00	2.000
CP 1.4	95.157	0.000	0.000	0.000	0.000	46.579	0.000	0.2309	15.00	2.000
Heritage	95.157	0.000	0.000	0.000	0.000	33.861	0.000	0.1825	15.00	2.000
CP 5.2	95.157	0.000	0.000	0.000	0.000	46.579	0.000	0.3055	15.00	2.000
CP 5.1	95.157	0.000	0.000	0.000	0.000	46.579	0.000	0.3188	17.00	2.000
CP 1.3	95.157	0.000	0.000	0.000	0.000	46.579	0.000	0.5856	17.00	2.000
CP 2.2	95.157	0.000	0.000	0.000	0.000	46.579	0.000	0.1249	12.00	2.000
CP 2.1	95.157	0.000	0.000	0.000	0.000	46.579	0.000	0.2293	15.00	2.000
CP 3.5	95.157	0.000	0.000	0.000	0.000	46.579	0.000	0.0433	12.00	2.000
CP 3.4	95.157	0.000	0.000	0.000	0.000	46.579	0.000	0.1339	14.00	2.000
CP3.3	95.157	0.000	0.000	0.000	0.000	46.579	0.000	0.2186	15.00	2.000
CP 3.2	95.157	0.000	0.000	0.000	0.000	46.579	0.000	0.2966	15.00	2.000
CP 3.1	95.157	0.000	0.000	0.000	0.000	46.579	0.000	0.5080	15.00	2.000
CP 4.1	95.157	0.000	0.000	0.000	0.000	46.579	0.000	0.0873	12.00	2.000
CP 6.3	95.157	0.000	0.000	0.000	0.000	46.579	0.000	0.1352	12.00	2.000
CP 6.2.	95.157	0.000	0.000	0.000	0.000	46.579	0.000	0.2732	14.00	2.000
CP 6.1	95.157	0.000	0.000	0.000	0.000	46.579	0.000	0.3965	15.00	2.000
Entry	95.157	0.000	0.000	0.000	0.000	46.579	0.000	1.025	15.00	2.000
CP 1.1	95.157	0.000	0.000	0.000	0.000	46.579	0.000	1.913	16.00	2.000
Landscape	95.157	0.000	0.000	0.000	0.000	30.470	0.000	3.465	17.00	2.000
JUNCTION 1	95.157	0.000	0.000	0.000	0.000	29.622	0.000	4.351	19.00	2.000
Beach 2	95.157	0.000	0.000	0.000	0.000	44.883	0.000	0.2325	13.00	2.000
Pools	95.157	100.0	0.000	0.000	0.000	0.000	0.000	0.000	1.000	2.000
Park 6	95.157	0.000	0.000	0.000	0.000	38.100	0.000	0.7972	15.00	2.000
Enviro	95.157	0.000	0.000	0.000	0.000	30.470	0.000	0.0878	16.00	2.000
Park 7	95.157	0.000	0.000	0.000	0.000	42.339	0.000	1.124	15.00	2.000
Park 5	95.157	0.000	0.000	0.000	0.000	44.883	0.000	0.2380	13.00	2.000
Park 3	95.157	0.000	0.000	0.000	0.000	35.557	0.000	0.5110	15.00	2.000
Park 2#2	7795.157	0.000	0.000	0.000	0.000	35.557	0.000	0.7041	15.00	2.000
Park 4	95.157	0.000	0.000	0.000	0.000	44.035	0.000	1.679	15.00	2.000
Park 9	95.157	0.000	0.000	0.000	0.000	42.339	0.000	0.0468	13.00	2.000
Beach 1	95.157	0.000	0.000	0.000	0.000	44.883	0.000	0.3223	13.00	0.000
Park 8	95.157	0.000	0.000	0.000	0.000	42.339	0.000	2.228	15.00	2.000
Junction 2	95.157	0.000	0.000	0.000	0.000	29.622	0.000	4.149	17.00	2.000
Detention	95.157	0.000	0.000	0.000	0.000	33.013	0.000	9.235	19.00	0.000
RTA land	95.157	0.000	0.000	0.000	0.000	30.470	0.000	0.4126	22.00	2.000
RTA POND	95.157	0.000	0.000	0.000	0.000	42.339	0.000	2.718	33.00	2.000
Out	95.157	0.000	0.000	0.000	0.000	29.622	0.000	2.735	36.00	0.000

SUMMARY OF BASIN RESULTS

Link Label	Time to Peak Inflow (m^3/s)	Peak Inflow (m^3/s)	Time to Peak Outflow (m^3/s)	Peak Outflow (m^3)	Total Inflow Vol. Avail (m^3)	Vol. Used	Stage Used
Detention	19.00	9.235	36.00	2.455	9815.2	0.0000	10291.0	76.114
RTA POND	33.00	2.718	34.00	2.735	10602.7	0.0000	8.2631	73.131

SUMMARY OF BASIN OUTLET RESULTS

Link Label	No. of	S/D Factor	Dia (m)	Width (m)	Pipe Length (m)	Pipe Slope (%)
Detention	1.0	1.000		0.000	20.000	0.2000
RTA POND	1.0		1.750	0.000	80.000	0.2000

LINK Staff 4.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.2937
ESTIMATED PEAK FLOW (CUMECS) = 0.25
ESTIMATED TIME TO PEAK (MINS) = 14.00

LINK node13 4.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.4893E-01
ESTIMATED PEAK FLOW (CUMECS) = 0.43E-01
ESTIMATED TIME TO PEAK (MINS) = 18.00

LINK Roof 4.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.2318
ESTIMATED PEAK FLOW (CUMECS) = 0.18
ESTIMATED TIME TO PEAK (MINS) = 12.00

LINK PARK 2 4.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.5321
ESTIMATED PEAK FLOW (CUMECS) = 0.44
ESTIMATED TIME TO PEAK (MINS) = 15.00

LINK PARK 1 4.000

ESTIMATED VOLUME (CU METRES*10**3) = 1.077
ESTIMATED PEAK FLOW (CUMECS) = 0.90
ESTIMATED TIME TO PEAK (MINS) = 17.00

LINK Overflow 4.000

ESTIMATED VOLUME (CU METRES*10**3) = 1.546
ESTIMATED PEAK FLOW (CUMECS) = 1.3
ESTIMATED TIME TO PEAK (MINS) = 15.00

LINK CP 1.6 4.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.7914E-01
ESTIMATED PEAK FLOW (CUMECS) = 0.64E-01
ESTIMATED TIME TO PEAK (MINS) = 12.00

LINK CP 1.5 4.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.1978
ESTIMATED PEAK FLOW (CUMECS) = 0.16
ESTIMATED TIME TO PEAK (MINS) = 14.00

LINK CP 1.4 4.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.2826
ESTIMATED PEAK FLOW (CUMECS) = 0.22
ESTIMATED TIME TO PEAK (MINS) = 16.00

LINK Heritage 4.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.1787
ESTIMATED PEAK FLOW (CUMECS) = 0.15
ESTIMATED TIME TO PEAK (MINS) = 17.00

LINK CP 5.2 4.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.3483
ESTIMATED PEAK FLOW (CUMECS) = 0.25
ESTIMATED TIME TO PEAK (MINS) = 19.00

LINK CP 5.1 4.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.3991
ESTIMATED PEAK FLOW (CUMECS) = 0.28
ESTIMATED TIME TO PEAK (MINS) = 20.00

LINK CP 1.3 4.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.8400
ESTIMATED PEAK FLOW (CUMECS) = 0.55
ESTIMATED TIME TO PEAK (MINS) = 20.00

LINK CP 2.2 4.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.1470
ESTIMATED PEAK FLOW (CUMECS) = 0.12
ESTIMATED TIME TO PEAK (MINS) = 12.00

LINK CP 2.1 4.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.2713
ESTIMATED PEAK FLOW (CUMECS) = 0.22

ESTIMATED TIME TO PEAK (MINS) = 14.00

LINK CP 3.5 4.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.5088E-01
ESTIMATED PEAK FLOW (CUMECS) = 0.41E-01
ESTIMATED TIME TO PEAK (MINS) = 12.00

LINK CP 3.4 4.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.1583
ESTIMATED PEAK FLOW (CUMECS) = 0.13
ESTIMATED TIME TO PEAK (MINS) = 14.00

LINK CP3.3 4.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.2657
ESTIMATED PEAK FLOW (CUMECS) = 0.20
ESTIMATED TIME TO PEAK (MINS) = 15.00

LINK CP 3.2 4.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.3731
ESTIMATED PEAK FLOW (CUMECS) = 0.27
ESTIMATED TIME TO PEAK (MINS) = 16.00

LINK CP 3.1 4.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.6444
ESTIMATED PEAK FLOW (CUMECS) = 0.44
ESTIMATED TIME TO PEAK (MINS) = 16.00

LINK CP 4.1 4.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.1017
ESTIMATED PEAK FLOW (CUMECS) = 0.83E-01
ESTIMATED TIME TO PEAK (MINS) = 12.00

LINK CP 6.3 4.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.1583
ESTIMATED PEAK FLOW (CUMECS) = 0.13
ESTIMATED TIME TO PEAK (MINS) = 13.00

LINK CP 6.2. 4.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.3222
ESTIMATED PEAK FLOW (CUMECS) = 0.26
ESTIMATED TIME TO PEAK (MINS) = 15.00

LINK CP 6.1 4.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.4861
ESTIMATED PEAK FLOW (CUMECS) = 0.37
ESTIMATED TIME TO PEAK (MINS) = 15.00

LINK Entry 4.000

ESTIMATED VOLUME (CU METRES*10**3) = 1.340
ESTIMATED PEAK FLOW (CUMECS) = 0.95
ESTIMATED TIME TO PEAK (MINS) = 17.00

LINK CP 1.1 4.000

ESTIMATED VOLUME (CU METRES*10**3) = 2.722
ESTIMATED PEAK FLOW (CUMECS) = 1.8
ESTIMATED TIME TO PEAK (MINS) = 19.00

LINK Landscape 4.000

ESTIMATED VOLUME (CU METRES*10**3) = 4.506
ESTIMATED PEAK FLOW (CUMECS) = 3.0
ESTIMATED TIME TO PEAK (MINS) = 18.00

LINK JUNCTION 1 4.000

ESTIMATED VOLUME (CU METRES*10**3) = 5.583
ESTIMATED PEAK FLOW (CUMECS) = 3.9
ESTIMATED TIME TO PEAK (MINS) = 20.00

LINK Beach 2 4.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.2671

ESTIMATED PEAK FLOW (CUMECS) = 0.22
ESTIMATED TIME TO PEAK (MINS) = 14.00

LINK Pools 4.000
WARNING 8 - LOSSES POSS. EXCEED RAIN

ESTIMATED VOLUME (CU METRES*10**3) = 0.000
ESTIMATED PEAK FLOW (CUMECS) = 0.0
ESTIMATED TIME TO PEAK (MINS) = 1.00

LINK Park 6 4.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.8238
ESTIMATED PEAK FLOW (CUMECS) = 0.72
ESTIMATED TIME TO PEAK (MINS) = 15.00

LINK Enviro 4.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.1131
ESTIMATED PEAK FLOW (CUMECS) = 0.80E-01
ESTIMATED TIME TO PEAK (MINS) = 21.00

LINK Park 7 4.000

ESTIMATED VOLUME (CU METRES*10**3) = 1.314
ESTIMATED PEAK FLOW (CUMECS) = 1.0
ESTIMATED TIME TO PEAK (MINS) = 15.00

LINK Park 5 4.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.2726
ESTIMATED PEAK FLOW (CUMECS) = 0.22
ESTIMATED TIME TO PEAK (MINS) = 13.00

LINK Park 3 4.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.5007
ESTIMATED PEAK FLOW (CUMECS) = 0.47
ESTIMATED TIME TO PEAK (MINS) = 15.00

LINK Park 2#277 4.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.6921
ESTIMATED PEAK FLOW (CUMECS) = 0.64
ESTIMATED TIME TO PEAK (MINS) = 15.00

LINK Park 4 4.000

ESTIMATED VOLUME (CU METRES*10**3) = 1.781
ESTIMATED PEAK FLOW (CUMECS) = 1.5
ESTIMATED TIME TO PEAK (MINS) = 17.00

LINK Park 9 4.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.5153E-01
ESTIMATED PEAK FLOW (CUMECS) = 0.44E-01
ESTIMATED TIME TO PEAK (MINS) = 13.00

LINK Beach 1 4.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.3708
ESTIMATED PEAK FLOW (CUMECS) = 0.30
ESTIMATED TIME TO PEAK (MINS) = 14.00

LINK Park 8 4.000

ESTIMATED VOLUME (CU METRES*10**3) = 2.662
ESTIMATED PEAK FLOW (CUMECS) = 2.1
ESTIMATED TIME TO PEAK (MINS) = 19.00

LINK Junction 2 4.000

ESTIMATED VOLUME (CU METRES*10**3) = 4.800
ESTIMATED PEAK FLOW (CUMECS) = 3.5
ESTIMATED TIME TO PEAK (MINS) = 21.00

LINK Detention 4.000

ESTIMATED VOLUME (CU METRES*10**3) = 11.98
ESTIMATED PEAK FLOW (CUMECS) = 8.3
ESTIMATED TIME TO PEAK (MINS) = 22.00

iosd llkta 0 60

LINK RTA land 4.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.7914
ESTIMATED PEAK FLOW (CUMECS) = 0.43
ESTIMATED TIME TO PEAK (MINS) = 28.00

LINK RTA POND 4.000

ESTIMATED VOLUME (CU METRES*10**3) = 12.95
ESTIMATED PEAK FLOW (CUMECS) = 3.1
ESTIMATED TIME TO PEAK (MINS) = 42.00

iosd llkta 0 63
LINK Out 4.000

ESTIMATED VOLUME (CU METRES*10**3) = 12.75
ESTIMATED PEAK FLOW (CUMECS) = 3.2
ESTIMATED TIME TO PEAK (MINS) = 45.00

##
Wet n wild Sydney

Results for period from 0: 0.0 1/ 1/1990
to 2: 0.0 3/ 1/1990
##

ROUTING INCREMENT (MINS) = 1.00
STORM DURATION (MINS) = 45.
RETURN PERIOD (YRS) = 100.
BX = 1.0000
TOTAL OF FIRST SUB-AREAS (ha) = 28.30
TOTAL OF SECOND SUB-AREAS (ha) = 0.00
TOTAL OF ALL SUB-AREAS (ha) = 28.30

SUMMARY OF CATCHMENT AND RAINFALL DATA

Link Label	Catch. Area (ha) #1	#2	Slope (%) #1	#2	Impervious (%) #1	#2	Pern #1	#2	B #1	#2	Link No.
Staff	0.5700	0.000	5.000	0.000	75.00	0.000	.025	0.00	.0014	0.000	1.000
node13	0.1300	0.000	5.000	0.000	5.000	0.000	.025	0.00	.0032	0.000	2.000
Roof	0.4100	0.000	12.00	0.000	100.0	0.000	.002	0.00	0.000	0.000	3.000
PARK 2	0.5400	0.000	3.000	0.000	50.00	0.000	.025	0.00	.0028	0.000	2.001
PARK 1	1.310	0.000	3.000	0.000	25.00	0.000	.025	0.00	.0070	0.000	2.002
Overflow	3.000	0.000	3.000	0.000	75.00	0.000	.025	0.00	.0044	0.000	4.000
CP 1.6	0.1400	0.000	3.000	0.000	100.0	0.000	.025	0.00	.0006	0.000	5.000
CP 1.5	0.2100	0.000	3.000	0.000	100.0	0.000	.025	0.00	.0008	0.000	5.001
CP 1.4	0.1500	0.000	3.000	0.000	100.0	0.000	.025	0.00	.0006	0.000	5.002
Heritage	0.4300	0.000	3.000	0.000	25.00	0.000	.035	0.00	.0050	0.000	6.000
CP 5.2	0.3000	0.000	3.000	0.000	100.0	0.000	.025	0.00	.0009	0.000	6.001
CP 5.1	0.0900	0.000	3.000	0.000	100.0	0.000	.025	0.00	.0005	0.000	6.002
CP 1.3	0.2800	0.000	3.000	0.000	100.0	0.000	.025	0.00	.0009	0.000	5.003
CP 2.2	0.2600	0.000	3.000	0.000	100.0	0.000	.025	0.00	.0009	0.000	7.000
CP 2.1	0.2200	0.000	3.000	0.000	100.0	0.000	.025	0.00	.0008	0.000	7.001
CP 3.5	0.0900	0.000	3.000	0.000	100.0	0.000	.025	0.00	.0005	0.000	8.000
CP 3.4	0.1900	0.000	3.000	0.000	100.0	0.000	.025	0.00	.0007	0.000	8.001
CP3.3	0.1900	0.000	3.000	0.000	100.0	0.000	.025	0.00	.0007	0.000	8.002
CP 3.2	0.1900	0.000	3.000	0.000	100.0	0.000	.025	0.00	.0007	0.000	8.003
CP 3.1	0.4800	0.000	3.000	0.000	100.0	0.000	.025	0.00	.0012	0.000	8.004
CP 4.1	0.1800	0.000	3.000	0.000	100.0	0.000	.025	0.00	.0007	0.000	9.000
CP 6.3	0.2800	0.000	3.000	0.000	100.0	0.000	.025	0.00	.0009	0.000	10.00
CP 6.2.	0.2900	0.000	3.000	0.000	100.0	0.000	.025	0.00	.0009	0.000	10.00
CP 6.1	0.2900	0.000	3.000	0.000	100.0	0.000	.025	0.00	.0009	0.000	10.00
Entry	0.1900	0.000	3.000	0.000	100.0	0.000	.025	0.00	.0007	0.000	8.005
CP 1.1	0.4800	0.000	3.000	0.000	100.0	0.000	.025	0.00	.0012	0.000	5.004
Landscape	0.6300	0.000	5.000	0.000	5.000	0.000	.035	0.00	.0093	0.000	4.001
JUNCTION 1.00001	0.000	.0100	0.000	0.000	0.000	.025	0.00	.0006	0.000	2.003	
Beach 2	0.4900	0.000	2.000	0.000	90.00	0.000	.025	0.00	.0017	0.000	11.00
Pools	1.400	0.000	.0011	0.000	100.0	0.000	.001	0.00	.0047	0.000	12.00
Park 6	1.770	0.000	3.000	0.000	50.00	0.000	.025	0.00	.0052	0.000	13.00
Enviro	0.3000	0.000	3.000	0.000	5.000	0.000	.035	0.00	.0082	0.000	14.00
Park 7	2.330	0.000	3.000	0.000	75.00	0.000	.025	0.00	.0038	0.000	14.00
Park 5	0.5000	0.000	3.000	0.000	90.00	0.000	.025	0.00	.0014	0.000	15.00
Park 3	1.150	0.000	5.000	0.000	35.00	0.000	.025	0.00	.0040	0.000	16.00
Park 2#277	1.590	0.000	5.000	0.000	35.00	0.000	.025	0.00	.0048	0.000	17.00
Park 4	0.5900	0.000	3.000	0.000	85.00	0.000	.025	0.00	.0016	0.000	15.00
Park 9	0.1000	0.000	3.000	0.000	75.00	0.000	.025	0.00	.0007	0.000	18.00
Beach 1	0.6800	0.000	2.000	0.000	90.00	0.000	.025	0.00	.0020	0.000	19.00
Park 8	0.8900	0.000	3.000	0.000	75.00	0.000	.025	0.00	.0023	0.000	15.00

Junction 2.00001 0.000 .0100 0.000 0.000 0.000 .025 0.00 .0006 0.000 13.00
Detention 2.550 0.000 5.000 0.000 20.00 0.000 .035 0.00 .0113 0.000 1.001
RTA land 2.100 0.000 3.000 0.000 5.000 0.000 .035 0.00 .0225 0.000 20.00
RTA POND 0.3400 0.000 3.000 0.000 75.00 0.000 .035 0.00 .0018 0.000 1.002
Out .00001 0.000 1.000 0.000 0.000 0.000 .025 0.00 0.000 0.000 1.003

Link Label	Average Intensity (mm/h)	Init. Loss #1 (mm)	Init. Loss #2 (mm/h)	Cont. Loss #1 (mm)	Cont. Loss #2 (m^3/s)	Excess Rain #1 Peak	Excess Rain #2 mins	Time to Inflow	Link Lag
Staff	76.726	0.000	0.000	0.000	0.000	51.548	0.000	0.2496	14.00 2.000
node13	76.726	0.000	0.000	0.000	0.000	37.558	0.000	0.0428	18.00 0.000
Roof	76.726	0.000	0.000	0.000	0.000	56.545	0.000	0.1840	12.00 0.000
PARK 2	76.726	0.000	0.000	0.000	0.000	46.552	0.000	0.4435	15.00 2.000
PARK 1	76.726	0.000	0.000	0.000	0.000	41.555	0.000	0.9008	17.00 2.000
Overflow	76.726	0.000	0.000	0.000	0.000	51.548	0.000	1.307	15.00 2.000
CP 1.6	76.726	0.000	0.000	0.000	0.000	56.545	0.000	0.0641	12.00 2.000
CP 1.5	76.726	0.000	0.000	0.000	0.000	56.545	0.000	0.1593	14.00 2.000
CP 1.4	76.726	0.000	0.000	0.000	0.000	56.545	0.000	0.2183	16.00 2.000
Heritage	76.726	0.000	0.000	0.000	0.000	41.555	0.000	0.1521	17.00 2.000
CP 5.2	76.726	0.000	0.000	0.000	0.000	56.545	0.000	0.2536	19.00 2.000
CP 5.1	76.726	0.000	0.000	0.000	0.000	56.545	0.000	0.2832	20.00 2.000
CP 1.3	76.726	0.000	0.000	0.000	0.000	56.545	0.000	0.5549	20.00 2.000
CP 2.2	76.726	0.000	0.000	0.000	0.000	56.545	0.000	0.1201	12.00 2.000
CP 2.1	76.726	0.000	0.000	0.000	0.000	56.545	0.000	0.2194	14.00 2.000
CP 3.5	76.726	0.000	0.000	0.000	0.000	56.545	0.000	0.0411	12.00 2.000
CP 3.4	76.726	0.000	0.000	0.000	0.000	56.545	0.000	0.1262	14.00 2.000
CP3.3	76.726	0.000	0.000	0.000	0.000	56.545	0.000	0.2006	15.00 2.000
CP 3.2	76.726	0.000	0.000	0.000	0.000	56.545	0.000	0.2714	16.00 2.000
CP 3.1	76.726	0.000	0.000	0.000	0.000	56.545	0.000	0.4417	16.00 2.000
CP 4.1	76.726	0.000	0.000	0.000	0.000	56.545	0.000	0.0833	12.00 2.000
CP 6.3	76.726	0.000	0.000	0.000	0.000	56.545	0.000	0.1281	13.00 2.000
CP 6.2.	76.726	0.000	0.000	0.000	0.000	56.545	0.000	0.2595	15.00 2.000
CP 6.1	76.726	0.000	0.000	0.000	0.000	56.545	0.000	0.3670	15.00 2.000
Entry	76.726	0.000	0.000	0.000	0.000	56.545	0.000	0.9500	17.00 2.000
CP 1.1	76.726	0.000	0.000	0.000	0.000	56.545	0.000	1.806	19.00 2.000
Landscape	76.726	0.000	0.000	0.000	0.000	37.558	0.000	3.019	18.00 2.000
JUNCTION 1	76.726	0.000	0.000	0.000	0.000	36.559	0.000	3.862	20.00 2.000
Beach 2	76.726	0.000	0.000	0.000	0.000	54.546	0.000	0.2184	14.00 2.000
Pools	76.726	100.0	0.000	0.000	0.000	0.000	0.000	0.000	1.000 2.000
Park 6	76.726	0.000	0.000	0.000	0.000	46.552	0.000	0.7235	15.00 2.000
Enviro	76.726	0.000	0.000	0.000	0.000	37.558	0.000	0.0796	21.00 2.000
Park 7	76.726	0.000	0.000	0.000	0.000	51.548	0.000	1.030	15.00 2.000
Park 5	76.726	0.000	0.000	0.000	0.000	54.546	0.000	0.2234	13.00 2.000
Park 3	76.726	0.000	0.000	0.000	0.000	43.554	0.000	0.4704	15.00 2.000
Park 2#2	76.726	0.000	0.000	0.000	0.000	43.554	0.000	0.6380	15.00 2.000
Park 4	76.726	0.000	0.000	0.000	0.000	53.547	0.000	1.532	17.00 2.000
Park 9	76.726	0.000	0.000	0.000	0.000	51.548	0.000	0.0440	13.00 2.000
Beach 1	76.726	0.000	0.000	0.000	0.000	54.546	0.000	0.3024	14.00 0.000
Park 8	76.726	0.000	0.000	0.000	0.000	51.548	0.000	2.080	19.00 2.000
Junction 2	76.726	0.000	0.000	0.000	0.000	36.559	0.000	3.459	21.00 2.000
Detention	76.726	0.000	0.000	0.000	0.000	40.556	0.000	8.343	22.00 0.000
RTA land	76.726	0.000	0.000	0.000	0.000	37.558	0.000	0.4280	28.00 2.000
RTA POND	76.726	0.000	0.000	0.000	0.000	51.548	0.000	3.116	42.00 2.000
Out	76.726	0.000	0.000	0.000	0.000	36.559	0.000	3.153	45.00 0.000

SUMMARY OF BASIN RESULTS

Link Label	Time to Peak Inflow (m^3/s)	Peak Inflow	Time to Peak Outflow (m^3/s)	Peak Outflow	Total Inflow (m^3)	Basin Vol. Avail	Basin Vol. Used	Stage Used
Detention	22.00	8.342	45.00	2.817	11980.1	0.0000	10911.0	76.196
RTA POND	42.00	3.116	43.00	3.153	12946.5	0.0000	9.4545	73.384

SUMMARY OF BASIN OUTLET RESULTS

Link Label	No. of	S/D Factor	Dia (m)	Width (m)	Pipe Length (m)	Pipe Slope (%)
Detention	1.0	1.000	0.000	20.000	0.2000	
RTA POND	1.0		1.750	0.000	80.000	0.2000

LINK Staff 5.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.3318
ESTIMATED PEAK FLOW (CUMECS) = 0.27
ESTIMATED TIME TO PEAK (MINS) = 23.00

LINK node13 5.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.5311E-01

ESTIMATED PEAK FLOW (CUMECS) = 0.51E-01
ESTIMATED TIME TO PEAK (MINS) = 25.00

LINK Roof 5.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.2641
ESTIMATED PEAK FLOW (CUMECS) = 0.20
ESTIMATED TIME TO PEAK (MINS) = 22.00

LINK PARK 2 5.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.5981
ESTIMATED PEAK FLOW (CUMECS) = 0.49
ESTIMATED TIME TO PEAK (MINS) = 24.00

LINK PARK 1 5.000

ESTIMATED VOLUME (CU METRES*10**3) = 1.199
ESTIMATED PEAK FLOW (CUMECS) = 1.0
ESTIMATED TIME TO PEAK (MINS) = 26.00

LINK Overflow 5.000

ESTIMATED VOLUME (CU METRES*10**3) = 1.747
ESTIMATED PEAK FLOW (CUMECS) = 1.4
ESTIMATED TIME TO PEAK (MINS) = 24.00

LINK CP 1.6 5.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.9018E-01
ESTIMATED PEAK FLOW (CUMECS) = 0.69E-01
ESTIMATED TIME TO PEAK (MINS) = 22.00

LINK CP 1.5 5.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.2254
ESTIMATED PEAK FLOW (CUMECS) = 0.17
ESTIMATED TIME TO PEAK (MINS) = 24.00

LINK CP 1.4 5.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.3221
ESTIMATED PEAK FLOW (CUMECS) = 0.22
ESTIMATED TIME TO PEAK (MINS) = 26.00

LINK Heritage 5.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.1971
ESTIMATED PEAK FLOW (CUMECS) = 0.18
ESTIMATED TIME TO PEAK (MINS) = 25.00

LINK CP 5.2 5.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.3903
ESTIMATED PEAK FLOW (CUMECS) = 0.29
ESTIMATED TIME TO PEAK (MINS) = 25.00

LINK CP 5.1 5.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.4483
ESTIMATED PEAK FLOW (CUMECS) = 0.31
ESTIMATED TIME TO PEAK (MINS) = 27.00

LINK CP 1.3 5.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.9507
ESTIMATED PEAK FLOW (CUMECS) = 0.58
ESTIMATED TIME TO PEAK (MINS) = 28.00

LINK CP 2.2 5.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.1675
ESTIMATED PEAK FLOW (CUMECS) = 0.13
ESTIMATED TIME TO PEAK (MINS) = 22.00

LINK CP 2.1 5.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.3092
ESTIMATED PEAK FLOW (CUMECS) = 0.23
ESTIMATED TIME TO PEAK (MINS) = 24.00

LINK CP 3.5 5.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.5798E-01
ESTIMATED PEAK FLOW (CUMECS) = 0.44E-01
ESTIMATED TIME TO PEAK (MINS) = 22.00

LINK CP 3.4 5.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.1804
ESTIMATED PEAK FLOW (CUMECS) = 0.14
ESTIMATED TIME TO PEAK (MINS) = 24.00

LINK CP3.3 5.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.3027
ESTIMATED PEAK FLOW (CUMECS) = 0.21
ESTIMATED TIME TO PEAK (MINS) = 24.00

LINK CP 3.2 5.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.4251
ESTIMATED PEAK FLOW (CUMECS) = 0.27
ESTIMATED TIME TO PEAK (MINS) = 26.00

LINK CP 3.1 5.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.7343
ESTIMATED PEAK FLOW (CUMECS) = 0.45
ESTIMATED TIME TO PEAK (MINS) = 25.00

LINK CP 4.1 5.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.1159
ESTIMATED PEAK FLOW (CUMECS) = 0.90E-01
ESTIMATED TIME TO PEAK (MINS) = 22.00

LINK CP 6.3 5.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.1804
ESTIMATED PEAK FLOW (CUMECS) = 0.14
ESTIMATED TIME TO PEAK (MINS) = 23.00

LINK CP 6.2. 5.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.3671
ESTIMATED PEAK FLOW (CUMECS) = 0.28
ESTIMATED TIME TO PEAK (MINS) = 25.00

LINK CP 6.1 5.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.5539
ESTIMATED PEAK FLOW (CUMECS) = 0.39
ESTIMATED TIME TO PEAK (MINS) = 25.00

LINK Entry 5.000

ESTIMATED VOLUME (CU METRES*10**3) = 1.527
ESTIMATED PEAK FLOW (CUMECS) = 0.97
ESTIMATED TIME TO PEAK (MINS) = 27.00

LINK CP 1.1 5.000

ESTIMATED VOLUME (CU METRES*10**3) = 3.096
ESTIMATED PEAK FLOW (CUMECS) = 1.8
ESTIMATED TIME TO PEAK (MINS) = 29.00

LINK Landscape 5.000

ESTIMATED VOLUME (CU METRES*10**3) = 5.100
ESTIMATED PEAK FLOW (CUMECS) = 3.2
ESTIMATED TIME TO PEAK (MINS) = 27.00

LINK JUNCTION 1 5.000

ESTIMATED VOLUME (CU METRES*10**3) = 6.299
ESTIMATED PEAK FLOW (CUMECS) = 4.2
ESTIMATED TIME TO PEAK (MINS) = 29.00

LINK Beach 2 5.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.3035
ESTIMATED PEAK FLOW (CUMECS) = 0.23
ESTIMATED TIME TO PEAK (MINS) = 23.00

LINK Pools 5.000

WARNING 8 - LOSSES POSS. EXCEED RAIN

ESTIMATED VOLUME (CU METRES*10**3) = 0.000
ESTIMATED PEAK FLOW (CUMECS) = 0.0
ESTIMATED TIME TO PEAK (MINS) = 1.00

LINK Park 6 5.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.9208
ESTIMATED PEAK FLOW (CUMECS) = 0.80
ESTIMATED TIME TO PEAK (MINS) = 25.00

LINK Enviro 5.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.1225
ESTIMATED PEAK FLOW (CUMECS) = 0.97E-01
ESTIMATED TIME TO PEAK (MINS) = 26.00

LINK Park 7 5.000

ESTIMATED VOLUME (CU METRES*10**3) = 1.479
ESTIMATED PEAK FLOW (CUMECS) = 1.1
ESTIMATED TIME TO PEAK (MINS) = 25.00

LINK Park 5 5.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.3096
ESTIMATED PEAK FLOW (CUMECS) = 0.24
ESTIMATED TIME TO PEAK (MINS) = 23.00

LINK Park 3 5.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.5554
ESTIMATED PEAK FLOW (CUMECS) = 0.51
ESTIMATED TIME TO PEAK (MINS) = 25.00

LINK Park 2#277 5.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.7681
ESTIMATED PEAK FLOW (CUMECS) = 0.71
ESTIMATED TIME TO PEAK (MINS) = 25.00

LINK Park 4 5.000

ESTIMATED VOLUME (CU METRES*10**3) = 1.991
ESTIMATED PEAK FLOW (CUMECS) = 1.7
ESTIMATED TIME TO PEAK (MINS) = 26.00

LINK Park 9 5.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.5821E-01
ESTIMATED PEAK FLOW (CUMECS) = 0.48E-01
ESTIMATED TIME TO PEAK (MINS) = 23.00

LINK Beach 1 5.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.4211
ESTIMATED PEAK FLOW (CUMECS) = 0.32
ESTIMATED TIME TO PEAK (MINS) = 23.00

LINK Park 8 5.000

ESTIMATED VOLUME (CU METRES*10**3) = 2.989
ESTIMATED PEAK FLOW (CUMECS) = 2.1
ESTIMATED TIME TO PEAK (MINS) = 26.00

LINK Junction 2 5.000

ESTIMATED VOLUME (CU METRES*10**3) = 5.388
ESTIMATED PEAK FLOW (CUMECS) = 3.9
ESTIMATED TIME TO PEAK (MINS) = 27.00

LINK Detention 5.000

ESTIMATED VOLUME (CU METRES*10**3) = 13.46
ESTIMATED PEAK FLOW (CUMECS) = 8.8
ESTIMATED TIME TO PEAK (MINS) = 29.00

iosd llkta 0 60
LINK RTA land 5.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.8612
ESTIMATED PEAK FLOW (CUMECS) = 0.49

ESTIMATED TIME TO PEAK (MINS) = 30.00

LINK RTA POND 5.000

ESTIMATED VOLUME (CU METRES*10**3) = 13.92
ESTIMATED PEAK FLOW (CUMECS) = 3.4
ESTIMATED TIME TO PEAK (MINS) = 44.00

iosd llkta 0 63
LINK Out 5.000

ESTIMATED VOLUME (CU METRES*10**3) = 13.84
ESTIMATED PEAK FLOW (CUMECS) = 3.4
ESTIMATED TIME TO PEAK (MINS) = 47.00

##
Wet n wild Sydney

Results for period from 0: 0.0 1/ 1/1990
to 5: 0.0 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) = 28.30
TOTAL OF SECOND SUB-AREAS (ha) = 0.00
TOTAL OF ALL SUB-AREAS (ha) = 28.30

SUMMARY OF CATCHMENT AND RAINFALL DATA

Link Label	Catch. Area #1 (ha)	Catch. Area #2 (ha)	Slope #1 (%)	Slope #2 (%)	% Impervious #1	% Impervious #2	Pern #1	Pern #2	B #1	B #2	Link No.
Staff	0.5700	0.000	5.000	0.000	75.00	0.000	.025	0.00	.0014	0.000	1.000
node13	0.1300	0.000	5.000	0.000	5.000	0.000	.025	0.00	.0032	0.000	2.000
Roof	0.4100	0.000	12.00	0.000	100.0	0.000	.002	0.00	0.000	0.000	3.000
PARK 2	0.5400	0.000	3.000	0.000	50.00	0.000	.025	0.00	.0028	0.000	2.001
PARK 1	1.310	0.000	3.000	0.000	25.00	0.000	.025	0.00	.0070	0.000	2.002
Overflow	3.000	0.000	3.000	0.000	75.00	0.000	.025	0.00	.0044	0.000	4.000
CP 1.6	0.1400	0.000	3.000	0.000	100.0	0.000	.025	0.00	.0006	0.000	5.000
CP 1.5	0.2100	0.000	3.000	0.000	100.0	0.000	.025	0.00	.0008	0.000	5.001
CP 1.4	0.1500	0.000	3.000	0.000	100.0	0.000	.025	0.00	.0006	0.000	5.002
Heritage	0.4300	0.000	3.000	0.000	25.00	0.000	.035	0.00	.0050	0.000	6.000
CP 5.2	0.3000	0.000	3.000	0.000	100.0	0.000	.025	0.00	.0009	0.000	6.001
CP 5.1	0.0900	0.000	3.000	0.000	100.0	0.000	.025	0.00	.0005	0.000	6.002
CP 1.3	0.2800	0.000	3.000	0.000	100.0	0.000	.025	0.00	.0009	0.000	5.003
CP 2.2	0.2600	0.000	3.000	0.000	100.0	0.000	.025	0.00	.0009	0.000	7.000
CP 2.1	0.2200	0.000	3.000	0.000	100.0	0.000	.025	0.00	.0008	0.000	7.001
CP 3.5	0.0900	0.000	3.000	0.000	100.0	0.000	.025	0.00	.0005	0.000	8.000
CP 3.4	0.1900	0.000	3.000	0.000	100.0	0.000	.025	0.00	.0007	0.000	8.001
CP3.3	0.1900	0.000	3.000	0.000	100.0	0.000	.025	0.00	.0007	0.000	8.002
CP 3.2	0.1900	0.000	3.000	0.000	100.0	0.000	.025	0.00	.0007	0.000	8.003
CP 3.1	0.4800	0.000	3.000	0.000	100.0	0.000	.025	0.00	.0012	0.000	8.004
CP 4.1	0.1800	0.000	3.000	0.000	100.0	0.000	.025	0.00	.0007	0.000	9.000
CP 6.3	0.2800	0.000	3.000	0.000	100.0	0.000	.025	0.00	.0009	0.000	10.00
CP 6.2.	0.2900	0.000	3.000	0.000	100.0	0.000	.025	0.00	.0009	0.000	10.00
CP 6.1	0.2900	0.000	3.000	0.000	100.0	0.000	.025	0.00	.0009	0.000	10.00
Entry	0.1900	0.000	3.000	0.000	100.0	0.000	.025	0.00	.0007	0.000	8.005
CP 1.1	0.4800	0.000	3.000	0.000	100.0	0.000	.025	0.00	.0012	0.000	5.004
Landscape	0.6300	0.000	5.000	0.000	5.000	0.000	.035	0.00	.0093	0.000	4.001
JUNCTION	1.00001	0.000	.0100	0.000	0.000	0.000	.025	0.00	.0006	0.000	2.003
Beach 2	0.4900	0.000	2.000	0.000	90.00	0.000	.025	0.00	.0017	0.000	11.00
Pools	1.400	0.000	.0011	0.000	100.0	0.000	.001	0.00	.0047	0.000	12.00
Park 6	1.770	0.000	3.000	0.000	50.00	0.000	.025	0.00	.0052	0.000	13.00
Enviro	0.3000	0.000	3.000	0.000	5.000	0.000	.035	0.00	.0082	0.000	14.00
Park 7	2.330	0.000	3.000	0.000	75.00	0.000	.025	0.00	.0038	0.000	14.00
Park 5	0.5000	0.000	3.000	0.000	90.00	0.000	.025	0.00	.0014	0.000	15.00
Park 3	1.150	0.000	5.000	0.000	35.00	0.000	.025	0.00	.0040	0.000	16.00
Park 2#277	1.590	0.000	5.000	0.000	35.00	0.000	.025	0.00	.0048	0.000	17.00
Park 4	0.5900	0.000	3.000	0.000	85.00	0.000	.025	0.00	.0016	0.000	15.00
Park 9	0.1000	0.000	3.000	0.000	75.00	0.000	.025	0.00	.0007	0.000	18.00
Beach 1	0.6800	0.000	2.000	0.000	90.00	0.000	.025	0.00	.0020	0.000	19.00
Park 8	0.8900	0.000	3.000	0.000	75.00	0.000	.025	0.00	.0023	0.000	15.00
Junction	2.00001	0.000	.0100	0.000	0.000	0.000	.025	0.00	.0006	0.000	13.00
Detention	2.550	0.000	5.000	0.000	20.00	0.000	.035	0.00	.0113	0.000	1.001
RTA land	2.100	0.000	3.000	0.000	5.000	0.000	.035	0.00	.0225	0.000	20.00
RTA POND	0.3400	0.000	3.000	0.000	75.00	0.000	.035	0.00	.0018	0.000	1.002

Out .00001 0.000 1.000 0.000 0.000 0.000 .025 0.00 0.000 0.000 1.003

Link Label	Average Intensity (mm/h)	Init. Loss #1 (mm)	Init. Loss #2 (mm/h)	Cont. Loss #1 (mm)	Cont. Loss #2	Excess Rain #1 (m^3/s)	Excess Rain #2	Peak Inflow	Time to Peak	Lag mins
Staff	65.434	0.000	0.000	0.000	0.000	58.233	0.000	0.2697	23.00	2.000
node13	65.434	0.000	0.000	0.000	0.000	40.869	0.000	0.0510	25.00	0.000
Roof	65.434	0.000	0.000	0.000	0.000	64.434	0.000	0.1994	22.00	0.000
PARK 2	65.434	0.000	0.000	0.000	0.000	52.032	0.000	0.4881	24.00	2.000
PARK 1	65.434	0.000	0.000	0.000	0.000	45.830	0.000	1.006	26.00	2.000
Overflow	65.434	0.000	0.000	0.000	0.000	58.233	0.000	1.397	24.00	2.000
CP 1.6	65.434	0.000	0.000	0.000	0.000	64.434	0.000	0.0686	22.00	2.000
CP 1.5	65.434	0.000	0.000	0.000	0.000	64.434	0.000	0.1692	24.00	2.000
CP 1.4	65.434	0.000	0.000	0.000	0.000	64.434	0.000	0.2210	26.00	2.000
Heritage	65.434	0.000	0.000	0.000	0.000	45.830	0.000	0.1770	25.00	2.000
CP 5.2	65.434	0.000	0.000	0.000	0.000	64.434	0.000	0.2946	25.00	2.000
CP 5.1	65.434	0.000	0.000	0.000	0.000	64.434	0.000	0.3135	27.00	2.000
CP 1.3	65.434	0.000	0.000	0.000	0.000	64.434	0.000	0.5825	28.00	2.000
CP 2.2	65.434	0.000	0.000	0.000	0.000	64.434	0.000	0.1276	22.00	2.000
CP 2.1	65.434	0.000	0.000	0.000	0.000	64.434	0.000	0.2323	24.00	2.000
CP 3.5	65.434	0.000	0.000	0.000	0.000	64.434	0.000	0.0441	22.00	2.000
CP 3.4	65.434	0.000	0.000	0.000	0.000	64.434	0.000	0.1352	24.00	2.000
CP3.3	65.434	0.000	0.000	0.000	0.000	64.434	0.000	0.2092	24.00	2.000
CP 3.2	65.434	0.000	0.000	0.000	0.000	64.434	0.000	0.2737	26.00	2.000
CP 3.1	65.434	0.000	0.000	0.000	0.000	64.434	0.000	0.4527	25.00	2.000
CP 4.1	65.434	0.000	0.000	0.000	0.000	64.434	0.000	0.0898	22.00	2.000
CP 6.3	65.434	0.000	0.000	0.000	0.000	64.434	0.000	0.1362	23.00	2.000
CP 6.2.	65.434	0.000	0.000	0.000	0.000	64.434	0.000	0.2758	25.00	2.000
CP 6.1	65.434	0.000	0.000	0.000	0.000	64.434	0.000	0.3854	25.00	2.000
Entry	65.434	0.000	0.000	0.000	0.000	64.434	0.000	0.9657	27.00	2.000
CP 1.1	65.434	0.000	0.000	0.000	0.000	64.434	0.000	1.829	29.00	2.000
Landscape	65.434	0.000	0.000	0.000	0.000	40.869	0.000	3.240	27.00	2.000
JUNCTION	165.434	0.000	0.000	0.000	0.000	39.629	0.000	4.155	29.00	2.000
Beach 2	65.434	0.000	0.000	0.000	0.000	61.953	0.000	0.2331	23.00	2.000
Pools	65.434	100.0	0.000	0.000	0.000	0.000	0.000	0.000	1.000	2.000
Park 6	65.434	0.000	0.000	0.000	0.000	52.032	0.000	0.7993	25.00	2.000
Enviro	65.434	0.000	0.000	0.000	0.000	40.869	0.000	0.0967	26.00	2.000
Park 7	65.434	0.000	0.000	0.000	0.000	58.233	0.000	1.137	25.00	2.000
Park 5	65.434	0.000	0.000	0.000	0.000	61.953	0.000	0.2399	23.00	2.000
Park 3	65.434	0.000	0.000	0.000	0.000	48.311	0.000	0.5144	25.00	2.000
Park 2#27765	65.434	0.000	0.000	0.000	0.000	48.311	0.000	0.7093	25.00	2.000
Park 4	65.434	0.000	0.000	0.000	0.000	60.713	0.000	1.652	26.00	2.000
Park 9	65.434	0.000	0.000	0.000	0.000	58.233	0.000	0.0476	23.00	2.000
Beach 1	65.434	0.000	0.000	0.000	0.000	61.953	0.000	0.3237	23.00	0.000
Park 8	65.434	0.000	0.000	0.000	0.000	58.233	0.000	2.083	26.00	2.000
Junction 2	65.434	0.000	0.000	0.000	0.000	39.629	0.000	3.870	27.00	2.000
Detention	65.434	0.000	0.000	0.000	0.000	44.590	0.000	8.824	29.00	0.000
RTA land	65.434	0.000	0.000	0.000	0.000	40.869	0.000	0.4949	30.00	2.000
RTA POND	65.434	0.000	0.000	0.000	0.000	58.233	0.000	3.371	44.00	2.000
Out	65.434	0.000	0.000	0.000	0.000	39.629	0.000	3.369	47.00	0.000

SUMMARY OF BASIN RESULTS

Link Label	Time to Peak Inflow	Peak Inflow (m^3/s)	Time to Peak Outflow	Peak Outflow (m^3/s)	Total Inflow Vol. (m^3)	Basin Avail Vol.	Basin Used Vol.	Basin Stage Used
Detention	29.00	8.824	46.00	3.029	13460.3	0.0000	11268.9	76.241
RTA POND	44.00	3.371	45.00	3.369	13924.8	0.0000	45.150	73.597

SUMMARY OF BASIN OUTLET RESULTS

Link Label	No. of	S/D Factor	Dia (m)	Width (m)	Pipe Length (m)	Pipe Slope (%)
Detention	1.0	1.000		0.000	20.000	0.2000
RTA POND	1.0		1.750	0.000	80.000	0.2000

LINK Staff 6.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.3909
ESTIMATED PEAK FLOW (CUMECS) = 0.29
ESTIMATED TIME TO PEAK (MINS) = 28.00

LINK node13 6.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.6185E-01
ESTIMATED PEAK FLOW (CUMECS) = 0.55E-01
ESTIMATED TIME TO PEAK (MINS) = 30.00

LINK Roof 6.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.3120
ESTIMATED PEAK FLOW (CUMECS) = 0.21
ESTIMATED TIME TO PEAK (MINS) = 27.00

LINK PARK 2 6.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.7037
ESTIMATED PEAK FLOW (CUMECS) = 0.52
ESTIMATED TIME TO PEAK (MINS) = 30.00

LINK PARK 1 6.000

ESTIMATED VOLUME (CU METRES*10**3) = 1.406
ESTIMATED PEAK FLOW (CUMECS) = 1.1
ESTIMATED TIME TO PEAK (MINS) = 30.00

LINK Overflow 6.000

ESTIMATED VOLUME (CU METRES*10**3) = 2.057
ESTIMATED PEAK FLOW (CUMECS) = 1.5
ESTIMATED TIME TO PEAK (MINS) = 29.00

LINK CP 1.6 6.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.1065
ESTIMATED PEAK FLOW (CUMECS) = 0.73E-01
ESTIMATED TIME TO PEAK (MINS) = 27.00

LINK CP 1.5 6.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.2663
ESTIMATED PEAK FLOW (CUMECS) = 0.18
ESTIMATED TIME TO PEAK (MINS) = 29.00

LINK CP 1.4 6.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.3804
ESTIMATED PEAK FLOW (CUMECS) = 0.23
ESTIMATED TIME TO PEAK (MINS) = 30.00

LINK Heritage 6.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.2303
ESTIMATED PEAK FLOW (CUMECS) = 0.19
ESTIMATED TIME TO PEAK (MINS) = 30.00

LINK CP 5.2 6.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.4586
ESTIMATED PEAK FLOW (CUMECS) = 0.31
ESTIMATED TIME TO PEAK (MINS) = 30.00

LINK CP 5.1 6.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.5271
ESTIMATED PEAK FLOW (CUMECS) = 0.32
ESTIMATED TIME TO PEAK (MINS) = 32.00

LINK CP 1.3 6.000

ESTIMATED VOLUME (CU METRES*10**3) = 1.121
ESTIMATED PEAK FLOW (CUMECS) = 0.60
ESTIMATED TIME TO PEAK (MINS) = 31.00

LINK CP 2.2 6.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.1978
ESTIMATED PEAK FLOW (CUMECS) = 0.13
ESTIMATED TIME TO PEAK (MINS) = 28.00

LINK CP 2.1 6.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.3652
ESTIMATED PEAK FLOW (CUMECS) = 0.24
ESTIMATED TIME TO PEAK (MINS) = 30.00

LINK CP 3.5 6.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.6848E-01
ESTIMATED PEAK FLOW (CUMECS) = 0.47E-01
ESTIMATED TIME TO PEAK (MINS) = 27.00

LINK CP 3.4 6.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.2130
ESTIMATED PEAK FLOW (CUMECS) = 0.14
ESTIMATED TIME TO PEAK (MINS) = 29.00

LINK CP3.3 6.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.3576
ESTIMATED PEAK FLOW (CUMECS) = 0.22
ESTIMATED TIME TO PEAK (MINS) = 29.00

LINK CP 3.2 6.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.5022
ESTIMATED PEAK FLOW (CUMECS) = 0.28
ESTIMATED TIME TO PEAK (MINS) = 31.00

LINK CP 3.1 6.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.8673
ESTIMATED PEAK FLOW (CUMECS) = 0.47
ESTIMATED TIME TO PEAK (MINS) = 30.00

LINK CP 4.1 6.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.1370
ESTIMATED PEAK FLOW (CUMECS) = 0.96E-01
ESTIMATED TIME TO PEAK (MINS) = 27.00

LINK CP 6.3 6.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.2130
ESTIMATED PEAK FLOW (CUMECS) = 0.14
ESTIMATED TIME TO PEAK (MINS) = 28.00

LINK CP 6.2. 6.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.4337
ESTIMATED PEAK FLOW (CUMECS) = 0.29
ESTIMATED TIME TO PEAK (MINS) = 30.00

LINK CP 6.1 6.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.6543
ESTIMATED PEAK FLOW (CUMECS) = 0.41
ESTIMATED TIME TO PEAK (MINS) = 30.00

LINK Entry 6.000

ESTIMATED VOLUME (CU METRES*10**3) = 1.803
ESTIMATED PEAK FLOW (CUMECS) = 1.0
ESTIMATED TIME TO PEAK (MINS) = 32.00

LINK CP 1.1 6.000

ESTIMATED VOLUME (CU METRES*10**3) = 3.654
ESTIMATED PEAK FLOW (CUMECS) = 1.8
ESTIMATED TIME TO PEAK (MINS) = 32.00

LINK Landscape 6.000

ESTIMATED VOLUME (CU METRES*10**3) = 6.011
ESTIMATED PEAK FLOW (CUMECS) = 3.4
ESTIMATED TIME TO PEAK (MINS) = 32.00

LINK JUNCTION 1 6.000

ESTIMATED VOLUME (CU METRES*10**3) = 7.417
ESTIMATED PEAK FLOW (CUMECS) = 4.3
ESTIMATED TIME TO PEAK (MINS) = 34.00

LINK Beach 2 6.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.3581
ESTIMATED PEAK FLOW (CUMECS) = 0.25
ESTIMATED TIME TO PEAK (MINS) = 28.00

LINK Pools 6.000
WARNING 8 - LOSSES POSS. EXCEED RAIN

ESTIMATED VOLUME (CU METRES*10**3) = 0.000
ESTIMATED PEAK FLOW (CUMECS) = 0.0

ESTIMATED TIME TO PEAK (MINS) = 1.00

LINK Park 6 6.000

ESTIMATED VOLUME (CU METRES*10**3) = 1.081
ESTIMATED PEAK FLOW (CUMECS) = 0.85
ESTIMATED TIME TO PEAK (MINS) = 30.00

LINK Enviro 6.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.1427
ESTIMATED PEAK FLOW (CUMECS) = 0.11
ESTIMATED TIME TO PEAK (MINS) = 30.00

LINK Park 7 6.000

ESTIMATED VOLUME (CU METRES*10**3) = 1.740
ESTIMATED PEAK FLOW (CUMECS) = 1.2
ESTIMATED TIME TO PEAK (MINS) = 30.00

LINK Park 5 6.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.3654
ESTIMATED PEAK FLOW (CUMECS) = 0.25
ESTIMATED TIME TO PEAK (MINS) = 28.00

LINK Park 3 6.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.6507
ESTIMATED PEAK FLOW (CUMECS) = 0.55
ESTIMATED TIME TO PEAK (MINS) = 30.00

LINK Park 2#277 6.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.8999
ESTIMATED PEAK FLOW (CUMECS) = 0.76
ESTIMATED TIME TO PEAK (MINS) = 30.00

LINK Park 4 6.000

ESTIMATED VOLUME (CU METRES*10**3) = 2.338
ESTIMATED PEAK FLOW (CUMECS) = 1.7
ESTIMATED TIME TO PEAK (MINS) = 31.00

LINK Park 9 6.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.6859E-01
ESTIMATED PEAK FLOW (CUMECS) = 0.51E-01
ESTIMATED TIME TO PEAK (MINS) = 28.00

LINK Beach 1 6.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.4970
ESTIMATED PEAK FLOW (CUMECS) = 0.34
ESTIMATED TIME TO PEAK (MINS) = 28.00

LINK Park 8 6.000

ESTIMATED VOLUME (CU METRES*10**3) = 3.514
ESTIMATED PEAK FLOW (CUMECS) = 2.2
ESTIMATED TIME TO PEAK (MINS) = 31.00

LINK Junction 2 6.000

ESTIMATED VOLUME (CU METRES*10**3) = 6.336
ESTIMATED PEAK FLOW (CUMECS) = 4.1
ESTIMATED TIME TO PEAK (MINS) = 32.00

LINK Detention 6.000

ESTIMATED VOLUME (CU METRES*10**3) = 15.83
ESTIMATED PEAK FLOW (CUMECS) = 9.1
ESTIMATED TIME TO PEAK (MINS) = 34.00

iosd llkta 0 60
LINK RTA land 6.000

ESTIMATED VOLUME (CU METRES*10**3) = 1.002
ESTIMATED PEAK FLOW (CUMECS) = 0.56
ESTIMATED TIME TO PEAK (MINS) = 31.00

LINK RTA POND 6.000

ESTIMATED VOLUME (CU METRES*10**3) = 16.39
ESTIMATED PEAK FLOW (CUMECS) = 3.4
ESTIMATED TIME TO PEAK (MINS) = 44.00

iosd llkta 0 63
LINK Out 6.000

ESTIMATED VOLUME (CU METRES*10**3) = 16.32
ESTIMATED PEAK FLOW (CUMECS) = 3.4
ESTIMATED TIME TO PEAK (MINS) = 47.00

##
Wet n wild Sydney

Results for period from 0: 0.0 1/ 1/1990
to 5: 0.0 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) = 28.30
TOTAL OF SECOND SUB-AREAS (ha) = 0.00
TOTAL OF ALL SUB-AREAS (ha) = 28.30

SUMMARY OF CATCHMENT AND RAINFALL DATA

Link Label	Catch. Area #1 (ha)	Area #2 (ha)	Slope #1 (%)	Slope #2 (%)	% Impervious #1	% Impervious #2	Perm #1	Perm #2	B #1	B #2	Link No.
Staff	0.5700	0.000	5.000	0.000	75.00	0.000	.025	0.00	.0014	0.000	1.000
node13	0.1300	0.000	5.000	0.000	5.000	0.000	.025	0.00	.0032	0.000	2.000
Roof	0.4100	0.000	12.00	0.000	100.0	0.000	.002	0.00	0.000	0.000	3.000
PARK 2	0.5400	0.000	3.000	0.000	50.00	0.000	.025	0.00	.0028	0.000	2.001
PARK 1	1.310	0.000	3.000	0.000	25.00	0.000	.025	0.00	.0070	0.000	2.002
Overflow	3.000	0.000	3.000	0.000	75.00	0.000	.025	0.00	.0044	0.000	4.000
CP 1.6	0.1400	0.000	3.000	0.000	100.0	0.000	.025	0.00	.0006	0.000	5.000
CP 1.5	0.2100	0.000	3.000	0.000	100.0	0.000	.025	0.00	.0008	0.000	5.001
CP 1.4	0.1500	0.000	3.000	0.000	100.0	0.000	.025	0.00	.0006	0.000	5.002
Heritage	0.4300	0.000	3.000	0.000	25.00	0.000	.035	0.00	.0050	0.000	6.000
CP 5.2	0.3000	0.000	3.000	0.000	100.0	0.000	.025	0.00	.0009	0.000	6.001
CP 5.1	0.0900	0.000	3.000	0.000	100.0	0.000	.025	0.00	.0005	0.000	6.002
CP 1.3	0.2800	0.000	3.000	0.000	100.0	0.000	.025	0.00	.0009	0.000	5.003
CP 2.2	0.2600	0.000	3.000	0.000	100.0	0.000	.025	0.00	.0009	0.000	7.000
CP 2.1	0.2200	0.000	3.000	0.000	100.0	0.000	.025	0.00	.0008	0.000	7.001
CP 3.5	0.0900	0.000	3.000	0.000	100.0	0.000	.025	0.00	.0005	0.000	8.000
CP 3.4	0.1900	0.000	3.000	0.000	100.0	0.000	.025	0.00	.0007	0.000	8.001
CP3.3	0.1900	0.000	3.000	0.000	100.0	0.000	.025	0.00	.0007	0.000	8.002
CP 3.2	0.1900	0.000	3.000	0.000	100.0	0.000	.025	0.00	.0007	0.000	8.003
CP 3.1	0.4800	0.000	3.000	0.000	100.0	0.000	.025	0.00	.0012	0.000	8.004
CP 4.1	0.1800	0.000	3.000	0.000	100.0	0.000	.025	0.00	.0007	0.000	9.000
CP 6.3	0.2800	0.000	3.000	0.000	100.0	0.000	.025	0.00	.0009	0.000	10.00
CP 6.2.	0.2900	0.000	3.000	0.000	100.0	0.000	.025	0.00	.0009	0.000	10.00
CP 6.1	0.2900	0.000	3.000	0.000	100.0	0.000	.025	0.00	.0009	0.000	10.00
Entry	0.1900	0.000	3.000	0.000	100.0	0.000	.025	0.00	.0007	0.000	8.005
CP 1.1	0.4800	0.000	3.000	0.000	100.0	0.000	.025	0.00	.0012	0.000	5.004
Landscape	0.6300	0.000	5.000	0.000	5.000	0.000	.035	0.00	.0093	0.000	4.001
JUNCTION	1.00001	0.000	.0100	0.000	0.000	0.000	.025	0.00	.0006	0.000	2.003
Beach 2	0.4900	0.000	2.000	0.000	90.00	0.000	.025	0.00	.0017	0.000	11.00
Pools	1.400	0.000	.0011	0.000	100.0	0.000	.001	0.00	.0047	0.000	12.00
Park 6	1.770	0.000	3.000	0.000	50.00	0.000	.025	0.00	.0052	0.000	13.00
Enviro	0.3000	0.000	3.000	0.000	5.000	0.000	.035	0.00	.0082	0.000	14.00
Park 7	2.330	0.000	3.000	0.000	75.00	0.000	.025	0.00	.0038	0.000	14.00
Park 5	0.5000	0.000	3.000	0.000	90.00	0.000	.025	0.00	.0014	0.000	15.00
Park 3	1.150	0.000	5.000	0.000	35.00	0.000	.025	0.00	.0040	0.000	16.00
Park 2#277	1.590	0.000	5.000	0.000	35.00	0.000	.025	0.00	.0048	0.000	17.00
Park 4	0.5900	0.000	3.000	0.000	85.00	0.000	.025	0.00	.0016	0.000	15.00
Park 9	0.1000	0.000	3.000	0.000	75.00	0.000	.025	0.00	.0007	0.000	18.00
Beach 1	0.6800	0.000	2.000	0.000	90.00	0.000	.025	0.00	.0020	0.000	19.00
Park 8	0.8900	0.000	3.000	0.000	75.00	0.000	.025	0.00	.0023	0.000	15.00
Junction	2.00001	0.000	.0100	0.000	0.000	0.000	.025	0.00	.0006	0.000	13.00
Detention	2.550	0.000	5.000	0.000	20.00	0.000	.035	0.00	.0113	0.000	1.001
RTA land	2.100	0.000	3.000	0.000	5.000	0.000	.035	0.00	.0225	0.000	20.00
RTA POND	0.3400	0.000	3.000	0.000	75.00	0.000	.035	0.00	.0018	0.000	1.002
Out	.00001	0.000	1.000	0.000	0.000	0.000	.025	0.00	0.000	0.000	1.003

Link	Average Init. Loss	Cont. Loss	Excess Rain	Peak	Time	Link

Label	Intensity (mm/h)	#1 (mm)	#2 (mm/h)	#1 (mm)	#2 (m^3/s)	Inflow Peak	to mins	Lag
Staff	51.407	0.000	0.000	0.000	0.000	68.612	0.000	0.2876 28.00 2.000
node13	51.407	0.000	0.000	0.000	0.000	47.614	0.000	0.0550 30.00 0.000
Roof	51.407	0.000	0.000	0.000	0.000	76.111	0.000	0.2065 27.00 0.000
PARK 2	51.407	0.000	0.000	0.000	0.000	61.113	0.000	0.5208 30.00 2.000
PARK 1	51.407	0.000	0.000	0.000	0.000	53.614	0.000	1.072 30.00 2.000
Overflow	51.407	0.000	0.000	0.000	0.000	68.612	0.000	1.484 29.00 2.000
CP 1.6	51.407	0.000	0.000	0.000	0.000	76.111	0.000	0.0732 27.00 2.000
CP 1.5	51.407	0.000	0.000	0.000	0.000	76.111	0.000	0.1789 29.00 2.000
CP 1.4	51.407	0.000	0.000	0.000	0.000	76.111	0.000	0.2297 30.00 2.000
Heritage	51.407	0.000	0.000	0.000	0.000	53.614	0.000	0.1893 30.00 2.000
CP 5.2	51.407	0.000	0.000	0.000	0.000	76.111	0.000	0.3108 30.00 2.000
CP 5.1	51.407	0.000	0.000	0.000	0.000	76.111	0.000	0.3224 32.00 2.000
CP 1.3	51.407	0.000	0.000	0.000	0.000	76.111	0.000	0.5958 31.00 2.000
CP 2.2	51.407	0.000	0.000	0.000	0.000	76.111	0.000	0.1338 28.00 2.000
CP 2.1	51.407	0.000	0.000	0.000	0.000	76.111	0.000	0.2445 30.00 2.000
CP 3.5	51.407	0.000	0.000	0.000	0.000	76.111	0.000	0.0468 27.00 2.000
CP 3.4	51.407	0.000	0.000	0.000	0.000	76.111	0.000	0.1437 29.00 2.000
CP3.3	51.407	0.000	0.000	0.000	0.000	76.111	0.000	0.2222 29.00 2.000
CP 3.2	51.407	0.000	0.000	0.000	0.000	76.111	0.000	0.2817 31.00 2.000
CP 3.1	51.407	0.000	0.000	0.000	0.000	76.111	0.000	0.4750 30.00 2.000
CP 4.1	51.407	0.000	0.000	0.000	0.000	76.111	0.000	0.0963 27.00 2.000
CP 6.3	51.407	0.000	0.000	0.000	0.000	76.111	0.000	0.1448 28.00 2.000
CP 6.2.	51.407	0.000	0.000	0.000	0.000	76.111	0.000	0.2921 30.00 2.000
CP 6.1	51.407	0.000	0.000	0.000	0.000	76.111	0.000	0.4071 30.00 2.000
Entry	51.407	0.000	0.000	0.000	0.000	76.111	0.000	1.002 32.00 2.000
CP 1.1	51.407	0.000	0.000	0.000	0.000	76.111	0.000	1.841 32.00 2.000
Landscape	51.407	0.000	0.000	0.000	0.000	47.614	0.000	3.368 32.00 2.000
JUNCTION 1	51.407	0.000	0.000	0.000	0.000	46.114	0.000	4.302 34.00 2.000
Beach 2	51.407	0.000	0.000	0.000	0.000	73.111	0.000	0.2483 28.00 2.000
Pools	51.407	100.0	0.000	0.000	0.000	0.000	0.000	0.000 1.000 2.000
Park 6	51.407	0.000	0.000	0.000	0.000	61.113	0.000	0.8526 30.00 2.000
Enviro	51.407	0.000	0.000	0.000	0.000	47.614	0.000	0.1071 30.00 2.000
Park 7	51.407	0.000	0.000	0.000	0.000	68.612	0.000	1.225 30.00 2.000
Park 5	51.407	0.000	0.000	0.000	0.000	73.111	0.000	0.2547 28.00 2.000
Park 3	51.407	0.000	0.000	0.000	0.000	56.613	0.000	0.5513 30.00 2.000
Park 2#2	7 51.407	0.000	0.000	0.000	0.000	56.613	0.000	0.7577 30.00 2.000
Park 4	51.407	0.000	0.000	0.000	0.000	71.612	0.000	1.739 31.00 2.000
Park 9	51.407	0.000	0.000	0.000	0.000	68.612	0.000	0.0507 28.00 2.000
Beach 1	51.407	0.000	0.000	0.000	0.000	73.111	0.000	0.3444 28.00 0.000
Park 8	51.407	0.000	0.000	0.000	0.000	68.612	0.000	2.165 31.00 2.000
Junction 2	51.407	0.000	0.000	0.000	0.000	46.114	0.000	4.118 32.00 2.000
Detention	51.407	0.000	0.000	0.000	0.000	52.114	0.000	9.050 34.00 0.000
RTA land	51.407	0.000	0.000	0.000	0.000	47.614	0.000	0.5586 31.00 2.000
RTA POND	51.407	0.000	0.000	0.000	0.000	68.612	0.000	3.402 44.00 2.000
Out	51.407	0.000	0.000	0.000	0.000	46.114	0.000	3.399 47.00 0.000

SUMMARY OF BASIN RESULTS

Link Label	Time to Peak Inflow (m^3/s)	Peak Inflow	Time to Peak Outflow (m^3/s)	Peak Outflow	Total Inflow Vol. (m^3)	Basin Vol. Avail	Basin Vol. Used	Stage Used
Detention	34.00	9.050	47.00	3.038	15831.0	0.0000	11284.5	76.243
RTA POND	44.00	3.401	45.00	3.398	16391.1	0.0000	46.611	73.601

SUMMARY OF BASIN OUTLET RESULTS

Link Label	No. of	S/D Factor (m)	Dia (m)	Width (m)	Pipe Length (m)	Pipe Slope (%)
Detention	1.0	1.000		0.000	20.000	0.2000
RTA POND	1.0		1.750	0.000	80.000	0.2000

LINK Staff 7.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.4429
ESTIMATED PEAK FLOW (CUMECS) = 0.28
ESTIMATED TIME TO PEAK (MINS) = 33.00

LINK node13 7.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.7331E-01
ESTIMATED PEAK FLOW (CUMECS) = 0.53E-01
ESTIMATED TIME TO PEAK (MINS) = 36.00

LINK Roof 7.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.3498
ESTIMATED PEAK FLOW (CUMECS) = 0.20
ESTIMATED TIME TO PEAK (MINS) = 32.00

LINK PARK 2 7.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.8017
ESTIMATED PEAK FLOW (CUMECS) = 0.50
ESTIMATED TIME TO PEAK (MINS) = 34.00

LINK PARK 1 7.000

ESTIMATED VOLUME (CU METRES*10**3) = 1.620
ESTIMATED PEAK FLOW (CUMECS) = 1.0
ESTIMATED TIME TO PEAK (MINS) = 36.00

LINK Overflow 7.000

ESTIMATED VOLUME (CU METRES*10**3) = 2.331
ESTIMATED PEAK FLOW (CUMECS) = 1.4
ESTIMATED TIME TO PEAK (MINS) = 34.00

LINK CP 1.6 7.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.1194
ESTIMATED PEAK FLOW (CUMECS) = 0.71E-01
ESTIMATED TIME TO PEAK (MINS) = 32.00

LINK CP 1.5 7.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.2986
ESTIMATED PEAK FLOW (CUMECS) = 0.17
ESTIMATED TIME TO PEAK (MINS) = 34.00

LINK CP 1.4 7.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.4265
ESTIMATED PEAK FLOW (CUMECS) = 0.23
ESTIMATED TIME TO PEAK (MINS) = 36.00

LINK Heritage 7.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.2687
ESTIMATED PEAK FLOW (CUMECS) = 0.18
ESTIMATED TIME TO PEAK (MINS) = 36.00

LINK CP 5.2 7.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.5246
ESTIMATED PEAK FLOW (CUMECS) = 0.28
ESTIMATED TIME TO PEAK (MINS) = 38.00

LINK CP 5.1 7.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.6014
ESTIMATED PEAK FLOW (CUMECS) = 0.31
ESTIMATED TIME TO PEAK (MINS) = 40.00

LINK CP 1.3 7.000

ESTIMATED VOLUME (CU METRES*10**3) = 1.267
ESTIMATED PEAK FLOW (CUMECS) = 0.62
ESTIMATED TIME TO PEAK (MINS) = 39.00

LINK CP 2.2 7.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.2218
ESTIMATED PEAK FLOW (CUMECS) = 0.14
ESTIMATED TIME TO PEAK (MINS) = 32.00

LINK CP 2.1 7.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.4095
ESTIMATED PEAK FLOW (CUMECS) = 0.24
ESTIMATED TIME TO PEAK (MINS) = 34.00

LINK CP 3.5 7.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.7678E-01
ESTIMATED PEAK FLOW (CUMECS) = 0.45E-01
ESTIMATED TIME TO PEAK (MINS) = 32.00

LINK CP 3.4 7.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.2389
ESTIMATED PEAK FLOW (CUMECS) = 0.14

ESTIMATED TIME TO PEAK (MINS) = 34.00

LINK CP3.3 7.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.4009
ESTIMATED PEAK FLOW (CUMECS) = 0.22
ESTIMATED TIME TO PEAK (MINS) = 36.00

LINK CP 3.2 7.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.5630
ESTIMATED PEAK FLOW (CUMECS) = 0.28
ESTIMATED TIME TO PEAK (MINS) = 36.00

LINK CP 3.1 7.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.9725
ESTIMATED PEAK FLOW (CUMECS) = 0.45
ESTIMATED TIME TO PEAK (MINS) = 38.00

LINK CP 4.1 7.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.1535
ESTIMATED PEAK FLOW (CUMECS) = 0.94E-01
ESTIMATED TIME TO PEAK (MINS) = 32.00

LINK CP 6.3 7.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.2389
ESTIMATED PEAK FLOW (CUMECS) = 0.14
ESTIMATED TIME TO PEAK (MINS) = 32.00

LINK CP 6.2. 7.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.4862
ESTIMATED PEAK FLOW (CUMECS) = 0.28
ESTIMATED TIME TO PEAK (MINS) = 35.00

LINK CP 6.1 7.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.7336
ESTIMATED PEAK FLOW (CUMECS) = 0.40
ESTIMATED TIME TO PEAK (MINS) = 36.00

LINK Entry 7.000

ESTIMATED VOLUME (CU METRES*10**3) = 2.022
ESTIMATED PEAK FLOW (CUMECS) = 0.97
ESTIMATED TIME TO PEAK (MINS) = 38.00

LINK CP 1.1 7.000

ESTIMATED VOLUME (CU METRES*10**3) = 4.107
ESTIMATED PEAK FLOW (CUMECS) = 1.9
ESTIMATED TIME TO PEAK (MINS) = 40.00

LINK Landscape 7.000

ESTIMATED VOLUME (CU METRES*10**3) = 6.795
ESTIMATED PEAK FLOW (CUMECS) = 3.1
ESTIMATED TIME TO PEAK (MINS) = 38.00

LINK JUNCTION 1 7.000

ESTIMATED VOLUME (CU METRES*10**3) = 8.415
ESTIMATED PEAK FLOW (CUMECS) = 4.0
ESTIMATED TIME TO PEAK (MINS) = 40.00

LINK Beach 2 7.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.4031
ESTIMATED PEAK FLOW (CUMECS) = 0.24
ESTIMATED TIME TO PEAK (MINS) = 33.00

LINK Pools 7.000
WARNING 8 - LOSSES POSS. EXCEED RAIN

ESTIMATED VOLUME (CU METRES*10**3) = 0.000
ESTIMATED PEAK FLOW (CUMECS) = 0.0
ESTIMATED TIME TO PEAK (MINS) = 1.00

LINK Park 6 7.000

ESTIMATED VOLUME (CU METRES*10**3) = 1.240
ESTIMATED PEAK FLOW (CUMECS) = 0.82
ESTIMATED TIME TO PEAK (MINS) = 35.00

LINK Enviro 7.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.1690
ESTIMATED PEAK FLOW (CUMECS) = 0.10
ESTIMATED TIME TO PEAK (MINS) = 39.00

LINK Park 7 7.000

ESTIMATED VOLUME (CU METRES*10**3) = 1.980
ESTIMATED PEAK FLOW (CUMECS) = 1.1
ESTIMATED TIME TO PEAK (MINS) = 34.00

LINK Park 5 7.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.4113
ESTIMATED PEAK FLOW (CUMECS) = 0.25
ESTIMATED TIME TO PEAK (MINS) = 33.00

LINK Park 3 7.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.7537
ESTIMATED PEAK FLOW (CUMECS) = 0.53
ESTIMATED TIME TO PEAK (MINS) = 35.00

LINK Park 2#277 7.000

ESTIMATED VOLUME (CU METRES*10**3) = 1.042
ESTIMATED PEAK FLOW (CUMECS) = 0.73
ESTIMATED TIME TO PEAK (MINS) = 35.00

LINK Park 4 7.000

ESTIMATED VOLUME (CU METRES*10**3) = 2.684
ESTIMATED PEAK FLOW (CUMECS) = 1.7
ESTIMATED TIME TO PEAK (MINS) = 36.00

LINK Park 9 7.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.7771E-01
ESTIMATED PEAK FLOW (CUMECS) = 0.49E-01
ESTIMATED TIME TO PEAK (MINS) = 33.00

LINK Beach 1 7.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.5594
ESTIMATED PEAK FLOW (CUMECS) = 0.33
ESTIMATED TIME TO PEAK (MINS) = 34.00

LINK Park 8 7.000

ESTIMATED VOLUME (CU METRES*10**3) = 4.012
ESTIMATED PEAK FLOW (CUMECS) = 2.3
ESTIMATED TIME TO PEAK (MINS) = 38.00

LINK Junction 2 7.000

ESTIMATED VOLUME (CU METRES*10**3) = 7.232
ESTIMATED PEAK FLOW (CUMECS) = 3.8
ESTIMATED TIME TO PEAK (MINS) = 39.00

LINK Detention 7.000

ESTIMATED VOLUME (CU METRES*10**3) = 18.05
ESTIMATED PEAK FLOW (CUMECS) = 9.0
ESTIMATED TIME TO PEAK (MINS) = 41.00

iosd llkta 0 60
LINK RTA land 7.000

ESTIMATED VOLUME (CU METRES*10**3) = 1.190
ESTIMATED PEAK FLOW (CUMECS) = 0.56
ESTIMATED TIME TO PEAK (MINS) = 41.00

LINK RTA POND 7.000

ESTIMATED VOLUME (CU METRES*10**3) = 18.68
ESTIMATED PEAK FLOW (CUMECS) = 3.5
ESTIMATED TIME TO PEAK (MINS) = 52.00

```
iosd llkta       0      63
LINK Out            7.000

ESTIMATED VOLUME (CU METRES*10**3) =              18.62
ESTIMATED PEAK FLOW       (CUMECS) =               3.5
ESTIMATED TIME TO PEAK       (MINS) =             55.00


################################################################################################
Wet n wild Sydney

Results for period from  0: 0.0  1/ 1/1990
              to  5: 0.0  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) =     28.30
                    TOTAL OF SECOND SUB-AREAS (ha) =      0.00
                    TOTAL OF ALL SUB-AREAS (ha)    =     28.30


   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)          (%)         (%)
Staff     0.5700  0.000  5.000 0.000  75.00 0.000  .025 0.00  .0014 0.000  1.000
node13    0.1300  0.000  5.000 0.000  5.000 0.000  .025 0.00  .0032 0.000  2.000
Roof      0.4100  0.000  12.00 0.000  100.0 0.000  .002 0.00  0.000 0.000  3.000
PARK 2    0.5400  0.000  3.000 0.000  50.00 0.000  .025 0.00  .0028 0.000  2.001
PARK 1     1.310  0.000  3.000 0.000  25.00 0.000  .025 0.00  .0070 0.000  2.002
Overflow   3.000  0.000  3.000 0.000  75.00 0.000  .025 0.00  .0044 0.000  4.000
CP 1.6    0.1400  0.000  3.000 0.000  100.0 0.000  .025 0.00  .0006 0.000  5.000
CP 1.5    0.2100  0.000  3.000 0.000  100.0 0.000  .025 0.00  .0008 0.000  5.001
CP 1.4    0.1500  0.000  3.000 0.000  100.0 0.000  .025 0.00  .0006 0.000  5.002
Heritage  0.4300  0.000  3.000 0.000  25.00 0.000  .035 0.00  .0050 0.000  6.000
CP 5.2    0.3000  0.000  3.000 0.000  100.0 0.000  .025 0.00  .0009 0.000  6.001
CP 5.1    0.0900  0.000  3.000 0.000  100.0 0.000  .025 0.00  .0005 0.000  6.002
CP 1.3    0.2800  0.000  3.000 0.000  100.0 0.000  .025 0.00  .0009 0.000  5.003
CP 2.2    0.2600  0.000  3.000 0.000  100.0 0.000  .025 0.00  .0009 0.000  7.000
CP 2.1    0.2200  0.000  3.000 0.000  100.0 0.000  .025 0.00  .0008 0.000  7.001
CP 3.5    0.0900  0.000  3.000 0.000  100.0 0.000  .025 0.00  .0005 0.000  8.000
CP 3.4    0.1900  0.000  3.000 0.000  100.0 0.000  .025 0.00  .0007 0.000  8.001
CP3.3     0.1900  0.000  3.000 0.000  100.0 0.000  .025 0.00  .0007 0.000  8.002
CP 3.2    0.1900  0.000  3.000 0.000  100.0 0.000  .025 0.00  .0007 0.000  8.003
CP 3.1    0.4800  0.000  3.000 0.000  100.0 0.000  .025 0.00  .0012 0.000  8.004
CP 4.1    0.1800  0.000  3.000 0.000  100.0 0.000  .025 0.00  .0007 0.000  9.000
CP 6.3    0.2800  0.000  3.000 0.000  100.0 0.000  .025 0.00  .0009 0.000  10.00
CP 6.2.   0.2900  0.000  3.000 0.000  100.0 0.000  .025 0.00  .0009 0.000  10.00
CP 6.1    0.2900  0.000  3.000 0.000  100.0 0.000  .025 0.00  .0009 0.000  10.00
Entry     0.1900  0.000  3.000 0.000  100.0 0.000  .025 0.00  .0007 0.000  8.005
CP 1.1    0.4800  0.000  3.000 0.000  100.0 0.000  .025 0.00  .0012 0.000  5.004
Landscape 0.6300  0.000  5.000 0.000  5.000 0.000  .035 0.00  .0093 0.000  4.001
JUNCTION 1.00001  0.000  .0100 0.000  0.000 0.000  .025 0.00  .0006 0.000  2.003
Beach 2   0.4900  0.000  2.000 0.000  90.00 0.000  .025 0.00  .0017 0.000  11.00
Pools      1.400  0.000  .0011 0.000  100.0 0.000  .001 0.00  .0047 0.000  12.00
Park 6     1.770  0.000  3.000 0.000  50.00 0.000  .025 0.00  .0052 0.000  13.00
Enviro    0.3000  0.000  3.000 0.000  5.000 0.000  .035 0.00  .0082 0.000  14.00
Park 7     2.330  0.000  3.000 0.000  75.00 0.000  .025 0.00  .0038 0.000  14.00
Park 5    0.5000  0.000  3.000 0.000  90.00 0.000  .025 0.00  .0014 0.000  15.00
Park 3     1.150  0.000  5.000 0.000  35.00 0.000  .025 0.00  .0040 0.000  16.00
Park 2#277 1.590  0.000  5.000 0.000  35.00 0.000  .025 0.00  .0048 0.000  17.00
Park 4    0.5900  0.000  3.000 0.000  85.00 0.000  .025 0.00  .0016 0.000  15.00
Park 9    0.1000  0.000  3.000 0.000  75.00 0.000  .025 0.00  .0007 0.000  18.00
Beach 1   0.6800  0.000  2.000 0.000  90.00 0.000  .025 0.00  .0020 0.000  19.00
Park 8    0.8900  0.000  3.000 0.000  75.00 0.000  .025 0.00  .0023 0.000  15.00
Junction 2.00001  0.000  .0100 0.000  0.000 0.000  .025 0.00  .0006 0.000  13.00
Detention  2.550  0.000  5.000 0.000  20.00 0.000  .035 0.00  .0113 0.000  1.001
RTA land   2.100  0.000  3.000 0.000  5.000 0.000  .035 0.00  .0225 0.000  20.00
RTA POND  0.3400  0.000  3.000 0.000  75.00 0.000  .035 0.00  .0018 0.000  1.002
Out       .00001  0.000  1.000 0.000  0.000 0.000  .025 0.00  0.000 0.000  1.003


 Link    Average Init. Loss  Cont. Loss    Excess Rain   Peak    Time   Link
 Label  Intensity #1   #2   #1    #2      #1    #2    Inflow  to     Lag
        (mm/h)   ( mm )     (mm/h)       ( mm )     (m^3/s)  Peak  mins
Staff     43.167 0.000 0.000  0.000 0.000  77.730  0.000  0.2801  33.00 2.000
node13    43.167 0.000 0.000  0.000 0.000  56.440  0.000  0.0525  36.00 0.000
```

Roof 43.167 0.000 0.000 0.000 0.000 85.333 0.000 0.2030 32.00 0.000
PARK 2 43.167 0.000 0.000 0.000 0.000 70.126 0.000 0.4980 34.00 2.000
PARK 1 43.167 0.000 0.000 0.000 0.000 62.523 0.000 1.048 36.00 2.000
Overflow 43.167 0.000 0.000 0.000 0.000 77.730 0.000 1.446 34.00 2.000
CP 1.6 43.167 0.000 0.000 0.000 0.000 85.333 0.000 0.0711 32.00 2.000
CP 1.5 43.167 0.000 0.000 0.000 0.000 85.333 0.000 0.1734 34.00 2.000
CP 1.4 43.167 0.000 0.000 0.000 0.000 85.333 0.000 0.2346 36.00 2.000
Heritage 43.167 0.000 0.000 0.000 0.000 62.523 0.000 0.1799 36.00 2.000
CP 5.2 43.167 0.000 0.000 0.000 0.000 85.333 0.000 0.2829 38.00 2.000
CP 5.1 43.167 0.000 0.000 0.000 0.000 85.333 0.000 0.3137 40.00 2.000
CP 1.3 43.167 0.000 0.000 0.000 0.000 85.333 0.000 0.6203 39.00 2.000
CP 2.2 43.167 0.000 0.000 0.000 0.000 85.333 0.000 0.1360 32.00 2.000
CP 2.1 43.167 0.000 0.000 0.000 0.000 85.333 0.000 0.2421 34.00 2.000
CP 3.5 43.167 0.000 0.000 0.000 0.000 85.333 0.000 0.0454 32.00 2.000
CP 3.4 43.167 0.000 0.000 0.000 0.000 85.333 0.000 0.1386 34.00 2.000
CP3.3 43.167 0.000 0.000 0.000 0.000 85.333 0.000 0.2163 36.00 2.000
CP 3.2 43.167 0.000 0.000 0.000 0.000 85.333 0.000 0.2841 36.00 2.000
CP 3.1 43.167 0.000 0.000 0.000 0.000 85.333 0.000 0.4455 38.00 2.000
CP 4.1 43.167 0.000 0.000 0.000 0.000 85.333 0.000 0.0937 32.00 2.000
CP 6.3 43.167 0.000 0.000 0.000 0.000 85.333 0.000 0.1444 32.00 2.000
CP 6.2. 43.167 0.000 0.000 0.000 0.000 85.333 0.000 0.2799 35.00 2.000
CP 6.1 43.167 0.000 0.000 0.000 0.000 85.333 0.000 0.3953 36.00 2.000
Entry 43.167 0.000 0.000 0.000 0.000 85.333 0.000 0.9739 38.00 2.000
CP 1.1 43.167 0.000 0.000 0.000 0.000 85.333 0.000 1.928 40.00 2.000
Landscape 43.167 0.000 0.000 0.000 0.000 56.440 0.000 3.119 38.00 2.000
JUNCTION 143.167 0.000 0.000 0.000 0.000 54.919 0.000 4.031 40.00 2.000
Beach 2 43.167 0.000 0.000 0.000 0.000 82.292 0.000 0.2422 33.00 2.000
Pools 43.167 100.0 0.000 0.000 0.000 0.000 0.000 0.000 1.000 2.000
Park 6 43.167 0.000 0.000 0.000 0.000 70.126 0.000 0.8197 35.00 2.000
Enviro 43.167 0.000 0.000 0.000 0.000 56.440 0.000 0.1000 39.00 2.000
Park 7 43.167 0.000 0.000 0.000 0.000 77.730 0.000 1.144 34.00 2.000
Park 5 43.167 0.000 0.000 0.000 0.000 82.292 0.000 0.2499 33.00 2.000
Park 3 43.167 0.000 0.000 0.000 0.000 65.564 0.000 0.5318 35.00 2.000
Park 2#27743.167 0.000 0.000 0.000 0.000 65.564 0.000 0.7298 35.00 2.000
Park 4 43.167 0.000 0.000 0.000 0.000 80.771 0.000 1.714 36.00 2.000
Park 9 43.167 0.000 0.000 0.000 0.000 77.730 0.000 0.0491 33.00 2.000
Beach 1 43.167 0.000 0.000 0.000 0.000 82.292 0.000 0.3326 34.00 0.000
Park 8 43.167 0.000 0.000 0.000 0.000 77.730 0.000 2.284 38.00 2.000
Junction 243.167 0.000 0.000 0.000 0.000 54.919 0.000 3.837 39.00 2.000
Detention 43.167 0.000 0.000 0.000 0.000 61.002 0.000 8.974 41.00 0.000
RTA land 43.167 0.000 0.000 0.000 0.000 56.440 0.000 0.5566 41.00 2.000
RTA POND 43.167 0.000 0.000 0.000 0.000 77.730 0.000 3.478 52.00 2.000
Out 43.167 0.000 0.000 0.000 0.000 54.919 0.000 3.468 55.00 0.000

SUMMARY OF BASIN RESULTS

Link Label	Time to Peak	Peak Inflow	Time to Peak	Peak Outflow	Total Inflow	Basin Vol. Avail	Basin Vol. Used	Basin Stage Used
		(m^3/s)		(m^3/s)	(m^3)			
Detention	41.00	8.974	53.00	3.100	18048.4	0.0000	11389.4	76.256
RTA POND	52.00	3.477	53.00	3.468	18682.9	0.0000	51.650	73.609

SUMMARY OF BASIN OUTLET RESULTS

Link Label	No. of	S/D Factor	Dia (m)	Width (m)	Pipe Length (m)	Pipe Slope (%)
Detention	1.0	1.000		0.000	20.000	0.2000
RTA POND	1.0		1.750	0.000	80.000	0.2000

LINK Staff 8.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.5259
ESTIMATED PEAK FLOW (CUMECS) = 0.15
ESTIMATED TIME TO PEAK (MINS) = 33.00

LINK node13 8.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.9211E-01
ESTIMATED PEAK FLOW (CUMECS) = 0.30E-01
ESTIMATED TIME TO PEAK (MINS) = 45.00

LINK Roof 8.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.4097
ESTIMATED PEAK FLOW (CUMECS) = 0.11
ESTIMATED TIME TO PEAK (MINS) = 45.00

LINK PARK 2 8.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.9587

ESTIMATED PEAK FLOW (CUMECS) = 0.27
ESTIMATED TIME TO PEAK (MINS) = 45.00

LINK PARK 1 8.000

ESTIMATED VOLUME (CU METRES*10**3) = 1.967
ESTIMATED PEAK FLOW (CUMECS) = 0.58
ESTIMATED TIME TO PEAK (MINS) = 45.00

LINK Overflow 8.000

ESTIMATED VOLUME (CU METRES*10**3) = 2.768
ESTIMATED PEAK FLOW (CUMECS) = 0.76
ESTIMATED TIME TO PEAK (MINS) = 45.00

LINK CP 1.6 8.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.1399
ESTIMATED PEAK FLOW (CUMECS) = 0.37E-01
ESTIMATED TIME TO PEAK (MINS) = 33.00

LINK CP 1.5 8.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.3497
ESTIMATED PEAK FLOW (CUMECS) = 0.92E-01
ESTIMATED TIME TO PEAK (MINS) = 35.00

LINK CP 1.4 8.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.4996
ESTIMATED PEAK FLOW (CUMECS) = 0.13
ESTIMATED TIME TO PEAK (MINS) = 37.00

LINK Heritage 8.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.3309
ESTIMATED PEAK FLOW (CUMECS) = 0.10
ESTIMATED TIME TO PEAK (MINS) = 45.00

LINK CP 5.2 8.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.6306
ESTIMATED PEAK FLOW (CUMECS) = 0.18
ESTIMATED TIME TO PEAK (MINS) = 45.00

LINK CP 5.1 8.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.7206
ESTIMATED PEAK FLOW (CUMECS) = 0.20
ESTIMATED TIME TO PEAK (MINS) = 45.00

LINK CP 1.3 8.000

ESTIMATED VOLUME (CU METRES*10**3) = 1.500
ESTIMATED PEAK FLOW (CUMECS) = 0.41
ESTIMATED TIME TO PEAK (MINS) = 45.00

LINK CP 2.2 8.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.2598
ESTIMATED PEAK FLOW (CUMECS) = 0.69E-01
ESTIMATED TIME TO PEAK (MINS) = 33.00

LINK CP 2.1 8.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.4796
ESTIMATED PEAK FLOW (CUMECS) = 0.13
ESTIMATED TIME TO PEAK (MINS) = 35.00

LINK CP 3.5 8.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.8993E-01
ESTIMATED PEAK FLOW (CUMECS) = 0.24E-01
ESTIMATED TIME TO PEAK (MINS) = 32.00

LINK CP 3.4 8.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.2798
ESTIMATED PEAK FLOW (CUMECS) = 0.74E-01
ESTIMATED TIME TO PEAK (MINS) = 35.00

LINK CP3.3 8.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.4696
ESTIMATED PEAK FLOW (CUMECS) = 0.12
ESTIMATED TIME TO PEAK (MINS) = 36.00

LINK CP 3.2 8.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.6595
ESTIMATED PEAK FLOW (CUMECS) = 0.17
ESTIMATED TIME TO PEAK (MINS) = 38.00

LINK CP 3.1 8.000

ESTIMATED VOLUME (CU METRES*10**3) = 1.139
ESTIMATED PEAK FLOW (CUMECS) = 0.30
ESTIMATED TIME TO PEAK (MINS) = 40.00

LINK CP 4.1 8.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.1799
ESTIMATED PEAK FLOW (CUMECS) = 0.48E-01
ESTIMATED TIME TO PEAK (MINS) = 33.00

LINK CP 6.3 8.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.2798
ESTIMATED PEAK FLOW (CUMECS) = 0.74E-01
ESTIMATED TIME TO PEAK (MINS) = 33.00

LINK CP 6.2. 8.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.5696
ESTIMATED PEAK FLOW (CUMECS) = 0.15
ESTIMATED TIME TO PEAK (MINS) = 35.00

LINK CP 6.1 8.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.8593
ESTIMATED PEAK FLOW (CUMECS) = 0.23
ESTIMATED TIME TO PEAK (MINS) = 37.00

LINK Entry 8.000

ESTIMATED VOLUME (CU METRES*10**3) = 2.368
ESTIMATED PEAK FLOW (CUMECS) = 0.62
ESTIMATED TIME TO PEAK (MINS) = 42.00

LINK CP 1.1 8.000

ESTIMATED VOLUME (CU METRES*10**3) = 4.827
ESTIMATED PEAK FLOW (CUMECS) = 1.3
ESTIMATED TIME TO PEAK (MINS) = 45.00

LINK Landscape 8.000

ESTIMATED VOLUME (CU METRES*10**3) = 8.042
ESTIMATED PEAK FLOW (CUMECS) = 2.2
ESTIMATED TIME TO PEAK (MINS) = 46.00

LINK JUNCTION 1 8.000

ESTIMATED VOLUME (CU METRES*10**3) = 10.01
ESTIMATED PEAK FLOW (CUMECS) = 2.8
ESTIMATED TIME TO PEAK (MINS) = 47.00

LINK Beach 2 8.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.4746
ESTIMATED PEAK FLOW (CUMECS) = 0.13
ESTIMATED TIME TO PEAK (MINS) = 33.00

LINK Pools 8.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.1333E-01
ESTIMATED PEAK FLOW (CUMECS) = 0.21E-01
ESTIMATED TIME TO PEAK (MINS) = 181.00

LINK Park 6 8.000

ESTIMATED VOLUME (CU METRES*10**3) = 1.498
ESTIMATED PEAK FLOW (CUMECS) = 0.44
ESTIMATED TIME TO PEAK (MINS) = 45.00

LINK Enviro 8.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.2128
ESTIMATED PEAK FLOW (CUMECS) = 0.68E-01
ESTIMATED TIME TO PEAK (MINS) = 45.00

LINK Park 7 8.000

ESTIMATED VOLUME (CU METRES*10**3) = 2.363
ESTIMATED PEAK FLOW (CUMECS) = 0.66
ESTIMATED TIME TO PEAK (MINS) = 45.00

LINK Park 5 8.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.4843
ESTIMATED PEAK FLOW (CUMECS) = 0.13
ESTIMATED TIME TO PEAK (MINS) = 33.00

LINK Park 3 8.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.9203
ESTIMATED PEAK FLOW (CUMECS) = 0.28
ESTIMATED TIME TO PEAK (MINS) = 45.00

LINK Park 2#277 8.000

ESTIMATED VOLUME (CU METRES*10**3) = 1.272
ESTIMATED PEAK FLOW (CUMECS) = 0.38
ESTIMATED TIME TO PEAK (MINS) = 45.00

LINK Park 4 8.000

ESTIMATED VOLUME (CU METRES*10**3) = 3.239
ESTIMATED PEAK FLOW (CUMECS) = 0.94
ESTIMATED TIME TO PEAK (MINS) = 45.00

LINK Park 9 8.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.9227E-01
ESTIMATED PEAK FLOW (CUMECS) = 0.26E-01
ESTIMATED TIME TO PEAK (MINS) = 33.00

LINK Beach 1 8.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.6586
ESTIMATED PEAK FLOW (CUMECS) = 0.18
ESTIMATED TIME TO PEAK (MINS) = 34.00

LINK Park 8 8.000

ESTIMATED VOLUME (CU METRES*10**3) = 4.811
ESTIMATED PEAK FLOW (CUMECS) = 1.4
ESTIMATED TIME TO PEAK (MINS) = 45.00

LINK Junction 2 8.000

ESTIMATED VOLUME (CU METRES*10**3) = 8.672
ESTIMATED PEAK FLOW (CUMECS) = 2.5
ESTIMATED TIME TO PEAK (MINS) = 47.00

LINK Detention 8.000

ESTIMATED VOLUME (CU METRES*10**3) = 21.62
ESTIMATED PEAK FLOW (CUMECS) = 6.0
ESTIMATED TIME TO PEAK (MINS) = 46.00

iosd llkta 0 60
LINK RTA land 8.000

ESTIMATED VOLUME (CU METRES*10**3) = 1.489
ESTIMATED PEAK FLOW (CUMECS) = 0.41
ESTIMATED TIME TO PEAK (MINS) = 46.00

LINK RTA POND 8.000

ESTIMATED VOLUME (CU METRES*10**3) = 22.22
ESTIMATED PEAK FLOW (CUMECS) = 2.8
ESTIMATED TIME TO PEAK (MINS) = 81.00

iosd llkta 0 63
LINK Out 8.000

ESTIMATED VOLUME (CU METRES*10**3) = 22.18
ESTIMATED PEAK FLOW (CUMECS) = 2.8

ESTIMATED TIME TO PEAK (MINS) = 83.00

##
Wet n wild Sydney

Results for period from 0: 0.0 1/ 1/1990
to 5: 0.0 1/ 1/1990
##

ROUTING INCREMENT (MINS) = 1.00
STORM DURATION (MINS) = 180.
RETURN PERIOD (YRS) = 100.
BX = 1.0000
TOTAL OF FIRST SUB-AREAS (ha) = 28.30
TOTAL OF SECOND SUB-AREAS (ha) = 0.00
TOTAL OF ALL SUB-AREAS (ha) = 28.30

SUMMARY OF CATCHMENT AND RAINFALL DATA

Link Label	Catch. Area (ha)	Slope #1 (%)	Slope #2 (%)	% Impervious #1	% Impervious #2	Perm #1	Perm #2	B #1	B #2	Link No.
Staff	0.5700	0.000	5.000	0.000	75.00	0.000	.025	0.00	.0014	0.000 1.000
node13	0.1300	0.000	5.000	0.000	5.000	0.000	.025	0.00	.0032	0.000 2.000
Roof	0.4100	0.000	12.00	0.000	100.0	0.000	.002	0.00	0.000	0.000 3.000
PARK 2	0.5400	0.000	3.000	0.000	50.00	0.000	.025	0.00	.0028	0.000 2.001
PARK 1	1.310	0.000	3.000	0.000	25.00	0.000	.025	0.00	.0070	0.000 2.002
Overflow	3.000	0.000	3.000	0.000	75.00	0.000	.025	0.00	.0044	0.000 4.000
CP 1.6	0.1400	0.000	3.000	0.000	100.0	0.000	.025	0.00	.0006	0.000 5.000
CP 1.5	0.2100	0.000	3.000	0.000	100.0	0.000	.025	0.00	.0008	0.000 5.001
CP 1.4	0.1500	0.000	3.000	0.000	100.0	0.000	.025	0.00	.0006	0.000 5.002
Heritage	0.4300	0.000	3.000	0.000	25.00	0.000	.035	0.00	.0050	0.000 6.000
CP 5.2	0.3000	0.000	3.000	0.000	100.0	0.000	.025	0.00	.0009	0.000 6.001
CP 5.1	0.0900	0.000	3.000	0.000	100.0	0.000	.025	0.00	.0005	0.000 6.002
CP 1.3	0.2800	0.000	3.000	0.000	100.0	0.000	.025	0.00	.0009	0.000 5.003
CP 2.2	0.2600	0.000	3.000	0.000	100.0	0.000	.025	0.00	.0009	0.000 7.000
CP 2.1	0.2200	0.000	3.000	0.000	100.0	0.000	.025	0.00	.0008	0.000 7.001
CP 3.5	0.0900	0.000	3.000	0.000	100.0	0.000	.025	0.00	.0005	0.000 8.000
CP 3.4	0.1900	0.000	3.000	0.000	100.0	0.000	.025	0.00	.0007	0.000 8.001
CP3.3	0.1900	0.000	3.000	0.000	100.0	0.000	.025	0.00	.0007	0.000 8.002
CP 3.2	0.1900	0.000	3.000	0.000	100.0	0.000	.025	0.00	.0007	0.000 8.003
CP 3.1	0.4800	0.000	3.000	0.000	100.0	0.000	.025	0.00	.0012	0.000 8.004
CP 4.1	0.1800	0.000	3.000	0.000	100.0	0.000	.025	0.00	.0007	0.000 9.000
CP 6.3	0.2800	0.000	3.000	0.000	100.0	0.000	.025	0.00	.0009	0.000 10.00
CP 6.2.	0.2900	0.000	3.000	0.000	100.0	0.000	.025	0.00	.0009	0.000 10.00
CP 6.1	0.2900	0.000	3.000	0.000	100.0	0.000	.025	0.00	.0009	0.000 10.00
Entry	0.1900	0.000	3.000	0.000	100.0	0.000	.025	0.00	.0007	0.000 8.005
CP 1.1	0.4800	0.000	3.000	0.000	100.0	0.000	.025	0.00	.0012	0.000 5.004
Landscape	0.6300	0.000	5.000	0.000	5.000	0.000	.035	0.00	.0093	0.000 4.001
JUNCTION	1.00001	0.000	.0100	0.000	0.000	0.000	.025	0.00	.0006	0.000 2.003
Beach 2	0.4900	0.000	2.000	0.000	90.00	0.000	.025	0.00	.0017	0.000 11.00
Pools	1.400	0.000	.0011	0.000	100.0	0.000	.001	0.00	.0047	0.000 12.00
Park 6	1.770	0.000	3.000	0.000	50.00	0.000	.025	0.00	.0052	0.000 13.00
Enviro	0.3000	0.000	3.000	0.000	5.000	0.000	.035	0.00	.0082	0.000 14.00
Park 7	2.330	0.000	3.000	0.000	75.00	0.000	.025	0.00	.0038	0.000 14.00
Park 5	0.5000	0.000	3.000	0.000	90.00	0.000	.025	0.00	.0014	0.000 15.00
Park 3	1.150	0.000	5.000	0.000	35.00	0.000	.025	0.00	.0040	0.000 16.00
Park 2#277	1.590	0.000	5.000	0.000	35.00	0.000	.025	0.00	.0048	0.000 17.00
Park 4	0.5900	0.000	3.000	0.000	85.00	0.000	.025	0.00	.0016	0.000 15.00
Park 9	0.1000	0.000	3.000	0.000	75.00	0.000	.025	0.00	.0007	0.000 18.00
Beach 1	0.6800	0.000	2.000	0.000	90.00	0.000	.025	0.00	.0020	0.000 19.00
Park 8	0.8900	0.000	3.000	0.000	75.00	0.000	.025	0.00	.0023	0.000 15.00
Junction	2.00001	0.000	.0100	0.000	0.000	0.000	.025	0.00	.0006	0.000 13.00
Detention	2.550	0.000	5.000	0.000	20.00	0.000	.035	0.00	.0113	0.000 1.001
RTA land	2.100	0.000	3.000	0.000	5.000	0.000	.035	0.00	.0225	0.000 20.00
RTA POND	0.3400	0.000	3.000	0.000	75.00	0.000	.035	0.00	.0018	0.000 1.002
Out	.00001	0.000	1.000	0.000	0.000	0.000	.025	0.00	0.000	0.000 1.003

Link Label	Average Intensity (mm/h)	Init. Loss #1 (mm)	Init. Loss #2 (mm)	Cont. Loss #1 (mm/h)	Cont. Loss #2 (mm)	Excess Rain #1 (m^3/s)	Excess Rain #2 Peak	Time to Peak	Link Lag mins
Staff	33.651	0.000	0.000	0.000	0.000	92.298	0.000	0.1457	33.00 2.000
node13	33.651	0.000	0.000	0.000	0.000	70.869	0.000	0.0300	45.00 0.000
Roof	33.651	0.000	0.000	0.000	0.000	99.952	0.000	0.1078	45.00 0.000
PARK 2	33.651	0.000	0.000	0.000	0.000	84.645	0.000	0.2706	45.00 2.000
PARK 1	33.651	0.000	0.000	0.000	0.000	76.992	0.000	0.5811	45.00 2.000
Overflow	33.651	0.000	0.000	0.000	0.000	92.298	0.000	0.7625	45.00 2.000
CP 1.6	33.651	0.000	0.000	0.000	0.000	99.952	0.000	0.0374	33.00 2.000

CP 1.5 33.651 0.000 0.000 0.000 0.000 99.952 0.000 0.0924 35.00 2.000
CP 1.4 33.651 0.000 0.000 0.000 0.000 99.952 0.000 0.1317 37.00 2.000
Heritage 33.651 0.000 0.000 0.000 0.000 76.992 0.000 0.1021 45.00 2.000
CP 5.2 33.651 0.000 0.000 0.000 0.000 99.952 0.000 0.1806 45.00 2.000
CP 5.1 33.651 0.000 0.000 0.000 0.000 99.952 0.000 0.2039 45.00 2.000
CP 1.3 33.651 0.000 0.000 0.000 0.000 99.952 0.000 0.4082 45.00 2.000
CP 2.2 33.651 0.000 0.000 0.000 0.000 99.952 0.000 0.0691 33.00 2.000
CP 2.1 33.651 0.000 0.000 0.000 0.000 99.952 0.000 0.1267 35.00 2.000
CP 3.5 33.651 0.000 0.000 0.000 0.000 99.952 0.000 0.0239 32.00 2.000
CP 3.4 33.651 0.000 0.000 0.000 0.000 99.952 0.000 0.0737 35.00 2.000
CP3.3 33.651 0.000 0.000 0.000 0.000 99.952 0.000 0.1236 36.00 2.000
CP 3.2 33.651 0.000 0.000 0.000 0.000 99.952 0.000 0.1735 38.00 2.000
CP 3.1 33.651 0.000 0.000 0.000 0.000 99.952 0.000 0.2996 40.00 2.000
CP 4.1 33.651 0.000 0.000 0.000 0.000 99.952 0.000 0.0481 33.00 2.000
CP 6.3 33.651 0.000 0.000 0.000 0.000 99.952 0.000 0.0743 33.00 2.000
CP 6.2. 33.651 0.000 0.000 0.000 0.000 99.952 0.000 0.1501 35.00 2.000
CP 6.1 33.651 0.000 0.000 0.000 0.000 99.952 0.000 0.2261 37.00 2.000
Entry 33.651 0.000 0.000 0.000 0.000 99.952 0.000 0.6225 42.00 2.000
CP 1.1 33.651 0.000 0.000 0.000 0.000 99.952 0.000 1.281 45.00 2.000
Landscape 33.651 0.000 0.000 0.000 0.000 70.869 0.000 2.181 46.00 2.000
JUNCTION 133.651 0.000 0.000 0.000 0.000 69.338 0.000 2.760 47.00 2.000
Beach 2 33.651 0.000 0.000 0.000 0.000 96.890 0.000 0.1281 33.00 2.000
Pools 33.651 100.0 0.000 0.000 0.000 0.9516 0.000 0.0212 181.0 2.000
Park 6 33.651 0.000 0.000 0.000 0.000 84.645 0.000 0.4352 45.00 2.000
Enviro 33.651 0.000 0.000 0.000 0.000 70.869 0.000 0.0676 45.00 2.000
Park 7 33.651 0.000 0.000 0.000 0.000 92.298 0.000 0.6578 45.00 2.000
Park 5 33.651 0.000 0.000 0.000 0.000 96.890 0.000 0.1314 33.00 2.000
Park 3 33.651 0.000 0.000 0.000 0.000 80.053 0.000 0.2770 45.00 2.000
Park 2#27733.651 0.000 0.000 0.000 0.000 80.053 0.000 0.3830 45.00 2.000
Park 4 33.651 0.000 0.000 0.000 0.000 95.360 0.000 0.9402 45.00 2.000
Park 9 33.651 0.000 0.000 0.000 0.000 92.298 0.000 0.0257 33.00 2.000
Beach 1 33.651 0.000 0.000 0.000 0.000 96.890 0.000 0.1767 34.00 0.000
Park 8 33.651 0.000 0.000 0.000 0.000 92.298 0.000 1.366 45.00 2.000
Junction 233.651 0.000 0.000 0.000 0.000 69.338 0.000 2.459 47.00 2.000
Detention 33.651 0.000 0.000 0.000 0.000 75.461 0.000 5.992 46.00 0.000
RTA land 33.651 0.000 0.000 0.000 0.000 70.869 0.000 0.4106 46.00 2.000
RTA POND 33.651 0.000 0.000 0.000 0.000 92.298 0.000 2.807 81.00 2.000
Out 33.651 0.000 0.000 0.000 0.000 69.338 0.000 2.819 83.00 0.000

SUMMARY OF BASIN RESULTS

Link Label	Time to Peak Inflow (m^3/s)	Peak Inflow (m^3/s)	Time to Peak Outflow	Peak Outflow (m^3/s)	Total Vol. (m^3)	Basin Vol. Avail	Basin Vol. Used	Basin Stage Used
Detention	46.00	5.992	82.00	2.586	21619.0	0.0000	10516.1	76.144
RTA POND	81.00	2.806	81.00	2.819	22218.1	0.0000	8.4399	73.168

SUMMARY OF BASIN OUTLET RESULTS

Link Label	No. of	S/D Factor (m)	Dia (m)	Width (m)	Pipe Length (m)	Pipe Slope (%)
Detention	1.0	1.000		0.000	20.000	0.2000
RTA POND	1.0		1.750	0.000	80.000	0.2000

LINK Staff 9.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.7001
ESTIMATED PEAK FLOW (CUMECS) = 0.97E-01
ESTIMATED TIME TO PEAK (MINS) = 115.00

LINK node13 9.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.1313
ESTIMATED PEAK FLOW (CUMECS) = 0.22E-01
ESTIMATED TIME TO PEAK (MINS) = 120.00

LINK Roof 9.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.5356
ESTIMATED PEAK FLOW (CUMECS) = 0.72E-01
ESTIMATED TIME TO PEAK (MINS) = 92.00

LINK PARK 2 9.000

ESTIMATED VOLUME (CU METRES*10**3) = 1.288
ESTIMATED PEAK FLOW (CUMECS) = 0.18
ESTIMATED TIME TO PEAK (MINS) = 120.00

LINK PARK 1 9.000

ESTIMATED VOLUME (CU METRES*10**3) = 2.693
ESTIMATED PEAK FLOW (CUMECS) = 0.41
ESTIMATED TIME TO PEAK (MINS) = 120.00

LINK Overflow 9.000

ESTIMATED VOLUME (CU METRES*10**3) = 3.685
ESTIMATED PEAK FLOW (CUMECS) = 0.51
ESTIMATED TIME TO PEAK (MINS) = 116.00

LINK CP 1.6 9.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.1829
ESTIMATED PEAK FLOW (CUMECS) = 0.24E-01
ESTIMATED TIME TO PEAK (MINS) = 93.00

LINK CP 1.5 9.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.4572
ESTIMATED PEAK FLOW (CUMECS) = 0.60E-01
ESTIMATED TIME TO PEAK (MINS) = 95.00

LINK CP 1.4 9.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.6531
ESTIMATED PEAK FLOW (CUMECS) = 0.86E-01
ESTIMATED TIME TO PEAK (MINS) = 97.00

LINK Heritage 9.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.4611
ESTIMATED PEAK FLOW (CUMECS) = 0.73E-01
ESTIMATED TIME TO PEAK (MINS) = 120.00

LINK CP 5.2 9.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.8530
ESTIMATED PEAK FLOW (CUMECS) = 0.12
ESTIMATED TIME TO PEAK (MINS) = 120.00

LINK CP 5.1 9.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.9705
ESTIMATED PEAK FLOW (CUMECS) = 0.14
ESTIMATED TIME TO PEAK (MINS) = 120.00

LINK CP 1.3 9.000

ESTIMATED VOLUME (CU METRES*10**3) = 1.989
ESTIMATED PEAK FLOW (CUMECS) = 0.27
ESTIMATED TIME TO PEAK (MINS) = 120.00

LINK CP 2.2 9.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.3396
ESTIMATED PEAK FLOW (CUMECS) = 0.46E-01
ESTIMATED TIME TO PEAK (MINS) = 93.00

LINK CP 2.1 9.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.6270
ESTIMATED PEAK FLOW (CUMECS) = 0.83E-01
ESTIMATED TIME TO PEAK (MINS) = 95.00

LINK CP 3.5 9.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.1176
ESTIMATED PEAK FLOW (CUMECS) = 0.16E-01
ESTIMATED TIME TO PEAK (MINS) = 93.00

LINK CP 3.4 9.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.3658
ESTIMATED PEAK FLOW (CUMECS) = 0.48E-01
ESTIMATED TIME TO PEAK (MINS) = 95.00

LINK CP3.3 9.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.6140
ESTIMATED PEAK FLOW (CUMECS) = 0.81E-01
ESTIMATED TIME TO PEAK (MINS) = 97.00

LINK CP 3.2 9.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.8621
ESTIMATED PEAK FLOW (CUMECS) = 0.11
ESTIMATED TIME TO PEAK (MINS) = 99.00

LINK CP 3.1 9.000

ESTIMATED VOLUME (CU METRES*10**3) = 1.489
ESTIMATED PEAK FLOW (CUMECS) = 0.19
ESTIMATED TIME TO PEAK (MINS) = 101.00

LINK CP 4.1 9.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.2351
ESTIMATED PEAK FLOW (CUMECS) = 0.32E-01
ESTIMATED TIME TO PEAK (MINS) = 93.00

LINK CP 6.3 9.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.3658
ESTIMATED PEAK FLOW (CUMECS) = 0.49E-01
ESTIMATED TIME TO PEAK (MINS) = 93.00

LINK CP 6.2. 9.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.7446
ESTIMATED PEAK FLOW (CUMECS) = 0.98E-01
ESTIMATED TIME TO PEAK (MINS) = 95.00

LINK CP 6.1 9.000

ESTIMATED VOLUME (CU METRES*10**3) = 1.123
ESTIMATED PEAK FLOW (CUMECS) = 0.15
ESTIMATED TIME TO PEAK (MINS) = 97.00

LINK Entry 9.000

ESTIMATED VOLUME (CU METRES*10**3) = 3.096
ESTIMATED PEAK FLOW (CUMECS) = 0.40
ESTIMATED TIME TO PEAK (MINS) = 103.00

LINK CP 1.1 9.000

ESTIMATED VOLUME (CU METRES*10**3) = 6.339
ESTIMATED PEAK FLOW (CUMECS) = 0.83
ESTIMATED TIME TO PEAK (MINS) = 120.00

LINK Landscape 9.000

ESTIMATED VOLUME (CU METRES*10**3) = 10.66
ESTIMATED PEAK FLOW (CUMECS) = 1.4
ESTIMATED TIME TO PEAK (MINS) = 120.00

LINK JUNCTION 1 9.000

ESTIMATED VOLUME (CU METRES*10**3) = 13.35
ESTIMATED PEAK FLOW (CUMECS) = 1.9
ESTIMATED TIME TO PEAK (MINS) = 122.00

LINK Beach 2 9.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.6248
ESTIMATED PEAK FLOW (CUMECS) = 0.84E-01
ESTIMATED TIME TO PEAK (MINS) = 115.00

LINK Pools 9.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.4432
ESTIMATED PEAK FLOW (CUMECS) = 0.72E-01
ESTIMATED TIME TO PEAK (MINS) = 230.00

LINK Park 6 9.000

ESTIMATED VOLUME (CU METRES*10**3) = 2.036
ESTIMATED PEAK FLOW (CUMECS) = 0.30
ESTIMATED TIME TO PEAK (MINS) = 119.00

LINK Enviro 9.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.3030
ESTIMATED PEAK FLOW (CUMECS) = 0.49E-01
ESTIMATED TIME TO PEAK (MINS) = 120.00

LINK Park 7 9.000

ESTIMATED VOLUME (CU METRES*10**3) = 3.165
ESTIMATED PEAK FLOW (CUMECS) = 0.45
ESTIMATED TIME TO PEAK (MINS) = 120.00

LINK Park 5 9.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.6375
ESTIMATED PEAK FLOW (CUMECS) = 0.86E-01
ESTIMATED TIME TO PEAK (MINS) = 93.00

LINK Park 3 9.000

ESTIMATED VOLUME (CU METRES*10**3) = 1.269
ESTIMATED PEAK FLOW (CUMECS) = 0.20
ESTIMATED TIME TO PEAK (MINS) = 118.00

LINK Park 2#277 9.000

ESTIMATED VOLUME (CU METRES*10**3) = 1.754
ESTIMATED PEAK FLOW (CUMECS) = 0.27
ESTIMATED TIME TO PEAK (MINS) = 119.00

LINK Park 4 9.000

ESTIMATED VOLUME (CU METRES*10**3) = 4.404
ESTIMATED PEAK FLOW (CUMECS) = 0.65
ESTIMATED TIME TO PEAK (MINS) = 120.00

LINK Park 9 9.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.1228
ESTIMATED PEAK FLOW (CUMECS) = 0.17E-01
ESTIMATED TIME TO PEAK (MINS) = 93.00

LINK Beach 1 9.000

ESTIMATED VOLUME (CU METRES*10**3) = 0.8670
ESTIMATED PEAK FLOW (CUMECS) = 0.12
ESTIMATED TIME TO PEAK (MINS) = 94.00

LINK Park 8 9.000

ESTIMATED VOLUME (CU METRES*10**3) = 6.487
ESTIMATED PEAK FLOW (CUMECS) = 0.93
ESTIMATED TIME TO PEAK (MINS) = 120.00

LINK Junction 2 9.000

ESTIMATED VOLUME (CU METRES*10**3) = 11.69
ESTIMATED PEAK FLOW (CUMECS) = 1.7
ESTIMATED TIME TO PEAK (MINS) = 122.00

LINK Detention 9.000

ESTIMATED VOLUME (CU METRES*10**3) = 29.50
ESTIMATED PEAK FLOW (CUMECS) = 4.1
ESTIMATED TIME TO PEAK (MINS) = 121.00

iosd llkta 0 60
LINK RTA land 9.000

ESTIMATED VOLUME (CU METRES*10**3) = 2.122
ESTIMATED PEAK FLOW (CUMECS) = 0.33
ESTIMATED TIME TO PEAK (MINS) = 120.00

LINK RTA POND 9.000

ESTIMATED VOLUME (CU METRES*10**3) = 32.04
ESTIMATED PEAK FLOW (CUMECS) = 3.0
ESTIMATED TIME TO PEAK (MINS) = 135.00

iosd llkta 0 63
LINK Out 9.000

ESTIMATED VOLUME (CU METRES*10**3) = 31.85
ESTIMATED PEAK FLOW (CUMECS) = 3.0
ESTIMATED TIME TO PEAK (MINS) = 138.00

##
Wet n wild Sydney

Results for period from 0: 0.0 1/ 1/1990
to 2: 0.0 3/ 1/1990
##

ROUTING INCREMENT (MINS) = 1.00
STORM DURATION (MINS) = 360.
RETURN PERIOD (YRS) = 100.
BX = 1.0000
TOTAL OF FIRST SUB-AREAS (ha) = 28.30
TOTAL OF SECOND SUB-AREAS (ha) = 0.00
TOTAL OF ALL SUB-AREAS (ha) = 28.30

SUMMARY OF CATCHMENT AND RAINFALL DATA

Link Label	Catch. Area (ha)	Slope #1 (%)	Slope #2 (%)	% Impervious #1	% Impervious #2	Perm #1	Perm #2	B #1	B #2	Link No.
Staff	0.5700	0.000	5.000	0.000	75.00	0.000	.025	0.00	.0014	0.000 1.000
node13	0.1300	0.000	5.000	0.000	5.000	0.000	.025	0.00	.0032	0.000 2.000
Roof	0.4100	0.000	12.00	0.000	100.0	0.000	.002	0.00	0.000	0.000 3.000
PARK 2	0.5400	0.000	3.000	0.000	50.00	0.000	.025	0.00	.0028	0.000 2.001
PARK 1	1.310	0.000	3.000	0.000	25.00	0.000	.025	0.00	.0070	0.000 2.002
Overflow	3.000	0.000	3.000	0.000	75.00	0.000	.025	0.00	.0044	0.000 4.000
CP 1.6	0.1400	0.000	3.000	0.000	100.0	0.000	.025	0.00	.0006	0.000 5.000
CP 1.5	0.2100	0.000	3.000	0.000	100.0	0.000	.025	0.00	.0008	0.000 5.001
CP 1.4	0.1500	0.000	3.000	0.000	100.0	0.000	.025	0.00	.0006	0.000 5.002
Heritage	0.4300	0.000	3.000	0.000	25.00	0.000	.035	0.00	.0050	0.000 6.000
CP 5.2	0.3000	0.000	3.000	0.000	100.0	0.000	.025	0.00	.0009	0.000 6.001
CP 5.1	0.0900	0.000	3.000	0.000	100.0	0.000	.025	0.00	.0005	0.000 6.002
CP 1.3	0.2800	0.000	3.000	0.000	100.0	0.000	.025	0.00	.0009	0.000 5.003
CP 2.2	0.2600	0.000	3.000	0.000	100.0	0.000	.025	0.00	.0009	0.000 7.000
CP 2.1	0.2200	0.000	3.000	0.000	100.0	0.000	.025	0.00	.0008	0.000 7.001
CP 3.5	0.0900	0.000	3.000	0.000	100.0	0.000	.025	0.00	.0005	0.000 8.000
CP 3.4	0.1900	0.000	3.000	0.000	100.0	0.000	.025	0.00	.0007	0.000 8.001
CP3.3	0.1900	0.000	3.000	0.000	100.0	0.000	.025	0.00	.0007	0.000 8.002
CP 3.2	0.1900	0.000	3.000	0.000	100.0	0.000	.025	0.00	.0007	0.000 8.003
CP 3.1	0.4800	0.000	3.000	0.000	100.0	0.000	.025	0.00	.0012	0.000 8.004
CP 4.1	0.1800	0.000	3.000	0.000	100.0	0.000	.025	0.00	.0007	0.000 9.000
CP 6.3	0.2800	0.000	3.000	0.000	100.0	0.000	.025	0.00	.0009	0.000 10.00
CP 6.2.	0.2900	0.000	3.000	0.000	100.0	0.000	.025	0.00	.0009	0.000 10.00
CP 6.1	0.2900	0.000	3.000	0.000	100.0	0.000	.025	0.00	.0009	0.000 10.00
Entry	0.1900	0.000	3.000	0.000	100.0	0.000	.025	0.00	.0007	0.000 8.005
CP 1.1	0.4800	0.000	3.000	0.000	100.0	0.000	.025	0.00	.0012	0.000 5.004
Landscape	0.6300	0.000	5.000	0.000	5.000	0.000	.035	0.00	.0093	0.000 4.001
JUNCTION	1.00001	0.000	.0100	0.000	0.000	0.000	.025	0.00	.0006	0.000 2.003
Beach 2	0.4900	0.000	2.000	0.000	90.00	0.000	.025	0.00	.0017	0.000 11.00
Pools	1.400	0.000	.0011	0.000	100.0	0.000	.001	0.00	.0047	0.000 12.00
Park 6	1.770	0.000	3.000	0.000	50.00	0.000	.025	0.00	.0052	0.000 13.00
Enviro	0.3000	0.000	3.000	0.000	5.000	0.000	.035	0.00	.0082	0.000 14.00
Park 7	2.330	0.000	3.000	0.000	75.00	0.000	.025	0.00	.0038	0.000 14.00
Park 5	0.5000	0.000	3.000	0.000	90.00	0.000	.025	0.00	.0014	0.000 15.00
Park 3	1.150	0.000	5.000	0.000	35.00	0.000	.025	0.00	.0040	0.000 16.00
Park 2#277	1.590	0.000	5.000	0.000	35.00	0.000	.025	0.00	.0048	0.000 17.00
Park 4	0.5900	0.000	3.000	0.000	85.00	0.000	.025	0.00	.0016	0.000 15.00
Park 9	0.1000	0.000	3.000	0.000	75.00	0.000	.025	0.00	.0007	0.000 18.00
Beach 1	0.6800	0.000	2.000	0.000	90.00	0.000	.025	0.00	.0020	0.000 19.00
Park 8	0.8900	0.000	3.000	0.000	75.00	0.000	.025	0.00	.0023	0.000 15.00
Junction	2.00001	0.000	.0100	0.000	0.000	0.000	.025	0.00	.0006	0.000 13.00
Detention	2.550	0.000	5.000	0.000	20.00	0.000	.035	0.00	.0113	0.000 1.001
RTA land	2.100	0.000	3.000	0.000	5.000	0.000	.035	0.00	.0225	0.000 20.00
RTA POND	0.3400	0.000	3.000	0.000	75.00	0.000	.035	0.00	.0018	0.000 1.002
Out	.00001	0.000	1.000	0.000	0.000	0.000	.025	0.00	0.000	0.000 1.003

Link Label	Average Intensity (mm/h)	Init. Loss #1 (mm)	Init. Loss #2 (mm)	Cont. Loss #1 (mm/h)	Cont. Loss #2	Excess Rain #1	Excess Rain #2	Peak Inflow (m^3/s)	Time to Peak	Link Lag mins
Staff	21.944	0.000	0.000	0.000	0.000	122.86	0.000	0.0973	115.0	2.000
node13	21.944	0.000	0.000	0.000	0.000	101.00	0.000	0.0221	120.0	0.000
Roof	21.944	0.000	0.000	0.000	0.000	130.67	0.000	0.0720	92.00	0.000
PARK 2	21.944	0.000	0.000	0.000	0.000	115.05	0.000	0.1840	120.0	2.000
PARK 1	21.944	0.000	0.000	0.000	0.000	107.25	0.000	0.4063	120.0	2.000
Overflow	21.944	0.000	0.000	0.000	0.000	122.86	0.000	0.5110	116.0	2.000
CP 1.6	21.944	0.000	0.000	0.000	0.000	130.67	0.000	0.0245	93.00	2.000
CP 1.5	21.944	0.000	0.000	0.000	0.000	130.67	0.000	0.0600	95.00	2.000
CP 1.4	21.944	0.000	0.000	0.000	0.000	130.67	0.000	0.0856	97.00	2.000
Heritage	21.944	0.000	0.000	0.000	0.000	107.25	0.000	0.0730	120.0	2.000
CP 5.2	21.944	0.000	0.000	0.000	0.000	130.67	0.000	0.1237	120.0	2.000
CP 5.1	21.944	0.000	0.000	0.000	0.000	130.67	0.000	0.1380	120.0	2.000

CP 1.3 21.944 0.000 0.000 0.000 0.000 130.67 0.000 0.2692 120.0 2.000
CP 2.2 21.944 0.000 0.000 0.000 0.000 130.67 0.000 0.0456 93.00 2.000
CP 2.1 21.944 0.000 0.000 0.000 0.000 130.67 0.000 0.0829 95.00 2.000
CP 3.5 21.944 0.000 0.000 0.000 0.000 130.67 0.000 0.0160 93.00 2.000
CP 3.4 21.944 0.000 0.000 0.000 0.000 130.67 0.000 0.0483 95.00 2.000
CP3.3 21.944 0.000 0.000 0.000 0.000 130.67 0.000 0.0806 97.00 2.000
CP 3.2 21.944 0.000 0.000 0.000 0.000 130.67 0.000 0.1130 99.00 2.000
CP 3.1 21.944 0.000 0.000 0.000 0.000 130.67 0.000 0.1948 101.0 2.000
CP 4.1 21.944 0.000 0.000 0.000 0.000 130.67 0.000 0.0316 93.00 2.000
CP 6.3 21.944 0.000 0.000 0.000 0.000 130.67 0.000 0.0491 93.00 2.000
CP 6.2. 21.944 0.000 0.000 0.000 0.000 130.67 0.000 0.0982 95.00 2.000
CP 6.1 21.944 0.000 0.000 0.000 0.000 130.67 0.000 0.1477 97.00 2.000
Entry 21.944 0.000 0.000 0.000 0.000 130.67 0.000 0.4044 103.0 2.000
CP 1.1 21.944 0.000 0.000 0.000 0.000 130.67 0.000 0.8341 120.0 2.000
Landscape 21.944 0.000 0.000 0.000 0.000 101.00 0.000 1.450 120.0 2.000
JUNCTION 121.944 0.000 0.000 0.000 0.000 99.442 0.000 1.856 122.0 2.000
Beach 2 21.944 0.000 0.000 0.000 0.000 127.54 0.000 0.0835 115.0 2.000
Pools 21.944 100.0 0.000 0.000 0.000 31.665 0.000 0.0717 230.0 2.000
Park 6 21.944 0.000 0.000 0.000 0.000 115.05 0.000 0.3012 119.0 2.000
Enviro 21.944 0.000 0.000 0.000 0.000 101.00 0.000 0.0492 120.0 2.000
Park 7 21.944 0.000 0.000 0.000 0.000 122.86 0.000 0.4451 120.0 2.000
Park 5 21.944 0.000 0.000 0.000 0.000 127.54 0.000 0.0858 93.00 2.000
Park 3 21.944 0.000 0.000 0.000 0.000 110.37 0.000 0.1957 118.0 2.000
Park 2#27721.944 0.000 0.000 0.000 0.000 110.37 0.000 0.2705 119.0 2.000
Park 4 21.944 0.000 0.000 0.000 0.000 125.98 0.000 0.6518 120.0 2.000
Park 9 21.944 0.000 0.000 0.000 0.000 122.86 0.000 0.0171 93.00 2.000
Beach 1 21.944 0.000 0.000 0.000 0.000 127.54 0.000 0.1167 94.00 0.000
Park 8 21.944 0.000 0.000 0.000 0.000 122.86 0.000 0.9346 120.0 2.000
Junction 221.944 0.000 0.000 0.000 0.000 99.442 0.000 1.681 122.0 2.000
Detention 21.944 0.000 0.000 0.000 0.000 105.69 0.000 4.108 121.0 0.000
RTA land 21.944 0.000 0.000 0.000 0.000 101.00 0.000 0.3346 120.0 2.000
RTA POND 21.944 0.000 0.000 0.000 0.000 122.86 0.000 2.993 135.0 2.000
Out 21.944 0.000 0.000 0.000 0.000 99.442 0.000 3.023 138.0 0.000

SUMMARY OF BASIN RESULTS

Link	Time to Peak Inflow	Peak Inflow	Time to Peak Outflow	Peak Outflow	Total Inflow	Basin Vol. Avail	Basin Vol. Used	Basin Stage Used
		(m^3/s)		(m^3/s)	(m^3)			
Detention	121.0	4.108	152.0	2.708	29503.4	0.0000	10725.4	76.171
RTA POND	135.0	2.992	136.0	3.022	32042.5	0.0000	8.9419	73.275

SUMMARY OF BASIN OUTLET RESULTS

Link	No. of	S/D Factor	Dia	Width	Pipe Length	Pipe Slope
			(m)	(m)	(m)	(%)
Detention	1.0	1.000		0.000	20.000	0.2000
RTA POND	1.0		1.750	0.000	80.000	0.2000

Run completed at: 12th January 2011 10:43:04

APPENDIX E

MUSIC Results – Water Balance

Source nodes Location,
Roof Area, Pervious landscape, Impervious Landscape, Pool area, Environmental Zone, overflow carpark, Support staff carpark, Main car park, Heritage
ID, 1, 2, 3,4,5,8,10,11,14
Node Type,
UrbanSourceNode, ForestSourceNode, UrbanSourceNode, UrbanSourceNode, ForestSourceNode, AgriculturalSourceNode, AgriculturalSourceNode, UrbanSourceNode, UrbanSourceNode
Total Area (ha),0.58,6.4,5.7,1.4,2.8,3,1.2,4,0.43
Area Impervious (ha), 0.58, 0.665656387665198, 5.7, 1.4, 0.552845814977974, 2.26083700440529, 0.898995594713656, 4, 0.215
Area Pervious (ha), 0, 5.7343436123348, 0, 0, 2.24715418502203, 0.739162995594714, 0.301004405286344, 0, 0.215
Field Capacity (mm), 70, 70, 70,70,70,80,80,70,80
Pervious Area Infiltration Capacity coefficient - a, 210,210,210,210,210,200,200,210,200
Pervious Area Infiltration Capacity exponent - b, 4.7, 4.7, 4.7, 4.7, 4.7, 1, 1, 4.7,1
Impervious Area Rainfall Threshold (mm/day), 1.4, 1.4, 1.4, 100, 1.4, 1, 1, 1.4,1
Pervious Area Soil Storage Capacity (mm), 170,170,170,170,170,120,120,170,120
Pervious Area Soil Initial Storage (% of Capacity), 30, 30, 30,30,30,30,30,30,30
Groundwater Initial Depth (mm), 10, 10, 10,10,10,10,10,10,10
Groundwater Daily Recharge Rate (%),50,50,50,50,50,25,25,50,25
Groundwater Daily Base flow Rate (%), 4, 4, 4,4,4,5,5,4,5
Groundwater Daily Deep Seepage Rate (%),0,0,0,0,0,0,0,0,0
Storm flow Total Suspended Solids Mean (log mg/L),2.2,1.9,2.2,2.2,1.9,2.3,2.3,2.2,2.2
Storm flow Total Suspended Solids Standard Deviation (log mg/L),0.32,0.2,0.32,0.32,0.2,0.31,0.31,0.32,0.32
Storm flow Total Suspended Solids Estimation Method, Stochastic, Stochastic, Stochastic, Stochastic, Stochastic, Stochastic, Stochastic, Stochastic, Stochastic
Storm flow Total Suspended Solids Serial Correlation, 0.27, 0.27, 0.27, 0.27, 0.27,0.95,0.95,0.27,0.95
Stormflow Total Phosphorus Mean (log mg/L),-0.6,-1.1,-0.45,-0.45,-1.1,-0.27,-0.27,-0.45,-0.45
Stormflow Total Phosphorus Standard Deviation (log mg/L),0.25,0.22,0.25,0.25,0.22,0.3,0.3,0.25,0.25
Stormflow Total Phosphorus Estimation Method,Stochastic,Stochastic,Stochastic,Stochastic,Stochastic,Stochastic,Stochastic,Stochastic,Stochastic
Stormflow Total Phosphorus Serial Correlation,0.27,0.27,0.27,0.27,0.27,0.95,0.95,0.27,0.95
Stormflow Total Nitrogen Mean (log mg/L),0.3,-0.075,0.42,0.42,-0.075,0.59,0.59,0.42,0.42
Stormflow Total Nitrogen Standard Deviation (log mg/L),0.19,0.24,0.19,0.19,0.24,0.26,0.26,0.19,0.19
Stormflow Total Nitrogen Estimation Method,Stochastic,Stochastic,Stochastic,Stochastic,Stochastic,Stochastic,Stochastic,Stochastic,Stochastic
Stormflow Total Nitrogen Serial Correlation,0.27,0.27,0.27,0.27,0.27,0.95,0.95,0.27,0.95
Baseflow Total Suspended Solids Mean (log mg/L),1.1,0.9,1.1,1.1,0.9,1.4,1.4,1.1,1.1
Baseflow Total Suspended Solids Standard Deviation (log mg/L),0.17,0.13,0.17,0.17,0.13,0.13,0.13,0.17,0.17
Baseflow Total Suspended Solids Estimation Method,Stochastic,Stochastic,Stochastic,Stochastic,Stochastic,Stochastic,Stochastic,Stochastic,Stochastic
Baseflow Total Suspended Solids Serial Correlation,0.31,0.31,0.31,0.31,0.31,0.94,0.94,0.31,0.94
Baseflow Total Phosphorus Mean (log mg/L),-0.82,-1.5,-0.82,-0.82,-1.5,-0.88,-0.88,-0.82,-0.82
Baseflow Total Phosphorus Standard Deviation (log mg/L),0.19,0.13,0.19,0.19,0.13,0.13,0.13,0.19,0.19
Baseflow Total Phosphorus Estimation Method,Stochastic,Stochastic,Stochastic,Stochastic,Stochastic,Stochastic,Stochastic,Stochastic,Stochastic
Baseflow Total Phosphorus Serial Correlation, 0.31, 0.31, 0.31, 0.31, 0.31, 0.94, 0.94, 0.31, 0.94
Base flow Total Nitrogen Mean (log mg/L),0.32,-0.14,0.32,0.32,-0.14,0.074,0.074,0.32,0.32
Base flow Total Nitrogen Standard Deviation (log mg/L),0.12,0.13,0.12,0.12,0.13,0.13,0.13,0.12,0.12
Base flow Total Nitrogen Estimation Method, Stochastic, Stochastic, Stochastic, Stochastic, Stochastic, Stochastic, Stochastic, Stochastic, Stochastic
Base flow Total Nitrogen Serial Correlation, 0.31, 0.31, 0.31, 0.31, 0.31, 0.94, 0.94, 0.31, 0.94
OUT - Mean Annual Flow (ML/yr), 4.30, 18.2, 42.2, 0.227, 9.37, 18.7, 7.47, 29.6, 2.04
OUT - TSS Mean Annual Load (kg/yr), 873, 864, 8.58E3, 23.1, 550, 4.17E3, 1.67E3, 6.12E3, 390
OUT - TP Mean Annual Load (kg/yr),1.28,1.16,17.8,81.7E-3,0.647,13.1,5.26,12.1,0.745
OUT - TN Mean Annual Load (kg/yr), 8.98, 18.3, 116, 0.460, 7.67, 83.2, 33.3, 86.3, 5.52
OUT - Gross Pollutant Mean Annual Load (kg/yr), 115, 237, 1.13E3, 3.19, 202, 544, 217, 790, 62.0
Rain In (ML/yr),5.02929,55.4959,49.4261,12.1399,24.2799,26.0137,10.4055,34.6848,3.72862
ET Loss (ML/yr), 0.730545, 37.3124, 7.17977, 11.913, 14.902, 7.33068, 2.93233, 5.03834, 1.69189
Deep Seepage Loss (ML/yr), 0, 0, 0,0,0,0,0,0,0
Base flow Out (ML/yr),0,7.99395,0,0,3.10875,0.693361,0.277345,0,0.198763
Imp. Storm flow Out (ML/yr),4.29874,4.74345,42.2464,0.22693,4.15052,17.3669,6.9468,29.6465,1.65951
Perv. Storm flow Out (ML/yr),0,5.41755,0,0,2.10682,0.620299,0.24812,0,0.177819
Total Storm flow Out (ML/yr),4.29874,10.161,42.2464,0.22693,6.25734,17.9872,7.19492,29.6465,1.83732
Total Outflow (ML/yr), 4.29874, 18.1549, 42.2464, 0.22693, 9.36609, 18.6806, 7.47226,29.6465,2.03609
Change in Soil Storage (ML/yr),0,0.0292451,0,0,0.0113731,0.00234022,0.000936089,0,0.000670865
TSS Base flow Out (ML/yr), 0, 65.6308, 0, 0, 25.4169, 17.6517, 7.06067, 0, 2.8306
TSS Total Storm flow Out (ML/yr), 872.58, 798.434, 8575.36, 23.1333, 524.431, 4156.17, 1662.47, 6115.9, 387.642

TSS Total Outflow (ML/yr), 872.58, 864.065, 8575.36, 23.1333, 549.848, 4173.82, 1669.53, 6115.9, 390.472
TP Base flow Out (ML/yr),0,0.263362,0,0,0.103696,0.100333,0.0401333,0,0.0340662
TP Total Storm flow Out (ML/yr), 1.28237, 0.897764, 17.8017, 0.0817452, 0.543044, 13.043, 5.21719, 12.0684, 0.710768
TP Total Outflow (ML/yr), 1.28237, 1.16113, 17.8017, 0.0817452, 0.64674, 13.1433, 5.25732, 12.0684, 0.744834
TN Base flow Out (ML/yr), 0, 6.06979, 0, 0, 2.32639, 0.836542, 0.334617, 0, 0.428614
TN Total Storm flow Out (ML/yr), 8.97832, 12.2299, 116.317, 0.460201, 5.34783, 82.386, 32.9544, 86.3378, 5.08903
TN Total Outflow (ML/yr), 8.97832, 18.2997, 116.317, 0.460201, 7.67422, 83.2226, 33.289, 86.3378, 5.51765
GP Total Outflow (ML/yr), 114.513, 237.438, 1125.39, 3.18606, 202.142, 543.601, 217.441, 789.745, 62.0034

No Imported Data Source nodes

USTM treatment nodes
Location, Wetland, Rainwater Tank, Pond, Buffer
ID, 6, 9, 12, 13
Node Type, WetlandNode, RainWaterTankNode, PondNode, BufferNode
Lo-flow bypass rate (cum/sec), 0, 0, 0,
Hi-flow bypass rate (cum/sec), 0.75,100,100,
Inlet pond volume, 200, 0, 0,
Area (sqm), 3000,1000,2000,1600
Extended detention depth (m), 0.5, 0.2,2,
Permanent pool volume (cum), 500, 250, 3500,
Proportion vegetated, 0.5, 0, 0.1,
Equivalent pipe diameter (mm), 600,600,600,
Overflow weir width (m), 2,10,2,
Notional Detention Time (hrs), 0.702, 0.148, 0.937,
Orifice discharge coefficient, 0.6, 0.6, 0.6,
Weir coefficient, 1.7, 1.7, 1.7,
Number of CSTR cells, 6, 2, 2,
Total Suspended Solids k (m/yr), 1500,400,400,
Total Suspended Solids C* (mg/L), 6, 12, 12,
Total Suspended Solids C** (mg/L), 6, 12, 12,
Total Phosphorus k (m/yr), 1000,300,300,
Total Phosphorus C* (mg/L), 0.06, 0.13, 0.09,
Total Phosphorus C** (mg/L), 0.06, 0.13, 0.09,
Total Nitrogen k (m/yr), 150, 40, 40,
Total Nitrogen C* (mg/L), 1, 1.4,1,
Total Nitrogen C** (mg/L), 1, 1.4,1,
Threshold hydraulic loading for C** (m/yr), 3500, 3500, 3500,
Horizontal Flow Coefficient,
Extraction for Re-use, Off, On, On, Off
Annual Re-use Demand - scaled by daily PET (ML), 0, 0,
Annual Re-use Demand - scaled by daily PET - Rain (ML), 0, 21,
Constant Daily Re-use Demand (kill), 0, 0,
User-defined Annual Re-use Demand (ML), 3.55,0,
Percentage of User-defined Annual Re-use Demand Jan, 12.406278116565, 8.33333333333333,
Percentage of User-defined Annual Re-use Demand Feb, 12.406278116565, 8.33333333333333,
Percentage of User-defined Annual Re-use Demand Mar, 12.406278116565, 8.33333333333333,
Percentage of User-defined Annual Re-use Demand Apr, 12.406278116565, 8.33333333333333,
Percentage of User-defined Annual Re-use Demand May, 12.406278116565, 8.33333333333333,
Percentage of User-defined Annual Re-use Demand Jun, 0.249925022493252, 8.33333333333333,
Percentage of User-defined Annual Re-use Demand Jul, 0.249925022493252, 8.33333333333333,
Percentage of User-defined Annual Re-use Demand Aug, 0, 8.33333333333333,
Percentage of User-defined Annual Re-use Demand Sep, 0.249925022493252, 8.33333333333333,
Percentage of User-defined Annual Re-use Demand Oct, 12.406278116565, 8.33333333333333,
Percentage of User-defined Annual Re-use Demand Nov, 12.406278116565, 8.33333333333333,
Percentage of User-defined Annual Re-use Demand Dec, 12.406278116565, 8.33333333333333,
User-defined Re-use File,
Filter area (sqm),
Filter perimeter (m),
Filter depth (m),
Filter median particle diameter (mm),
Saturated hydraulic conductivity (mm/hr),
Infiltration Media Porosity,

Length (m),
Bed slope,
Base Width (m),
Top width (m),
Vegetation height (m),
Vegetation Type,
Total Nitrogen Content in Filter (mg/kg),
Proportion of Organic Material in Filter (%),
Orthophosphate Content in Filter (mg/kg),
Is Base Lined?
Is Underdrain Present?
Is Submerged Zone Present?
Submerged Zone Depth (m),-9999,-9999,
B for Media Soil Texture,-9999,-9999
Proportion of upstream impervious area treated, 0, 0, 0.75
Exfiltration Rate (mm/hr), 0,0,1,0
Evap Loss as proportion of PET, 1.25,
Depth in metres below the drain pipe,
TSS A Coefficient,
TSS B Coefficient,
TP A Coefficient,
TP B Coefficient,
TN A Coefficient,
TN B Coefficient,
Sfc,
S*,
Sw,
Sh,
Emax (m/day),
Ew (m/day), 4.30,125,
IN - Mean Annual Flow (ML/yr), 130, 873, 1.62E3, 29.6
IN - TSS Mean Annual Load (kg/yr), 12.5E3, 1.28, 11.9, 6.12E3
IN - TP Mean Annual Load (kg/yr), 41.4, 8.98, 211, 12.1
IN - TN Mean Annual Load (kg/yr), 292, 115, 0.00, 86.3
IN - Gross Pollutant Mean Annual Load (kg/yr), 1.00E3, 1.93,103,790
OUT - Mean Annual Flow (ML/yr), 125, 29.3, 1.53E3, 29.6
OUT - TSS Mean Annual Load (kg/yr), 1.62E3, 0.262, 10.6, 2.79E3
OUT - TP Mean Annual Load (kg/yr), 11.9, 3.06, 165, 8.02
OUT - TN Mean Annual Load (kg/yr), 211, 0.00, 0.00, 68.2
OUT - Gross Pollutant Mean Annual Load (kg/yr), 0.00, 4.29874, 125.101,790
Flow In (ML/yr), 129.762, 0, 2.40104, 29.6465
ET Loss (ML/yr), 4.68246,0,0,0
Infiltration Loss (ML/yr), 0,0,0,0
Low Flow Bypass Out (ML/yr), 0,0,0,0
High Flow Bypass Out (ML/yr), 0, 1.93284, 102.877, 7.41163
Orifice / Filter Out (ML/yr), 124.898, 0,0,22.235
Weir Out (ML/yr), 0.202886,0,0,0
Transfer Function Out (ML/yr), 0, 2.36624, 19.875,0
Reuse Supplied (ML/yr), 0, 3.5122, 21.0153,0
Reuse Requested (ML/yr), 0, 67.3718, 94.5741,0
% Reuse Demand Met, 0, 55.0371, 17.7647,0
% Load Reduction, 3.59245, 872.58, 1616.67,-0.000183798
TSS Flow In (kg/yr), 12456.3, 0, 0, 6115.9
TSS ET Loss (kg/yr), 0,0,0,0
TSS Infiltration Loss (kg/yr), 0,0,0,0
TSS Low Flow Bypass Out (kg/yr), 0,0,0,0
TSS High Flow Bypass Out (kg/yr), 0, 29.253, 1526.84, 1528.98
TSS Orifice / Filter Out (kg/yr), 1605.9,0,0,1265
TSS Weir Out (kg/yr), 10.7714,0,0,0
TSS Transfer Function Out (kg/yr), 0, 28.5756, 240.966,0
TSS Reuse Supplied (kg/yr), 0,0,0,0
TSS Reuse Requested (kg/yr), 0,0,0,0
TSS % Reuse Demand Met, 0, 96.6475, 5.55617,0

TSS % Load Reduction, 87.0213, 1.28237, 11.8854, 54.3162
TP Flow In (kg/yr), 41.3786, 0,0,12.0684
TP ET Loss (kg/yr), 0,0,0,0
TP Infiltration Loss (kg/yr), 0,0,0,0
TP Low Flow Bypass Out (kg/yr), 0,0,0,0
TP High Flow Bypass Out (kg/yr), 0, 0.262446, 10.624, 3.01711
TP Orifice / Filter Out (kg/yr), 11.8408, 0, 0, 5.00703
TP Weir Out (kg/yr), 0.0445221,0,0,0
TP Transfer Function Out (kg/yr), 0, 0.307933, 1.80925,0
TP Reuse Supplied (kg/yr), 0,0,0,0
TP Reuse Requested (kg/yr), 0,0,0,0
TP % Reuse Demand Met, 0, 79.5344, 10.613,0
TP % Load Reduction, 71.2766, 8.97832, 210.578, 33.5113
TN Flow In (kg/yr), 292.177, 0,0,86.3378
TN ET Loss (kg/yr), 0,0,0,0
TN Infiltration Loss (kg/yr), 0,0,0,0
TN Low Flow Bypass Out (kg/yr), 0,0,0,0
TN High Flow Bypass Out (kg/yr), 0, 3.06412, 165.274, 21.5845
TN Orifice / Filter Out (kg/yr), 209.513, 0,0,46.6652
TN Weir Out (kg/yr), 1.06501,0,0,0
TN Transfer Function Out (kg/yr), 0, 3.39269, 24.0039,0
TN Reuse Supplied (kg/yr), 0,0,0,0
TN Reuse Requested (kg/yr), 0,0,0,0
TN % Reuse Demand Met, 0, 65.872, 21.514,0
TN % Load Reduction, 27.9279, 114.513, 0, 20.9505
GP Flow In (kg/yr), 1003.03, 0, 0,789.745
GP ET Loss (kg/yr), 0,0,0,0
GP Infiltration Loss (kg/yr), 0,0,0,0
GP Low Flow Bypass Out (kg/yr), 0,0,0,0
GP High Flow Bypass Out (kg/yr), 0, 0, 0,197.436
GP Orifice / Filter Out (kg/yr), 0,0,0,0
GP Weir Out (kg/yr), 0,0,0,0
GP Transfer Function Out (kg/yr), 0,0,0,0
GP Reuse Supplied (kg/yr), 0,0,0,0
GP Reuse Requested (kg/yr), 0,0,0,0
GP % Reuse Demand Met, 0, 100, 100, 0
GP % Load Reduction, 100, 75

Generic treatment nodes
Location, Gross Pollutant Trap
ID, 7
Node Type, GPTNode
Lo-flow bypass rate (cum/sec), 0
Hi-flow bypass rate (cum/sec), 1.5
Flow Transfer Function
Input (cum/sec), 0
Output (cum/sec), 0
Input (cum/sec), 10
Output (cum/sec), 10

Gross Pollutant Transfer Function
Input (kg/ML), 0
Output (kg/ML), 0
Input (kg/ML), 100
Output (kg/ML), 10

Total Nitrogen Transfer Function
Input (mg/L), 0
Output (mg/L), 0
Input (mg/L), 100
Output (mg/L), 80

Total Phosphorus Transfer Function

Input (mg/L), 0
Output (mg/L), 0
Input (mg/L), 100
Output (mg/L), 80

Total Suspended Solids Transfer Function
Input (mg/L), 0
Output (mg/L), 0
Input (mg/L), 100
Output (mg/L), 50

IN - Mean Annual Flow (ML/yr), 104
IN - TSS Mean Annual Load (kg/yr), 13.2E3
IN - TP Mean Annual Load (kg/yr), 28.7
IN - TN Mean Annual Load (kg/yr), 220
IN - Gross Pollutant Mean Annual Load (kg/yr), 2.42E3
OUT - Mean Annual Flow (ML/yr), 104
OUT - TSS Mean Annual Load (kg/yr), 6.61E3
OUT - TP Mean Annual Load (kg/yr), 23.0
OUT - TN Mean Annual Load (kg/yr), 176
OUT - Gross Pollutant Mean Annual Load (kg/yr), 242
Flow In (ML/yr), 103.61
ET Loss (ML/yr), 0
Infiltration Loss (ML/yr), 0
Low Flow Bypass Out (ML/yr), 0
High Flow Bypass Out (ML/yr), 0
Orifice / Filter Out (ML/yr), 0
Weir Out (ML/yr), 0
Transfer Function Out (ML/yr), 103.61
Reuse Supplied (ML/yr), 0
Reuse Requested (ML/yr), 0
% Reuse Demand Met, 0
% Load Reduction, 0
TSS Flow In (kg/yr), 13226
TSS ET Loss (kg/yr), 0
TSS Infiltration Loss (kg/yr), 0
TSS Low Flow Bypass Out (kg/yr), 0
TSS High Flow Bypass Out (kg/yr), 0
TSS Orifice / Filter Out (kg/yr), 0
TSS Weir Out (kg/yr), 0
TSS Transfer Function Out (kg/yr), 6613.01
TSS Reuse Supplied (kg/yr), 0
TSS Reuse Requested (kg/yr), 0
TSS % Reuse Demand Met, 0
TSS % Load Reduction, 50
TP Flow In (kg/yr), 28.7226
TP ET Loss (kg/yr), 0
TP Infiltration Loss (kg/yr), 0
TP Low Flow Bypass Out (kg/yr), 0
TP High Flow Bypass Out (kg/yr), 0
TP Orifice / Filter Out (kg/yr), 0
TP Weir Out (kg/yr), 0
TP Transfer Function Out (kg/yr), 22.9781
TP Reuse Supplied (kg/yr), 0
TP Reuse Requested (kg/yr), 0
TP % Reuse Demand Met, 0
TP % Load Reduction, 20.0001
TN Flow In (kg/yr), 219.582
TN ET Loss (kg/yr), 0
TN Infiltration Loss (kg/yr), 0
TN Low Flow Bypass Out (kg/yr), 0
TN High Flow Bypass Out (kg/yr), 0
TN Orifice / Filter Out (kg/yr), 0

TN Weir Out (kg/yr), 0
TN Transfer Function Out (kg/yr), 175.665
TN Reuse Supplied (kg/yr), 0
TN Reuse Requested (kg/yr), 0
TN % Reuse Demand Met, 0
TN % Load Reduction, 20.0001
GP Flow In (kg/yr), 2419.9
GP ET Loss (kg/yr), 0
GP Infiltration Loss (kg/yr), 0
GP Low Flow Bypass Out (kg/yr), 0
GP High Flow Bypass Out (kg/yr), 0
GP Orifice / Filter Out (kg/yr), 0
GP Weir Out (kg/yr), 0
GP Transfer Function Out (kg/yr), 241.99
GP Reuse Supplied (kg/yr), 0
GP Reuse Requested (kg/yr), 0
GP % Reuse Demand Met, 0
GP % Load Reduction, 100

No Other nodes

Links
Location,Drainage Link, Drainage Link, Drainage Link, Drainage Link, Drainage Link, Drainage Link, Drainage Link, Drainage Link, Drainage Link, Drainage Link, Drainage Link, Drainage Link, Drainage Link
Source node ID,7,2,3,5,1,9,4,10,8,6,11,13,14
Target node ID,6,7,7,7,9,7,7,6,6,12,13,7,7
Muskingum-Cunge Routing, Not Routed, Not Routed, Not Routed, Not Routed, Not Routed, Not Routed, Not Routed, Not Routed, Not Routed, Not Routed, Not Routed, Not Routed, Not Routed
Muskingum K, , , , , , , , , , , , ,
Muskingum theta, , , , , , , , , , , , ,
IN - Mean Annual Flow (ML/yr),104,18.2,42.2,9.37,4.30,1.93,0.227,7.47,18.7,125,29.6,29.6,2.04
IN - TSS Mean Anual Load (kg/yr),6.61E3,864,8.58E3,550,873,29.3,23.1,1.67E3,4.17E3,1.62E3,6.12E3,2.79E3,390
IN - TP Mean Annual Load (kg/yr),23.0,1.16,17.8,0.647,1.28,0.262,81.7E-3,5.26,13.1,11.9,12.1,8.02,0.745
IN - TN Mean Annual Load (kg/yr),176,18.3,116,7.67,8.98,3.06,0.460,33.3,83.2,211,86.3,68.2,5.52
IN - Gross Pollutant Mean Annual Load (kg/yr),242,237,1.13E3,202,115,0.00,3.19,217,544,0.00,790,790,62.0
OUT - Mean Annual Flow (ML/yr),104,18.2,42.2,9.37,4.30,1.93,0.227,7.47,18.7,125,29.6,29.6,2.04
OUT - TSS Mean Anual Load (kg/yr),6.61E3,864,8.58E3,550,873,29.3,23.1,1.67E3,4.17E3,1.62E3,6.12E3,2.79E3,390
OUT - TP Mean Annual Load (kg/yr),23.0,1.16,17.8,0.647,1.28,0.262,81.7E-3,5.26,13.1,11.9,12.1,8.02,0.745
OUT - TN Mean Annual Load (kg/yr),176,18.3,116,7.67,8.98,3.06,0.460,33.3,83.2,211,86.3,68.2,5.52
OUT - Gross Pollutant Mean Annual Load (kg/yr),242,237,1.13E3,202,115,0.00,3.19,217,544,0.00,790,790,62.0

APPENDIX F

MUSIC Results – Water Quality

Source nodes
Location, Roof Area, Pervious landscape, Impervious Landscape, Pool area, Environmental Zone, overflow carpark, Support staff carpark, Main car park, Heritage
ID, 1, 2, 3,4,5,8,10,11,14
Node Type, UrbanSourceNode, ForestSourceNode, UrbanSourceNode, UrbanSourceNode, ForestSourceNode, AgriculturalSourceNode, AgriculturalSourceNode, UrbanSourceNode, UrbanSourceNode
Total Area (ha),0.58,6.4,5.7,1.4,2.8,3,1.2,4,0.43
Area Impervious (ha), 0.58, 0.665656387665198, 5.7, 1.4, 0.141726872246696, 2.26083700440529, 0.898995594713656, 4, 0.215
Area Pervious (ha), 0, 5.7343436123348, 0, 0, 2.6582731277533, 0.739162995594714, 0.301004405286344, 0, 0.215
Field Capacity (mm), 70, 70, 70,70,70,80,80,70,80
Pervious Area Infiltration Capacity coefficient - a, 210,210,210,210,210,200,200,210,200
Pervious Area Infiltration Capacity exponent - b, 4.7, 4.7, 4.7, 4.7, 4.7, 1, 1, 4.7,1
Impervious Area Rainfall Threshold (mm/day), 1.4, 1.4, 1.4, 100, 1.4, 1, 1, 1.4,1
Pervious Area Soil Storage Capacity (mm), 170,170,170,170,170,120,120,170,120
Pervious Area Soil Initial Storage (% of Capacity), 30, 30, 30,30,30,30,30,30,30
Groundwater Initial Depth (mm), 10, 10, 10,10,10,10,10,10,10
Groundwater Daily Recharge Rate (%),50,50,50,50,50,25,25,50,25
Groundwater Daily Base flow Rate (%), 4, 4, 4,4,4,5,5,4,5
Groundwater Daily Deep Seepage Rate (%),0,0,0,0,0,0,0,0,0
Storm flow Total Suspended Solids Mean (log mg/L),2.2,1.9,2.2,2.2,1.9,2.3,2.3,2.2,2.2
Storm flow Total Suspended Solids Standard Deviation (log mg/L),0.32,0.2,0.32,0.32,0.2,0.31,0.31,0.32,0.32
Storm flow Total Suspended Solids Estimation Method, Stochastic, Stochastic, Stochastic, Stochastic, Stochastic, Stochastic, Stochastic, Stochastic, Stochastic
Storm flow Total Suspended Solids Serial Correlation, 0.27, 0.27, 0.27, 0.27, 0.27, 0.95, 0.95, 0.27, 0.95
Storm flow Total Phosphorus Mean (log mg/L),-0.6,-1.1,-0.45,-0.45,-1.1,-0.27,-0.27,-0.45,-0.45
Storm flow Total Phosphorus Standard Deviation (log mg/L),0.25,0.22,0.25,0.25,0.22,0.3,0.3,0.25,0.25
Storm flow Total Phosphorus Estimation Method, Stochastic, Stochastic, Stochastic, Stochastic, Stochastic, Stochastic, Stochastic, Stochastic, Stochastic
Storm flow Total Phosphorus Serial Correlation, 0.27, 0.27, 0.27, 0.27, 0.27, 0.95, 0.95, 0.27, 0.95
Storm flow Total Nitrogen Mean (log mg/L),0.3,-0.075,0.42,0.42,-0.075,0.59,0.59,0.42,0.42
Storm flow Total Nitrogen Standard Deviation (log mg/L),0.19,0.24,0.19,0.19,0.24,0.26,0.26,0.19,0.19
Storm flow Total Nitrogen Estimation Method, Stochastic, Stochastic, Stochastic, Stochastic, Stochastic, Stochastic, Stochastic, Stochastic, Stochastic
Storm flow Total Nitrogen Serial Correlation, 0.27, 0.27, 0.27, 0.27, 0.27, 0.95, 0.95, 0.27, 0.95
Base flow Total Suspended Solids Mean (log mg/L),1.1,0.9,1.1,1.1,0.9,1.4,1.4,1.1,1.1
Base flow Total Suspended Solids Standard Deviation (log mg/L),0.17,0.13,0.17,0.17,0.13,0.13,0.13,0.17,0.17
Base flow Total Suspended Solids Estimation Method, Stochastic, Stochastic, Stochastic, Stochastic, Stochastic, Stochastic, Stochastic, Stochastic, Stochastic
Base flow Total Suspended Solids Serial Correlation, 0.31, 0.31, 0.31, 0.31, 0.31, 0.94, 0.94, 0.31, 0.94
Base flow Total Phosphorus Mean (log mg/L),-0.82,-1.5,-0.82,-0.82,-1.5,-0.88,-0.88,-0.82,-0.82
Base flow Total Phosphorus Standard Deviation (log mg/L),0.19,0.13,0.19,0.19,0.13,0.13,0.13,0.19,0.19
Base flow Total Phosphorus Estimation Method, Stochastic, Stochastic, Stochastic, Stochastic, Stochastic, Stochastic, Stochastic, Stochastic, Stochastic
Base flow Total Phosphorus Serial Correlation, 0.31, 0.31, 0.31, 0.31, 0.31, 0.94, 0.94, 0.31, 0.94
Base flow Total Nitrogen Mean (log mg/L),0.32,-0.14,0.32,0.32,-0.14,0.074,0.074,0.32,0.32
Base flow Total Nitrogen Standard Deviation (log mg/L),0.12,0.13,0.12,0.12,0.13,0.13,0.13,0.12,0.12
Base flow Total Nitrogen Estimation Method, Stochastic, Stochastic, Stochastic, Stochastic, Stochastic, Stochastic, Stochastic, Stochastic, Stochastic
Base flow Total Nitrogen Serial Correlation, 0.31, 0.31, 0.31, 0.31, 0.31, 0.94, 0.94, 0.31, 0.94
OUT - Mean Annual Flow (ML/yr), 4.24, 13.1, 36.6, 0.135, 6.58, 18.2, 7.29, 29.3, 1.95
OUT - TSS Mean Annual Load (kg/yr), 892, 680, 7.96E3, 23.2, 293, 4.63E3, 1.79E3, 6.17E3, 358
OUT - TP Mean Annual Load (kg/yr),1.27,0.826,15.4,61.3E-3,0.381,11.6,4.91,12.3,0.822
OUT - TN Mean Annual Load (kg/yr), 9.31, 11.2, 107, 0.394, 5.60, 77.3, 34.0, 84.8, 5.40
OUT - Gross Pollutant Mean Annual Load (kg/yr), 111, 185, 954, 2.39, 43.8, 525, 210, 763, 60.1
Rain In (ML/yr),4.96159,42.7724,42.7724,11.9763,23.9525,25.6634,10.2654,34.2179,3.67843
ET Loss (ML/yr), 0.717623, 29.6965, 6.18637, 11.8416, 17.3614, 7.44873, 2.97947, 4.94909, 1.73085
Deep Seepage Loss (ML/yr), 0, 0, 0,0,0,0,0,0,0
Base flow Out (ML/yr),0,5.9305,0,0,3.50558,0.647644,0.259058,0,0.185658
Imp. Storm flow Out (ML/yr),4.24397,3.6586,36.586,0.134698,1.02441,17.1312,6.85247,29.2688,1.63698
Perv. Storm flow Out (ML/yr),0,3.47528,0,0,2.05428,0.435962,0.174385,0,0.124976
Total Storm flow Out (ML/yr),4.24397,7.13388,36.586,0.134698,3.07868,17.5671,7.02686,29.2688,1.76195
Total Outflow (ML/yr), 4.24397, 13.0644, 36.586, 0.134698, 6.58426, 18.2148, 7.28591, 29.2688, 1.94761
Change in Soil Storage (ML/yr), 0, 0.0115673, 0, 0, 0.00683754,-9.09498E-5,-3.64199E-5, 0,-2.61143E-5

TSS Base flow Out (ML/yr), 0, 49.3484, 0, 0, 29.1096, 17.1773, 6.81142, 0, 2.52277
TSS Total Storm flow Out (ML/yr), 892.271, 630.771, 7963.23, 23.2029, 264.027, 4617.67, 1787.4, 6165.44, 355.029
TSS Total Outflow (ML/yr), 892.271, 680.119, 7963.23, 23.2029, 293.136, 4634.84, 1794.21, 6165.44, 357.552
TP Base flow Out (ML/yr),0,0.196078,0,0,0.115908,0.0888234,0.0357249,0,0.0309988
TP Total Storm flow Out (ML/yr), 1.27028, 0.62996, 15.4425, 0.0612586, 0.265237, 11.5583, 4.87869, 12.2884, 0.791177
TP Total Outflow (ML/yr), 1.27028, 0.826038, 15.4425, 0.0612586, 0.381145, 11.6471, 4.91441, 12.2884, 0.822176
TN Base flow Out (ML/yr), 0, 4.48731, 0, 0, 2.65531, 0.79956, 0.323416, 0, 0.402799
TN Total Storm flow Out (ML/yr), 9.31199, 6.73769, 107.239, 0.39354, 2.94834, 76.459, 33.6675, 84.769, 4.99277
TN Total Outflow (ML/yr), 9.31199, 11.225, 107.239, 0.39354, 5.60365, 77.2586, 33.9909, 84.769, 5.39557
GP Total Outflow (ML/yr), 110.616, 185.361, 953.588, 2.38739, 43.7583, 525.044, 210.018, 762.871, 60.0952

No Imported Data Source nodes

USTM treatment nodes
Location, Wetland, Rainwater Tank, Pond, Buffer
ID, 6, 9, 12, 13
Node Type, WetlandNode, RainWaterTankNode, PondNode, BufferNode
Lo-flow bypass rate (cum/sec), 0, 0, 0,
Hi-flow bypass rate (cum/sec), 0.75,100,100,
Inlet pond volume, 200, 0, 0,
Area (sqm), 3000,1000,2000,1600
Extended detention depth (m), 0.5, 0.2,2,
Permanent pool volume (cum), 500, 500, 3500,
Proportion vegetated, 0.5, 0, 0.1,
Equivalent pipe diameter (mm), 600,600,600,
Overflow weir width (m), 2,10,2,
Notional Detention Time (hrs), 0.702, 0.148, 0.937,
Orifice discharge coefficient, 0.6, 0.6, 0.6,
Weir coefficient, 1.7, 1.7, 1.7,
Number of CSTR cells, 6, 2, 2,
Total Suspended Solids k (m/yr), 1500,400,400,
Total Suspended Solids C* (mg/L), 6, 12, 12,
Total Suspended Solids C** (mg/L), 6, 12, 12,
Total Phosphorus k (m/yr), 1000,300,300,
Total Phosphorus C* (mg/L), 0.06, 0.13, 0.09,
Total Phosphorus C** (mg/L), 0.06, 0.13, 0.09,
Total Nitrogen k (m/yr), 150, 40, 40,
Total Nitrogen C* (mg/L), 1, 1.4,1,
Total Nitrogen C** (mg/L), 1, 1.4,1,
Threshold hydraulic loading for C** (m/yr), 3500, 3500, 3500,
Horizontal Flow Coefficient,
Extraction for Re-use, Off, On, On, Off
Annual Re-use Demand - scaled by daily PET (ML), 0, 0,
Annual Re-use Demand - scaled by daily PET - Rain (ML), 0, 37.23,
Constant Daily Re-use Demand (kL), 0, 0,
User-defined Annual Re-use Demand (ML), 4.2,0,
Percentage of User-defined Annual Re-use Demand Jan, 12.4062031015508, 8.33333333333333,
Percentage of User-defined Annual Re-use Demand Feb, 12.4062031015508, 8.33333333333333,
Percentage of User-defined Annual Re-use Demand Mar, 12.4062031015508, 8.33333333333333,
Percentage of User-defined Annual Re-use Demand Apr, 12.4062031015508, 8.33333333333333,
Percentage of User-defined Annual Re-use Demand May, 12.4062031015508, 8.33333333333333,
Percentage of User-defined Annual Re-use Demand Jun, 0.250125062531266, 8.33333333333333,
Percentage of User-defined Annual Re-use Demand Jul, 0.250125062531266, 8.33333333333333,
Percentage of User-defined Annual Re-use Demand Aug, 0, 8.33333333333333,
Percentage of User-defined Annual Re-use Demand Sep, 0.250125062531266, 8.33333333333333,
Percentage of User-defined Annual Re-use Demand Oct, 12.4062031015508, 8.33333333333333,
Percentage of User-defined Annual Re-use Demand Nov, 12.4062031015508, 8.33333333333333,
Percentage of User-defined Annual Re-use Demand Dec, 12.4062031015508, 8.33333333333333,
User-defined Re-use File,
Filter area (sqm),
Filter perimeter (m),
Filter depth (m),
Filter median particle diameter (mm),

Saturated hydraulic conductivity (mm/hr),
Infiltration Media Porosity,
Length (m),
Bed slope,
Base Width (m),
Top width (m),
Vegetation height (m),
Vegetation Type,
Total Nitrogen Content in Filter (mg/kg),
Proportion of Organic Material in Filter (%),
Orthophosphate Content in Filter (mg/kg),
Is Base Lined?
Is Underdrain Present?
Is Submerged Zone Present?
Submerged Zone Depth (m),-9999,-9999,
B for Media Soil Texture,-9999,-9999
Proportion of upstream impervious area treated, 0, 0, 0.75
Exfiltration Rate (mm/hr), 0,0,1,0
Evap Loss as proportion of PET, 1.25,
Depth in metres below the drain pipe,
TSS A Coefficient,
TSS B Coefficient,
TP A Coefficient,
TP B Coefficient,
TN A Coefficient,
TN B Coefficient,
Sfc,
S*,
Sw,
Sh,
Emax (m/day),
Ew (m/day), 4.24,113,
IN - Mean Annual Flow (ML/yr), 118, 892, 4.49E3, 29.3
IN - TSS Mean Annual Load (kg/yr), 12.8E3, 1.27, 18.5, 6.17E3
IN - TP Mean Annual Load (kg/yr), 37.6, 9.31, 216, 12.3
IN - TN Mean Annual Load (kg/yr), 274, 111, 58.2, 84.8
IN - Gross Pollutant Mean Annual Load (kg/yr), 954, 1.27, 79.5,763
OUT - Mean Annual Flow (ML/yr), 113, 50.7, 2.76E3, 29.3
OUT - TSS Mean Annual Load (kg/yr), 4.49E3, 0.200, 12.0, 2.95E3
OUT - TP Mean Annual Load (kg/yr), 18.5, 2.17, 146, 8.24
OUT - TN Mean Annual Load (kg/yr), 216, 0.00, 0.00, 67.9
OUT - Gross Pollutant Mean Annual Load (kg/yr), 58.2, 4.24367, 112.958,763
Flow In (ML/yr), 117.482, 0, 2.18818, 29.2683
ET Loss (ML/yr), 4.69721,0,0,0
Infiltration Loss (ML/yr), 0,0,0,0
Low Flow Bypass Out (ML/yr), 0,0,0,0
High Flow Bypass Out (ML/yr), 10.2969, 1.26864, 78.9716, 7.31707
Orifice / Filter Out (ML/yr), 102.519, 0, 0.56983, 21.9532
Weir Out (ML/yr), 0.149021,0,0,0
Transfer Function Out (ML/yr), 0, 3.03528, 31.5792,0
Reuse Supplied (ML/yr), 0, 4.18775, 37.215,0
Reuse Requested (ML/yr), 0, 72.4799, 84.856,0
% Reuse Demand Met, 0, 70.1052, 29.5832,0
% Load Reduction, 3.8452, 892.27, 4480.09,-0.0069222
TSS Flow In (kg/yr), 12788,0,0,6165.43
TSS ET Loss (kg/yr), 0,0,0,0
TSS Infiltration Loss (kg/yr), 0,0,0,0
TSS Low Flow Bypass Out (kg/yr), 0,0,0,0
TSS High Flow Bypass Out (kg/yr), 1219.92, 50.724, 2701.56, 1541.36
TSS Orifice / Filter Out (kg/yr), 3251.58, 0, 58.1835, 1411.23
TSS Weir Out (kg/yr), 11.8514,0,0,0
TSS Transfer Function Out (kg/yr), 0, 40.3119, 413.041,0
TSS Reuse Supplied (kg/yr), 0,0,0,0

TSS Reuse Requested (kg/yr), 0,0,0,0
TSS % Reuse Demand Met, 0, 94.3152, 38.3999,0
TSS % Load Reduction, 64.941, 1.27028, 18.4588, 52.1106
TP Flow In (kg/yr), 37.5369, 0,0,12.2884
TP ET Loss (kg/yr), 0,0,0,0
TP Infiltration Loss (kg/yr), 0,0,0,0
TP Low Flow Bypass Out (kg/yr), 0,0,0,0
TP High Flow Bypass Out (kg/yr), 3.4493, 0.199898, 11.8999, 3.0721
TP Orifice / Filter Out (kg/yr), 14.974, 0, 0.129666, 5.16924
TP Weir Out (kg/yr), 0.0402821,0,0,0
TP Transfer Function Out (kg/yr), 0, 0.397453, 2.99533,0
TP Reuse Supplied (kg/yr), 0,0,0,0
TP Reuse Requested (kg/yr), 0,0,0,0
TP % Reuse Demand Met, 0, 84.2635, 34.8303,0
TP % Load Reduction, 50.8121, 9.31196, 215.68, 32.9339
TN Flow In (kg/yr), 273.64, 0,0,84.7686
TN ET Loss (kg/yr), 0,0,0,0
TN Infiltration Loss (kg/yr), 0,0,0,0
TN Low Flow Bypass Out (kg/yr), 0,0,0,0
TN High Flow Bypass Out (kg/yr), 22.7244, 2.17059, 145.002, 21.1922
TN Orifice / Filter Out (kg/yr), 192.718, 0, 1.00627, 46.7221
TN Weir Out (kg/yr), 0.315813,0,0,0
TN Transfer Function Out (kg/yr), 0, 4.47696, 43.1405,0
TN Reuse Supplied (kg/yr), 0,0,0,0
TN Reuse Requested (kg/yr), 0,0,0,0
TN % Reuse Demand Met, 0, 76.6903, 32.3033,0
TN % Load Reduction, 21.1525, 110.617, 58.1858, 19.8829
GP Flow In (kg/yr), 953.922, 0, 0,762.858
GP ET Loss (kg/yr), 0,0,0,0
GP Infiltration Loss (kg/yr), 0,0,0,0
GP Low Flow Bypass Out (kg/yr), 0,0,0,0
GP High Flow Bypass Out (kg/yr), 58.1858, 0, 0,190.714
GP Orifice / Filter Out (kg/yr), 0,0,0,0
GP Weir Out (kg/yr), 0,0,0,0
GP Transfer Function Out (kg/yr), 0,0,0,0
GP Reuse Supplied (kg/yr), 0,0,0,0
GP Reuse Requested (kg/yr), 0,0,0,0
GP % Reuse Demand Met, 0, 100, 100, 0
GP % Load Reduction, 93.9004,75

Generic treatment nodes
Location, Gross Pollutant Trap
ID, 7
Node Type, GPTNode
Lo-flow bypass rate (cum/sec), 0
Hi-flow bypass rate (cum/sec), 1.5
Flow Transfer Function
Input (cum/sec), 0
Output (cum/sec), 0
Input (cum/sec), 10
Output (cum/sec), 10

Gross Pollutant Transfer Function
Input (kg/ML), 0
Output (kg/ML), 0
Input (kg/ML), 100
Output (kg/ML), 10

Total Nitrogen Transfer Function
Input (mg/L), 0
Output (mg/L), 0
Input (mg/L), 100
Output (mg/L), 80

Total Phosphorus Transfer Function
Input (mg/L), 0
Output (mg/L), 0
Input (mg/L), 100
Output (mg/L), 80

Total Suspended Solids Transfer Function
Input (mg/L), 0
Output (mg/L), 0
Input (mg/L), 100
Output (mg/L), 50

IN - Mean Annual Flow (ML/yr), 92.1
IN - TSS Mean Annual Load (kg/yr), 12.5E3
IN - TP Mean Annual Load (kg/yr), 26.2
IN - TN Mean Annual Load (kg/yr), 203
IN - Gross Pollutant Mean Annual Load (kg/yr), 2.03E3
OUT - Mean Annual Flow (ML/yr), 92.1
OUT - TSS Mean Annual Load (kg/yr), 6.38E3
OUT - TP Mean Annual Load (kg/yr), 21.0
OUT - TN Mean Annual Load (kg/yr), 163
OUT - Gross Pollutant Mean Annual Load (kg/yr), 219
Flow In (ML/yr), 92.0436
ET Loss (ML/yr), 0
Infiltration Loss (ML/yr), 0
Low Flow Bypass Out (ML/yr), 0
High Flow Bypass Out (ML/yr), 1.90036
Orifice / Filter Out (ML/yr), 0
Weir Out (ML/yr), 0
Transfer Function Out (ML/yr), 90.1482
Reuse Supplied (ML/yr), 0
Reuse Requested (ML/yr), 0
% Reuse Demand Met, 0
% Load Reduction,-0.00534506
TSS Flow In (kg/yr), 12441
TSS ET Loss (kg/yr), 0
TSS Infiltration Loss (kg/yr), 0
TSS Low Flow Bypass Out (kg/yr), 0
TSS High Flow Bypass Out (kg/yr), 298.502
TSS Orifice / Filter Out (kg/yr), 0
TSS Weir Out (kg/yr), 0
TSS Transfer Function Out (kg/yr), 6072.48
TSS Reuse Supplied (kg/yr), 0
TSS Reuse Requested (kg/yr), 0
TSS % Reuse Demand Met, 0
TSS % Load Reduction, 48.7905
TP Flow In (kg/yr), 26.1383
TP ET Loss (kg/yr), 0
TP Infiltration Loss (kg/yr), 0
TP Low Flow Bypass Out (kg/yr), 0
TP High Flow Bypass Out (kg/yr), 0.501418
TP Orifice / Filter Out (kg/yr), 0
TP Weir Out (kg/yr), 0
TP Transfer Function Out (kg/yr), 20.5059
TP Reuse Supplied (kg/yr), 0
TP Reuse Requested (kg/yr), 0
TP % Reuse Demand Met, 0
TP % Load Reduction, 19.6302
TN Flow In (kg/yr), 202.533
TN ET Loss (kg/yr), 0
TN Infiltration Loss (kg/yr), 0
TN Low Flow Bypass Out (kg/yr), 0

TN High Flow Bypass Out (kg/yr), 3.47107
TN Orifice / Filter Out (kg/yr), 0
TN Weir Out (kg/yr), 0
TN Transfer Function Out (kg/yr), 159.225
TN Reuse Supplied (kg/yr), 0
TN Reuse Requested (kg/yr), 0
TN % Reuse Demand Met, 0
TN % Load Reduction, 19.6694
GP Flow In (kg/yr), 2029.98
GP ET Loss (kg/yr), 0
GP Infiltration Loss (kg/yr), 0
GP Low Flow Bypass Out (kg/yr), 0
GP High Flow Bypass Out (kg/yr), 8.95322
GP Orifice / Filter Out (kg/yr), 0
GP Weir Out (kg/yr), 0
GP Transfer Function Out (kg/yr), 129.372
GP Reuse Supplied (kg/yr), 0
GP Reuse Requested (kg/yr), 0
GP % Reuse Demand Met, 0
GP % Load Reduction, 99.5589

No Other nodes

Links
Location, Drainage Link, Drainage Link, Drainage Link, Drainage Link, Drainage Link, Drainage Link, Drainage Link, Drainage Link, Drainage Link, Drainage Link, Drainage Link, Drainage Link, Drainage Link
Source node ID,7,2,3,5,1,9,4,10,8,6,11,13,14
Target node ID,6,7,7,7,9,7,7,6,6,12,13,7,7
Muskingum-Cunge Routing, Not Routed, Not Routed, Not Routed, Not Routed, Not Routed, Not Routed, Not Routed, Not Routed, Not Routed, Not Routed, Not Routed, Not Routed, Not Routed
Muskingum K, , , , , , , , , , , , ,
Muskingum theta, , , , , , , , , , , , ,
IN - Mean Annual Flow (ML/yr),92.1,13.1,36.6,6.58,4.24,1.27,0.135,7.29,18.2,113,29.3,29.3,1.95
IN - TSS Mean Anual Load (kg/yr),6.38E3,680,7.96E3,293,892,50.7,23.2,1.79E3,4.63E3,4.49E3,6.17E3,2.95E3,358
IN - TP Mean Annual Load (kg/yr),21.0,0.826,15.4,0.381,1.27,0.200,61.3E-3,4.91,11.6,18.5,12.3,8.24,0.822
IN - TN Mean Annual Load (kg/yr),163,11.2,107,5.60,9.31,2.17,0.394,34.0,77.3,216,84.8,67.9,5.40
IN - Gross Pollutant Mean Annual Load (kg/yr),219,185,954,43.8,111,0.00,2.39,210,525,58.2,763,763,60.1
OUT - Mean Annual Flow (ML/yr),92.1,13.1,36.6,6.58,4.24,1.27,0.135,7.29,18.2,113,29.3,29.3,1.95
OUT - TSS Mean Anual Load (kg/yr),6.38E3,680,7.96E3,293,892,50.7,23.2,1.79E3,4.63E3,4.49E3,6.17E3,2.95E3,358
OUT - TP Mean Annual Load (kg/yr),21.0,0.826,15.4,0.381,1.27,0.200,61.3E-3,4.91,11.6,18.5,12.3,8.24,0.822
OUT - TN Mean Annual Load (kg/yr),163,11.2,107,5.60,9.31,2.17,0.394,34.0,77.3,216,84.8,67.9,5.40
OUT - Gross Pollutant Mean Annual Load (kg/yr),219,185,954,43.8,111,0.00,2.39,210,525,58.2,763,763,60.1

APPENDIX G

Excel Water Balance Calculations

Total Pool Area 14000 m^2		Average rainfall 2.4 mm/day 867 mm/year		Backwash 0.288mm/day			Average loss 11 l/s		
Pool freeboard 100 mm				Carry out 1.3 l/person 5038 l/day			Peak loss 43 l/s		
Max 24hr rainfall 234.6 mm		Average evaporation 16.92 mm/day 6180 mm/year				Annual average 0.79		Annual average 77.4 ML	
		Evaporation multiplier 4		Max loss -89.05 43 l/s					

Historical Rainfall data

Historical Evaporation data x 4

Water carried out on people

Water carried out on people

Date	Rainfall mm	Evaporation mm	Carry out mm	Backwash mm	Loss / Gain mm	Storage in freeboard mm	Overflow to sewer m^3	Top up requirement mm	Top up requirement m^3
1/07/1970	0	7.2	0.0	0.000	-7.20	0.00			
2/07/1970	0	16.4	0.0	0.000	-16.40	0.00	0	16.40	229.60
3/07/1970	0	17.2	0.0	0.000	-17.20	0.00	0	17.20	240.80
4/07/1970	0	10	0.0	0.000	-10.00	0.00	0	10.00	140.00
5/07/1970	0	8	0.0	0.000	-8.00	0.00	0	8.00	112.00

For the purpose of this calculation, park operation assumed to start on October 1st. Backwash and carryout start on this date

Rows removed for clarity

27/09/1970				0.000	-18.40	0.00	0	18.40	257.60
28/09/1970				0.000	11.20	11.20	0	0.00	0.00
29/09/1970				0.000	-18.20	0.00	0	7.00	98.00
30/09/1970		11.2	0.0	0.000	-9.90	0.00	0	9.90	138.60
1/10/1970	0	14.4	0.4	0.288	-15.05	0.00	0	15.05	210.67
2/10/1970	0	26.4	0.4	0.288	-27.05	0.00	0		378.67
3/10/1970	0	39.6	0.4	0.288	-40.25				563.47
4/10/1970	0	41.6	0.4	0.288	-42.25				591.47
5/10/1970	0	42.8	0.4	0.288	-43.45				608.27

Any day where evaporation and carryout exceeds direct rainfall, the short fall is topped up from mains water

Rows removed for clarity

For the purpose of this calculation, park operation assumed to end on June 1st. Backwash and carryout stop on this date

27/05/1971				0.288	-3.85	0.00	0	3.85	53.87
28/05/1971				0.288	-9.85	0.00	0	9.85	137.87
29/05/1971				0.288	-15.85	0.00	0	15.85	221.87
30/05/1971				0.288	-10.65	0.00	0	10.65	149.07
31/05/1971		14.4	0.4	0.288	-15.05	0.00	0	15.05	210.67
1/06/1971	0	15.2	0.0	0.000	-15.20	0.00	0	15.20	212.80

2/06/1971	0.8	3.2	0.0	0.000	-2.40	0.00	0	2.40	33.60
3/06/1971	0	8	0.0	0.000	-8.00	0.00	0	8.00	112.00
4/06/1971	0	7.2	0.0	0.000	-7.20	0.00	0	7.20	100.80
				Rows removed for clarity					
12/01/1972	0	30.4	0.4	0.288	-31.05	0.00	0	31.05	434.67
13/01/1972	29	29.6	0.4	0.288	-1.25	0.00	0	1.25	17.47
14/01/1972	72.4	13.2	0.4	0.288	58.55	58.55	0	0.00	0.00
15/01/1972	50.8	0	0.4	0.288	50.15	100.00	121.8	0.00	0.00
16/01/1972	14.7	0	0.4	0.288	14.05	100.00	196.7	0.00	0.00
17/01/1972	8.4	15.2	0.4	0.288	-7.45	92.55	0	0.00	0.00
18/01/1972	11.9	22.4	0.4	0.288	-11.15	81.40	0	0.00	0.00
19/01/1972	25.4	56	0.4	0.288	-31.25	50.16	0	0.00	0.00
20/01/1972	0	24.4	0.4	0.288	-25.05	25.11	0	0.00	0.00
21/01/1972	0	28.4	0.4	0.288	-29.05	0.00	0	29.05	434.67
22/01/1972	0	28.4	0.4	0.288	-29.05	0.00	0	29.05	434.67
				Rows removed for clarity					
26/09/1993	0	23.2	0.0	0.000	-23.20	0.00	0	23.20	324.80
27/09/1993	0	19.2	0.0	0.000	-19.20	0.00	0	19.20	268.80
28/09/1993	0	12.8	0.0	0.000	-12.80	0.00	0	12.80	179.20
29/09/1993	0	17.6	0.0	0.000	-17.60	0.00	0	17.60	246.40
30/09/1993	0	29.6	0.0	0.000	-29.60	0.00	0	29.60	414.40

When rainfall exceeds evaporation the excess is held in the pool freeboard

When water levels reach the top of the pool freeboard excess water is directed 'overflows' to sewers. This is a very rare occurrence

Historical data / simulation runs from 1/7/1970 to 30/9/1993

APPENDIX H

Wash down Estimate

Water use for wash down

6	l/min	Water use
30	mins	Duration of wash down
180	L	Use per wash down
43	m^3	Use per annum (operating season)
0.05	L	Use per visitor

The use of efficient nozzles and the training staff to not waste water in wash down is important to meeting this usage

Very little information on actuall washdown water use is available for this type of site.

The high pressure washdown equipment used at the Gold Coast Wet 'n' Wild used 6l/minute and is typically used for 30 minutes per day during the operating season

Areas of the site requiring washdown are areas around food service etc where cleanliness is considered essential to public health.

930,000 vistors per annum has been taken from the clients forecasts

APPENDIX I

Irrigation Demand Estimate

Irrigation Demand

Summer Months 90 days

7	mm/day	High Demand	"Lush tropical plantings"
4.5	mm/day	Medium Demand	
2	mm/day	Low Demand	"Lawns"

Spring / Autumn / Winter 270 days

2	mm/day	High Demand	"Lush tropical plantings"
1	mm/day	Medium Demand	
0	mm/day	Low Demand	"Lawns"

Irrigated Areas

1	ha	High Demand
1	ha	Medium Demand
1.4	ha	Low Demand

Summer Demand - Volume

6300	kl	High Demand
4050	kl	Medium Demand
2520	kl	Low Demand

Spring, Autumn and Winter Demand - Volume

5400	kl	High Demand
2700	kl	Medium Demand
0	kl	Low Demand

Summer Demand - Flow

5	l/s	High Demand
3	l/s	Medium Demand
2	l/s	Low Demand

Assuming an irrigation period / day of 4.0 hours

Spring, Autumn and Winter Demand - Flow

1	l/s	High Demand
1	l/s	Medium Demand
0	l/s	Low Demand

Peak demand

10 l/s

Annual demand

21.0 Ml

APPENDIX J

Chlorine Mass Balance

Safe level of chlorine in aquatic environment

13µg/L ANZEC Guidelines for 80% protection
0.013mg/L

Pool volume
7000m^3

Rate to sewer
14l/s

Runoff from pools and rainfall on pool from XP-Rafts model for developed site

Flow to sewer in 24 hrs
1210m^3

Flow to sewer in 48 hrs
2419m^3

Dilution due to direct rainfall on pools

24 hr storms		
ARI	Rainfall vol	Concentration
	m^3	mg/L
2	1421	1.247
5	1861	1.185
10	2120	1.151
100	3246	1.025

48 hr storms		
ARI	Rainfall vol	Concentration
	m^3	mg/L
2	1788	1.195
5	2379	1.120
10	2735	1.079
100	4287	0.930

Dilution due to mixing with other runoff, for any flows that exceed the flow allowable to the sewer

24 hr storms			
ARI	Runoff from pools	Flow from remainder of site	Concentration
	m^3	m^3	mg/L
2	23	20850	0
5	474	29080	0
10	723	33480	0
100	1851	53460	0.012

48 hr storms			
ARI	Runoff from pools	Flow from remainder of site	Concentration
	m^3	m^3	mg/L
2	386	25170	0
5	995	37040	0
10	1340	43400	0
100	2890	71330	0.006