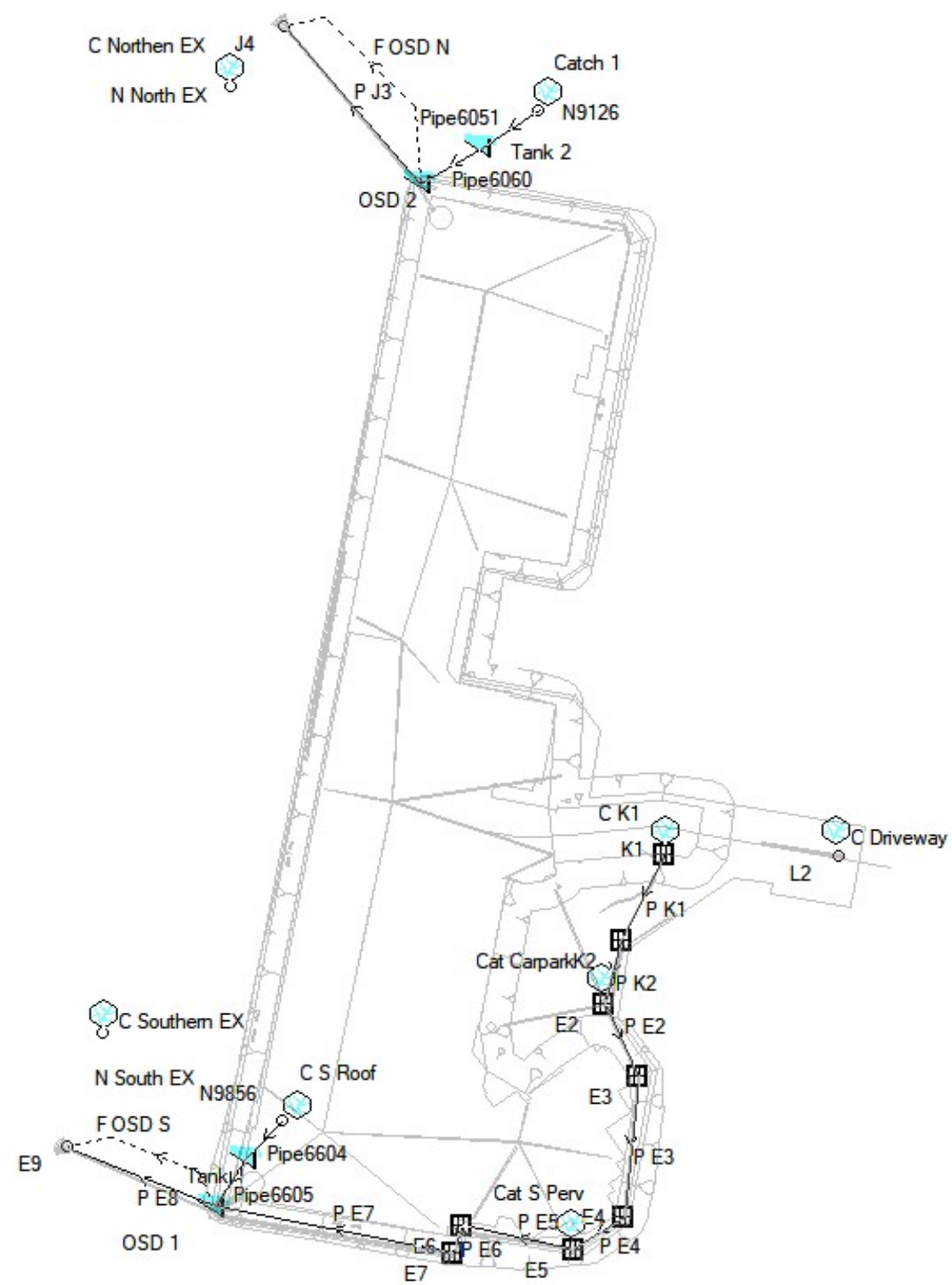




PIT / NODE DETAILS			Version 13														
Name	Type	Family	Size	Ponding Volume (cu.m)	Pressure Change Coeff. Ku	Surface Elev (m)	Max Pond Depth (m)	Base Inflow (cu.m/s)	Blocking Factor	x	y	Bolt-down lid	id	Part Full Shock Loss	Inflow Hydrograph	Pit is	
K1	OnGrade	SIP	600 mm Sqre SIP		1.5		4.52		0	0	959.837	986.193	No	13	1 x Ku	No	New
K2	OnGrade	SIP	600 mm Sqre SIP			1.5	4.6		0	0	954.691	975.604	No	14	1 x Ku	No	New
E2	OnGrade	SIP	600 mm Sqre SIP		1.5		4.53		0	0	952.674	967.74	No	9	1 x Ku	No	New
E3	OnGrade	SIP	600 mm Sqre SIP		1.5		4.49		0	0	956.74	958.689	No	7	1 x Ku	No	New
E4	OnGrade	SIP	600 mm Sqre SIP		1.5		4.41		0	0	955.027	941.37	No	1	1 x Ku	No	New
E5	OnGrade	SIP	600 mm Sqre SIP		1.5		4.36		0	0	948.979	937.302	No	6	1 x Ku	No	New
E6	OnGrade	SIP	600 mm Sqre SIP		1.5		4.29		0	0	935.627	940.259	No	102	1 x Ku	No	New
E7	OnGrade	SIP	600 mm Sqre SIP		1.5		4.28		0	0	934.454	936.896	No	4	1 x Ku	No	New
E9	Node						4		0		888.142	950.005		112		No	
L2	Node						4.4		0		980.831	986.085		113		No	
N South EX	Node						4		4		892.445	964.169		149		No	
N North EX	Node						4		4		907.853	1081.527		150		No	
N9126	Node						9.8		0		944.771	1078.593		1418375		No	
J4	Node						4		0		914.269	1088.934		111		No	
N9856	Node						9.8		0		913.941	953.164		1547863		No	

[illegible]

SUB-CATCHMENT DETAILS																						
Name	Pit or Node	Total Area (ha)	Paved Area %	Grass Area %	Supp Area %	Paved Time (min)	Grass Time (min)	Supp Time (min)	Paved Length (m)	Grass Length (m)	Supp Length (m)	Paved Slope(%)	Grass Slope %	Supp Slope %	Paved Rough	Grass Rough	Supp Rough	Lag Time or Factor	Gutter Length (m)	Gutter Slope %	Gutter FlowFactor	Rainfall Multiplier
C K1	K1	0.0024		80	20	0	5	6	0										0			1
Cat Carpark	E2	0.081		65	35	0	5	6	0										0			1
Cat S Perv	E5	0.044		0	80	20	0	0	5	0	20	0	0	0.5	30	0	0.17	0.01	0			1
C Driveway	L2	0.015		80	20	0	5	6	0										0			1
C Southern EX	N South EX	0.3638		0	100	0	0	20	0										0			1
C Northern EX	N North EX	0.1377		0	100	0	0	20	0										0			1
Catch 1	N9126	0.1377		82.5	17.5	0	7	0	0	0	25	0	30	0.5	0	0.1	0.17	0	0			1
C S Roof	N9856	0.22		100	0	0	7	0	0										0			1

PIPE DETAILS																			
Name	From	To	Length (m)	U/S IL (m)	D/S IL (m)	Slope (%)	Type	Dia (mm)	I.D. (mm)	Rough	Pipe Is	No. Pipes	Chg From	At Chg	Chg (m)	RI (m)	Chg (m)	RL (m)	etc (m)
P K1	K1	K2	11.295	4.22	4.05	1.51	uPVC, under roads	100	105	0.01	NewFixed	1	K1		0				
P K2	K2	E2	7.788	4.05	3.92	1.67	uPVC, under roads	150	154	0.01	NewFixed	1	K2		0				
P E2	E2	E3	9.563	3.92	3.87	0.52	uPVC, not under roads	300	303	0.01	NewFixed	1	E2		0				
P E3	E3	E4	16.695	3.87	3.785	0.51	uPVC, not under roads	225	242	0.01	NewFixed	1	E3		0				
P E4	E4	E5	6.992	3.785	3.75	0.5	uPVC, not under roads	225	242	0.01	NewFixed	1	E4		0				
P E5	E5	E6	13.239	3.75	3.68	0.53	uPVC, not under roads	225	242	0.01	NewFixed	1	E5		0				
P E6	E6	E7	2.393	3.68	3.67	0.42	uPVC, not under roads	300	303	0.01	NewFixed	1	E6		0				
P E7	E7	OSD 1	28.061	3.67	3.53	0.5	uPVC, not under roads	300	303	0.01	NewFixed	1	E7		0				
P E8	OSD 1	E9	18	3.4	3.328	0.4	uPVC, not under roads	375	386	0.01	NewFixed	1	OSD 1		0				
Pipe6051	N9126	Tank 2	5	9	8.5	10	uPVC, not under roads	225	242	0.01	NewFixed	1	N9126		0				
Pipe6060	Tank 2	OSD 2	4	7.85	7.7	3.75	uPVC, not under roads	375	386	0.01	NewFixed	1	Tank 2		0				
P J3	OSD 2	J4	24.085	3.41	3.314	0.4	uPVC, not under roads	300	303	0.01	NewFixed	1	OSD 2		0				
Pipe6604	N9856	Tank 1	5	9	8.5	10	uPVC, not under roads	225	242	0.01	NewFixed	1	N9856		0				
Pipe6605	Tank 1	OSD 1	4	7.8	7.5	7.5	Concrete, not under roads	450	450	0.013	NewFixed	1	Tank 1		0				

DETAILS of SERVICES CROSSING PIPES										
Pipe	Chg	Bottom	Height of Service	Chg	Bottom	Height of Service	Chg	Bottom	Height of Service	etc

	(m)	Elev (m)	(m)	(m)	Elev (m)	(m)	(m)	Elev (m)	(m)	etc					
CHANNEL DETAILS															
Name	From	To	Type	Length (m)	U/S IL (m)	D/S IL (m)	Slope (%)	Base Width (m)	L.B. Slope (1:?)	R.B. Slope (1:?)	Manning n	Depth (m)	Roofed		
OVERFLOW ROUTE DETAILS															
Name	From	To	Travel Time (min)	Spill Level (m)	Crest Length (m)	Weir Coeff. C	Cross Section	Safe Depth Major Storms (m)	SafeDepth Minor Storms (m)	Safe DxV (sq.m/sec)	Bed Slope (%)	D/S Area Contributing %	id	U/S IL	D/S IL Length (m)
F OSD S	OSD 1	E9		1	4.2	2.4	1.66 Pathway 4m wide	0.3		0.3	0.6	0.5	0	11521	
F OSD N	OSD 2	J4		1	4.1	2.4	1.66 Pathway 4m wide	0.3		0.3	0.6	0.5	0	3453	

PIPE COVER DETAILS					
Name	Type	Dia (mm)	Safe Cover (m)	Cover (m)	
P K1	uPVC, under roads	105	0.3	0.19	Unsafe
P K2	uPVC, under roads	154	0.3	0.39	
P E2	uPVC, not under roads	303	0.3	0.3	
P E3	uPVC, not under roads	242	0.3	0.37	
P E4	uPVC, not under roads	242	0.3	0.36	
P E5	uPVC, not under roads	242	0.3	0.36	
P E6	uPVC, not under roads	303	0.3	0.3	
P E7	uPVC, not under roads	303	0.3	-0.47	Unsafe
P E8	uPVC, not under roads	386	0.3	-0.42	Unsafe
Pipe6051	uPVC, not under roads	242	0.3	-2.75	Unsafe
Pipe6060	uPVC, not under roads	386	0.3	-4.71	Unsafe
P J3	uPVC, not under roads	303	0.3	-0.34	Unsafe
Pipe6604	uPVC, not under roads	242	0.3	-2.75	Unsafe
Pipe6605	Concrete, not under roads	450	0.6	-4.62	Unsafe

This model has no pipes with non-return valves

PIT / NODE DETAILS

Name	Max HGL	Max Pond HGL	Max Surface Flow Arriving (cu.m/s)	Version 8 Max Pond Volume (cu.m)	Min Freeboard (m)	Overflow (cu.m/s)	Constraint
K1	4.25		0.001			0.27	None
K2	4.12		0			0.48	None
E2	4.11		0.028			0.42	None
E3	4.08		0			0.41	None
E4	4.02		0			0.39	None
E5	3.98		0.01			0.38	None
E6	3.88		0			0.41	None
E7	3.82		0			0.46	None
E9	3.48		0				
N9126	9.13		0.044				
J4	3.42		0				
N9856	9.18		0.081				

SUB-CATCHMENT DETAILS

Name	Max Flow Q (cu.m/s)	Paved Max Q (cu.m/s)	Grassed Max Q (cu.m/s)	Paved Tc (min)	Grassed Tc (min)	Supp. Tc (min)	Due to Storm
C K1	0.001	0.001		0	5	6	0 AR&R 5 year, 20 minutes storm, average 83.9 mm/h, Zone 1
Cat Carpark	0.028	0.02		0.008	5	6	0 AR&R 5 year, 30 minutes storm, average 68.5 mm/h, Zone 1
Cat S Perv	0.01	0		0.01	0	12.05	5 AR&R 5 year, 20 minutes storm, average 83.9 mm/h, Zone 1
C Driveway	0.005	0.005		0.001	5	6	0 AR&R 5 year, 20 minutes storm, average 83.9 mm/h, Zone 1
C Southern EX	0.065	0		0.065	0	20	0 AR&R 5 year, 2 hours storm, average 31.5 mm/h, Zone 1
C Northen EX	0.024	0		0.024	0	20	0 AR&R 5 year, 2 hours storm, average 31.5 mm/h, Zone 1
Catch 1	0.044	0.042		0.004	7	13.78	0 AR&R 5 year, 20 minutes storm, average 83.9 mm/h, Zone 1
C S Roof	0.081	0.081		0	7	0	0 AR&R 5 year, 20 minutes storm, average 83.9 mm/h, Zone 1

Outflow Volumes for Total Catchment (0.41 impervious + 0.59 pervious = 1.00 total ha)

Storm	Total Rainfall cu.m	Total Runoff cu.m (Runoff %)	Impervious Runoff cu.m (Runoff %)	Pervious Runoff cu.m (Runoff %)
AR&R 5 year, 5 minutes storm, average 148 mm/h, Zone 1	123.53	56.56 (45.8%)	45.35 (89.9%)	11.21 (15.3%)
AR&R 5 year, 10 minutes storm, average 114 mm/h, Zone 1	190.3	111.42 (58.5%)	72.03 (92.7%)	39.39 (35.0%)
AR&R 5 year, 20 minutes storm, average 83.9 mm/h, Zone 1	280.11	186.25 (66.5%)	107.91 (94.3%)	78.33 (47.3%)
AR&R 5 year, 30 minutes storm, average 68.5 mm/h, Zone 1	343.05	233.24 (68.0%)	133.06 (95.0%)	100.18 (49.4%)
AR&R 5 year, 1 hour storm, average 47.0 mm/h, Zone 1	470.75	330.23 (70.1%)	184.08 (95.8%)	146.15 (52.5%)
AR&R 5 year, 2 hours storm, average 31.5 mm/h, Zone 1	631.01	445.30 (70.6%)	248.11 (96.3%)	197.19 (52.8%)

PIPE DETAILS

Name	Max Q (cu.m/s)	Max V (m/s)	Max U/S HGL (m)	Max D/S HGL (m)	Due to Storm
P K1	0.001	0.67	4.241	4.119	AR&R 5 year, 20 minutes storm, average 83.9 mm/h, Zone 1
P K2	0.002	0.22	4.118	4.115	AR&R 5 year, 30 minutes storm, average 68.5 mm/h, Zone 1
P E2	0.027	0.64	4.093	4.08	AR&R 5 year, 30 minutes storm, average 68.5 mm/h, Zone 1
P E3	0.026	0.7	4.052	4.023	AR&R 5 year, 30 minutes storm, average 68.5 mm/h, Zone 1
P E4	0.025	0.6	3.995	3.977	AR&R 5 year, 20 minutes storm, average 83.9 mm/h, Zone 1
P E5	0.034	0.96	3.922	3.883	AR&R 5 year, 30 minutes storm, average 68.5 mm/h, Zone 1
P E6	0.034	0.96	3.851	3.818	AR&R 5 year, 30 minutes storm, average 68.5 mm/h, Zone 1
P E7	0.033	2.17	3.751	3.657	AR&R 5 year, 30 minutes storm, average 68.5 mm/h, Zone 1
P E8	0.052	1.19	3.571	3.483	AR&R 5 year, 2 hours storm, average 31.5 mm/h, Zone 1
Pipe6051	0.044	3.8	9.127	8.573	AR&R 5 year, 20 minutes storm, average 83.9 mm/h, Zone 1
Pipe6060	0.044	2.55	7.985	7.78	AR&R 5 year, 20 minutes storm, average 83.9 mm/h, Zone 1
P J3	0.023	0.97	3.52	3.425	AR&R 5 year, 2 hours storm, average 31.5 mm/h, Zone 1
Pipe6604	0.08	4.45	9.182	8.601	AR&R 5 year, 20 minutes storm, average 83.9 mm/h, Zone 1

Pipe66050.083.177.9737.598 AR&R 5 year, 20 minutes storm, average 83.9 mm/h, Zone 1

CHANNEL DETAILS

Name	Max Q (cu.m/s)	Max V (m/s)	Due to Storm
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OVERFLOW ROUTE DETAILS

Name	Max Q U/S	Max Q D/S	Safe Q	Max D	Max DxV	Max Width	Max V	Due to Storm
F OSD S		0	0	1.754	0	0	0	0
F OSD N		0	0	1.754	0	0	0	0

DETENTION BASIN DETAILS

Name	Max WL	MaxVol	Max Q Total	Max Q Low Level	Max Q High Level	
OSD 1	3.65	32.7	0.052	0.052		0
Tank 2	8.04	10.8	0.044	0.044		0
OSD 2	3.63	7.5	0.023	0.023		0
Tank 1	8.08	10.9	0.08	0.08		0

CONTINUITY CHECK for AR&R 5 year, 2 hours storm, average 31.5 mm/h, Zone 1

Node	Inflow (cu.m)	Outflow (cu.m)	Storage Change (cu.m)	Difference %
K1	1.35	1.35	0	-0.5
K2	1.35	1.36	0	-0.2
E2	43.24	43.3	0	-0.1
E3	43.3	43.39	0	-0.2
E4	43.39	43.48	0	-0.2
E5	60.24	60.32	0	-0.1
E6	60.32	60.39	0	-0.1
E7	60.39	60.13	0	0.4
OSD 1	185.97	186.9	0.02	-0.5
E9	178.52	178.52	0	0
L2	8.42	8.42	0	0
N South EX	45117.69	45117.69	0	0
N North EX	45044.56	45044.56	0	0
N9126	78.23	78.25	0	0
Tank 2	78.25	69.14	10.25	-1.5
OSD 2	69.14	69.4	0.02	-0.4
J4	66.94	66.94	0	0
N9856	136.4	136.43	0	0
Tank 1	136.43	125.83	10.08	0.4

Run Log for 20180531 Everglades run at 17:12:14 on 31/5/2018
No water upwelling from any pit. Freeboard was adequate at all pits.
Flows were safe in all overflow routes.

PIT / NODE DETAILS

Name	Max HGL	Max Pond HGL	Max Surface Flow Arriving (cu.m/s)	Version 8 Max Pond Volume (cu.m)	Min Freeboard (m)	Overflow (cu.m/s)	Constraint
K1	4.25		0.001			0.27	None
K2	4.16		0			0.44	None
E2	4.16		0.032			0.37	None
E3	4.14		0			0.35	None
E4	4.07		0			0.34	None
E5	4.02		0.012			0.34	None
E6	3.9		0			0.39	None
E7	3.83		0			0.45	None
E9	3.49		0				
N9126	9.14		0.051				
J4	3.43		0				
N9856	9.2		0.091				

SUB-CATCHMENT DETAILS

Name	Max Flow Q (cu.m/s)	Paved Max Q (cu.m/s)	Grassed Max Q (cu.m/s)	Paved Tc (min)	Grassed Tc (min)	Supp. Tc (min)	Due to Storm
C K1	0.001	0.001		0	5	6	0 AR&R 10 year, 20 minutes storm, average 94.3 mm/h, Zone 1
Cat Carpark	0.032	0.023		0.01	5	6	0 AR&R 10 year, 2 hours storm, average 35.7 mm/h, Zone 1
Cat S Perv	0.012	0		0.012	0	11.5	5 AR&R 10 year, 20 minutes storm, average 94.3 mm/h, Zone 1
C Driveway	0.006	0.005		0.001	5	6	0 AR&R 10 year, 20 minutes storm, average 94.3 mm/h, Zone 1
C Southern EX	0.078	0		0.078	0	20	0 AR&R 10 year, 2 hours storm, average 35.7 mm/h, Zone 1
C Northen EX	0.029	0		0.029	0	20	0 AR&R 10 year, 2 hours storm, average 35.7 mm/h, Zone 1
Catch 1	0.051	0.047		0.005	7	13.15	0 AR&R 10 year, 20 minutes storm, average 94.3 mm/h, Zone 1
C S Roof	0.091	0.091		0	7	0	0 AR&R 10 year, 20 minutes storm, average 94.3 mm/h, Zone 1

Outflow Volumes for Total Catchment (0.41 impervious + 0.59 pervious = 1.00 total ha)

Storm	Total Rainfall cu.m	Total Runoff cu.m (Runoff %)	Impervious Runoff cu.m (Runoff %)	Pervious Runoff cu.m (Runoff %)
AR&R 10 year, 5 minutes storm, average 165 mm/h, Zone 1	137.72	68.93 (50.1%)	51.02 (90.7%)	17.91 (22.0%)
AR&R 10 year, 10 minutes storm, average 128 mm/h, Zone 1	213.67	134.30 (62.9%)	81.37 (93.3%)	52.93 (41.9%)
AR&R 10 year, 20 minutes storm, average 94.3 mm/h, Zone 1	314.84	220.46 (70.0%)	121.79 (94.7%)	98.67 (53.0%)
AR&R 10 year, 30 minutes storm, average 77.2 mm/h, Zone 1	386.62	276.15 (71.4%)	150.46 (95.3%)	125.68 (54.9%)
AR&R 10 year, 1 hour storm, average 53.2 mm/h, Zone 1	532.86	391.08 (73.4%)	208.89 (96.0%)	182.18 (57.8%)
AR&R 10 year, 2 hours storm, average 35.7 mm/h, Zone 1	715.13	528.37 (73.9%)	281.71 (96.5%)	246.66 (58.3%)

PIPE DETAILS

Name	Max Q (cu.m/s)	Max V (m/s)	Max U/S HGL (m)	Max D/S HGL (m)	Due to Storm
P K1	0.001	0.71	4.242	4.162	AR&R 10 year, 20 minutes storm, average 94.3 mm/h, Zone 1
P K2	0.002	0.17	4.162	4.16	AR&R 10 year, 30 minutes storm, average 77.2 mm/h, Zone 1
P E2	0.03	0.53	4.145	4.137	AR&R 10 year, 2 hours storm, average 35.7 mm/h, Zone 1
P E3	0.028	0.61	4.111	4.072	AR&R 10 year, 20 minutes storm, average 94.3 mm/h, Zone 1
P E4	0.027	0.59	4.046	4.019	AR&R 10 year, 20 minutes storm, average 94.3 mm/h, Zone 1
P E5	0.037	0.86	3.992	3.897	AR&R 10 year, 20 minutes storm, average 94.3 mm/h, Zone 1
P E6	0.037	0.98	3.862	3.828	AR&R 10 year, 20 minutes storm, average 94.3 mm/h, Zone 1
P E7	0.037	1.74	3.772	3.671	AR&R 10 year, 20 minutes storm, average 94.3 mm/h, Zone 1
P E8	0.058	1.23	3.58	3.491	AR&R 10 year, 2 hours storm, average 35.7 mm/h, Zone 1
Pipe6051	0.051	3.94	9.136	8.578	AR&R 10 year, 20 minutes storm, average 94.3 mm/h, Zone 1
Pipe6060	0.05	2.65	7.993	7.785	AR&R 10 year, 20 minutes storm, average 94.3 mm/h, Zone 1
P J3	0.025	0.99	3.525	3.431	AR&R 10 year, 2 hours storm, average 35.7 mm/h, Zone 1
Pipe6604	0.09	4.61	9.198	8.607	AR&R 10 year, 20 minutes storm, average 94.3 mm/h, Zone 1

Pipe66050.093.277.9837.604 AR&R 10 year, 20 minutes storm, average 94.3 mm/h, Zone 1

CHANNEL DETAILS

Name	Max Q (cu.m/s)	Max V (m/s)	Due to Storm
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OVERFLOW ROUTE DETAILS

Name	Max Q U/S	Max Q D/S	Safe Q	Max D	Max DxV	Max Width	Max V	Due to Storm
F OSD S		0	0	1.754	0	0	0	0
F OSD N		0	0	1.754	0	0	0	0

DETENTION BASIN DETAILS

Name	Max WL	MaxVol	Max Q Total	Max Q Low Level	Max Q High Level	
OSD 1	3.67	39.9	0.058	0.058		0
Tank 2	8.05	10.8	0.05	0.05		0
OSD 2	3.66	10.4	0.025	0.025		0
Tank 1	8.1	10.9	0.09	0.09		0

CONTINUITY CHECK for AR&R 10 year, 2 hours storm, average 35.7 mm/h, Zone 1

Node	Inflow (cu.m)	Outflow (cu.m)	Storage Change (cu.m)	Difference %
K1	1.55	1.55	0	-0.4
K2	1.55	1.56	0	-0.2
E2	50.21	50.26	0	-0.1
E3	50.26	50.33	0	-0.1
E4	50.33	50.43	0	-0.2
E5	70.86	70.94	0	-0.1
E6	70.94	71.01	0	-0.1
E7	71.01	70.55	0	0.6
OSD 1	215.03	216.08	0.02	-0.5
E9	206.3	206.3	0	0
L2	9.67	9.67	0	0
N South EX	45147.56	45147.56	0	0
N North EX	45055.88	45055.88	0	0
N9126	89.75	89.77	0	0
Tank 2	89.77	80.67	10.25	-1.3
OSD 2	80.67	80.9	0.02	-0.3
J4	77.86	77.86	0	0
N9856	154.88	154.91	0	0
Tank 1	154.91	144.48	10.08	0.2

Run Log for 20180531 Everglades run at 17:13:48 on 31/5/2018
No water upwelling from any pit. Freeboard was adequate at all pits.
Flows were safe in all overflow routes.

PIT / NODE DETAILS

Name	Max HGL	Max Pond HGL	Max Surface Flow Arriving (cu.m/s)	Version 8 Max Pond Volume (cu.m)	Min Freeboard (m)	Overflow (cu.m/s)	Constraint
K1	4.27		0.001			0.25	None
K2	4.26		0			0.34	None
E2	4.26		0.037			0.27	None
E3	4.24		0			0.25	None
E4	4.15		0			0.26	None
E5	4.09		0.015			0.27	None
E6	3.92		0			0.37	None
E7	3.85		0			0.43	None
E9	3.5		0				
N9126	9.15		0.059				
J4	3.44		0				
N9856	9.22		0.104				

SUB-CATCHMENT DETAILS

Name	Max Flow Q (cu.m/s)	Paved Max Q (cu.m/s)	Grassed Max Q (cu.m/s)	Paved Tc (min)	Grassed Tc (min)	Supp. Tc (min)	Due to Storm
C K1	0.001	0.001		0	5	6	0 AR&R 20 year, 20 minutes storm, average 108 mm/h, Zone 1
Cat Carpark	0.037	0.026		0.012	5	6	0 AR&R 20 year, 2 hours storm, average 41.2 mm/h, Zone 1
Cat S Perv	0.015	0		0.015	0	10.89	5 AR&R 20 year, 20 minutes storm, average 108 mm/h, Zone 1
C Driveway	0.007	0.006		0.001	5	6	0 AR&R 20 year, 20 minutes storm, average 108 mm/h, Zone 1
C Southern EX	0.095	0		0.095	0	20	0 AR&R 20 year, 2 hours storm, average 41.2 mm/h, Zone 1
C Northen EX	0.036	0		0.036	0	20	0 AR&R 20 year, 2 hours storm, average 41.2 mm/h, Zone 1
Catch 1	0.059	0.054		0.007	7	12.45	0 AR&R 20 year, 20 minutes storm, average 108 mm/h, Zone 1
C S Roof	0.104	0.104		0	7	0	0 AR&R 20 year, 20 minutes storm, average 108 mm/h, Zone 1

Outflow Volumes for Total Catchment (0.41 impervious + 0.59 pervious = 1.00 total ha)

Storm	Total Rainfall cu.m	Total Runoff cu.m (Runoff %)	Impervious Runoff cu.m (Runoff %)	Pervious Runoff cu.m (Runoff %)
AR&R 20 year, 5 minutes storm, average 189 mm/h, Zone 1	157.75	88.38 (56.0%)	59.03 (91.6%)	29.36 (31.5%)
AR&R 20 year, 10 minutes storm, average 147 mm/h, Zone 1	245.39	165.52 (67.5%)	94.04 (93.9%)	71.48 (49.2%)
AR&R 20 year, 20 minutes storm, average 108 mm/h, Zone 1	360.58	265.63 (73.7%)	140.06 (95.1%)	125.57 (58.9%)
AR&R 20 year, 30 minutes storm, average 88.7 mm/h, Zone 1	444.21	333.07 (75.0%)	173.47 (95.6%)	159.59 (60.7%)
AR&R 20 year, 1 hour storm, average 61.3 mm/h, Zone 1	613.99	470.84 (76.7%)	241.31 (96.3%)	229.53 (63.2%)
AR&R 20 year, 2 hours storm, average 41.2 mm/h, Zone 1	825.3	637.73 (77.3%)	325.73 (96.7%)	312.00 (63.9%)

PIPE DETAILS

Name	Max Q (cu.m/s)	Max V (m/s)	Max U/S HGL (m)	Max D/S HGL (m)	Due to Storm
P K1	0.001	0.37	4.266	4.263	AR&R 20 year, 30 minutes storm, average 88.7 mm/h, Zone 1
P K2	0.003	0.17	4.263	4.261	AR&R 20 year, 30 minutes storm, average 88.7 mm/h, Zone 1
P E2	0.033	0.46	4.247	4.236	AR&R 20 year, 30 minutes storm, average 88.7 mm/h, Zone 1
P E3	0.031	0.68	4.202	4.154	AR&R 20 year, 20 minutes storm, average 108 mm/h, Zone 1
P E4	0.03	0.66	4.122	4.088	AR&R 20 year, 2 hours storm, average 41.2 mm/h, Zone 1
P E5	0.044	0.96	4.017	3.921	AR&R 20 year, 20 minutes storm, average 108 mm/h, Zone 1
P E6	0.044	1.02	3.881	3.846	AR&R 20 year, 20 minutes storm, average 108 mm/h, Zone 1
P E7	0.044	1.54	3.797	3.704	AR&R 20 year, 20 minutes storm, average 108 mm/h, Zone 1
P E8	0.064	1.27	3.591	3.501	AR&R 20 year, 2 hours storm, average 41.2 mm/h, Zone 1
Pipe6051	0.059	4.1	9.149	8.585	AR&R 20 year, 20 minutes storm, average 108 mm/h, Zone 1
Pipe6060	0.059	2.77	8.004	7.791	AR&R 20 year, 20 minutes storm, average 108 mm/h, Zone 1
P J3	0.028	1.02	3.532	3.437	AR&R 20 year, 2 hours storm, average 41.2 mm/h, Zone 1
Pipe6604	0.104	4.78	9.223	8.616	AR&R 20 year, 20 minutes storm, average 108 mm/h, Zone 1

Pipe66050.1043.417.9967.611 AR&R 20 year, 20 minutes storm, average 108 mm/h, Zone 1

CHANNEL DETAILS

Name	Max Q (cu.m/s)	Max V (m/s)	Due to Storm
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OVERFLOW ROUTE DETAILS

Name	Max Q U/S	Max Q D/S	Safe Q	Max D	Max DxV	Max Width	Max V	Due to Storm
F OSD S		0	0	1.754	0	0	0	0
F OSD N		0	0	1.754	0	0	0	0

DETENTION BASIN DETAILS

Name	Max WL	MaxVol	Max Q Total	Max Q Low Level	Max Q High Level	
OSD 1	3.7	49.8	0.064	0.064		0
Tank 2	8.07	10.8	0.059	0.059		0
OSD 2	3.7	14.3	0.028	0.028		0
Tank 1	8.13	10.9	0.104	0.104		0

CONTINUITY CHECK for AR&R 20 year, 2 hours storm, average 41.2 mm/h, Zone 1

Node	Inflow (cu.m)	Outflow (cu.m)	Storage Change (cu.m)	Difference %
K1	1.81	1.82	0	-0.2
K2	1.82	1.83	0	-0.9
E2	59.37	59.3	0	0.1
E3	59.3	59.39	0	-0.1
E4	59.39	59.5	0	-0.2
E5	84.74	84.82	0	-0.1
E6	84.82	84.9	0	-0.1
E7	84.9	84.46	0	0.5
OSD 1	253.23	254.69	0.03	-0.6
E9	242.86	242.86	0	0
L2	11.32	11.32	0	0
N South EX	45187.07	45187.07	0	0
N North EX	45070.77	45070.77	0	0
N9126	104.87	104.89	0	0
Tank 2	104.89	95.7	10.25	-1
OSD 2	95.7	96.04	0.02	-0.4
J4	92.24	92.24	0	0
N9856	179.08	179.11	0	0
Tank 1	179.11	168.77	10.08	0.1

Run Log for 20180531 Everglades run at 17:14:53 on 31/5/2018
No water upwelling from any pit. Freeboard was adequate at all pits.
Flows were safe in all overflow routes.

PIT / NODE DETAILS

Name	Max HGL	Max Pond HGL	Max Surface Flow Arriving (cu.m/s)	Version 8 Max Pond Volume (cu.m)	Min Freeboard (m)	Overflow (cu.m/s)	Constraint
K1	4.37		0.001			0.15	None
K2	4.37		0			0.23	None
E2	4.36		0.042			0.17	None
E3	4.34		0			0.15	None
E4	4.24		0			0.17	None
E5	4.16		0.018			0.2	None
E6	3.94		0			0.35	None
E7	3.87		0			0.41	None
E9	3.51		0				
N9126	9.16		0.066				
J4	3.44		0				
N9856	9.26		0.114				

SUB-CATCHMENT DETAILS

Name	Max Flow Q (cu.m/s)	Paved Max Q (cu.m/s)	Grassed Max Q (cu.m/s)	Paved Tc (min)	Grassed Tc (min)	Supp. Tc (min)	Due to Storm
C K1	0.001	0.001		0	5	6	0 AR&R 50 year, 20 minutes storm, average 126 mm/h, Zone 1
Cat Carpark	0.042	0.029		0.013	5	6	0 AR&R 50 year, 20 minutes storm, average 126 mm/h, Zone 1
Cat S Perv	0.018	0		0.018	0	10.24	5 AR&R 50 year, 20 minutes storm, average 126 mm/h, Zone 1
C Driveway	0.008	0.007		0.001	5	6	0 AR&R 50 year, 20 minutes storm, average 126 mm/h, Zone 1
C Southern EX	0.109	0		0.109	0	20	0 AR&R 50 year, 2 hours storm, average 48.5 mm/h, Zone 1
C Northen EX	0.041	0		0.041	0	20	0 AR&R 50 year, 2 hours storm, average 48.5 mm/h, Zone 1
Catch 1	0.066	0.059		0.009	7	11.71	0 AR&R 50 year, 20 minutes storm, average 126 mm/h, Zone 1
C S Roof	0.114	0.114		0	7	0	0 AR&R 50 year, 20 minutes storm, average 126 mm/h, Zone 1

Outflow Volumes for Total Catchment (0.41 impervious + 0.59 pervious = 1.00 total ha)

Storm	Total Rainfall cu.m	Total Runoff cu.m (Runoff %)	Impervious Runoff cu.m (Runoff %)	Pervious Runoff cu.m (Runoff %)
AR&R 50 year, 5 minutes storm, average 220 mm/h, Zone 1	183.63	113.89 (62.0%)	69.36 (92.5%)	44.53 (41.0%)
AR&R 50 year, 10 minutes storm, average 171 mm/h, Zone 1	285.46	204.93 (71.8%)	110.05 (94.4%)	94.89 (56.2%)
AR&R 50 year, 20 minutes storm, average 126 mm/h, Zone 1	420.67	324.28 (77.1%)	164.07 (95.5%)	160.21 (64.4%)
AR&R 50 year, 30 minutes storm, average 104 mm/h, Zone 1	520.83	407.92 (78.3%)	204.09 (96.0%)	203.83 (66.1%)
AR&R 50 year, 1 hour storm, average 71.9 mm/h, Zone 1	720.14	575.12 (79.9%)	283.72 (96.5%)	291.40 (68.4%)
AR&R 50 year, 2 hours storm, average 48.5 mm/h, Zone 1	971.58	782.80 (80.6%)	384.17 (96.8%)	398.63 (69.3%)

PIPE DETAILS

Name	Max Q (cu.m/s)	Max V (m/s)	Max U/S HGL (m)	Max D/S HGL (m)	Due to Storm
P K1	0.002	0.25	4.371	4.367	AR&R 50 year, 20 minutes storm, average 126 mm/h, Zone 1
P K2	0.004	0.24	4.367	4.365	AR&R 50 year, 20 minutes storm, average 126 mm/h, Zone 1
P E2	0.037	0.51	4.349	4.336	AR&R 50 year, 20 minutes storm, average 126 mm/h, Zone 1
P E3	0.034	0.73	4.298	4.241	AR&R 50 year, 20 minutes storm, average 126 mm/h, Zone 1
P E4	0.033	0.71	4.203	4.161	AR&R 50 year, 2 hours storm, average 48.5 mm/h, Zone 1
P E5	0.05	1.09	4.069	3.943	AR&R 50 year, 20 minutes storm, average 126 mm/h, Zone 1
P E6	0.05	0.99	3.899	3.87	AR&R 50 year, 20 minutes storm, average 126 mm/h, Zone 1
P E7	0.05	1.46	3.816	3.739	AR&R 50 year, 20 minutes storm, average 126 mm/h, Zone 1
P E8	0.071	1.3	3.602	3.511	AR&R 50 year, 2 hours storm, average 48.5 mm/h, Zone 1
Pipe6051	0.066	4.18	9.159	8.591	AR&R 50 year, 20 minutes storm, average 126 mm/h, Zone 1
Pipe6060	0.066	2.86	8.013	7.797	AR&R 50 year, 20 minutes storm, average 126 mm/h, Zone 1
P J3	0.03	1.05	3.538	3.442	AR&R 50 year, 2 hours storm, average 48.5 mm/h, Zone 1
Pipe6604	0.114	4.9	9.263	8.622	AR&R 50 year, 20 minutes storm, average 126 mm/h, Zone 1

Pipe66050.1143.518.0057.616 AR&R 50 year, 20 minutes storm, average 126 mm/h, Zone 1

CHANNEL DETAILS

Name	Max Q (cu.m/s)	Max V (m/s)	Due to Storm
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OVERFLOW ROUTE DETAILS

Name	Max Q U/S	Max Q D/S	Safe Q	Max D	Max DxV	Max Width	Max V	Due to Storm
F OSD S	0	0	0	1.754	0	0	0	0
F OSD N	0	0	0	1.754	0	0	0	0

DETENTION BASIN DETAILS

Name	Max WL	MaxVol	Max Q Total	Max Q Low Level	Max Q High Level
OSD 1	3.74	60.3	0.071	0.071	0
Tank 2	8.08	10.9	0.066	0.066	0
OSD 2	3.73	18.2	0.03	0.03	0
Tank 1	8.16	10.9	0.114	0.114	0

CONTINUITY CHECK for AR&R 50 year, 2 hours storm, average 48.5 mm/h, Zone 1

Node	Inflow (cu.m)	Outflow (cu.m)	Storage Change (cu.m)	Difference %
K1	2.16	2.17	0	-0.3
K2	2.17	2.22	0	-2.2
E2	71.55	71.39	0	0.2
E3	71.39	71.53	0	-0.2
E4	71.53	71.67	0	-0.2
E5	103.28	103.39	0	-0.1
E6	103.39	103.5	0	-0.1
E7	103.5	102.91	0	0.6
OSD 1	303.84	307.02	0.03	-1.1
E9	292.31	292.31	0	0
L2	13.51	13.51	0	0
N South EX	45239.41	45239.41	0	0
N North EX	45090.63	45090.63	0	0
N9126	124.94	124.96	0	0
Tank 2	124.96	115.62	10.25	-0.7
OSD 2	115.62	116.42	0.02	-0.7
J4	111.55	111.55	0	0
N9856	211.21	211.24	0	0
Tank 1	211.24	200.93	10.08	0.1

Run Log for 20180531 Everglades run at 17:14:22 on 31/5/2018

No water upwelling from any pit.

Freeboard was less than 0.15m at K1

Flows were safe in all overflow routes.

PIT / NODE DETAILS

Name	Max HGL	Max Pond HGL	Max Surface Flow Arriving (cu.m/s)	Version 8 Max Pond Volume (cu.m)	Min Freeboard (m)	Overflow (cu.m/s)	Constraint
K1	4.49		0.001			0.03	None
K2	4.48		0			0.12	None
E2	4.48		0.047			0.05	None
E3	4.44		0			0.05	None
E4	4.33		0			0.08	None
E5	4.23		0.021			0.13	None
E6	3.97		0			0.32	None
E7	3.89		0			0.39	None
E9	3.52		0				
N9126	9.17		0.074				
J4	3.45		0				
N9856	9.31		0.127				

SUB-CATCHMENT DETAILS

Name	Max Flow Q (cu.m/s)	Paved Max Q (cu.m/s)	Grassed Max Q (cu.m/s)	Paved Tc (min)	Grassed Tc (min)	Supp. Tc (min)	Due to Storm
C K1	0.001	0.001		0	5	6	0 AR&R 100 year, 20 minutes storm, average 140 mm/h, Zone 1
Cat Carpark	0.047	0.033		0.015	5	6	0 AR&R 100 year, 20 minutes storm, average 140 mm/h, Zone 1
Cat S Perv	0.021	0		0.021	0	9.82	5 AR&R 100 year, 20 minutes storm, average 140 mm/h, Zone 1
C Driveway	0.009	0.007		0.002	5	6	0 AR&R 100 year, 20 minutes storm, average 140 mm/h, Zone 1
C Southern EX	0.124	0		0.124	0	20	0 AR&R 100 year, 2 hours storm, average 54.1 mm/h, Zone 1
C Northen EX	0.047	0		0.047	0	20	0 AR&R 100 year, 2 hours storm, average 54.1 mm/h, Zone 1
Catch 1	0.074	0.066		0.011	7	11.23	0 AR&R 100 year, 20 minutes storm, average 140 mm/h, Zone 1
C S Roof	0.127	0.127		0	7	0	0 AR&R 100 year, 20 minutes storm, average 140 mm/h, Zone 1

Outflow Volumes for Total Catchment (0.41 impervious + 0.59 pervious = 1.00 total ha)

Storm	Total Rainfall cu.m	Total Runoff cu.m (Runoff %)	Impervious Runoff cu.m (Runoff %)	Pervious Runoff cu.m (Runoff %)
AR&R 100 year, 5 minutes storm, average 243 mm/h, Zone 1	202.82	132.87 (65.5%)	77.03 (93.0%)	55.84 (46.5%)
AR&R 100 year, 10 minutes storm, average 189 mm/h, Zone 1	315.5	234.74 (74.4%)	122.05 (94.7%)	112.69 (60.4%)
AR&R 100 year, 20 minutes storm, average 140 mm/h, Zone 1	467.41	370.62 (79.3%)	182.75 (95.8%)	187.87 (67.9%)
AR&R 100 year, 30 minutes storm, average 115 mm/h, Zone 1	575.92	462.67 (80.3%)	226.10 (96.1%)	236.57 (69.4%)
AR&R 100 year, 1 hour storm, average 80.0 mm/h, Zone 1	801.28	655.91 (81.9%)	316.14 (96.6%)	339.78 (71.7%)
AR&R 100 year, 2 hours storm, average 54.1 mm/h, Zone 1	1083.74	894.42 (82.5%)	428.99 (96.9%)	465.43 (72.6%)

PIPE DETAILS

Name	Max Q (cu.m/s)	Max V (m/s)	Max U/S HGL (m)	Max D/S HGL (m)	Due to Storm
P K1	0.003	0.31	4.486	4.481	AR&R 100 year, 20 minutes storm, average 140 mm/h, Zone 1
P K2	0.006	0.3	4.481	4.479	AR&R 100 year, 20 minutes storm, average 140 mm/h, Zone 1
P E2	0.039	0.55	4.46	4.445	AR&R 100 year, 20 minutes storm, average 140 mm/h, Zone 1
P E3	0.037	0.8	4.399	4.33	AR&R 100 year, 20 minutes storm, average 140 mm/h, Zone 1
P E4	0.036	0.77	4.284	4.233	AR&R 100 year, 2 hours storm, average 54.1 mm/h, Zone 1
P E5	0.056	1.21	4.12	3.966	AR&R 100 year, 20 minutes storm, average 140 mm/h, Zone 1
P E6	0.056	0.99	3.911	3.891	AR&R 100 year, 20 minutes storm, average 140 mm/h, Zone 1
P E7	0.056	1.43	3.831	3.776	AR&R 100 year, 20 minutes storm, average 140 mm/h, Zone 1
P E8	0.077	1.33	3.612	3.52	AR&R 100 year, 2 hours storm, average 54.1 mm/h, Zone 1
Pipe6051	0.074	4.33	9.171	8.596	AR&R 100 year, 20 minutes storm, average 140 mm/h, Zone 1
Pipe6060	0.074	2.96	8.022	7.803	AR&R 100 year, 20 minutes storm, average 140 mm/h, Zone 1
P J3	0.033	1.07	3.544	3.448	AR&R 100 year, 2 hours storm, average 54.1 mm/h, Zone 1
Pipe6604	0.127	5.02	9.314	8.63	AR&R 100 year, 20 minutes storm, average 140 mm/h, Zone 1

Pipe66050.1273.618.0177.623 AR&R 100 year, 20 minutes storm, average 140 mm/h, Zone 1

CHANNEL DETAILS

Name	Max Q (cu.m/s)	Max V (m/s)	Due to Storm
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OVERFLOW ROUTE DETAILS

Name	Max Q U/S	Max Q D/S	Safe Q	Max D	Max DxV	Max Width	Max V	Due to Storm
F OSD S		0	0	1.754	0	0	0	0
F OSD N		0	0	1.754	0	0	0	0

DETENTION BASIN DETAILS

Name	Max WL	MaxVol	Max Q Total	Max Q Low Level	Max Q High Level	
OSD 1	3.78	71.4	0.077	0.077		0
Tank 2	8.1	10.9	0.074	0.074		0
OSD 2	3.78	22.5	0.033	0.033		0
Tank 1	8.2	11	0.127	0.127		0

CONTINUITY CHECK for AR&R 100 year, 2 hours storm, average 54.1 mm/h, Zone 1

Node	Inflow (cu.m)	Outflow (cu.m)	Storage Change (cu.m)	Difference %
K1	2.43	2.45	0	-1
K2	2.45	2.51	0	-2.5
E2	80.9	80.62	0	0.3
E3	80.62	80.78	0	-0.2
E4	80.78	80.95	0	-0.2
E5	117.47	117.59	0	-0.1
E6	117.59	117.71	0	-0.1
E7	117.71	117.28	0	0.4
OSD 1	342.88	347.55	0.03	-1.4
E9	330.57	330.57	0	0
L2	15.19	15.19	0	0
N South EX	45279.79	45279.79	0	0
N North EX	45105.87	45105.87	0	0
N9126	140.34	140.37	0	0
Tank 2	140.37	130.95	10.25	-0.6
OSD 2	130.95	132.27	0.02	-1
J4	126.46	126.46	0	0
N9856	235.84	235.88	0	0
Tank 1	235.88	225.6	10.08	0.1

Run Log for 20180531 Everglades run at 17:13:15 on 31/5/2018

No water upwelling from any pit.

Freeboard was less than 0.15m at K2, K1, E2, E3, E5, E4

Flows were safe in all overflow routes.