



Result report StormTac Web

In this result report input and output data are compiled from simulation with StormTac Web.

3. Pollutant transport

3.1 Input data

- Yearly base flow and stormwater flow according to 1. Runoff.
- Standard concentrations for base flow and stormwater flow according to updated tables on www.stormtac.com.

Land use	Factor *
Parking	5.0
Park grounds	5.0

* Roads: factor value = traffic intensity= 0-200. Unit: x 1000 vehicles/day.

Other land use: factor value = 5 (1-10). Unit: -. 5 = standard (default) concentration value from the data base for the specific land use, 0 = minimum concentration value, 10 = maximum concentration value.

Baseflow concentration (µg/l) per land use

Land use	P	N	Pb	Cu	Zn	Cd	Cr	Ni	SS	BaP
Parking	29	960	3.6	11	47	0.041	2.5	2.2	35000	0.010
Park grounds	35	1100	0.72	4.1	8.4	0.027	0.50	1.1	12000	0.0010

Runoff flow concentration (µg/l) per land use.

Land use	P	N	Pb	Cu	Zn	Cd	Cr	Ni	SS	BaP
Parking	160	1600	20	40	140	0.45	15	6.0	140000	0.060
Park grounds	200	1200	9.0	11	35	0.30	4.0	2.0	24000	0.0084

Classification of uncertainty High certainty Average certainty Low certainty



3.2 Output data

Baseflow concentration (µg/l) without treatment

	P	N	Pb	Cu	Zn	Cd	Cr	Ni	SS	BaP
Base flow concentration	35	1100	0.93	4.6	11	0.028	0.64	1.2	14000	0.0016
Absolute uncertainty (%)	9.6	360	0.21	0.99	2.2	0.0053	0.15	0.33	5300	0.00095

Runoff flow concentration (µg/l) without treatment

	P	N	Pb	Cu	Zn	Cd	Cr	Ni	SS	BaP
Runoff flow concentration	180	1400	15	26	88	0.38	9.5	4.0	82000	0.034
Absolute uncertainty (+/-)	50	460	3.3	5.5	17	0.071	2.2	1.1	32000	0.020

Base flow load (kg/year) without treatment

	P	N	Pb	Cu	Zn	Cd	Cr	Ni	SS	BaP
Base flow load	0.016	0.51	0.00043	0.0021	0.0052	0.000013	0.00030	0.00055	6.3	0.00000077
Absolute uncertainty (+/-)	0.0060	0.21	0.00014	0.00070	0.0016	0.0000040	0.00010	0.00020	2.9	0.00000048

Runoff flow load (kg/year) without treatment

	P	N	Pb	Cu	Zn	Cd	Cr	Ni	SS	BaP
Pollutant load	0.14	1.1	0.011	0.020	0.067	0.00029	0.0073	0.0031	63	0.000026
Absolute uncertainty (+/-)	0.051	0.44	0.0037	0.0064	0.021	0.000090	0.0024	0.0012	29	0.000016



Pollutant concentrations (µg/l) (stormwater + base flow) without treatment

Comparison against target value where the greyed/bold cells show exceeding target value. Total fractions are referred to where nothing else is stated.

		P	N	Pb	Cu	Zn	Cd	Cr	Ni	SS	BaP
Calculation	C	130	1300	9.4	18	59	0.24	6.2	2.9	56000	0.022
Criteria	C _{gr,sw}	160	2000	8.0	18	75	0.40	10	15	40000	0.030
Absolute uncertainty (+/-)	C	35	420	2.1	3.8	11	0.047	1.4	0.83	22000	0.013
Relative uncertainty (%)	C	28	33	22	22	19	19	23	28	39	58

Pollutant loads (kg/year) (stormwater + base flow) without treatment

	P	N	Pb	Cu	Zn	Cd	Cr	Ni	SS	BaP
Pollutant load	0.15	1.6	0.012	0.022	0.073	0.00030	0.0076	0.0036	69	0.000027
Absolute uncertainty (+/-)	0.057	0.65	0.0038	0.0071	0.023	0.000094	0.0025	0.0014	32	0.000017
Relative uncertainty (%)	37	41	33	33	31	31	33	37	46	63

Pollutant loads (kg/ha/year) (stormwater + base flow) without treatment

P	N	Pb	Cu	Zn	Cd	Cr	Ni	SS	BaP
0.21	2.2	0.016	0.030	0.10	0.00042	0.011	0.0050	96	0.000038



Pollutant concentrations (µg/l) per land use with stormwater+base flow without treatment

Land use	P	N	Pb	Cu	Zn	Cd	Cr	Ni	SS	BaP
Parking	150	1549	19	38	133	0.42	14	5.7	131591	0.056
Park grounds	113	1147	4.6	7.4	21	0.16	2.2	1.5	17659	0.0045

Pollutant loads (kg/year) per land use with stormwater+base flow without treatment

Land use	P	N	Pb	Cu	Zn	Cd	Cr	Ni	SS	BaP
Parking	0.063	0.65	0.0078	0.016	0.055	0.00017	0.0059	0.0024	55	0.000023
Park grounds	0.092	0.94	0.0038	0.0060	0.017	0.00013	0.0018	0.0012	14	0.0000037

Baseflow load (kg/year) per land use without treatment

Land use	P	N	Pb	Cu	Zn	Cd	Cr	Ni	SS	BaP
Parking	0.00097	0.032	0.00012	0.00037	0.0016	0.0000014	0.000084	0.000074	1.2	0.00000033
Park grounds	0.015	0.47	0.00031	0.0018	0.0036	0.000012	0.00022	0.00047	5.2	0.00000043

Stormwater load (kg/year) per land use without treatment

Land use	P	N	Pb	Cu	Zn	Cd	Cr	Ni	SS	BaP
Parking	0.062	0.62	0.0077	0.015	0.054	0.00017	0.0058	0.0023	54	0.000023
Park grounds	0.077	0.46	0.0035	0.0042	0.013	0.00012	0.0015	0.00077	9.2	0.0000032



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3.1 Input data

- Yearly base flow and stormwater flow according to 1. Runoff.
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Land use	Factor *
Multifamily area with biofilter with local disposal in block	

* Roads: factor value = traffic intensity= 0-200. Unit: x 1000 vehicles/day.

Other land use: factor value = 5 (1-10). Unit: -. 5 = standard (default) concentration value from the data base for the specific land use, 0 = minimum concentration value, 10 = maximum concentration value.

Baseflow concentration (µg/l) per land use

Land use	P	N	Pb	Cu	Zn	Cd	Cr	Ni	SS	BaP
Multifamily area with biofilter with local disposal in block	70	1200	1.1	5.8	27	0.038	1.4	3.9	10000	0.010

Runoff flow concentration (µg/l) per land use.

Land use	P	N	Pb	Cu	Zn	Cd	Cr	Ni	SS	BaP
Multifamily area with biofilter with local disposal in block	83	1400	2.0	7.6	15	0.092	2.7	3.1	11000	0.0036

Classification of uncertainty High certainty Average certainty Low certainty



3.2 Output data

Baseflow concentration (µg/l) without treatment

	P	N	Pb	Cu	Zn	Cd	Cr	Ni	SS	BaP
Base flow concentration	70	1200	1.1	5.8	27	0.038	1.4	3.9	10000	0.010
Absolute uncertainty (%)	17	320	0.44	1.8	8.5	0.014	0.42	1.2	3800	0.0040

Runoff flow concentration (µg/l) without treatment

	P	N	Pb	Cu	Zn	Cd	Cr	Ni	SS	BaP
Runoff flow concentration	83	1400	2.0	7.6	15	0.092	2.7	3.1	11000	0.0036
Absolute uncertainty (+/-)	20	380	0.79	2.3	4.7	0.033	0.81	0.94	4100	0.0014

Base flow load (kg/year) without treatment

	P	N	Pb	Cu	Zn	Cd	Cr	Ni	SS	BaP
Base flow load	0.032	0.54	0.00050	0.0026	0.012	0.000017	0.00063	0.0018	4.5	0.0000045
Absolute uncertainty (+/-)	0.011	0.20	0.00023	0.0010	0.0049	0.0000075	0.00025	0.00069	2.0	0.0000021

Runoff flow load (kg/year) without treatment

	P	N	Pb	Cu	Zn	Cd	Cr	Ni	SS	BaP
Pollutant load	0.079	1.3	0.0019	0.0072	0.014	0.000088	0.0026	0.0030	10	0.0000034
Absolute uncertainty (+/-)	0.027	0.48	0.00089	0.0028	0.0057	0.000038	0.00100	0.0012	4.7	0.0000016



Pollutant concentrations (µg/l) (stormwater + base flow) without treatment

Comparison against target value where the greyed/bold cells show exceeding target value. Total fractions are referred to where nothing else is stated.

		P	N	Pb	Cu	Zn	Cd	Cr	Ni	SS	BaP
Calculation	C	79	1300	1.7	7.0	19	0.075	2.3	3.4	11000	0.0057
Criteria	C _{gr,sw}	160	2000	8.0	18	75	0.40	10	15	40000	0.030
Absolute uncertainty (+/-)	C	19	360	0.68	2.1	5.9	0.027	0.69	1.0	4000	0.0023
Relative uncertainty (%)	C	24	27	40	31	31	36	30	30	38	40

Pollutant loads (kg/year) (stormwater + base flow) without treatment

	P	N	Pb	Cu	Zn	Cd	Cr	Ni	SS	BaP
Pollutant load	0.11	1.9	0.0024	0.0099	0.027	0.00010	0.0032	0.0047	15	0.0000080
Absolute uncertainty (+/-)	0.038	0.68	0.0011	0.0039	0.011	0.000046	0.0012	0.0018	6.7	0.0000037
Relative uncertainty (%)	35	36	47	39	40	43	39	39	45	47

Pollutant loads (kg/ha/year) (stormwater + base flow) without treatment

P	N	Pb	Cu	Zn	Cd	Cr	Ni	SS	BaP
0.15	2.6	0.0033	0.014	0.037	0.00015	0.0045	0.0066	21	0.000011



Pollutant concentrations (µg/l) per land use with stormwater+base flow without treatment

Land use	P	N	Pb	Cu	Zn	Cd	Cr	Ni	SS	BaP
Multifamily area with biofilter with local disposal in block	79	1335	1.7	7.0	19	0.075	2.3	3.4	10677	0.0057

Pollutant loads (kg/year) per land use with stormwater+base flow without treatment

Land use	P	N	Pb	Cu	Zn	Cd	Cr	Ni	SS	BaP
Multifamily area with biofilter with local disposal in block	0.11	1.9	0.0024	0.0099	0.027	0.00010	0.0032	0.0047	15	0.0000080

Baseflow load (kg/year) per land use without treatment

Land use	P	N	Pb	Cu	Zn	Cd	Cr	Ni	SS	BaP
Multifamily area with biofilter with local disposal in block	0.032	0.54	0.00050	0.0026	0.012	0.000017	0.00063	0.0018	4.5	0.0000045

Stormwater load (kg/year) per land use without treatment

Land use	P	N	Pb	Cu	Zn	Cd	Cr	Ni	SS	BaP
Multifamily area with biofilter with local disposal in block	0.079	1.3	0.0019	0.0072	0.014	0.000088	0.0026	0.0030	10	0.0000034