APPENDIX-A

Tables and calculations.

Table 1: Urban water balance, all the flow which interact in the area of interest.

	WWTP EFFLUENT (m3/h)	T (°C)	Runoff coefficient	Evaporation (mm/d)	Evaporation (m3/d)	Precipitation (0.1 mm/d)	Precipitation (mm/d)	Net precipitation (m3/d)	Precipitation (m3/d)	Infiltration	WWTP Effluent (m3/d)	Stormwater (m3/d) *	water consumption (m3/d)	water intake (m3 / d)	inflow combined + pressure sewage (m3/d)	inflow separate sewage wwtp (m3/d)	outflow separate sewage system (m3/d)	Extraneous water (m3/d)	water balance (m3/d)	water balance (m3/year)	water balance (m/year)	water balance (mm/year)
DD/MM/YYYY	(Water board)	KNMI	Triangle method	KNMI	(evaporation mm/1000) * pervious area	KNMI	Precipitation 0.1 mm / 10	(Precipitation mm / 1000) * impervious area	Precipitation - Net precipitation	Precipitation - Net Precipitation - Evaporation	((WWTP effluent m3/h * 24 * 95%)* Breda rural pop) / (Breda's pop)	Net precipitation * runoff coefficient	Brabant Water	97.48% * water consumption	55% *stormwater + 55% * water consumption	45% * water consumption	55% * stormwater + 15% extraneous water	Triangle method	Precipitation + Water intake - Evaporation - WWTP - outflow separate sewage	sum of daily water balance	water balance (m3/yr) / rural area	water balance (m/year) * 1000
01/01/2020	2028.178	2	0.56	0.10	3411.88	0	0	0.00	0.00	-3193.11	40266.52	0.00	19426.68	18937.12	10684.67	8742.00	0.00	12737.56	-24032.95	2815039.63	0.05055648	50.55648
02/01/2020	2049.676	4.1	0.56	0.10	3411.88	0	0	0.00	0.00	-3193.11	40693.33	0.00	19426.68	18937.12	10684.67	8742.00	0.00	12872.57	-24459.76			
03/01/2020	3305.784	7.8	0.56	0.10	3411.88	29	2.9	68875.00	161475.13	89407.02	65631.53	38570.00	19426.68	18937.12	31898.17	8742.00	17356.50	20761.31	94720.67			
04/01/2020	2323.649	6.4	0.56	0.20	6823.76	5	0.5	11875.00	27840.54	9579.32	46132.67	6650.00	19426.68	18937.12	14342.17	8742.00	2992.50	14593.21	-8244.17			
05/01/2020	2224.189	6.8	0.56	0.10	3411.88	0	0	0.00	0.00	-3193.11	44158.03	0.00	19426.68	18937.12	10684.67	8742.00	0.00	13968.56	-27924.46			
06/01/2020	2184.621	5.9	0.56	0.50	17059.39	8	0.8	19000.00	44544.86	9579.32	43372.47	10640.00	19426.68	18937.12	16536.67	8742.00	4788.00	13720.07	-154.47			
07/01/2020	2424.248	7.1	0.56	0.20	6823.76	0.04	0.004	95.00	222.72	-6258.49	48129.91	53.20	19426.68	18937.12	10713.93	8742.00	23.94	15224.99	-34890.66			
08/01/2020	2585.008	10.7	0.56	0.20	6823.76	15	1.5	35625.00	83521.62	41510.40	51321.57	19950.00	19426.68	18937.12	21657.17	8742.00	8977.50	16234.62	36263.01			
09/01/2020	3177.072	11.9	0.56	0.10	3411.88	30	3	71250.00	167043.24	92600.13	63076.13	39900.00	19426.68	18937.12	32629.67	8742.00	17955.00	19952.95	102245.67			
10/01/2020	5384.151	6.3	0.56	0.20	6823.76	55	5.5	130625.00	306245.93	169234.72	106894.47	73150.00	19426.68	18937.12	50917.17	8742.00	32917.50	33814.06	179474.43			
11/01/2020	2486.721	5.7	0.56	0.40	13647.51	0	0	0.00	0.00	-12772.43	49370.22	0.00	19426.68	18937.12	10684.67	8742.00	0.00	15617.34	-42715.97			
12/01/2020	2346.963	7.5	0.56	0.10	3411.88	3	0.3	7125.00	16704.32	6386.22	46595.54	3990.00	19426.68	18937.12	12879.17	8742.00	1795.50	14739.63	-15453.15			
13/01/2020	2188.501	8	0.56	0.50	17059.39	0.04	0.004	95.00	222.72	-15837.82	43449.49	53.20	19426.68	18937.12	10713.93	8742.00	23.94	13744.43	-39789.57			
14/01/2020	4786.335	10.9	0.56	0.10	3411.88	55	5.5	130625.00	306245.93	172427.83	95025.71	73150.00	19426.68	18937.12	50917.17	8742.00	32917.50	30059.60	194536.30			
15/01/2020	3820.472	9.2	0.56	0.20	6823.76	23	2.3	54625.00	128066.48	67055.27	75849.91	30590.00	19426.68	18937.12	27509.17	8742.00	13765.50	23993.70	51491.53			
16/01/2020	2436.615	6.9	0.56	0.70	23883.15	0	0	0.00	0.00	-22351.76	48375.44	0.00	19426.68	18937.12	10684.67	8742.00	0.00	15302.66	-51300.52			
17/01/2020	2433.763	8.5	0.56	0.20	6823.76	3	0.3	7125.00	16704.32	3193.11	48318.81	3990.00	19426.68	18937.12	12879.17	8742.00	1795.50	15284.75	-20369.53			
18/01/2020	2353.154	4.3	0.56	0.50	17059.39	0.04	0.004	95.00	222.72	-15837.82	46718.45	53.20	19426.68	18937.12	10713.93	8742.00	23.94	14778.51	-43058.53			
19/01/2020	2475.197	3	0.56	0.50	17059.39	1	0.1	2375.00	5568.11	-12772.43	49141.42	1330.00	19426.68	18937.12	11416.17	8742.00	598.50	15544.97	-40710.68			
20/01/2020	2179.164	1.6	0.56	0.30	10235.63	0	0	0.00	0.00	-9579.32	43264.13	0.00	19426.68	18937.12	10684.67	8742.00	0.00	13685.80	-33416.78			
21/01/2020	2210.425	-0.2	0.56	0.20	6823.76	0	0	0.00	0.00	-6386.22	43884.78	0.00	19426.68	18937.12	10684.67	8742.00	0.00	13882.13	-30844.31			
22/01/2020	2273.292	2.8	0.56	0.20	6823.76	0.04	0.004	95.00	222.72	-6258.49	45132.90	53.20	19426.68	18937.12	10713.93	8742.00	23.94	14276.95	-31893.65			
23/01/2020	2185.499	3.9	0.56	0.40	13647.51	0	0	0.00	0.00	-12772.43	43389.90	0.00	19426.68	18937.12	10684.67	8742.00	0.00	13725.58	-36735.65			
24/01/2020	2136.636	1.6	0.56	0.10	3411.88	0.04	0.004	95.00	222.72	-3065.38	42419.80	53.20	19426.68	18937.12	10713.93	8742.00	23.94	13418.71	-25987.45			
25/01/2020	2206.837	1.4	0.56	0.20	6823.76	0	0	0.00	0.00	-6386.22	43813.53	0.00	19426.68	18937.12	10684.67	8742.00	0.00	13859.59	-30773.07			
26/01/2020	2167.868	6.1	0.56	0.70	23883.15	1	0.1	2375.00	5568.11	-19158.65	43039.86	1330.00	19426.68	18937.12	11416.17	8742.00	598.50	13614.85	-40995.33			
27/01/2020	5195.880	8.4	0.56	0.40	13647.51	75	7.5	178125.00	417608.09	226710.66	103156.63	99750.00	19426.68	18937.12	65547.17	8742.00	44887.50	32631.67	276218.21			
28/01/2020	8688.265	5.2	0.56	0.50	17059.39	67	6.7	159125.00	373063.23	197972.69	172492.85	89110.00	19426.68	18937.12	59695.17	8742.00	40099.50	54564.88	163932.02			
29/01/2020	3307.357	5.7	0.56	0.50	17059.39	2	0.2	4750.00	11136.22	-9579.32	65662.76	2660.00	19426.68	18937.12	12147.67	8742.00	1197.00	20771.19	-52262.41			
30/01/2020	3249.916	8.5	0.56	0.40	13647.51	34	3.4	80750.00	189315.67	95793.24	64522.34	45220.00	19426.68	18937.12	35555.67	8742.00	20349.00	20410.43	111098.57			
31/01/2020	2756.636	11.6	0.56	0.30	10235.63	0.04	0.004	95.00	222.72	-9451.60	54728.99	53.20	19426.68	18937.12	10713.93	8742.00	23.94	17312.49	-44682.85			
01/02/2020	3245.233	10.9	0.56	0.40	13647.51	21	2.1	49875.00	116930.27	54282.83	64429.38	27930.00	19426.68	18937.12	26046.17	8742.00	12568.50	20381.03	46586.63			
02/02/2020	3800.507	9.9	0.56	0.20	6823.76	37	3.7	87875.00	206019.99	111758.78	75453.52	49210.00	19426.68	18937.12	37750.17	8742.00	22144.50	23868.31	121462.43			
03/02/2020	2537.654	9.5	0.56	0.40	13647.51	26	2.6	61750.00	144770.81	70248.37	50381.43	34580.00	19426.68	18937.12	29703.67	8742.00	15561.00	15937.22	85482.62			
04/02/2020	4687.930	5.3	0.56	0.30	10235.63	37	3.7	87875.00	206019.99	108565.67	93072.02	49210.00	19426.68	18937.12	37750.17	8742.00	22144.50	29441.59	100650.82			
05/02/2020	2556.224	4.3	0.56	0.60	20471.27	0	0	0.00	0.00	-19158.65	50750.11	0.00	19426.68	18937.12	10684.67	8742.00	0.00	16053.85	-50482.08			
06/02/2020	2323.315	3.1	0.56	0.50	17059.39	0	0	0.00	0.00	-15965.54	46126.03	0.00	19426.68	18937.12	10684.67	8742.00	0.00	14591.10	-42664.89			
07/02/2020	2271.730	3.7	0.56	0.90	30706.90	0	0	0.00	0.00	-28737.97	45101.89	0.00	19426.68	18937.12	10684.67	8742.00	0.00	14267.14	-54413.18			
08/02/2020	2333.271	7.8	0.56	0.30	10235.63	6	0.6	14250.00	33408.65	9579.32	46323.70	7980.00	19426.68	18937.12	15073.67	8742.00	3591.00	14653.63	-6658.70			
09/02/2020	2989.236	10.4	0.56	0.30	10235.63	82	8.2	194750.00	456584.85	252255.52	59346.94	109060.00	19426.68	18937.12	70667.67	8742.00	49077.00	18773.29	358008.27			
10/02/2020	4416.782	8.1	0.56	0.60	20471.27	61	6.1	144875.00	339654.58	175620.93	87688.78	81130.00	19426.68	18937.12	55306.17	8742.00	36508.50	27738.70	215725.34			
11/02/2020	4129.872	6.3	0.56	0.50	17059.39	8	0.8	19000.00	44544.86	9579.32	81992.59	10640.00	19426.68	18937.12	16536.67	8742.00	4788.00	25936.82	-38774.59			
12/02/2020	2315.648	5.4	0.56	0.80	27295.03	0.04	0.004	95.00	222.72	-25417.14	45973.81	53.20	19426.68	18937.12	10713.93	8742.00	23.94	14542.95	-51893.21			
13/02/2020	6121.867	6.2	0.56	0.40	13647.51	83	8.3	197125.00	462152.96	252255.52	121540.75	110390.00	19426.68	18937.12	71399.17	8742.00	49675.50	38447.14	297590.96			
14/02/2020	3562.946	7.5	0.56	0.60	20471.27	1	0.1	2375.00	5568.11	-15965.54	70737.09	1330.00	19426.68	18937.12	11416.17	8742.00	598.50	22376.35	-65499.46			
15/02/2020	2476.400	10.8	0.56	0.70	23883.15	0.04	0.004	95.00	222.72	-22224.03	49165.32	53.20	19426.68	18937.12	10713.93	8742.00	23.94	15552.53	-51891.61			
16/02/2020	5188.436	12.8	0.56	0.40	13647.51	110	11	261250.00	612491.87	338469.44	103008.84	146300.00	27879.61	27177.04	95798.79	12545.82	65835.00	32584.92	458755.21			
17/02/2020	6604.041	8	0.56	0.90	30706.90	21	2.1	49875.00	116930.27	38317.29	131113.62	27930.00	19426.68	18937.12	26046.17	8742.00	12568.50	41475.34	-36063.15			
18/02/2020	2706.700	7.4	0.56	0.80	27295.03	65	6.5	154375.00	361927.01	182007.15	53737.58	86450.00	19426.68	18937.12	58232.17	8742.00	38902.50	16998.88	263168.75			
19/02/2020	7802.371	6.3	0.56	1.00	34118.78	26	2.6	61750.00	144770.81	51089.73	154904.71	34580.00	19426.68	18937.12	29703.67	8742.00	15561.00	49001.20	-38199.30			
20/02/2020	4712.109	8.2	0.56	0.40	13647.51	68	6.8	161500.00	378631.34	204358.91	93552.07	90440.00	19426.68	18937.12	60426.67	8742.00	40698.00	29593.44	251035.51			
21/02/2020	5419.007	7	0.56	0.70	23883.15	0	0	0.00	0.00	-22351.76	107586.49	0.00	19426.68	18937.12	10684.67	8742.00	0.00	34032.97	-110511.57			
22/02/2020	2944.342	9	0.56	0.30	10235.63	29	2.9	68875.00	161475.13	83020.81	58455.62	38570.00	19426.68	18937.12	31898.17	8742.00	17356.50	18491.34	95510.36			
23/02/2020	11220.896	9.3	0.56	0.20	6823.76	247	24.7	586625.00	1375322.65	782311.44	222774.54	328510.00	19426.68	18937.12	191365.17	8742.00	147829.50	70470.55	1017759.07			
24/02/2020	8773.643	8.1	0.56	0.20	6823.76	52	5.2	123500.00	289541.61	159655.40	174187.89	69160.00	19426.68	18937.12	48722.67	8742.00	31122.00	55101.08	97272.18			
25/02/2020	3909.609	6.6	0.56	1.00	34118.78	60	6	142500.00	334086.47	159655.40	77619.59	79800.00	19426.68	18937.12	54574.67	8742.00	35910.00	24553.50	208052.48			
26/02/2020	13069.119	2.8	0.56	0.70	23883.15	142	14.2	337250.00	790671.32	431069.57	259468.32	188860.00	19426.68	18937.12	114557.67	8742.00	84987.00	82077.94	443290.92			
27/02/2020	9889.386	2.5	0.56	0.20	6823.76	88	8.8	209000.00	489993.50	274607.28	196339.36	117040.00	19426.68	18937.12	75056.67	8742.00	52668.00	62108.28	254026.60			
28/02/2020	8141.336	4.4	0.56	0.70	23883.15	59	5.9	140125.00	328518.37	166041.61	161634.36	78470.00	19426.68	18937.12	53843.17	8742.00	35311.50	51130.00	128647.43			
29/02/2020	6250.176	8.9	0.56	0.80	27295.03	15	1.5	35625.00	83521.62	22351.76	124088.14	19950.00	19426.68	18937.12	21657.17	8742.00	8977.50	39252.96	-55662.21			
01/03/2020	3481.543	6.8	0.56	1.00	34118.78	1	0.1	2375.00	5568.11	-28737.97	69120.96	1330.00	19426.68	18937.12	11416.17	8742.00	598.50	21865.12	-76655.76			
02/03/2020	5481.801	5.8	0.56	0.40	13647.51	54	5.4	128250.00	300677.83	159655.40	108833.18	71820.00	19426.68	18937.12	50185.67	8742.00	32319.00	34427.34	166179.90			
03/03/2020	3560.931	4.6	0.56	1.30	44354.42	3	0.3	7125.00	16704.32	-31931.08	70697.10	3990.00	19426.68	18937.12	12879.17	8742.00	1795.50	22363.70	-77872.00			
04/03/2020	3788.557	6.3	0.56	1.00	34118.78	17	1.7	40375.00	94657.83	22351.76	75216.29	22610.00	19426.68	18937.12	23120.17	8742.00	10174.50	23793.26	-3237.36			
05/03/2020	6247.834	5.8	0.56	0.20	6823.76	152	15.2	361000.00	846352.40	478966.19	124041.64	202160.00	19426.68	18937.12	121872.67	8742.00	90972.00	39238.25	644379.23			
06/03/2020	11257.077	6.6	0.56	0.80	27295.03	32	3.2	76000.00	178179.45	76634.59	223492.86	42560.00	19426.68	18937.12	34092.67	8742.00	19152.00	70697.78	-70583.60			

07/03/2020	4531.692	7.3	0.56	1.40	47766.29	0.04	0.004	95.00	222.72	-44575.79	89970.15	53.20	19426.68	18937.12	10713.93	8742.00	23.94	28460.37	-115048.20
08/03/2020	3368.647	8.3	0.56	0.50	17059.39	14	1.4	33250.00	77953.51	28737.97	66879.58	18620.00	19426.68	18937.12	20925.67	8742.00	8379.00	21156.10	6156.06
09/03/2020	3787.182	7.9	0.56	1.10	37530.66	15	1.5	35625.00	83521.62	12772.43	75188.98	19950.00	19426.68	18937.12	21657.17	8742.00	8977.50	23784.62	-16342.37
10/03/2020	12752.305	10.8	0.56	0.30	10235.63	200	20	475000.00	1113621.58	629042.26	253178.43	266000.00	19426.68	18937.12	156984.67	8742.00	119700.00	80088.26	750590.50
11/03/2020	11051.983	11.7	0.56	1.00	34118.78	81	8.1	192375.00	451016.74	226710.66	219421.01	107730.00	19426.68	18937.12	69936.17	8742.00	48478.50	69409.73	170612.82
12/03/2020	11487.124	8.9	0.56	1.80	61413.81	43	4.3	102125.00	239428.64	79827.70	228060.10	57190.00	19426.68	18937.12	42139.17	8742.00	25735.50	72142.54	-52416.23
13/03/2020	5015.017	7	0.56	1.20	40942.54	4	0.4	9500.00	22272.43	-25544.86	99565.86	5320.00	19426.68	18937.12	13610.67	8742.00	2394.00	31495.79	-98578.04
14/03/2020	3618.690	7	0.56	1.30	44354.42	2	0.2	4750.00	11136.22	-35124.19	71843.83	2660.00	19426.68	18937.12	12147.67	8742.00	1197.00	22726.45	-83988.34
15/03/2020	3263.094	9.5	0.56	0.70	23883.15	0	0	0.00	0.00	-22351.76	64783.99	0.00	19426.68	18937.12	10684.67	8742.00	0.00	20493.20	-67709.06
16/03/2020	3156.236	8.5	0.56	1.30	44354.42	0	0	0.00	0.00	-41510.40	62662.46	0.00	19426.68	18937.12	10684.67	8742.00	0.00	19822.10	-84746.19
17/03/2020	2589.509	8.4	0.56	2.10	71649.44	0	0	0.00	0.00	-67055.27	51410.94	0.00	19426.68	18937.12	10684.67	8742.00	0.00	16262.89	-99039.53
18/03/2020	2909.683	11	0.56	1.80	61413.81	0	0	0.00	0.00	-57475.94	57767.52	0.00	19426.68	18937.12	10684.67	8742.00	0.00	18273.67	-95816.78
19/03/2020	2517.866	9.6	0.56	1.20	40942.54	0	0	0.00	0.00	-38317.29	49988.57	0.00	19426.68	18937.12	10684.67	8742.00	0.00	15812.95	-68879.18
20/03/2020	2626.813	7	0.56	0.50	17059.39	17	1.7	40375.00	94657.83	38317.29	52151.55	22610.00	19426.68	18937.12	23120.17	8742.00	10174.50	16497.17	35792.92
21/03/2020	2537.324	5.5	0.56	2.20	75061.32	0	0	0.00	0.00	-70248.37	50374.86	0.00	19426.68	18937.12	10684.67	8742.00	0.00	15935.14	-101196.56
22/03/2020	2454.137	5.1	0.56	2.30	78473.20	0	0	0.00	0.00	-73441.48	48723.32	0.00	19426.68	18937.12	10684.67	8742.00	0.00	15412.71	-102738.13
23/03/2020	2399.801	5.5	0.56	2.30	78473.20	0	0	0.00	0.00	-73441.48	47644.55	0.00	19426.68	18937.12	10684.67	8742.00	0.00	15071.46	-101659.35
24/03/2020	2048.135	5.8	0.56	2.40	81885.08	0	0	0.00	0.00	-76634.59	40662.74	0.00	19426.68	18937.12	10684.67	8742.00	0.00	12862.90	-97870.66
25/03/2020	2314.323	6.1	0.56	2.40	81885.08	0	0	0.00	0.00	-76634.59	45947.52	0.00	19426.68	18937.12	10684.67	8742.00	0.00	14534.64	-103155.43
26/03/2020	2287.081	6.5	0.56	2.40	81885.08	0	0	0.00	0.00	-76634.59	45406.67	0.00	19426.68	18937.12	10684.67	8742.00	0.00	14363.55	-102614.58
27/03/2020	2256.547	8.2	0.56	2.30	78473.20	0	0	0.00	0.00	-73441.48	44800.45	0.00	19426.68	18937.12	10684.67	8742.00	0.00	14171.78	-98815.26
28/03/2020	2237.613	7.8	0.56	2.40	81885.08	0.04	0.004	95.00	222.72	-76506.87	44424.55	53.20	19426.68	18937.12	10713.93	8742.00	23.94	14052.88	-101433.68
29/03/2020	2303.202	4.3	0.56	1.60	54590.05	0.04	0.004	95.00	222.72	-50962.00	45726.73	53.20	19426.68	18937.12	10713.93	8742.00	23.94	14464.79	-77190.99
30/03/2020	2174.994	3.7	0.56	1.30	44354.42	2	0.2	4750.00	11136.22	-35124.19	43181.35	2660.00	19426.68	18937.12	12147.67	8742.00	1197.00	13659.61	-55325.85
31/03/2020	2275.597	4.1	0.56	2.50	85296.96	0	0	0.00	0.00	-79827.70	45178.65	0.00	19426.68	18937.12	10684.67	8742.00	0.00	14291.42	-105579.67
01/04/2020	2096.052	4	0.56	2.30	78473.20	0	0	0.00	0.00	-73441.48	41614.06	0.00	19426.68	18937.12	10684.67	8742.00	0.00	13163.83	-95628.87
02/04/2020	2327.835	6.3	0.56	1.30	44354.42	0.04	0.004	95.00	222.72	-41382.68	46215.78	53.20	19426.68	18937.12	10713.93	8742.00	23.94	14619.50	-68100.72
03/04/2020	2311.241	6.7	0.56	1.60	54590.05	0	0	0.00	0.00	-51089.73	45886.32	0.00	19426.68	18937.12	10684.67	8742.00	0.00	14515.28	-77549.37
04/04/2020	2307.043	8.5	0.56	2.90	98944.47	0	0	0.00	0.00	-92600.13	45802.97	0.00	19426.68	18937.12	10684.67	8742.00	0.00	14488.91	-118976.43
05/04/2020	2249.937	14	0.56	3.30	112591.98	0	0	0.00	0.00	-105372.56	44669.23	0.00	27879.61	27177.04	15333.79	12545.82	0.00	14130.27	-122162.18
06/04/2020	2121.551	14.9	0.56	3.00	102356.35	0.04	0.004	95.00	222.72	-95665.51	42120.31	53.20	27879.61	27177.04	15363.05	12545.82	23.94	13323.97	-109835.15
07/04/2020	2206.256	12.8	0.56	3.20	109180.10	0	0	0.00	0.00	-102179.45	43802.00	0.00	27879.61	27177.04	15333.79	12545.82	0.00	13855.94	-118101.84
08/04/2020	2137.629	16.3	0.56	3.20	109180.10	0	0	0.00	0.00	-102179.45	42439.51	0.00	30414.12	29647.68	16727.77	13686.35	0.00	13424.94	-114204.84
09/04/2020	2220.254	14	0.56	2.90	98944.47	0	0	0.00	0.00	-92600.13	44079.91	0.00	27879.61	27177.04	15333.79	12545.82	0.00	13943.85	-108800.43
10/04/2020	2215.757	12.8	0.56	3.30	112591.98	0	0	0.00	0.00	-105372.56	43990.63	0.00	27879.61	27177.04	15333.79	12545.82	0.00	13915.61	-121483.58
11/04/2020	2137.546	13.5	0.56	3.50	119415.74	0	0	0.00	0.00	-111758.78	42437.86	0.00	27879.61	27177.04	15333.79	12545.82	0.00	13424.42	-126317.03
12/04/2020	2099.691	14.5	0.56	2.80	95532.59	0	0	0.00	0.00	-89407.02	41686.30	0.00	27879.61	27177.04	15333.79	12545.82	0.00	13186.68	-103213.71
13/04/2020	2040.721	8.3	0.56	2.60	88708.83	0.04	0.004	95.00	222.72	-82893.08	40515.54	53.20	19426.68	18937.12	10713.93	8742.00	23.94	12816.33	-103910.88
14/04/2020	2117.010	6.4	0.56	1.50	51178.17	0	0	0.00	0.00	-47896.62	42030.14	0.00	19426.68	18937.12	10684.67	8742.00	0.00	13295.45	-70500.08
15/04/2020	2115.901	9.5	0.56	3.10	105768.22	0	0	0.00	0.00	-98986.34	42008.14	0.00	19426.68	18937.12	10684.67	8742.00	0.00	13288.49	-121567.81
16/04/2020	2168.452	14	0.56	3.40	116003.86	0	0	0.00	0.00	-108565.67	43051.45	0.00	27879.61	27177.04	15333.79	12545.82	0.00	13618.52	-123737.50
17/04/2020	2145.371	12.8	0.56	3.40	116003.86	0	0	0.00	0.00	-108565.67	42593.22	0.00	27879.61	27177.04	15333.79	12545.82	0.00	13473.57	-123279.27
18/04/2020	2436.160	10.9	0.56	1.40	47766.29	8	0.8	19000.00	44544.86	-19158.65	48366.40	10640.00	19426.68	18937.12	16536.67	8742.00	4788.00	15299.81	-33886.37
19/04/2020	2294.913	13.4	0.56	3.10	105768.22	2	0.2	4750.00	11136.22	-92600.13	45562.15	2660.00	27879.61	27177.04	16796.79	12545.82	1197.00	14412.73	-106729.67
20/04/2020	2098.035	13.8	0.56	3.80	129651.37	0	0	0.00	0.00	-121338.10	41653.43	0.00	27879.61	27177.04	15333.79	12545.82	0.00	13176.28	-135111.92
21/04/2020	2155.262	14.7	0.56	4.00	136475.13	0	0	0.00	0.00	-127724.32	42789.58	0.00	27879.61	27177.04	15333.79	12545.82	0.00	13535.68	-142634.29
22/04/2020	2103.613	15.9	0.56	4.10	139887.01	0	0	0.00	0.00	-130917.42	41764.18	0.00	30414.12	29647.68	16727.77	13686.35	0.00	13211.32	-142267.48
23/04/2020	2041.273	15.8	0.56	4.00	136475.13	0	0	0.00	0.00	-127724.32	40526.51	0.00	30414.12	29647.68	16727.77	13686.35	0.00	12819.80	-137836.70
24/04/2020	2106.498	12.8	0.56	3.80	129651.37	0	0	0.00	0.00	-121338.10	41821.46	0.00	27879.61	27177.04	15333.79	12545.82	0.00	13229.43	-135279.95
25/04/2020	2058.975	10.1	0.56	2.90	98944.47	0	0	0.00	0.00	-92600.13	40877.96	0.00	19426.68	18937.12	10684.67	8742.00	0.00	12930.98	-114051.41
26/04/2020	2002.448	10.3	0.56	3.60	122827.62	0	0	0.00	0.00	-114951.88	39755.69	0.00	19426.68	18937.12	10684.67	8742.00	0.00	12575.97	-135280.89
27/04/2020	1999.906	13.7	0.56	3.70	126239.49	0	0	0.00	0.00	-118144.99	39705.23	0.00	27879.61	27177.04	15333.79	12545.82	0.00	12560.01	-129970.61
28/04/2020	2445.298	11.2	0.56	0.90	30706.90	32	3.2	76000.00	178179.45	73441.48	48547.83	42560.00	19426.68	18937.12	34092.67	8742.00	19152.00	15357.20	101168.33
29/04/2020	2536.564	12.6	0.56	1.70	58001.93	3	0.3	7125.00	16704.32	-44703.51	50359.78	3990.00	27879.61	27177.04	17528.29	12545.82	1795.50	15930.37	-61854.18
30/04/2020	2375.139	11.7	0.56	2.90	98944.47	20	2	47500.00	111362.16	-28737.97	47154.93	26600.00	19426.68	18937.12	25314.67	8742.00	11970.00	14916.58	-20936.22
01/05/2020	2784.022	10.4	0.56	2.10	71649.44	20	2	47500.00	111362.16	-3193.11	55272.70	26600.00	19426.68	18937.12	25314.67	8742.00	11970.00	17484.48	-3509.13
02/05/2020	3725.359	9.8	0.56	2.40	81885.08	73	7.3	173375.00	406471.88	156462.29	73961.58	97090.00	19426.68	18937.12	64084.17	8742.00	43690.50	23396.36	231611.88
03/05/2020	2478.747	12.4	0.56	2.50	85296.96	0.04	0.004	95.00	222.72	-79699.97	49211.91	53.20	27879.61	27177.04	15363.05	12545.82	23.94	15567.27	-100961.22
04/05/2020	2363.390	12.1	0.56	3.00	102356.35	1	0.1	2375.00	5568.11	-92600.13	46921.66	1330.00	27879.61	27177.04	16065.29	12545.82	598.50	14842.79	-109865.68
05/05/2020	1997.918	10	0.56	4.00	136475.13	0	0	0.00	0.00	-127724.32	39665.76	0.00	19426.68	18937.12	10684.67	8742.00	0.00	12547.52	-147963.40
06/05/2020	2059.060	11.8	0.56	4.10	139887.01	0	0	0.00	0.00	-130917.42	40879.63	0.00	19426.68	18937.12	10684.67	8742.00	0.00	12931.51	-152370.38
07/05/2020	2033.760	14.2	0.56	4.00	136475.13	0	0	0.00	0.00	-127724.32	40377.34	0.00	27879.61	27177.04	15333.79	12545.82	0.00	12772.61	-140222.04
08/05/2020	2002.025	16	0.56	3.80	129651.37	0	0	0.00	0.00	-121338.10	39747.28	0.00	30414.12	29647.68	16727.77	13686.35	0.00	12573.31	-130671.26
09/05/2020	2019.237	18.2	0.56	4.60	156946.40	0	0	0.00	0.00	-146882.96	40089.01	0.00	35483.14	34588.97	19515.73	15967.41	0.00	12681.41	-151488.84
10/05/2020	1998.044	14.1	0.56	1.70	58001.93	10	1	23750.00	55681.08	-22351.76	39668.25	13300.00	27879.61	27177.04	22648.79	12545.82	5985.00	12548.31	-16375.40
11/05/2020	1994.834	8.7	0.56	3.30	112591.98	2	0.2	4750.00	11136.22	-98986.34	39604.53	2660.00	19426.68	18937.12	12147.67	8742.00	1197.00	12528.15	-115611.20
12/05/2020	2029.659	7.4	0.56	1.90	64825.69	0	0	0.00	0.00	-60669.05	40295.93	0.00	19426.68	18937.12	10684.67	8742.00	0.00	12746.86	-81538.31
13/05/2020	2041.528	8.7	0.56	2.70	92120.71	0	0	0.00	0.00	-86213.91	40531.56	0.00	19426.68	18937.12	10684.67	8742.00	0.00	12821.40	-107318.80
14/05/2020	1642.478	8.5	0.56	3.80	129651.37	0	0	0.00	0.00	-121338.10	32609.00	0.00	19426.68	18937.12	10684.67	8742.00	0.00	10315.25	-134520.43
15/05/2020	2354.104	9.3	0.56	3.30	112591.98	0	0	0.00	0.00	-105372.56	46737.31	0.00	19426.68	18937.12	10684.67	8742.00	0.00	14784.47	-132683.19
16/05/2020	1973.139	10.4	0.56	3.10	105768.22	0	0	0.00	0.00	-98986.34	39173.80	0.00	19426.68	18937.12	10684.67	8742.00	0.00	12391.90	-118733.47
17/05/2020	2010.152	12.9	0.56	3.60	122827.62	0	0	0.00	0.00	-114951.88	39908.63	0.00	27879.61	27177.04	15333.79	12545.82	0.00	12624.35	-126980.91
18/05/2020	2096.291	15.5	0.56	4.40	150122.64	0	0	0.00	0.00	-140496.75	41618.80	0.00	30414.12	29647.68	16727.77	13686.35	0.00	13165.33	-151701.42
19/05/2020	1998.091	17	0.56	4.50	153534.52	0	0	0.00	0.00	-143689.86	39669.19	0.00	30414.12	29647.68	16727.77	13686.35	0.00	12548.61	-152944.93
20/05/2020	2027.577	17.2	0.56	4.80	163770.15	0	0	0.00	0.00	-153269.18	40254.58	0.00	30414.12	29647.68	16727.77	13686.35	0.00	12733.78	-163109.64

21/05/2020	2014.249	20.3	0.56	5.00	170593.91	0	0	0.00	0.00	-159655.40	39989.97	0.00	35483.14	34588.97	19515.73	15967.41	0.00	12650.08	-164162.23
22/05/2020	1921.992	19.4	0.56	2.30	78473.20	10	1	23750.00	55681.08	-41510.40	38158.35	13300.00	35483.14	34588.97	26830.73	15967.41	5985.00	12070.68	-26420.61
23/05/2020	1999.102	15.4	0.56	3.40	116003.86	1	0.1	2375.00	5568.11	-105372.56	39689.25	1330.00	30414.12	29647.68	17459.27	13686.35	598.50	12554.95	-112871.19
24/05/2020	2054.691	13.1	0.56	1.10	37530.66	20	2	47500.00	111362.16	28737.97	40792.89	26600.00	27879.61	27177.04	29963.79	12545.82	11970.00	12904.07	51354.69
25/05/2020	2199.579	16.2	0.56	4.30	146710.76	0	0	0.00	0.00	-137303.64	43669.43	0.00	30414.12	29647.68	16727.77	13686.35	0.00	13814.01	-150558.95
26/05/2020	1947.720	17	0.56	4.80	163770.15	0	0	0.00	0.00	-153269.18	38669.14	0.00	30414.12	29647.68	16727.77	13686.35	0.00	12232.26	-161524.20
27/05/2020	2094.528	16.7	0.56	4.70	160358.28	0	0	0.00	0.00	-150076.07	41583.80	0.00	30414.12	29647.68	16727.77	13686.35	0.00	13154.26	-161245.76
28/05/2020	2039.332	15.2	0.56	4.90	167182.03	0	0	0.00	0.00	-156462.29	40487.96	0.00	30414.12	29647.68	16727.77	13686.35	0.00	12807.61	-166536.13
29/05/2020	1919.379	16.2	0.56	5.00	170593.91	0	0	0.00	0.00	-159655.40	38106.47	0.00	30414.12	29647.68	16727.77	13686.35	0.00	12054.27	-167347.74
30/05/2020	1978.517	18.6	0.56	5.10	174005.79	0	0	0.00	0.00	-162848.50	39280.58	0.00	35483.14	34588.97	19515.73	15967.41	0.00	12425.67	-166645.94
31/05/2020	1796.465	17.5	0.56	5.10	174005.79	0	0	0.00	0.00	-162848.50	35666.19	0.00	30414.12	29647.68	16727.77	13686.35	0.00	11282.33	-168100.57
01/06/2020	1867.997	19.5	0.56	5.10	174005.79	0	0	0.00	0.00	-162848.50	37086.36	0.00	35483.14	34588.97	19515.73	15967.41	0.00	11731.58	-164451.73
02/06/2020	2050.924	20.4	0.56	5.00	170593.91	0	0	0.00	0.00	-159655.40	40718.12	0.00	35483.14	34588.97	19515.73	15967.41	0.00	12880.41	-164890.37
03/06/2020	2119.196	17.3	0.56	4.00	136475.13	0	0	0.00	0.00	-127724.32	42073.55	0.00	30414.12	29647.68	16727.77	13686.35	0.00	13309.18	-139383.74
04/06/2020	1994.435	13	0.56	1.20	40942.54	18	1.8	42750.00	100225.94	19158.65	39596.61	23940.00	27879.61	27177.04	28500.79	12545.82	10773.00	12525.65	39418.65
05/06/2020	4667.111	10	0.56	1.70	58001.93	104	10.4	247000.00	579083.22	277800.39	92658.70	138320.00	19426.68	18937.12	86760.67	8742.00	62244.00	29310.84	389324.37
06/06/2020	3971.287	11.9	0.56	2.80	95532.59	22	2.2	52250.00	122498.37	-19158.65	78844.12	29260.00	19426.68	18937.12	26777.67	8742.00	13167.00	24940.86	-39493.09
07/06/2020	3443.965	13.2	0.56	2.80	95532.59	31	3.1	73625.00	172611.34	9579.32	68374.90	41230.00	27879.61	27177.04	38010.29	12545.82	18553.50	21629.12	24155.53
08/06/2020	3827.615	14.1	0.56	2.00	68237.56	0.04	0.004	95.00	222.72	-63734.43	75991.72	53.20	27879.61	27177.04	15363.05	12545.82	23.94	24038.56	-111775.48
09/06/2020	2064.202	13.8	0.56	2.50	85296.96	0	0	0.00	0.00	-79827.70	40981.72	0.00	27879.61	27177.04	15333.79	12545.82	0.00	12963.80	-92929.80
10/06/2020	2102.082	14.1	0.56	1.80	61413.81	0	0	0.00	0.00	-57475.94	41733.77	0.00	27879.61	27177.04	15333.79	12545.82	0.00	13201.70	-71330.10
11/06/2020	1720.267	16.2	0.56	2.10	71649.44	0.04	0.004	95.00	222.72	-66927.54	34153.39	53.20	30414.12	29647.68	16757.03	13686.35	23.94	10803.79	-70595.75
12/06/2020	3252.839	19.4	0.56	3.80	129651.37	89	8.9	211375.00	495561.60	162848.50	64580.38	118370.00	35483.14	34588.97	84619.23	15967.41	53266.50	20428.79	291859.76
13/06/2020	8429.606	20.9	0.56	5.10	174005.79	10	1	23750.00	55681.08	-130917.42	167357.54	13300.00	35483.14	34588.97	26830.73	15967.41	5985.00	52940.42	-245026.82
14/06/2020	2161.193	19.3	0.56	2.00	68237.56	0	0	0.00	0.00	-63862.16	42907.34	0.00	35483.14	34588.97	19515.73	15967.41	0.00	13572.93	-71286.35
15/06/2020	2323.894	20.1	0.56	3.20	109180.10	116	11.6	275500.00	645900.52	268221.06	46137.52	154280.00	35483.14	34588.97	104369.73	15967.41	69426.00	14594.74	463640.68
16/06/2020	4475.710	18.5	0.56	2.40	81885.08	178	17.8	422750.00	991123.21	491738.62	88858.70	236740.00	35483.14	34588.97	149722.73	15967.41	106533.00	28108.78	754580.06
17/06/2020	6117.881	18.7	0.56	3.60	122827.62	183	18.3	434625.00	1018963.75	469386.86	121461.62	243390.00	35483.14	34588.97	153380.23	15967.41	109525.50	38422.11	708507.88
18/06/2020	7748.697	17.9	0.56	3.70	126239.49	48	4.8	114000.00	267269.18	35124.19	153839.08	63840.00	30414.12	29647.68	51839.77	13686.35	28728.00	48664.11	-3028.78
19/06/2020	2400.343	17.2	0.56	4.20	143298.88	0.04	0.004	95.00	222.72	-133982.81	47655.32	53.20	30414.12	29647.68	16757.03	13686.35	23.94	15074.87	-151152.94
20/06/2020	1937.268	17.2	0.56	4.40	150122.64	0	0	0.00	0.00	-140496.75	38461.64	0.00	30414.12	29647.68	16727.77	13686.35	0.00	12166.62	-148544.27
21/06/2020	1940.922	19.5	0.56	4.00	136475.13	1	0.1	2375.00	5568.11	-124531.21	38534.19	1330.00	35483.14	34588.97	20247.23	15967.41	598.50	12189.57	-125805.75
22/06/2020	2032.381	17.7	0.56	5.00	170593.91	0	0	0.00	0.00	-159655.40	40349.96	0.00	30414.12	29647.68	16727.77	13686.35	0.00	12763.95	-169591.23
23/06/2020	1953.707	20.8	0.56	5.40	184241.42	0	0	0.00	0.00	-172427.83	38788.00	0.00	35483.14	34588.97	19515.73	15967.41	0.00	12269.86	-175732.68
24/06/2020	1932.938	24.2	0.56	5.90	201300.81	0	0	0.00	0.00	-188393.37	38375.66	0.00	40552.16	39530.25	22303.69	18248.47	0.00	12139.42	-186216.86
25/06/2020	1965.876	24.5	0.56	5.70	194477.06	0	0	0.00	0.00	-182007.15	39029.60	0.00	40552.16	39530.25	22303.69	18248.47	0.00	12346.28	-180484.59
26/06/2020	2730.369	23.8	0.56	5.10	174005.79	516	51.6	1225500.00	2873143.68	1484795.17	54207.51	686280.00	38017.65	37059.61	398363.71	17107.94	308826.00	17147.53	2385279.32
27/06/2020	4952.611	20.5	0.56	3.40	116003.86	21	2.1	49875.00	116930.27	-41510.40	98326.87	27930.00	35483.14	34588.97	34877.23	15967.41	12568.50	31103.86	-67047.64
28/06/2020	1980.682	17.9	0.56	3.30	112591.98	0.04	0.004	95.00	222.72	-105244.84	39323.57	53.20	30414.12	29647.68	16757.03	13686.35	23.94	12439.27	-114083.22
29/06/2020	2003.998	16.4	0.56	3.30	112591.98	0	0	0.00	0.00	-105372.56	39786.47	0.00	30414.12	29647.68	16727.77	13686.35	0.00	12585.70	-114744.91
30/06/2020	2993.595	16.5	0.56	2.00	68237.56	65	6.5	154375.00	361927.01	143689.86	59433.46	86450.00	30414.12	29647.68	64275.27	13686.35	38902.50	18800.66	230143.01
01/07/2020	11082.625	18	0.56	2.40	81885.08	208	20.8	494000.00	1158166.44	587531.85	220029.37	276640.00	30414.12	29647.68	168879.77	13686.35	124488.00	69602.17	767428.60
02/07/2020	3033.526	16.2	0.56	2.70	92120.71	88	8.8	209000.00	489993.50	194779.58	60226.25	117040.00	30414.12	29647.68	81099.77	13686.35	52668.00	19051.45	321299.46
03/07/2020	2145.782	17.7	0.56	3.40	116003.86	0.04	0.004	95.00	222.72	-108437.94	42601.37	53.20	30414.12	29647.68	16757.03	13686.35	23.94	13476.15	-120554.14
04/07/2020	2257.542	17.2	0.56	1.10	37530.66	54	5.4	128250.00	300677.83	137303.64	44820.22	71820.00	30414.12	29647.68	56228.77	13686.35	32319.00	14178.04	218828.54
05/07/2020	3249.342	18.3	0.56	2.20	75061.32	3	0.3	7125.00	16704.32	-60669.05	64510.95	3990.00	35483.14	34588.97	21710.23	15967.41	1795.50	20406.83	-84367.36
06/07/2020	2341.735	14.7	0.56	3.30	112591.98	28	2.8	66500.00	155907.02	-15965.54	46491.73	37240.00	27879.61	27177.04	35815.79	12545.82	16758.00	14706.79	15164.34
07/07/2020	2095.855	15.8	0.56	3.40	116003.86	0.04	0.004	95.00	222.72	-108437.94	41610.15	53.20	30414.12	29647.68	16757.03	13686.35	23.94	13162.59	-119562.91
08/07/2020	4134.455	15.4	0.56	1.10	37530.66	61	6.1	144875.00	339654.58	159655.40	82083.57	81130.00	30414.12	29647.68	61349.27	13686.35	36508.50	25965.60	216352.44
09/07/2020	3603.270	17.5	0.56	1.20	40942.54	27	2.7	64125.00	150338.91	47896.62	71537.68	35910.00	30414.12	29647.68	36478.27	13686.35	16159.50	22629.61	54738.56
10/07/2020	2772.194	15.1	0.56	2.00	68237.56	14	1.4	33250.00	77953.51	-19158.65	55037.88	18620.00	30414.12	29647.68	26968.77	13686.35	8379.00	17410.20	-18911.40
11/07/2020	1934.095	14.3	0.56	3.00	102356.35	2	0.2	4750.00	11136.22	-89407.02	38398.64	2660.00	27879.61	27177.04	16796.79	12545.82	1197.00	12146.69	-96373.05
12/07/2020	1802.393	15.5	0.56	4.50	153534.52	0	0	0.00	0.00	-143689.86	35783.89	0.00	30414.12	29647.68	16727.77	13686.35	0.00	11319.56	-149059.63
13/07/2020	1844.155	17.7	0.56	5.00	170593.91	0	0	0.00	0.00	-159655.40	36613.00	0.00	30414.12	29647.68	16727.77	13686.35	0.00	11581.84	-165854.28
14/07/2020	2828.274	15.7	0.56	1.20	40942.54	19	1.9	45125.00	105794.05	22351.76	56151.27	25270.00	30414.12	29647.68	30626.27	13686.35	11371.50	17762.40	30368.11
15/07/2020	1935.857	16	0.56	3.20	109180.10	0.04	0.004	95.00	222.72	-102051.73	38433.63	53.20	30414.12	29647.68	16757.03	13686.35	23.94	12157.76	-110000.17
16/07/2020	2842.544	16.1	0.56	1.20	40942.54	31	3.1	73625.00	172611.34	60669.05	56434.57	41230.00	30414.12	29647.68	39404.27	13686.35	18553.50	17852.02	89720.10
17/07/2020	1924.159	17.8	0.56	2.40	81885.08	0.04	0.004	95.00	222.72	-76506.87	38201.37	53.20	30414.12	29647.68	16757.03	13686.35	23.94	12084.29	-84223.05
18/07/2020	1875.818	19.6	0.56	3.80	129651.37	0	0	0.00	0.00	-121338.10	37241.64	0.00	35483.14	34588.97	19515.73	15967.41	0.00	11780.70	-123096.60
19/07/2020	1776.323	18.2	0.56	4.10	139887.01	0.04	0.004	95.00	222.72	-130789.70	35266.30	53.20	35483.14	34588.97	19544.99	15967.41	23.94	11155.83	-130501.80
20/07/2020	1657.333	16.5	0.56	3.90	133063.25	0	0	0.00	0.00	-124531.21	32903.94	0.00	30414.12	29647.68	16727.77	13686.35	0.00	10408.55	-127021.03
21/07/2020	1983.787	15	0.56	4.00	136475.13	0	0	0.00	0.00	-127724.32	39385.19	0.00	27879.61	27177.04	15333.79	12545.82	0.00	12458.77	-139229.90
22/07/2020	1900.482	15.3	0.56	3.80	129651.37	0	0	0.00	0.00	-121338.10	37731.31	0.00	30414.12	29647.68	16727.77	13686.35	0.00	11935.59	-128655.29
23/07/2020	1903.684	18.8	0.56	4.40	150122.64	0	0	0.00	0.00	-140496.75	37794.88	0.00	35483.14	34588.97	19515.73	15967.41	0.00	11955.70	-142808.49
24/07/2020	1915.987	18.6	0.56	2.10	71649.44	0.04	0.004	95.00	222.72	-66927.54	38039.12	53.20	35483.14	34588.97	19544.99	15967.41	23.94	12032.96	-69412.46
25/07/2020	2305.896	18.7	0.56	1.50	51178.17	44	4.4	104500.00	244996.75	92600.13	45780.21	58520.00	35483.14	34588.97	51701.73	15967.41	26334.00	14481.71	160469.06
26/07/2020	4068.581	18.7	0.56	3.80	129651.37	8	0.8	19000.00	44544.86	-95793.24	80775.74	10640.00	35483.14	34588.97	25367.73	15967.41	4788.00	25551.89	-126873.84
27/07/2020	1884.132	18.7	0.56	1.80	61413.81	10	1	23750.00	55681.08	-25544.86	37406.69	13300.00	35483.14	34588.97	26830.73	15967.41	5985.00	11832.91	-9703.41
28/07/2020	1787.709	18	0.56	3.40	116003.86	0	0	0.00	0.00	-108565.67	35492.36	0.00	30414.12	29647.68	16727.77	13686.35	0.00	11227.34	-113643.91
29/07/2020	1849.889	16.9	0.56	3.90	133063.25	0	0	0.00	0.00	-124531.21	36726.84	0.00	30414.12	29647.68	16727.77	13686.35	0.00	11617.85	-130843.93
30/07/2020	1814.581	19.6	0.56	4.60	156946.40	0	0	0.00	0.00	-146882.96	36025.87	0.00	35483.14	34588.97	19515.73	15967.41	0.00	11396.11	-147425.69
31/07/2020	1815.972	25.9	0.56	5.30	180829.54	4	0.4	9500.00	22272.43	-156462.29	36053.48	5320.00	40552.16	39530.25	25229.69	18248.47	2394.00	11404.84	-144857.61
01/08/2020	1812.099	20.9	0.56	2.70	92120.71	5	0.5	11875.00	27840.54	-70248.37	35976.58	6650.00	35483.14	34588.97	23173.23	15967.41	2992.50	11380.52	-61859.31
02/08/2020	1727.104	17.1	0.56	3.10	105768.22	0	0	0.00	0.00	-98986.34	34289.13	0.00	30414.12	29647.68	16727.77	13686.35	0.00	10846.72	-102861.35
03/08/2020	2318.151	15.5	0.56	2.60	88708.83	0.04	0.004	95.00	222.72	-82893.08	46023.52	53.20	30414.12	29647.68	16757.03	13686.35	23.94	14558.68	-98431.42

04/08/2020	1881.875	16.8	0.56	4.20	143298.88	0	0	0.00	0.00	-134110.53	37361.88	0.00	30414.12	29647.68	16727.77	13686.35	0.00	11818.73	-141058.29
05/08/2020	1735.603	21.2	0.56	4.80	163770.15	0	0	0.00	0.00	-153269.18	34457.87	0.00	38017.65	37059.61	20909.71	17107.94	0.00	10900.10	-149709.40
06/08/2020	1740.153	23.4	0.56	4.80	163770.15	0	0	0.00	0.00	-153269.18	34548.20	0.00	38017.65	37059.61	20909.71	17107.94	0.00	10928.68	-149799.73
07/08/2020	1788.581	26	0.56	5.00	170593.91	0	0	0.00	0.00	-159655.40	35509.67	0.00	40552.16	39530.25	22303.69	18248.47	0.00	11232.82	-154612.90
08/08/2020	1864.765	27.3	0.56	4.80	163770.15	0	0	0.00	0.00	-153269.18	37022.20	0.00	40552.16	39530.25	22303.69	18248.47	0.00	11711.28	-149739.21
09/08/2020	1795.977	27.9	0.56	4.70	160358.28	0	0	0.00	0.00	-150076.07	35656.50	0.00	40552.16	39530.25	22303.69	18248.47	0.00	11279.27	-145180.41
10/08/2020	1865.622	27.1	0.56	4.20	143298.88	0	0	0.00	0.00	-134110.53	37039.21	0.00	40552.16	39530.25	22303.69	18248.47	0.00	11716.66	-130597.58
11/08/2020	3059.344	26.5	0.56	4.10	139887.01	25	2.5	59375.00	139202.70	-51089.73	60738.81	33250.00	40552.16	39530.25	40591.19	18248.47	14962.50	19213.58	-26863.88
12/08/2020	6130.877	27.1	0.56	4.50	153534.52	0	0	0.00	0.00	-143689.86	121719.62	0.00	40552.16	39530.25	22303.69	18248.47	0.00	38503.72	-224857.32
13/08/2020	2420.229	23.9	0.56	2.60	88708.83	8	0.8	19000.00	44544.86	-57475.94	48050.12	10640.00	38017.65	37059.61	26761.71	17107.94	4788.00	15199.76	-53296.42
14/08/2020	2650.178	21.8	0.56	3.00	102356.35	0	0	0.00	0.00	-95793.24	52615.42	0.00	38017.65	37059.61	20909.71	17107.94	0.00	16643.90	-110391.01
15/08/2020	2270.065	21.3	0.56	2.70	92120.71	37	3.7	87875.00	206019.99	31931.08	45068.84	49210.00	38017.65	37059.61	47975.21	17107.94	22144.50	14256.68	90610.39
16/08/2020	4074.507	21.9	0.56	3.40	116003.86	15	1.5	35625.00	83521.62	-60669.05	80893.40	19950.00	38017.65	37059.61	31882.21	17107.94	8977.50	25589.11	-76897.30
17/08/2020	4698.638	20.1	0.56	3.10	105768.22	14	1.4	33250.00	77953.51	-54282.83	93284.61	18620.00	35483.14	34588.97	29756.73	15967.41	8379.00	29508.84	-87213.30
18/08/2020	2267.746	19.2	0.56	3.70	126239.49	0	0	0.00	0.00	-118144.99	45022.79	0.00	35483.14	34588.97	19515.73	15967.41	0.00	14242.12	-127684.64
19/08/2020	2132.034	21.3	0.56	3.20	109180.10	4	0.4	9500.00	22272.43	-89407.02	42328.42	5320.00	38017.65	37059.61	23835.71	17107.94	2394.00	13389.80	-86611.80
20/08/2020	2027.584	24.7	0.56	2.50	85296.96	0.04	0.004	95.00	222.72	-79699.97	40254.72	53.20	40552.16	39530.25	22332.95	18248.47	23.94	12733.83	-79331.47
21/08/2020	1958.914	24.2	0.56	3.60	122827.62	0.04	0.004	95.00	222.72	-114824.16	38891.39	53.20	40552.16	39530.25	22332.95	18248.47	23.94	12302.56	-113092.33
22/08/2020	2666.942	19.1	0.56	2.70	92120.71	63	6.3	149625.00	350790.80	114951.88	52948.25	83790.00	35483.14	34588.97	65600.23	15967.41	37705.50	16749.19	209406.27
23/08/2020	2738.281	17.6	0.56	2.00	68237.56	18	1.8	42750.00	100225.94	-6386.22	54364.58	23940.00	30414.12	29647.68	29894.77	13686.35	10773.00	17197.22	1640.33
24/08/2020	2196.617	16.9	0.56	2.30	78473.20	10	1	23750.00	55681.08	-41510.40	43610.63	13300.00	30414.12	29647.68	24042.77	13686.35	5985.00	13795.41	-36941.92
25/08/2020	1987.084	18	0.56	1.30	44354.42	8	0.8	19000.00	44544.86	-15965.54	39450.65	10640.00	30414.12	29647.68	22579.77	13686.35	4788.00	12479.47	-10790.07
26/08/2020	2061.233	16.7	0.56	0.50	17059.39	15	1.5	35625.00	83521.62	31931.08	40922.78	19950.00	30414.12	29647.68	27700.27	13686.35	8977.50	12945.15	48069.92
27/08/2020	1981.469	16.7	0.56	1.90	64825.69	12	1.2	28500.00	66817.29	-22351.76	39339.18	15960.00	30414.12	29647.68	25505.77	13686.35	7182.00	12444.21	-9958.81
28/08/2020	4137.292	16.2	0.56	1.80	61413.81	79	7.9	187625.00	439880.52	194779.58	82139.91	105070.00	30414.12	29647.68	74516.27	13686.35	47281.50	25983.42	283397.29
29/08/2020	5226.688	14.5	0.56	1.90	64825.69	0.04	0.004	95.00	222.72	-60541.33	103768.27	53.20	27879.61	27177.04	15363.05	12545.82	23.94	32825.15	-136358.93
30/08/2020	3033.225	15.4	0.56	1.60	54590.05	29	2.9	68875.00	161475.13	41510.40	60220.26	38570.00	30414.12	29647.68	37941.27	13686.35	17356.50	19049.55	63222.76
31/08/2020	1928.451	15	0.56	2.30	78473.20	0.04	0.004	95.00	222.72	-73313.76	38286.58	53.20	27879.61	27177.04	15363.05	12545.82	23.94	12111.24	-83649.66
01/09/2020	1987.921	14.1	0.56	1.90	64825.69	0	0	0.00	0.00	-60669.05	39467.29	0.00	27879.61	27177.04	15333.79	12545.82	0.00	12484.74	-72256.72
02/09/2020	1992.103	15.3	0.56	2.70	92120.71	0	0	0.00	0.00	-86213.91	39550.30	0.00	30414.12	29647.68	16727.77	13686.35	0.00	12511.00	-95350.09
03/09/2020	2995.112	17.1	0.56	1.30	44354.42	28	2.8	66500.00	155907.02	47896.62	59463.59	37240.00	30414.12	29647.68	37209.77	13686.35	16758.00	18810.19	68589.15
04/09/2020	2448.477	17.4	0.56	2.30	78473.20	10	1	23750.00	55681.08	-41510.40	48610.95	13300.00	30414.12	29647.68	24042.77	13686.35	5985.00	15377.16	-41942.24
05/09/2020	2627.219	15.2	0.56	2.40	81885.08	4	0.4	9500.00	22272.43	-63862.16	52159.60	5320.00	30414.12	29647.68	19653.77	13686.35	2394.00	16499.71	-78501.64
06/09/2020	1929.616	13.6	0.56	1.90	64825.69	0	0	0.00	0.00	-60669.05	38309.72	0.00	27879.61	27177.04	15333.79	12545.82	0.00	12118.56	-71099.16
07/09/2020	2011.620	15.7	0.56	2.70	92120.71	0	0	0.00	0.00	-86213.91	39937.78	0.00	30414.12	29647.68	16727.77	13686.35	0.00	12633.57	-95737.57
08/09/2020	1815.527	16.8	0.56	0.60	20471.27	0.04	0.004	95.00	222.72	-19030.92	36044.65	53.20	30414.12	29647.68	16757.03	13686.35	23.94	11402.05	-24590.39
09/09/2020	1852.826	18	0.56	1.50	51178.17	3	0.3	7125.00	16704.32	-38317.29	36785.16	3990.00	30414.12	29647.68	18922.27	13686.35	1795.50	11636.30	-39358.84
10/09/2020	2015.280	13.7	0.56	2.50	85296.96	0	0	0.00	0.00	-79827.70	40010.45	0.00	27879.61	27177.04	15333.79	12545.82	0.00	12656.56	-91958.54
11/09/2020	1952.791	14	0.56	2.30	78473.20	0	0	0.00	0.00	-73441.48	38769.83	0.00	27879.61	27177.04	15333.79	12545.82	0.00	12264.11	-84331.70
12/09/2020	1865.753	15.1	0.56	2.00	68237.56	0	0	0.00	0.00	-63862.16	37041.80	0.00	30414.12	29647.68	16727.77	13686.35	0.00	11717.48	-70489.84
13/09/2020	1814.703	16.6	0.56	2.80	95532.59	0	0	0.00	0.00	-89407.02	36028.28	0.00	30414.12	29647.68	16727.77	13686.35	0.00	11396.87	-95021.18
14/09/2020	1876.297	20.8	0.56	3.10	105768.22	0	0	0.00	0.00	-98986.34	37251.14	0.00	35483.14	34588.97	19515.73	15967.41	0.00	11783.70	-100754.34
15/09/2020	1722.298	23.8	0.56	3.20	109180.10	0	0	0.00	0.00	-102179.45	34193.71	0.00	38017.65	37059.61	20909.71	17107.94	0.00	10816.54	-98355.52
16/09/2020	1854.680	19.1	0.56	2.30	78473.20	0	0	0.00	0.00	-73441.48	36821.97	0.00	35483.14	34588.97	19515.73	15967.41	0.00	11647.94	-74780.31
17/09/2020	1792.550	14.6	0.56	2.70	92120.71	0	0	0.00	0.00	-86213.91	35588.48	0.00	27879.61	27177.04	15333.79	12545.82	0.00	11257.75	-93922.78
18/09/2020	2059.089	16	0.56	2.80	95532.59	0	0	0.00	0.00	-89407.02	40880.22	0.00	30414.12	29647.68	16727.77	13686.35	0.00	12931.69	-99873.12
19/09/2020	1880.417	17.4	0.56	2.70	92120.71	0	0	0.00	0.00	-86213.91	37332.94	0.00	30414.12	29647.68	16727.77	13686.35	0.00	11809.58	-93132.74
20/09/2020	1912.834	15.9	0.56	2.80	95532.59	0	0	0.00	0.00	-89407.02	37976.53	0.00	30414.12	29647.68	16727.77	13686.35	0.00	12013.16	-96969.43
21/09/2020	1885.026	15.4	0.56	2.60	88708.83	0	0	0.00	0.00	-83020.81	37424.44	0.00	30414.12	29647.68	16727.77	13686.35	0.00	11838.52	-90031.13
22/09/2020	1880.478	15.3	0.56	2.50	85296.96	0	0	0.00	0.00	-79827.70	37334.15	0.00	30414.12	29647.68	16727.77	13686.35	0.00	11809.96	-86747.73
23/09/2020	2137.388	17	0.56	1.40	47766.29	134	13.4	318250.00	746126.46	383172.95	42434.73	178220.00	30414.12	29647.68	114748.77	13686.35	80199.00	13423.43	609203.33
24/09/2020	4765.570	14.2	0.56	1.70	58001.93	29	2.9	68875.00	161475.13	38317.29	94613.45	38570.00	27879.61	27177.04	36547.29	12545.82	17356.50	29929.19	23101.96
25/09/2020	6972.390	10.7	0.56	1.20	40942.54	197	19.7	467875.00	1096917.26	590724.96	138426.65	262010.00	19426.68	18937.12	154790.17	8742.00	117904.50	43788.68	821695.49
26/09/2020	9722.637	13.1	0.56	1.80	61413.81	113	11.3	268375.00	629196.19	303345.25	193028.79	150290.00	27879.61	27177.04	97993.29	12545.82	67630.50	61061.04	338940.58
27/09/2020	7765.725	13.7	0.56	0.70	23883.15	54	5.4	128250.00	300677.83	150076.07	154177.16	71820.00	27879.61	27177.04	54834.79	12545.82	32319.00	48771.06	119709.52
28/09/2020	5281.497	12.4	0.56	0.20	6823.76	44	4.4	104500.00	244996.75	134110.53	104856.43	58520.00	27879.61	27177.04	47519.79	12545.82	26334.00	33169.37	135299.72
29/09/2020	4205.138	15.8	0.56	2.00	68237.56	11	1.1	26125.00	61249.19	-28737.97	83486.89	14630.00	30414.12	29647.68	24774.27	13686.35	6583.50	26409.52	-62269.24
30/09/2020	2384.742	15.9	0.56	1.00	34118.78	27	2.7	64125.00	150338.91	54282.83	47345.58	35910.00	30414.12	29647.68	36478.27	13686.35	16159.50	14976.89	85316.88
01/10/2020	5970.939	13	0.56	0.40	13647.51	91	9.1	216125.00	506697.82	277800.39	118544.30	121030.00	27879.61	27177.04	81900.29	12545.82	54463.50	37499.27	348797.20
02/10/2020	2616.127	12.8	0.56	0.70	23883.15	6	0.6	14250.00	33408.65	-3193.11	51939.39	7980.00	27879.61	27177.04	19722.79	12545.82	3591.00	16430.05	-16593.89
03/10/2020	5382.063	12.3	0.56	0.30	10235.63	69	6.9	163875.00	384199.45	210745.12	106853.02	91770.00	27879.61	27177.04	65807.29	12545.82	41296.50	33800.95	254350.21
04/10/2020	2639.354	12.1	0.56	1.20	40942.54	5	0.5	11875.00	27840.54	-22351.76	52400.53	6650.00	27879.61	27177.04	18991.29	12545.82	2992.50	16575.93	-37990.18
05/10/2020	3111.123	12.1	0.56	0.80	27295.03	47	4.7	111625.00	261701.07	124531.21	61766.81	62510.00	27879.61	27177.04	49714.29	12545.82	28129.50	19538.77	174139.51
06/10/2020	4007.030	13.3	0.56	1.30	44354.42	58	5.8	137750.00	322950.26	143689.86	79553.74	77140.00	27879.61	27177.04	57760.79	12545.82	34713.00	25165.34	195052.72
07/10/2020	6451.544	12.2	0.56	1.00	34118.78	36	3.6	85500.00	200451.88	83020.81	128086.01	47880.00	27879.61	27177.04	41667.79	12545.82	21546.00	40517.61	46768.41
08/10/2020	5096.400	13.6	0.56	0.40	13647.51	58	5.8	137750.00	322950.26	172427.83	101181.59	77140.00	27879.61	27177.04	57760.79	12545.82	34713.00	32006.90	202162.84
09/10/2020	3347.516	12	0.56	1.10	37530.66	17	1.7	40375.00	94657.83	19158.65	66460.04	22610.00	19426.68	18937.12	23120.17	8742.00	10174.50	21023.39	2325.78
10/10/2020	5186.749	8.9	0.56	1.00	34118.78	54	5.4	128250.00	300677.83	140496.75	102975.34	71820.00	19426.68	18937.12	50185.67	8742.00	32319.00	32574.32	152879.08
11/10/2020	8329.850	8.8	0.56	1.10	37530.66	33	3.3	78375.00	183747.56	70248.37	165377.04	43890.00	19426.68	18937.12	34824.17	8742.00	19750.50	52313.93	-17077.49
12/10/2020	3202.747	10.4	0.56	1.10	37530.66	20	2	47500.00	111362.16	28737.97	63585.87	26600.00	19426.68	18937.12	25314.67	8742.00	11970.00	20114.20	20108.78
13/10/2020	2160.122	10	0.56	1.00	34118.78	15	1.5	35625.00	83521.62	15965.54	42886.08	19950.00	19426.68	18937.12	21657.17	8742.00	8977.50	13566.21	19153.63
14/10/2020	2119.678	9	0.56	0.80	27295.03	0	0	0.00	0.00	-25544.86	42083.13	0.00	19426.68	18937.12	10684.67	8742.00	0.00	13312.21	-48201.31
15/10/2020	2096.840	9.2	0.56	0.70	23883.15	0	0	0.00	0.00	-22351.76	41629.70	0.00	19426.68	18937.12	10684.67	8742.00	0.00	13168.77	-44554.77
16/10/2020	2088.214	7.7	0.56	0.80	27295.03	0	0	0.00	0.00	-25544.86	41458.46	0.00	19426.68	18937.12	10684.67	8742.00	0.00	13114.61	-47576.64
17/10/2020	2024.065	7.6	0.56	0.90	30706.90	0	0	0.00	0.00	-28737.97	40184.87	0.00	19426.68	18937.12	10684.67	8742.00	0.00	12711.73	-49496.16

18/10/2020	1907.713	9.4	0.56	0.40	13647.51	4	0.4	9500.00	22272.43	0.00	37874.86	5320.00	19426.68	18937.12	13610.67	8742.00	2394.00	11981.00	-11342.18
19/10/2020	2041.984	9.9	0.56	0.90	30706.90	5	0.5	11875.00	27840.54	-12772.43	40540.61	6650.00	19426.68	18937.12	14342.17	8742.00	2992.50	12824.26	-25003.86
20/10/2020	1974.865	12.2	0.56	0.30	10235.63	0.04	0.004	95.00	222.72	-9451.60	39208.07	53.20	27879.61	27177.04	15363.05	12545.82	23.94	12402.74	-20709.00
21/10/2020	5601.422	16.2	0.56	0.80	27295.03	75	7.5	178125.00	417608.09	213938.23	111208.07	99750.00	30414.12	29647.68	71590.27	13686.35	44887.50	35178.59	266381.78
22/10/2020	2148.699	13.6	0.56	1.00	34118.78	0	0	0.00	0.00	-31931.08	42659.30	0.00	27879.61	27177.04	15333.79	12545.82	0.00	13494.47	-46710.76
23/10/2020	2060.536	12.5	0.56	0.70	23883.15	0	0	0.00	0.00	-22351.76	40908.94	0.00	27879.61	27177.04	15333.79	12545.82	0.00	12940.78	-35381.08
24/10/2020	2006.124	14.1	0.56	0.60	20471.27	6	0.6	14250.00	33408.65	0.00	39828.68	7980.00	27879.61	27177.04	19722.79	12545.82	3591.00	12599.06	-1290.06
25/10/2020	2766.202	12	0.56	0.30	10235.63	35	3.5	83125.00	194883.78	102179.45	54918.92	46550.00	19426.68	18937.12	36287.17	8742.00	20947.50	17372.57	128864.71
26/10/2020	2026.669	10.6	0.56	0.80	27295.03	5	0.5	11875.00	27840.54	-9579.32	40236.56	6650.00	19426.68	18937.12	14342.17	8742.00	2992.50	12728.08	-21506.71
27/10/2020	2215.537	10.1	0.56	0.50	17059.39	17	1.7	40375.00	94657.83	38317.29	43986.26	22610.00	19426.68	18937.12	23120.17	8742.00	10174.50	13914.23	43958.22
28/10/2020	8681.159	10.5	0.56	0.60	20471.27	95	9.5	225625.00	528970.25	284186.60	172351.77	126350.00	19426.68	18937.12	80177.17	8742.00	56857.50	54520.25	300029.01
29/10/2020	5786.002	10.9	0.56	0.50	17059.39	51	5.1	121125.00	283973.50	146882.96	114872.64	67830.00	19426.68	18937.12	47991.17	8742.00	30523.50	36337.81	142038.50
30/10/2020	2890.531	14.3	0.56	0.40	13647.51	10	1	23750.00	55681.08	19158.65	57387.28	13300.00	27879.61	27177.04	22648.79	12545.82	5985.00	18153.39	7415.98
31/10/2020	2708.694	13.6	0.56	0.80	27295.03	21	2.1	49875.00	116930.27	41510.40	53777.18	27930.00	27879.61	27177.04	30695.29	12545.82	12568.50	17011.40	52919.33
01/11/2020	2518.570	14.9	0.56	0.40	13647.51	58	5.8	137750.00	322950.26	172427.83	50002.53	77140.00	27879.61	27177.04	57760.79	12545.82	34713.00	15817.36	253341.91
02/11/2020	5750.575	16	0.56	0.40	13647.51	27	2.7	64125.00	150338.91	73441.48	114169.30	35910.00	30414.12	29647.68	36478.27	13686.35	16159.50	36115.32	37651.81
03/11/2020	2467.480	8.8	0.56	0.90	30706.90	16	1.6	38000.00	89089.73	22351.76	48988.22	21280.00	19426.68	18937.12	22388.67	8742.00	9576.00	15496.50	21214.22
04/11/2020	2229.483	6	0.56	0.90	30706.90	0	0	0.00	0.00	-28737.97	44263.15	0.00	19426.68	18937.12	10684.67	8742.00	0.00	14001.82	-53574.44
05/11/2020	1772.094	4.9	0.56	0.90	30706.90	0	0	0.00	0.00	-28737.97	35182.35	0.00	19426.68	18937.12	10684.67	8742.00	0.00	11129.28	-44493.64
06/11/2020	2215.152	6.4	0.56	0.90	30706.90	0	0	0.00	0.00	-28737.97	43978.61	0.00	19426.68	18937.12	10684.67	8742.00	0.00	13911.81	-53289.91
07/11/2020	2265.764	7.4	0.56	0.80	27295.03	0	0	0.00	0.00	-25544.86	44983.44	0.00	19426.68	18937.12	10684.67	8742.00	0.00	14229.67	-51101.62
08/11/2020	2070.590	9.1	0.56	0.40	13647.51	0.04	0.004	95.00	222.72	-12644.71	41108.55	53.20	19426.68	18937.12	10713.93	8742.00	23.94	13003.92	-34255.52
09/11/2020	2096.313	12.3	0.56	0.80	27295.03	0	0	0.00	0.00	-25544.86	41619.23	0.00	27879.61	27177.04	15333.79	12545.82	0.00	13165.46	-39284.48
10/11/2020	2056.171	12.2	0.56	0.80	27295.03	1	0.1	2375.00	5568.11	-22351.76	40822.28	1330.00	27879.61	27177.04	16065.29	12545.82	598.50	12913.37	-33517.93
11/11/2020	2126.634	11	0.56	0.40	13647.51	0	0	0.00	0.00	-12772.43	42221.22	0.00	19426.68	18937.12	10684.67	8742.00	0.00	13355.89	-35566.97
12/11/2020	3081.075	10.3	0.56	0.50	17059.39	30	3	71250.00	167043.24	79827.70	61170.26	39900.00	19426.68	18937.12	32629.67	8742.00	17955.00	19350.07	91379.12
13/11/2020	2576.941	10	0.56	0.30	10235.63	12	1.2	28500.00	66817.29	28737.97	51161.41	15960.00	19426.68	18937.12	19462.67	8742.00	7182.00	16183.95	18321.24
14/11/2020	2805.828	12.7	0.56	0.60	20471.27	17	1.7	40375.00	94657.83	35124.19	55705.62	22610.00	27879.61	27177.04	27769.29	12545.82	10174.50	17621.43	37498.67
15/11/2020	5511.844	12.8	0.56	0.30	10235.63	65	6.5	154375.00	361927.01	197972.69	109429.64	86450.00	27879.61	27177.04	62881.29	12545.82	38902.50	34616.02	231895.16
16/11/2020	3080.444	10.2	0.56	0.30	10235.63	11	1.1	26125.00	61249.19	25544.86	61157.72	14630.00	19426.68	18937.12	18731.17	8742.00	6583.50	19346.10	3355.32
17/11/2020	2133.495	12	0.56	0.30	10235.63	1	0.1	2375.00	5568.11	-6386.22	42357.43	1330.00	19426.68	18937.12	11416.17	8742.00	598.50	13398.98	-27540.47
18/11/2020	2148.523	12.9	0.56	0.90	30706.90	0.04	0.004	95.00	222.72	-28610.25	42655.80	53.20	27879.61	27177.04	15363.05	12545.82	23.94	13493.36	-43315.38
19/11/2020	2752.413	7.8	0.56	0.30	10235.63	34	3.4	80750.00	189315.67	98986.34	54645.16	45220.00	19426.68	18937.12	35555.67	8742.00	20349.00	17285.97	124168.87
20/11/2020	2514.006	5.2	0.56	0.50	17059.39	5	0.5	11875.00	27840.54	0.00	49911.92	6650.00	19426.68	18937.12	14342.17	8742.00	2992.50	15788.70	-21602.74
21/11/2020	2156.149	8.5	0.56	0.30	10235.63	2	0.2	4750.00	11136.22	-3193.11	42807.20	2660.00	19426.68	18937.12	12147.67	8742.00	1197.00	13541.26	-23020.63
22/11/2020	2378.471	8.9	0.56	0.20	6823.76	17	1.7	40375.00	94657.83	47896.62	47221.08	22610.00	19426.68	18937.12	23120.17	8742.00	10174.50	14937.50	50302.72
23/11/2020	2101.421	6.9	0.56	0.60	20471.27	0	0	0.00	0.00	-19158.65	41720.65	0.00	19426.68	18937.12	10684.67	8742.00	0.00	13197.55	-41452.62
24/11/2020	2089.033	8.3	0.56	0.40	13647.51	0	0	0.00	0.00	-12772.43	41474.71	0.00	19426.68	18937.12	10684.67	8742.00	0.00	13119.75	-34820.47
25/11/2020	2051.554	6.8	0.56	0.50	17059.39	0	0	0.00	0.00	-15965.54	40730.62	0.00	19426.68	18937.12	10684.67	8742.00	0.00	12884.37	-37269.48
26/11/2020	1999.317	8.5	0.56	0.10	3411.88	7	0.7	16625.00	38976.76	19158.65	39693.53	9310.00	19426.68	18937.12	15805.17	8742.00	4189.50	12556.31	11327.29
27/11/2020	2575.423	6.5	0.56	0.20	6823.76	6	0.6	14250.00	33408.65	12772.43	51131.28	7980.00	19426.68	18937.12	15073.67	8742.00	3591.00	16174.42	-8273.17
28/11/2020	2053.429	4.9	0.56	0.40	13647.51	0	0	0.00	0.00	-12772.43	40767.85	0.00	19426.68	18937.12	10684.67	8742.00	0.00	12896.15	-34113.60
29/11/2020	1995.992	1.3	0.56	0.20	6823.76	0	0	0.00	0.00	-6386.22	39627.51	0.00	19426.68	18937.12	10684.67	8742.00	0.00	12535.42	-26587.05
30/11/2020	2328.944	2.1	0.56	0.10	3411.88	51	5.1	121125.00	283973.50	159655.40	46237.79	67830.00	19426.68	18937.12	47991.17	8742.00	30523.50	14626.46	223445.78
01/12/2020	5992.512	8.2	0.56	0.30	10235.63	76	7.6	180500.00	423176.20	233096.88	118972.60	101080.00	19426.68	18937.12	66278.67	8742.00	45486.00	37634.75	268564.96
02/12/2020	2089.826	6	0.56	0.10	3411.88	0.04	0.004	95.00	222.72	-3065.38	41490.44	53.20	19426.68	18937.12	10713.93	8742.00	23.94	13124.72	-25058.09
03/12/2020	2574.424	5.7	0.56	0.10	3411.88	37	3.7	87875.00	206019.99	114951.88	51111.43	49210.00	19426.68	18937.12	37750.17	8742.00	22144.50	16168.14	148997.63
04/12/2020	2989.154	5.1	0.56	0.20	6823.76	12	1.2	28500.00	66817.29	31931.08	59345.30	15960.00	19426.68	18937.12	19462.67	8742.00	7182.00	18772.77	13330.46
05/12/2020	2038.532	2.2	0.56	0.30	10235.63	0.04	0.004	95.00	222.72	-9451.60	40472.09	53.20	19426.68	18937.12	10713.93	8742.00	23.94	12802.59	-30425.95
06/12/2020	1909.004	1.1	0.56	0.20	6823.76	0	0	0.00	0.00	-6386.22	37900.49	0.00	19426.68	18937.12	10684.67	8742.00	0.00	11989.11	-24860.03
07/12/2020	3702.049	2.3	0.56	0.10	3411.88	54	5.4	128250.00	300677.83	169234.72	73498.78	71820.00	19426.68	18937.12	50185.67	8742.00	32319.00	23249.96	211093.61
08/12/2020	1941.469	1.1	0.56	0.30	10235.63	0	0	0.00	0.00	-9579.32	38545.04	0.00	19426.68	18937.12	10684.67	8742.00	0.00	12193.00	-28697.69
09/12/2020	1937.679	0.8	0.56	0.10	3411.88	0	0	0.00	0.00	-3193.11	38469.79	0.00	19426.68	18937.12	10684.67	8742.00	0.00	12169.20	-22236.22
10/12/2020	1877.376	1.1	0.56	0.30	10235.63	0	0	0.00	0.00	-9579.32	37272.57	0.00	19426.68	18937.12	10684.67	8742.00	0.00	11790.48	-27425.22
11/12/2020	3022.972	3	0.56	0.10	3411.88	33	3.3	78375.00	183747.56	102179.45	60016.70	43890.00	19426.68	18937.12	34824.17	8742.00	19750.50	18985.16	120213.93
12/12/2020	3027.327	7.9	0.56	0.10	3411.88	14	1.4	33250.00	77953.51	41510.40	60103.16	18620.00	19426.68	18937.12	20925.67	8742.00	8379.00	19012.51	25704.92
13/12/2020	2260.587	7.4	0.56	0.30	10235.63	8	0.8	19000.00	44544.86	15965.54	44880.65	10640.00	19426.68	18937.12	16536.67	8742.00	4788.00	14197.15	4723.56
14/12/2020	3533.663	9.7	0.56	0.20	6823.76	55	5.5	130625.00	306245.93	169234.72	70155.74	73150.00	19426.68	18937.12	50917.17	8742.00	32917.50	22192.45	216213.16
15/12/2020	2706.457	8.3	0.56	0.10	3411.88	8	0.8	19000.00	44544.86	22351.76	53732.76	10640.00	19426.68	18937.12	16536.67	8742.00	4788.00	16997.35	2257.68
16/12/2020	2041.381	7.2	0.56	0.40	13647.51	0.04	0.004	95.00	222.72	-12644.71	40528.64	53.20	19426.68	18937.12	10713.93	8742.00	23.94	12820.48	-33675.61
17/12/2020	3143.485	9.1	0.56	0.40	13647.51	18	1.8	42750.00	100225.94	44703.51	62409.32	23940.00	19426.68	18937.12	23851.67	8742.00	10773.00	19742.02	33697.87
18/12/2020	2005.317	8.4	0.56	0.50	17059.39	0	0	0.00	0.00	-15965.54	39812.65	0.00	19426.68	18937.12	10684.67	8742.00	0.00	12593.99	-36351.51
19/12/2020	1950.083	9.1	0.56	0.30	10235.63	2	0.2	4750.00	11136.22	-3193.11	38716.06	2660.00	19426.68	18937.12	12147.67	8742.00	1197.00	12247.10	-18929.49
20/12/2020	1898.948	8.5	0.56	0.30	10235.63	0	0	0.00	0.00	-9579.32	37700.85	0.00	19426.68	18937.12	10684.67	8742.00	0.00	11925.96	-27853.50
21/12/2020	4895.114	8.4	0.56	0.10	3411.88	102	10.2	242250.00	567947.01	322503.90	97185.35	135660.00	19426.68	18937.12	85297.67	8742.00	61047.00	30742.77	425948.23
22/12/2020	6937.952	11.5	0.56	0.20	6823.76	59	5.9	140125.00	328518.37	182007.15	137742.94	78470.00	19426.68	18937.12	53843.17	8742.00	35311.50	43572.40	168504.39
23/12/2020	6772.977	11.5	0.56	0.10	3411.88	79	7.9	187625.00	439880.52	249062.42	134467.59	105070.00	19426.68	18937.12	68473.17	8742.00	47281.50	42536.30	274365.01
24/12/2020	5040.730	5.7	0.56	0.20	6823.76	35	3.5	83125.00	194883.78	105372.56	100076.35	46550.00	19426.68	18937.12	36287.17	8742.00	20947.50	31657.28	86900.39
25/12/2020	2245.300	3.1	0.56	0.40	13647.51	0	0	0.00	0.00	-12772.43	44577.16	0.00	19426.68	18937.12	10684.67	8742.00	0.00	14101.15	-37922.91
26/12/2020	2038.084	4	0.56	0.20	6823.76	10	1	23750.00	55681.08	25544.86	40463.19	13300.00	19426.68	18937.12	17999.67	8742.00	5985.00	12799.77	22273.35
27/12/2020	8438.528	4.9	0.56	0.10	3411.88	103	10.3	244625.00	573515.11	325697.01	167534.69	136990.00	19426.68	18937.12	86029.17	8742.00	61645.50	52996.46	360568.49
28/12/2020	3018.134	3.3	0.56	0.20	6823.76	10	1	23750.00	55681.08	25544.86	59920.65	13300.00	19426.68	18937.12	17999.67	8742.00	5985.00	18954.77	2815.89
29/12/2020	2508.446	3	0.56	0.10	3411.88	16	1.6	38000.00	89089.73	47896.62	49801.53	21280.00	19426.68	18937.12	22388.67	8742.00	9576.00	15753.78	45945.76
30/12/2020	3510.425	3.6	0.56	0.20	6823.76	22	2.2	52250.00	122498.37	63862.16	69694.37	29260.00	19426.68	18937.12	26777.67	8742.00	13167.00	22046.51	52677.47
31/12/2020	3510.425	3.6	0.56	0.20	6823.76	0.04	0.004	95.00	222.72	-6258.49	69694.37	53.20	19426.68	18937.12	10713.93	8742.00	23.94	22046.51	-56455.12

Table 2: Rural water balance, all the flow which interact in the area of interest.

	WWTP EFFLUENT (m3/h)	T (°C)	Runoff coefficient	Evaporation (mm/d)	Evaporation (m3/d)	Precipitation (0.1 mm/d)	Precipitation (mm/d)	Net precipitation (m3/d)	Precipitation (m3/d)	Infiltration	WWTP Effluent (m3/d)	Stormwater (m3/d) *	water consumption (m3/d)	water intake (m3 / d)	inflow combined + pressure sewage (m3/d)	inflow separate sewage wwtp (m3/d)	outflow separate sewage system (m3/d)	Extraneous water (m3/d)	water balance (m3/d)	water balance (m3/year)	water balance (m/year)	water balance (mm/year)
DD/MM/YYYY	(Water board)	KNMI	Triangle method	KNMI	(evaporation mm/1000) * pervious area	KNMI	Precipitation 0.1 mm / 10	(Precipitation mm / 1000) * impervious area	Precipitation - Net precipitation	Precipitation - Net Precipitation - Evaporation	((WWTP effluent m3/h * 24 * 95%)* Breda rural pop) / (Breda's pop)	Net precipitation * runoff coefficient	Brabant Water	97.48% * water consumption	55% *stormwater + 55% * water consumption	45% * water consumption	55% * stormwater + 15% extraneous water	Triangle method	Precipitation + Water intake - Evaporation - WWTP - outflow separate sewage	sum of daily water balance	water balance (m3/yr) / rural area	water balance (m/year) * 1000
01/01/2020	2028.178	2	0.56	0.10	3411.88	0	0	0.00	0.00	-3411.88	5975.94	0.00	2532.74	2468.92	1393.01	1139.73	0.00	1890.38	-6855.08	1498904.46	0.04237931	42.37931
02/01/2020	2049.676	4.1	0.56	0.10	3411.88	0	0	0.00	0.00	-3411.88	6039.28	0.00	2532.74	2468.92	1393.01	1139.73	0.00	1910.41	-6918.42			
03/01/2020	3305.784	7.8	0.56	0.10	3411.88	29	2.9	3625.00	102569.47	95532.59	9740.35	1087.50	2532.74	2468.92	2509.51	1139.73	913.50	3081.18	91036.48			
04/01/2020	2323.649	6.4	0.56	0.20	6823.76	5	0.5	625.00	17684.39	10235.63	6846.53	187.50	2532.74	2468.92	1585.51	1139.73	157.50	2165.77	6389.34			
05/01/2020	2224.189	6.8	0.56	0.10	3411.88	0	0	0.00	0.00	-3411.88	6553.48	0.00	2532.74	2468.92	1393.01	1139.73	0.00	2073.07	-7432.61			
06/01/2020	2184.621	5.9	0.56	0.50	17059.39	8	0.8	1000.00	28295.03	10235.63	6436.89	300.00	2532.74	2468.92	1701.01	1139.73	252.00	2036.19	7079.48			
07/01/2020	2424.248	7.1	0.56	0.20	6823.76	0.04	0.004	5.00	141.48	-6687.28	7142.94	1.50	2532.74	2468.92	1394.55	1139.73	1.26	2259.54	-11293.74			
08/01/2020	2585.008	10.7	0.56	0.20	6823.76	15	1.5	1875.00	53053.17	44354.42	7616.62	562.50	2532.74	2468.92	1970.51	1139.73	472.50	2409.37	40673.04			
09/01/2020	3177.072	11.9	0.56	0.10	3411.88	30	3	3750.00	106106.35	98944.47	9361.10	1125.00	2532.74	2468.92	2548.01	1139.73	945.00	2961.21	94921.10			
10/01/2020	5384.151	6.3	0.56	0.20	6823.76	55	5.5	6875.00	194528.30	180829.54	15864.17	2062.50	2532.74	2468.92	3510.51	1139.73	1732.50	5018.33	172640.62			
11/01/2020	2486.721	5.7	0.56	0.40	13647.51	0	0	0.00	0.00	-13647.51	7327.02	0.00	2532.74	2468.92	1393.01	1139.73	0.00	2317.76	-18441.79			
12/01/2020	2346.963	7.5	0.56	0.10	3411.88	3	0.3	375.00	10610.63	6823.76	6915.23	112.50	2532.74	2468.92	1508.51	1139.73	94.50	2187.50	2721.77			
13/01/2020	2188.501	8	0.56	0.50	17059.39	0.04	0.004	5.00	141.48	-16922.92	6448.32	1.50	2532.74	2468.92	1394.55	1139.73	1.26	2039.81	-20834.76			
14/01/2020	4786.335	10.9	0.56	0.10	3411.88	55	5.5	6875.00	194528.30	184241.42	14102.73	2062.50	2532.74	2468.92	3510.51	1139.73	1732.50	4461.13	177813.94			
15/01/2020	3820.472	9.2	0.56	0.20	6823.76	23	2.3	2875.00	81348.20	71649.44	11256.86	862.50	2532.74	2468.92	2278.51	1139.73	724.50	3560.90	65075.83			
16/01/2020	2436.615	6.9	0.56	0.70	23883.15	0	0	0.00	0.00	-23883.15	7179.38	0.00	2532.74	2468.92	1393.01	1139.73	0.00	2271.06	-28529.79			
17/01/2020	2433.763	8.5	0.56	0.20	6823.76	3	0.3	375.00	10610.63	3411.88	7170.98	112.50	2532.74	2468.92	1508.51	1139.73	94.50	2268.40	-945.86			
18/01/2020	2353.154	4.3	0.56	0.50	17059.39	0.04	0.004	5.00	141.48	-16922.92	6933.47	1.50	2532.74	2468.92	1394.55	1139.73	1.26	2193.27	-21319.90			
19/01/2020	2475.197	3	0.56	0.50	17059.39	1	0.1	125.00	3536.88	-13647.51	7293.06	37.50	2532.74	2468.92	1431.51	1139.73	31.50	2307.02	-18314.33			
20/01/2020	2179.164	1.6	0.56	0.30	10235.63	0	0	0.00	0.00	-10235.63	6420.81	0.00	2532.74	2468.92	1393.01	1139.73	0.00	2031.10	-14123.71			
21/01/2020	2210.425	-0.2	0.56	0.20	6823.76	0	0	0.00	0.00	-6823.76	6512.92	0.00	2532.74	2468.92	1393.01	1139.73	0.00	2060.24	-10803.94			
22/01/2020	2273.292	2.8	0.56	0.20	6823.76	0.04	0.004	5.00	141.48	-6687.28	6698.16	1.50	2532.74	2468.92	1394.55	1139.73	1.26	2118.84	-10848.96			
23/01/2020	2185.499	3.9	0.56	0.40	13647.51	0	0	0.00	0.00	-13647.51	6439.48	0.00	2532.74	2468.92	1393.01	1139.73	0.00	2037.01	-17554.25			
24/01/2020	2136.636	1.6	0.56	0.10	3411.88	0.04	0.004	5.00	141.48	-3275.40	6295.51	1.50	2532.74	2468.92	1394.55	1139.73	1.26	1991.47	-7034.43			
25/01/2020	2206.837	1.4	0.56	0.20	6823.76	0	0	0.00	0.00	-6823.76	6502.35	0.00	2532.74	2468.92	1393.01	1139.73	0.00	2056.90	-10793.36			
26/01/2020	2167.868	6.1	0.56	0.70	23883.15	1	0.1	125.00	3536.88	-20471.27	6387.53	37.50	2532.74	2468.92	1431.51	1139.73	31.50	2020.58	-24232.56			
27/01/2020	5195.880	8.4	0.56	0.40	13647.51	75	7.5	9375.00	265265.87	242243.35	15309.44	2812.50	2532.74	2468.92	4280.51	1139.73	2362.50	4842.85	236479.16			
28/01/2020	8688.265	5.2	0.56	0.50	17059.39	67	6.7	8375.00	236970.84	211536.45	25599.60	2512.50	2532.74	2468.92	3972.51	1139.73	2110.50	8097.95	194734.09			
29/01/2020	3307.357	5.7	0.56	0.50	17059.39	2	0.2	250.00	7073.76	-10235.63	9744.99	75.00	2532.74	2468.92	1470.01	1139.73	63.00	3082.64	-17260.88			
30/01/2020	3249.916	8.5	0.56	0.40	13647.51	34	3.4	4250.00	120253.86	102356.35	9575.74	1275.00	2532.74	2468.92	2702.01	1139.73	1071.00	3029.10	98492.35			
31/01/2020	2756.636	11.6	0.56	0.30	10235.63	0.04	0.004	5.00	141.48	-10099.16	8122.31	1.50	2532.74	2468.92	1394.55	1139.73	1.26	2569.34	-15684.99			
01/02/2020	3245.233	10.9	0.56	0.40	13647.51	21	2.1	2625.00	74274.44	58001.93	9561.94	787.50	2532.74	2468.92	2201.51	1139.73	661.50	3024.74	52936.23			
02/02/2020	3800.507	9.9	0.56	0.20	6823.76	37	3.7	4625.00	130864.49	119415.74	11198.03	1387.50	2532.74	2468.92	2817.51	1139.73	1165.50	3542.29	114209.95			
03/02/2020	2537.654	9.5	0.56	0.40	13647.51	26	2.6	3250.00	91958.83	75061.32	7477.09	975.00	2532.74	2468.92	2394.01	1139.73	819.00	2365.24	72547.97			
04/02/2020	4687.930	5.3	0.56	0.30	10235.63	37	3.7	4625.00	130864.49	116003.86	13812.78	1387.50	2532.74	2468.92	2817.51	1139.73	1165.50	4369.42	108183.32			
05/02/2020	2556.224	4.3	0.56	0.60	20471.27	0	0	0.00	0.00	-20471.27	7531.80	0.00	2532.74	2468.92	1393.01	1139.73	0.00	2382.55	-25470.33			
06/02/2020	2323.315	3.1	0.56	0.50	17059.39	0	0	0.00	0.00	-17059.39	6845.55	0.00	2532.74	2468.92	1393.01	1139.73	0.00	2165.46	-21372.20			
07/02/2020	2271.730	3.7	0.56	0.90	30706.90	0	0	0.00	0.00	-30706.90	6693.55	0.00	2532.74	2468.92	1393.01	1139.73	0.00	2117.38	-34867.72			
08/02/2020	2333.271	7.8	0.56	0.30	10235.63	6	0.6	750.00	21221.27	10235.63	6874.88	225.00	2532.74	2468.92	1624.01	1139.73	189.00	2174.74	6454.49			
09/02/2020	2989.236	10.4	0.56	0.30	10235.63	82	8.2	10250.00	290024.01	269538.38	8807.66	3075.00	2532.74	2468.92	4550.01	1139.73	2583.00	2786.14	270930.46			
10/02/2020	4416.782	8.1	0.56	0.60	20471.27	61	6.1	7625.00	215749.57	187653.30	13013.86	2287.50	2532.74	2468.92	3741.51	1139.73	1921.50	4116.69	182875.68			
11/02/2020	4129.872	6.3	0.56	0.50	17059.39	8	0.8	1000.00	28295.03	10235.63	12168.49	300.00	2532.74	2468.92	1701.01	1139.73	252.00	3849.27	1347.89			
12/02/2020	2315.648	5.4	0.56	0.80	27295.03	0.04	0.004	5.00	141.48	-27158.55	6822.96	1.50	2532.74	2468.92	1394.55	1139.73	1.26	2158.31	-31445.02			
13/02/2020	6121.867	6.2	0.56	0.40	13647.51	83	8.3	10375.00	293560.89	269538.38	18037.82	3112.50	2532.74	2468.92	4588.51	1139.73	2614.50	5705.93	261793.80			
14/02/2020	3562.946	7.5	0.56	0.60	20471.27	1	0.1	125.00	3536.88	-17059.39	10498.07	37.50	2532.74	2468.92	1431.51	1139.73	31.50	3320.87	-24931.21			
15/02/2020	2476.400	10.8	0.56	0.70	23883.15	0.04	0.004	5.00	141.48	-23746.67	7296.61	1.50	2532.74	2468.92	1394.55	1139.73	1.26	2308.14	-28506.80			
16/02/2020	5188.436	12.8	0.56	0.40	13647.51	110	11	13750.00	389056.60	361659.09	15287.50	4125.00	4078.18	3975.41	6478.00	1835.18	3465.00	4835.92	360734.76			
17/02/2020	6604.041	8	0.56	0.90	30706.90	21	2.1	2625.00	74274.44	40942.54	19458.52	787.50	2532.74	2468.92	2201.51	1139.73	661.50	6155.34	25980.26			
18/02/2020	2706.700	7.4	0.56	0.80	27295.03	65	6.5	8125.00	229897.08	194477.06	7975.17	2437.50	2532.74	2468.92	3895.51	1139.73	2047.50	2522.80	195112.13			
19/02/2020	7802.371	6.3	0.56	1.00	34118.78	26	2.6	3250.00	91958.83	54590.05	22989.35	975.00	2532.74	2468.92	2394.01	1139.73	819.00	7272.25	36564.44			
20/02/2020	4712.109	8.2	0.56	0.40	13647.51	68	6.8	8500.00	240507.72	218360.20	13884.03	2550.00	2532.74	2468.92	4011.01	1139.73	2142.00	4391.95	213366.92			
21/02/2020	5419.007	7	0.56	0.70	23883.15	0	0	0.00	0.00	-23883.15	15966.87	0.00	2532.74	2468.92	1393.01	1139.73	0.00	5050.82	-37317.28			
22/02/2020	2944.342	9	0.56	0.30	10235.63	29	2.9	3625.00	102569.47	88708.83	8675.38	1087.50	2532.74	2468.92	2509.51	1139.73	913.50	2744.29	85277.70			
23/02/2020	11220.896	9.3	0.56	0.20	6823.76	247	24.7	30875.00	873608.92	835910.16	33061.88	9262.50	2532.74	2468.92	10902.51	1139.73	7780.50	10458.51	828475.52			
24/02/2020	8773.643	8.1	0.56	0.20	6823.76	52	5.2	6500.00	183917.67	170593.91	25851.16	1950.00	2532.74	2468.92	3395.01	1139.73	1638.00	8177.53	152137.49			
25/02/2020	3909.609	6.6	0.56	1.00	34118.78	60	6	7500.00	212212.69	170593.91	11519.49	2250.00	2532.74	2468.92	3703.01	1139.73	1890.00	3643.98	167217.16			
26/02/2020	13069.119	2.8	0.56	0.70	23883.15	142	14.2	17750.00	502236.70	460603.56	38507.59	5325.00	2532.74	2468.92	6860.01	1139.73	4473.00	12181.16	437905.70			
27/02/2020	9889.386	2.5	0.56	0.20	6823.76	88	8.8	11000.00	311245.28	293421.53	29138.65	3300.00	2532.74	2468.92	4781.01	1139.73	2772.00	9217.47	275043.62			
28/02/2020	8141.336	4.4	0.56	0.70	23883.15	59	5.9	7375.00	208675.81	177417.67	23988.09	2212.50	2532.74	2468.92	3664.51	1139.73	1858.50	7588.18	161478.81			
29/02/2020	6250.176	8.9	0.56	0.80	27295.03	15	1.5	1875.00	53053.17	23883.15	18415.87	562.50	2532.74	2468.92	1970.51	1139.73	472.50	5825.52	9402.51			
01/03/2020	3481.543	6.8	0.56	1.00	34118.78	1	0.1	125.00	3536.88	-30706.90	10258.22	37.50	2532.74	2468.92	1431.51	1139.73	31.50	3244.99	-38338.88			
02/03/2020	5481.801	5.8	0.56	0.40	13647.51	54	5.4	6750.00	190991.42	170593.91	16151.89	2025.00	2532.74	2468.92	3472.01	1139.73	1701.00	5109.35	162023.76			
03/03/2020	3560.931	4.6	0.56	1.30	44354.42	3	0.3	375.00	10610.63	-34118.78	10492.13	112.50	2532.74	2468.92	1508.51	1139.73	94.50	3318.99	-41797.67			
04/03/2020	3788.557	6.3	0.56	1.00	34118.78	17	1.7	2125.00	60126.93	23883.15	11162.82	637.50	2532.74	2468.92	2047.51	1139.73	535.50	3531.15	16842.57			
05/03/2020	6247.834	5.8	0.56	0.20	6823.76	152	15.2	19000.00	537605.49	511781.73	18408.97	5700.00	2532.74	2468.92	7245.01	1139.73	4788.00	5823.33	510117.50			
06/03/2020	11257.077	6.6	0.56	0.80	27295.03	32	3.2	4000.00	113180.10	81885.08	33168.49	1200.00	2532.74	2468.92	2625.01	1139.73	1008.00	10492.23	54241.33			

07/03/2020	4531.692	7.3	0.56	1.40	47766.29	0.04	0.004	5.00	141.48	-47629.82	13352.44	1.50	2532.74	2468.92	1394.55	1139.73	1.26	4223.79	-58445.77
08/03/2020	3368.647	8.3	0.56	0.50	17059.39	14	1.4	1750.00	49516.29	30706.90	9925.57	525.00	2532.74	2468.92	1932.01	1139.73	441.00	3139.77	24623.07
09/03/2020	3787.182	7.9	0.56	1.10	37530.66	15	1.5	1875.00	53053.17	13647.51	11158.77	562.50	2532.74	2468.92	1970.51	1139.73	472.50	3529.87	6423.99
10/03/2020	12752.305	10.8	0.56	0.30	10235.63	200	20	25000.00	707375.64	672140.01	37574.12	7500.00	2532.74	2468.92	9093.01	1139.73	6300.00	11885.87	655798.63
11/03/2020	11051.983	11.7	0.56	1.00	34118.78	81	8.1	10125.00	286487.13	242243.35	32564.19	3037.50	2532.74	2468.92	4511.51	1139.73	2551.50	10301.07	219785.40
12/03/2020	11487.124	8.9	0.56	1.80	61413.81	43	4.3	5375.00	152085.76	85296.96	33846.31	1612.50	2532.74	2468.92	3048.51	1139.73	1354.50	10706.65	58003.88
13/03/2020	5015.017	7	0.56	1.20	40942.54	4	0.4	500.00	14147.51	-27295.03	14776.53	150.00	2532.74	2468.92	1547.01	1139.73	126.00	4674.28	-39164.82
14/03/2020	3618.690	7	0.56	1.30	44354.42	2	0.2	250.00	7073.76	-37530.66	10662.32	75.00	2532.74	2468.92	1470.01	1139.73	63.00	3372.82	-45473.23
15/03/2020	3263.094	9.5	0.56	0.70	23883.15	0	0	0.00	0.00	-23883.15	9614.57	0.00	2532.74	2468.92	1393.01	1139.73	0.00	3041.39	-30964.97
16/03/2020	3156.236	8.5	0.56	1.30	44354.42	0	0	0.00	0.00	-44354.42	9299.71	0.00	2532.74	2468.92	1393.01	1139.73	0.00	2941.79	-51121.39
17/03/2020	2589.509	8.4	0.56	2.10	71649.44	0	0	0.00	0.00	-71649.44	7629.88	0.00	2532.74	2468.92	1393.01	1139.73	0.00	2413.57	-76746.58
18/03/2020	2909.683	11	0.56	1.80	61413.81	0	0	0.00	0.00	-61413.81	8573.26	0.00	2532.74	2468.92	1393.01	1139.73	0.00	2711.99	-67454.32
19/03/2020	2517.866	9.6	0.56	1.20	40942.54	0	0	0.00	0.00	-40942.54	7418.78	0.00	2532.74	2468.92	1393.01	1139.73	0.00	2346.79	-45828.58
20/03/2020	2626.813	7	0.56	0.50	17059.39	17	1.7	2125.00	60126.93	40942.54	7739.79	637.50	2532.74	2468.92	2047.51	1139.73	535.50	2448.34	37324.99
21/03/2020	2537.324	5.5	0.56	2.20	75061.32	0	0	0.00	0.00	-75061.32	7476.11	0.00	2532.74	2468.92	1393.01	1139.73	0.00	2364.93	-80004.69
22/03/2020	2454.137	5.1	0.56	2.30	78473.20	0	0	0.00	0.00	-78473.20	7231.01	0.00	2532.74	2468.92	1393.01	1139.73	0.00	2287.39	-83171.47
23/03/2020	2399.801	5.5	0.56	2.30	78473.20	0	0	0.00	0.00	-78473.20	7070.91	0.00	2532.74	2468.92	1393.01	1139.73	0.00	2236.75	-83011.37
24/03/2020	2048.135	5.8	0.56	2.40	81885.08	0	0	0.00	0.00	-81885.08	6034.74	0.00	2532.74	2468.92	1393.01	1139.73	0.00	1908.98	-85387.08
25/03/2020	2314.323	6.1	0.56	2.40	81885.08	0	0	0.00	0.00	-81885.08	6819.05	0.00	2532.74	2468.92	1393.01	1139.73	0.00	2157.08	-86171.39
26/03/2020	2287.081	6.5	0.56	2.40	81885.08	0	0	0.00	0.00	-81885.08	6738.79	0.00	2532.74	2468.92	1393.01	1139.73	0.00	2131.69	-86091.12
27/03/2020	2256.547	8.2	0.56	2.30	78473.20	0	0	0.00	0.00	-78473.20	6648.82	0.00	2532.74	2468.92	1393.01	1139.73	0.00	2103.23	-82589.28
28/03/2020	2237.613	7.8	0.56	2.40	81885.08	0.04	0.004	5.00	141.48	-81748.60	6593.03	1.50	2532.74	2468.92	1394.55	1139.73	1.26	2085.58	-85805.15
29/03/2020	2303.202	4.3	0.56	1.60	54590.05	0.04	0.004	5.00	141.48	-54453.58	6786.29	1.50	2532.74	2468.92	1394.55	1139.73	1.26	2146.71	-58703.38
30/03/2020	2174.994	3.7	0.56	1.30	44354.42	2	0.2	250.00	7073.76	-37530.66	6408.53	75.00	2532.74	2468.92	1470.01	1139.73	63.00	2027.22	-41219.45
31/03/2020	2275.597	4.1	0.56	2.50	85296.96	0	0	0.00	0.00	-85296.96	6704.95	0.00	2532.74	2468.92	1393.01	1139.73	0.00	2120.98	-89469.16
01/04/2020	2096.052	4	0.56	2.30	78473.20	0	0	0.00	0.00	-78473.20	6175.93	0.00	2532.74	2468.92	1393.01	1139.73	0.00	1953.64	-82116.38
02/04/2020	2327.835	6.3	0.56	1.30	44354.42	0.04	0.004	5.00	141.48	-44217.94	6858.87	1.50	2532.74	2468.92	1394.55	1139.73	1.26	2169.67	-48540.33
03/04/2020	2311.241	6.7	0.56	1.60	54590.05	0	0	0.00	0.00	-54590.05	6809.97	0.00	2532.74	2468.92	1393.01	1139.73	0.00	2154.21	-58867.28
04/04/2020	2307.043	8.5	0.56	2.90	98944.47	0	0	0.00	0.00	-98944.47	6797.60	0.00	2532.74	2468.92	1393.01	1139.73	0.00	2150.29	-103209.33
05/04/2020	2249.937	14	0.56	3.30	112591.98	0	0	0.00	0.00	-112591.98	6629.34	0.00	4078.18	3975.41	2243.00	1835.18	0.00	2097.07	-115143.15
06/04/2020	2121.551	14.9	0.56	3.00	102356.35	0.04	0.004	5.00	141.48	-102219.87	6251.06	1.50	4078.18	3975.41	2244.54	1835.18	1.26	1977.41	-104389.01
07/04/2020	2206.256	12.8	0.56	3.20	109180.10	0	0	0.00	0.00	-109180.10	6500.64	0.00	4078.18	3975.41	2243.00	1835.18	0.00	2056.36	-111602.56
08/04/2020	2137.629	16.3	0.56	3.20	109180.10	0	0	0.00	0.00	-109180.10	6298.43	0.00	4819.66	4698.21	2650.82	2168.85	0.00	1992.39	-110658.87
09/04/2020	2220.254	14	0.56	2.90	98944.47	0	0	0.00	0.00	-98944.47	6541.88	0.00	4078.18	3975.41	2243.00	1835.18	0.00	2069.40	-101408.17
10/04/2020	2215.757	12.8	0.56	3.30	112591.98	0	0	0.00	0.00	-112591.98	6528.63	0.00	4078.18	3975.41	2243.00	1835.18	0.00	2065.21	-115042.44
11/04/2020	2137.546	13.5	0.56	3.50	119415.74	0	0	0.00	0.00	-119415.74	6298.19	0.00	4078.18	3975.41	2243.00	1835.18	0.00	1992.31	-121635.75
12/04/2020	2099.691	14.5	0.56	2.80	95532.59	0	0	0.00	0.00	-95532.59	6186.65	0.00	4078.18	3975.41	2243.00	1835.18	0.00	1957.03	-97641.06
13/04/2020	2040.721	8.3	0.56	2.60	88708.83	0.04	0.004	5.00	141.48	-88572.36	6012.90	1.50	2532.74	2468.92	1394.55	1139.73	1.26	1902.07	-92048.77
14/04/2020	2117.010	6.4	0.56	1.50	51178.17	0	0	0.00	0.00	-51178.17	6237.68	0.00	2532.74	2468.92	1393.01	1139.73	0.00	1973.17	-54883.11
15/04/2020	2115.901	9.5	0.56	3.10	105768.22	0	0	0.00	0.00	-105768.22	6234.41	0.00	2532.74	2468.92	1393.01	1139.73	0.00	1972.14	-109469.89
16/04/2020	2168.452	14	0.56	3.40	116003.86	0	0	0.00	0.00	-116003.86	6389.25	0.00	4078.18	3975.41	2243.00	1835.18	0.00	2021.12	-118314.93
17/04/2020	2145.371	12.8	0.56	3.40	116003.86	0	0	0.00	0.00	-116003.86	6321.24	0.00	4078.18	3975.41	2243.00	1835.18	0.00	1999.61	-118246.92
18/04/2020	2436.160	10.9	0.56	1.40	47766.29	8	0.8	1000.00	28295.03	-20471.27	7178.04	300.00	2532.74	2468.92	1701.01	1139.73	252.00	2270.64	-24368.57
19/04/2020	2294.913	13.4	0.56	3.10	105768.22	2	0.2	250.00	7073.76	-98944.47	6761.86	75.00	4078.18	3975.41	2320.00	1835.18	63.00	2138.99	-101441.15
20/04/2020	2098.035	13.8	0.56	3.80	129651.37	0	0	0.00	0.00	-129651.37	6181.77	0.00	4078.18	3975.41	2243.00	1835.18	0.00	1955.49	-131754.96
21/04/2020	2155.262	14.7	0.56	4.00	136475.13	0	0	0.00	0.00	-136475.13	6350.39	0.00	4078.18	3975.41	2243.00	1835.18	0.00	2008.83	-138747.34
22/04/2020	2103.613	15.9	0.56	4.10	139887.01	0	0	0.00	0.00	-139887.01	6198.21	0.00	4819.66	4698.21	2650.82	2168.85	0.00	1960.69	-141265.55
23/04/2020	2041.273	15.8	0.56	4.00	136475.13	0	0	0.00	0.00	-136475.13	6014.52	0.00	4819.66	4698.21	2650.82	2168.85	0.00	1902.58	-137669.99
24/04/2020	2106.498	12.8	0.56	3.80	129651.37	0	0	0.00	0.00	-129651.37	6206.71	0.00	4078.18	3975.41	2243.00	1835.18	0.00	1963.38	-131779.90
25/04/2020	2058.975	10.1	0.56	2.90	98944.47	0	0	0.00	0.00	-98944.47	6066.68	0.00	2532.74	2468.92	1393.01	1139.73	0.00	1919.08	-102478.41
26/04/2020	2002.448	10.3	0.56	3.60	122827.62	0	0	0.00	0.00	-122827.62	5900.13	0.00	2532.74	2468.92	1393.01	1139.73	0.00	1866.39	-126195.00
27/04/2020	1999.906	13.7	0.56	3.70	126239.49	0	0	0.00	0.00	-126239.49	5892.64	0.00	4078.18	3975.41	2243.00	1835.18	0.00	1864.03	-128053.95
28/04/2020	2445.298	11.2	0.56	0.90	30706.90	32	3.2	4000.00	113180.10	78473.20	7204.97	1200.00	2532.74	2468.92	2625.01	1139.73	1008.00	2279.16	76792.98
29/04/2020	2536.564	12.6	0.56	1.70	58001.93	3	0.3	375.00	10610.63	-47766.29	7473.88	112.50	4078.18	3975.41	2358.50	1835.18	94.50	2364.22	-50881.49
30/04/2020	2375.139	11.7	0.56	2.90	98944.47	20	2	2500.00	70737.56	-30706.90	6998.25	750.00	2532.74	2468.92	2163.01	1139.73	630.00	2213.76	-33302.41
01/05/2020	2784.022	10.4	0.56	2.10	71649.44	20	2	2500.00	70737.56	-3411.88	8203.00	750.00	2532.74	2468.92	2163.01	1139.73	630.00	2594.87	-7212.14
02/05/2020	3725.359	9.8	0.56	2.40	81885.08	73	7.3	9125.00	258192.11	167182.03	10976.61	2737.50	2532.74	2468.92	4203.51	1139.73	2299.50	3472.25	165563.66
03/05/2020	2478.747	12.4	0.56	2.50	85296.96	0.04	0.004	5.00	141.48	-85160.48	7303.52	1.50	4078.18	3975.41	2244.54	1835.18	1.26	2310.33	-88382.08
04/05/2020	2363.390	12.1	0.56	3.00	102356.35	1	0.1	125.00	3536.88	-98944.47	6963.63	37.50	4078.18	3975.41	2281.50	1835.18	31.50	2202.81	-101736.42
05/05/2020	1997.918	10	0.56	4.00	136475.13	0	0	0.00	0.00	-136475.13	5886.78	0.00	2532.74	2468.92	1393.01	1139.73	0.00	1862.17	-139829.17
06/05/2020	2059.060	11.8	0.56	4.10	139887.01	0	0	0.00	0.00	-139887.01	6066.93	0.00	2532.74	2468.92	1393.01	1139.73	0.00	1919.16	-143421.20
07/05/2020	2033.760	14.2	0.56	4.00	136475.13	0	0	0.00	0.00	-136475.13	5992.39	0.00	4078.18	3975.41	2243.00	1835.18	0.00	1895.58	-138389.34
08/05/2020	2002.025	16	0.56	3.80	129651.37	0	0	0.00	0.00	-129651.37	5898.88	0.00	4819.66	4698.21	2650.82	2168.85	0.00	1866.00	-130730.59
09/05/2020	2019.237	18.2	0.56	4.60	156946.40	0	0	0.00	0.00	-156946.40	5949.60	0.00	5561.15	5421.01	3058.63	2502.52	0.00	1882.04	-157334.84
10/05/2020	1998.044	14.1	0.56	1.70	58001.93	10	1	1250.00	35368.78	-23883.15	5887.15	375.00	4078.18	3975.41	2628.00	1835.18	315.00	1862.29	-24757.12
11/05/2020	1994.834	8.7	0.56	3.30	112591.98	2	0.2	250.00	7073.76	-105768.22	5877.69	75.00	2532.74	2468.92	1470.01	1139.73	63.00	1859.30	-108926.18
12/05/2020	2029.659	7.4	0.56	1.90	64825.69	0	0	0.00	0.00	-64825.69	5980.30	0.00	2532.74	2468.92	1393.01	1139.73	0.00	1891.76	-68273.25
13/05/2020	2041.528	8.7	0.56	2.70	92120.71	0	0	0.00	0.00	-92120.71	6015.27	0.00	2532.74	2468.92	1393.01	1139.73	0.00	1902.82	-95603.24
14/05/2020	1642.478	8.5	0.56	3.80	129651.37	0	0	0.00	0.00	-129651.37	4839.49	0.00	2532.74	2468.92	1393.01	1139.73	0.00	1530.88	-131958.12
15/05/2020	2354.104	9.3	0.56	3.30	112591.98	0	0	0.00	0.00	-112591.98	6936.27	0.00	2532.74	2468.92	1393.01	1139.73	0.00	2194.16	-116995.50
16/05/2020	1973.139	10.4	0.56	3.10	105768.22	0	0	0.00	0.00	-105768.22	5813.77	0.00	2532.74	2468.92	1393.01	1139.73	0.00	1839.08	-109049.25
17/05/2020	2010.152	12.9	0.56	3.60	122827.62	0	0	0.00	0.00	-122827.62	5922.83	0.00	4078.18	3975.41	2243.00	1835.18	0.00	1873.57	-124672.26
18/05/2020	2096.291	15.5	0.56	4.40	150122.64	0	0	0.00	0.00	-150122.64	6176.63	0.00	4819.66	4698.21	2650.82	2168.85	0.00	1953.86	-151479.61
19/05/2020	1998.091	17	0.56	4.50	153534.52	0	0	0.00	0.00	-153534.52	5887.29	0.00	4819.66	4698.21	2650.82	2168.85	0.00	1862.33	-154602.14
20/05/2020	2027.577	17.2	0.56	4.80	163770.15	0	0	0.00	0.00	-163770.15	5974.17	0.00	4819.66	4698.21	2650.82	2168.85	0.00	1889.82	-164924.66

21/05/2020	2014.249	20.3	0.56	5.00	170593.91	0	0	0.00	0.00	-170593.91	5934.90	0.00	5561.15	5421.01	3058.63	2502.52	0.00	1877.39	-170967.66
22/05/2020	1921.992	19.4	0.56	2.30	78473.20	10	1	1250.00	35368.78	-44354.42	5663.07	375.00	5561.15	5421.01	3443.63	2502.52	315.00	1791.40	-43521.33
23/05/2020	1999.102	15.4	0.56	3.40	116003.86	1	0.1	125.00	3536.88	-112591.98	5890.27	37.50	4819.66	4698.21	2689.32	2168.85	31.50	1863.28	-113569.08
24/05/2020	2054.691	13.1	0.56	1.10	37530.66	20	2	2500.00	70737.56	30706.90	6054.06	750.00	4078.18	3975.41	3013.00	1835.18	630.00	1915.09	30601.02
25/05/2020	2199.579	16.2	0.56	4.30	146710.76	0	0	0.00	0.00	-146710.76	6480.96	0.00	4819.66	4698.21	2650.82	2168.85	0.00	2050.13	-148372.06
26/05/2020	1947.720	17	0.56	4.80	163770.15	0	0	0.00	0.00	-163770.15	5738.87	0.00	4819.66	4698.21	2650.82	2168.85	0.00	1815.38	-164689.36
27/05/2020	2094.528	16.7	0.56	4.70	160358.28	0	0	0.00	0.00	-160358.28	6171.44	0.00	4819.66	4698.21	2650.82	2168.85	0.00	1952.22	-161710.05
28/05/2020	2039.332	15.2	0.56	4.90	167182.03	0	0	0.00	0.00	-167182.03	6008.80	0.00	4819.66	4698.21	2650.82	2168.85	0.00	1900.77	-168371.17
29/05/2020	1919.379	16.2	0.56	5.00	170593.91	0	0	0.00	0.00	-170593.91	5655.37	0.00	4819.66	4698.21	2650.82	2168.85	0.00	1788.97	-171429.61
30/05/2020	1978.517	18.6	0.56	5.10	174005.79	0	0	0.00	0.00	-174005.79	5829.62	0.00	5561.15	5421.01	3058.63	2502.52	0.00	1844.09	-174274.25
31/05/2020	1796.465	17.5	0.56	5.10	174005.79	0	0	0.00	0.00	-174005.79	5293.21	0.00	4819.66	4698.21	2650.82	2168.85	0.00	1674.41	-174479.33
01/06/2020	1867.997	19.5	0.56	5.10	174005.79	0	0	0.00	0.00	-174005.79	5503.97	0.00	5561.15	5421.01	3058.63	2502.52	0.00	1741.08	-173948.61
02/06/2020	2050.924	20.4	0.56	5.00	170593.91	0	0	0.00	0.00	-170593.91	6042.96	0.00	5561.15	5421.01	3058.63	2502.52	0.00	1911.58	-171075.72
03/06/2020	2119.196	17.3	0.56	4.00	136475.13	0	0	0.00	0.00	-136475.13	6244.12	0.00	4819.66	4698.21	2650.82	2168.85	0.00	1975.21	-137899.58
04/06/2020	1994.435	13	0.56	1.20	40942.54	18	1.8	2250.00	63663.81	20471.27	5876.52	675.00	4078.18	3975.41	2936.00	1835.18	567.00	1858.93	20355.93
05/06/2020	4667.111	10	0.56	1.70	58001.93	104	10.4	13000.00	367835.33	296833.40	13751.44	3900.00	2532.74	2468.92	5397.01	1139.73	3276.00	4350.01	295338.70
06/06/2020	3971.287	11.9	0.56	2.80	95532.59	22	2.2	2750.00	77811.32	-20471.27	11701.23	825.00	2532.74	2468.92	2240.01	1139.73	693.00	3701.46	-27582.75
07/06/2020	3443.965	13.2	0.56	2.80	95532.59	31	3.1	3875.00	109643.22	10235.63	10147.49	1162.50	4078.18	3975.41	3436.50	1835.18	976.50	3209.97	7064.82
08/06/2020	3827.615	14.1	0.56	2.00	68237.56	0.04	0.004	5.00	141.48	-68101.09	11277.90	1.50	4078.18	3975.41	2244.54	1835.18	1.26	3567.55	-75297.07
09/06/2020	2064.202	13.8	0.56	2.50	85296.96	0	0	0.00	0.00	-85296.96	6082.08	0.00	4078.18	3975.41	2243.00	1835.18	0.00	1923.95	-87300.86
10/06/2020	2102.082	14.1	0.56	1.80	61413.81	0	0	0.00	0.00	-61413.81	6193.69	0.00	4078.18	3975.41	2243.00	1835.18	0.00	1959.26	-63529.32
11/06/2020	1720.267	16.2	0.56	2.10	71649.44	0.04	0.004	5.00	141.48	-71512.97	5068.69	1.50	4819.66	4698.21	2652.36	2168.85	1.26	1603.39	-71758.25
12/06/2020	3252.839	19.4	0.56	3.80	129651.37	89	8.9	11125.00	314782.16	174005.79	9584.35	3337.50	5561.15	5421.01	6485.13	2502.52	2803.50	3031.83	178304.09
13/06/2020	8429.606	20.9	0.56	5.10	174005.79	10	1	1250.00	35368.78	-139887.01	24837.47	375.00	5561.15	5421.01	3443.63	2502.52	315.00	7856.87	-158228.32
14/06/2020	2161.193	19.3	0.56	2.00	68237.56	0	0	0.00	0.00	-68237.56	6367.86	0.00	5561.15	5421.01	3058.63	2502.52	0.00	2014.35	-69044.27
15/06/2020	2323.894	20.1	0.56	3.20	109180.10	116	11.6	14500.00	410277.87	286597.77	6847.25	4350.00	5561.15	5421.01	7524.63	2502.52	3654.00	2166.00	296157.67
16/06/2020	4475.710	18.5	0.56	2.40	81885.08	178	17.8	22250.00	629564.32	525429.24	13187.49	6675.00	5561.15	5421.01	9911.63	2502.52	5607.00	4171.61	534445.91
17/06/2020	6117.881	18.7	0.56	3.60	122827.62	183	18.3	22875.00	647248.71	501546.10	18026.07	6862.50	5561.15	5421.01	10104.13	2502.52	5764.50	5702.21	506191.67
18/06/2020	7748.697	17.9	0.56	3.70	126239.49	48	4.8	6000.00	169770.15	37530.66	22831.20	1800.00	4819.66	4698.21	4498.82	2168.85	1512.00	7222.22	24007.12
19/06/2020	2400.343	17.2	0.56	4.20	143298.88	0.04	0.004	5.00	141.48	-143162.41	7072.51	1.50	4819.66	4698.21	2652.36	2168.85	1.26	2237.26	-145411.51
20/06/2020	1937.268	17.2	0.56	4.40	150122.64	0	0	0.00	0.00	-150122.64	5708.08	0.00	4819.66	4698.21	2650.82	2168.85	0.00	1805.64	-151011.05
21/06/2020	1940.922	19.5	0.56	4.00	136475.13	1	0.1	125.00	3536.88	-133063.25	5718.84	37.50	5561.15	5421.01	3097.13	2502.52	31.50	1809.05	-133127.44
22/06/2020	2032.381	17.7	0.56	5.00	170593.91	0	0	0.00	0.00	-170593.91	5988.32	0.00	4819.66	4698.21	2650.82	2168.85	0.00	1894.29	-171762.57
23/06/2020	1953.707	20.8	0.56	5.40	184241.42	0	0	0.00	0.00	-184241.42	5756.51	0.00	5561.15	5421.01	3058.63	2502.52	0.00	1820.96	-184436.78
24/06/2020	1932.938	24.2	0.56	5.90	201300.81	0	0	0.00	0.00	-201300.81	5695.32	0.00	7044.12	6866.61	3874.27	3169.86	0.00	1801.61	-199952.01
25/06/2020	1965.876	24.5	0.56	5.70	194477.06	0	0	0.00	0.00	-194477.06	5792.37	0.00	7044.12	6866.61	3874.27	3169.86	0.00	1832.31	-193225.30
26/06/2020	2730.369	23.8	0.56	5.10	174005.79	516	51.6	64500.00	1825029.15	1586523.36	8044.92	19350.00	6302.64	6143.81	23332.45	2836.19	16254.00	2544.86	1633027.09
27/06/2020	4952.611	20.5	0.56	3.40	116003.86	21	2.1	2625.00	74274.44	-44354.42	14592.65	787.50	5561.15	5421.01	3867.13	2502.52	661.50	4616.11	-51422.42
28/06/2020	1980.682	17.9	0.56	3.30	112591.98	0.04	0.004	5.00	141.48	-112455.51	5836.00	1.50	4819.66	4698.21	2652.36	2168.85	1.26	1846.11	-113468.10
29/06/2020	2003.998	16.4	0.56	3.30	112591.98	0	0	0.00	0.00	-112591.98	5904.69	0.00	4819.66	4698.21	2650.82	2168.85	0.00	1867.84	-113677.01
30/06/2020	2993.595	16.5	0.56	2.00	68237.56	65	6.5	8125.00	229897.08	153534.52	8820.50	2437.50	4819.66	4698.21	5153.32	2168.85	2047.50	2790.20	155611.19
01/07/2020	11082.625	18	0.56	2.40	81885.08	208	20.8	26000.00	735670.67	627785.59	32654.48	7800.00	4819.66	4698.21	10658.82	2168.85	6552.00	10329.63	619398.78
02/07/2020	3033.526	16.2	0.56	2.70	92120.71	88	8.8	11000.00	311245.28	208124.57	8938.15	3300.00	4819.66	4698.21	6038.82	2168.85	2772.00	2827.42	212234.08
03/07/2020	2145.782	17.7	0.56	3.40	116003.86	0.04	0.004	5.00	141.48	-115867.38	6322.45	1.50	4819.66	4698.21	2652.36	2168.85	1.26	1999.99	-117366.43
04/07/2020	2257.542	17.2	0.56	1.10	37530.66	54	5.4	6750.00	190991.42	146710.76	6651.75	2025.00	4819.66	4698.21	4729.82	2168.85	1701.00	2104.16	149927.68
05/07/2020	3249.342	18.3	0.56	2.20	75061.32	3	0.3	375.00	10610.63	-64825.69	9574.05	112.50	5561.15	5421.01	3174.13	2502.52	94.50	3028.57	-68558.08
06/07/2020	2341.735	14.7	0.56	3.30	112591.98	28	2.8	3500.00	99032.59	-17059.39	6899.82	1050.00	4078.18	3975.41	3321.00	1835.18	882.00	2182.63	-17263.03
07/07/2020	2095.855	15.8	0.56	3.40	116003.86	0.04	0.004	5.00	141.48	-115867.38	6175.35	1.50	4819.66	4698.21	2652.36	2168.85	1.26	1953.46	-117219.33
08/07/2020	4134.455	15.4	0.56	1.10	37530.66	61	6.1	7625.00	215749.57	170593.91	12181.99	2287.50	4819.66	4698.21	4999.32	2168.85	1921.50	3853.54	168935.08
09/07/2020	3603.270	17.5	0.56	1.20	40942.54	27	2.7	3375.00	95495.71	51178.17	10616.88	1012.50	4819.66	4698.21	3690.32	2168.85	850.50	3358.45	47905.46
10/07/2020	2772.194	15.1	0.56	2.00	68237.56	14	1.4	1750.00	49516.29	-20471.27	8168.15	525.00	4819.66	4698.21	3189.82	2168.85	441.00	2583.84	-22510.76
11/07/2020	1934.095	14.3	0.56	3.00	102356.35	2	0.2	250.00	7073.76	-95532.59	5698.73	75.00	4078.18	3975.41	2320.00	1835.18	63.00	1802.69	-96966.14
12/07/2020	1802.393	15.5	0.56	4.50	153534.52	0	0	0.00	0.00	-153534.52	5310.67	0.00	4819.66	4698.21	2650.82	2168.85	0.00	1679.93	-154025.53
13/07/2020	1844.155	17.7	0.56	5.00	170593.91	0	0	0.00	0.00	-170593.91	5433.72	0.00	4819.66	4698.21	2650.82	2168.85	0.00	1718.86	-171207.97
14/07/2020	2828.274	15.7	0.56	1.20	40942.54	19	1.9	2375.00	67200.69	23883.15	8333.39	712.50	4819.66	4698.21	3382.32	2168.85	598.50	2636.11	22145.92
15/07/2020	1935.857	16	0.56	3.20	109180.10	0.04	0.004	5.00	141.48	-109043.63	5703.92	1.50	4819.66	4698.21	2652.36	2168.85	1.26	1804.33	-109924.14
16/07/2020	2842.544	16.1	0.56	1.20	40942.54	31	3.1	3875.00	109643.22	64825.69	8375.43	1162.50	4819.66	4698.21	3844.32	2168.85	976.50	2649.41	64168.42
17/07/2020	1924.159	17.8	0.56	2.40	81885.08	0.04	0.004	5.00	141.48	-81748.60	5669.45	1.50	4819.66	4698.21	2652.36	2168.85	1.26	1793.42	-82594.65
18/07/2020	1875.818	19.6	0.56	3.80	129651.37	0	0	0.00	0.00	-129651.37	5527.02	0.00	5561.15	5421.01	3058.63	2502.52	0.00	1748.37	-129617.24
19/07/2020	1776.323	18.2	0.56	4.10	139887.01	0.04	0.004	5.00	141.48	-139750.53	5233.86	1.50	5561.15	5421.01	3060.17	2502.52	1.26	1655.63	-139419.50
20/07/2020	1657.333	16.5	0.56	3.90	133063.25	0	0	0.00	0.00	-133063.25	4883.26	0.00	4819.66	4698.21	2650.82	2168.85	0.00	1544.73	-133126.85
21/07/2020	1983.787	15	0.56	4.00	136475.13	0	0	0.00	0.00	-136475.13	5845.14	0.00	4078.18	3975.41	2243.00	1835.18	0.00	1849.00	-138242.09
22/07/2020	1900.482	15.3	0.56	3.80	129651.37	0	0	0.00	0.00	-129651.37	5599.69	0.00	4819.66	4698.21	2650.82	2168.85	0.00	1771.36	-130431.40
23/07/2020	1903.684	18.8	0.56	4.40	150122.64	0	0	0.00	0.00	-150122.64	5609.12	0.00	5561.15	5421.01	3058.63	2502.52	0.00	1774.34	-150170.61
24/07/2020	1915.987	18.6	0.56	2.10	71649.44	0.04	0.004	5.00	141.48	-71512.97	5645.37	1.50	5561.15	5421.01	3060.17	2502.52	1.26	1785.81	-71593.45
25/07/2020	2305.896	18.7	0.56	1.50	51178.17	44	4.4	5500.00	155622.64	98944.47	6794.22	1650.00	5561.15	5421.01	4752.63	2502.52	1386.00	2149.23	101825.40
26/07/2020	4068.581	18.7	0.56	3.80	129651.37	8	0.8	1000.00	28295.03	-102356.35	11987.90	300.00	5561.15	5421.01	3366.63	2502.52	252.00	3792.15	-108035.09
27/07/2020	1884.132	18.7	0.56	1.80	61413.81	10	1	1250.00	35368.78	-27295.03	5551.51	375.00	5561.15	5421.01	3443.63	2502.52	315.00	1756.12	-26350.39
28/07/2020	1787.709	18	0.56	3.40	116003.86	0	0	0.00	0.00	-116003.86	5267.41	0.00	4819.66	4698.21	2650.82	2168.85	0.00	1666.25	-116451.60
29/07/2020	1849.889	16.9	0.56	3.90	133063.25	0	0	0.00	0.00	-133063.25	5450.62	0.00	4819.66	4698.21	2650.82	2168.85	0.00	1724.20	-133694.20
30/07/2020	1814.581	19.6	0.56	4.60	156946.40	0	0	0.00	0.00	-156946.40	5346.59	0.00	5561.15	5421.01	3058.63	2502.52	0.00	1691.29	-156731.83
31/07/2020	1815.972	25.9	0.56	5.30	180829.54	4	0.4	500.00	14147.51	-167182.03	5350.68	150.00	7044.12	6866.61	4028.27	3169.86	126.00	1692.59	-165114.59
01/08/2020	1812.099	20.9	0.56	2.70	92120.71	5	0.5	625.00	17684.39	-75061.32	5339.27	187.50	5561.15	5421.01	3251.13	2502.52	157.50	1688.98	-74371.94
02/08/2020	1727.104	17.1	0.56	3.10	105768.22	0	0	0.00	0.00	-105768.22	5088.84	0.00	4819.66	4698.21	2650.82	2168.85	0.00	1609.76	-106037.40
03/08/2020	2318.151	15.5	0.56	2.60	88708.83	0.04	0.004	5.00	141.48	-88572.36	6830.33	1.50	4819.66	4698.21	2652.36	2168.85	1.26	2160.65	-90579.29

04/08/2020	1881.875	16.8	0.56	4.20	143298.88	0	0	0.00	0.00	-143298.88	5544.86	0.00	4819.66	4698.21	2650.82	2168.85	0.00	1754.01	-144024.08
05/08/2020	1735.603	21.2	0.56	4.80	163770.15	0	0	0.00	0.00	-163770.15	5113.88	0.00	6302.64	6143.81	3466.45	2836.19	0.00	1617.68	-162581.40
06/08/2020	1740.153	23.4	0.56	4.80	163770.15	0	0	0.00	0.00	-163770.15	5127.28	0.00	6302.64	6143.81	3466.45	2836.19	0.00	1621.92	-162594.80
07/08/2020	1788.581	26	0.56	5.00	170593.91	0	0	0.00	0.00	-170593.91	5269.98	0.00	7044.12	6866.61	3874.27	3169.86	0.00	1667.06	-168819.76
08/08/2020	1864.765	27.3	0.56	4.80	163770.15	0	0	0.00	0.00	-163770.15	5494.45	0.00	7044.12	6866.61	3874.27	3169.86	0.00	1738.07	-162220.48
09/08/2020	1795.977	27.9	0.56	4.70	160358.28	0	0	0.00	0.00	-160358.28	5291.77	0.00	7044.12	6866.61	3874.27	3169.86	0.00	1673.95	-158605.92
10/08/2020	1865.622	27.1	0.56	4.20	143298.88	0	0	0.00	0.00	-143298.88	5496.98	0.00	7044.12	6866.61	3874.27	3169.86	0.00	1738.87	-141751.74
11/08/2020	3059.344	26.5	0.56	4.10	139887.01	25	2.5	3125.00	88421.96	-54590.05	9014.22	937.50	7044.12	6866.61	4836.77	3169.86	787.50	2851.48	-54222.65
12/08/2020	6130.877	27.1	0.56	4.50	153534.52	0	0	0.00	0.00	-153534.52	18064.36	0.00	7044.12	6866.61	3874.27	3169.86	0.00	5714.32	-164554.76
13/08/2020	2420.229	23.9	0.56	2.60	88708.83	8	0.8	1000.00	28295.03	-61413.81	7131.10	300.00	6302.64	6143.81	3774.45	2836.19	252.00	2255.79	-61494.27
14/08/2020	2650.178	21.8	0.56	3.00	102356.35	0	0	0.00	0.00	-102356.35	7808.63	0.00	6302.64	6143.81	3466.45	2836.19	0.00	2470.12	-103862.34
15/08/2020	2270.065	21.3	0.56	2.70	92120.71	37	3.7	4625.00	130864.49	34118.78	6688.65	1387.50	6302.64	6143.81	4890.95	2836.19	1165.50	2115.83	37192.27
16/08/2020	4074.507	21.9	0.56	3.40	116003.86	15	1.5	1875.00	53053.17	-64825.69	12005.36	562.50	6302.64	6143.81	4043.95	2836.19	472.50	3797.67	-69125.91
17/08/2020	4698.638	20.1	0.56	3.10	105768.22	14	1.4	1750.00	49516.29	-58001.93	13844.33	525.00	5561.15	5421.01	3597.63	2502.52	441.00	4379.40	-64976.11
18/08/2020	2267.746	19.2	0.56	3.70	126239.49	0	0	0.00	0.00	-126239.49	6681.82	0.00	5561.15	5421.01	3058.63	2502.52	0.00	2113.67	-127360.16
19/08/2020	2132.034	21.3	0.56	3.20	109180.10	4	0.4	500.00	14147.51	-95532.59	6281.95	150.00	6302.64	6143.81	3620.45	2836.19	126.00	1987.18	-95137.90
20/08/2020	2027.584	24.7	0.56	2.50	85296.96	0.04	0.004	5.00	141.48	-85160.48	5974.19	1.50	7044.12	6866.61	3875.81	3169.86	1.26	1889.82	-84086.80
21/08/2020	1958.914	24.2	0.56	3.60	122827.62	0.04	0.004	5.00	141.48	-122691.14	5771.86	1.50	7044.12	6866.61	3875.81	3169.86	1.26	1825.82	-121415.13
22/08/2020	2666.942	19.1	0.56	2.70	92120.71	63	6.3	7875.00	222823.33	122827.62	7858.03	2362.50	5561.15	5421.01	5484.13	2502.52	1984.50	2485.74	126421.24
23/08/2020	2738.281	17.6	0.56	2.00	68237.56	18	1.8	2250.00	63663.81	-6823.76	8068.23	675.00	4819.66	4698.21	3343.82	2168.85	567.00	2552.23	-8389.32
24/08/2020	2196.617	16.9	0.56	2.30	78473.20	10	1	1250.00	35368.78	-44354.42	6472.24	375.00	4819.66	4698.21	3035.82	2168.85	315.00	2047.37	-45071.99
25/08/2020	1987.084	18	0.56	1.30	44354.42	8	0.8	1000.00	28295.03	-17059.39	5854.86	300.00	4819.66	4698.21	2958.82	2168.85	252.00	1852.07	-17346.58
26/08/2020	2061.233	16.7	0.56	0.50	17059.39	15	1.5	1875.00	53053.17	34118.78	6073.33	562.50	4819.66	4698.21	3228.32	2168.85	472.50	1921.19	34267.61
27/08/2020	1981.469	16.7	0.56	1.90	64825.69	12	1.2	1500.00	42442.54	-23883.15	5838.31	450.00	4819.66	4698.21	3112.82	2168.85	378.00	1846.84	-23779.80
28/08/2020	4137.292	16.2	0.56	1.80	61413.81	79	7.9	9875.00	279413.38	208124.57	12190.35	2962.50	4819.66	4698.21	5692.32	2168.85	2488.50	3856.19	208140.38
29/08/2020	5226.688	14.5	0.56	1.90	64825.69	0.04	0.004	5.00	141.48	-64689.21	15400.21	1.50	4078.18	3975.41	2244.54	1835.18	1.26	4871.57	-76007.50
30/08/2020	3033.225	15.4	0.56	1.60	54590.05	29	2.9	3625.00	102569.47	44354.42	8937.27	1087.50	4819.66	4698.21	3767.32	2168.85	913.50	2827.14	42948.31
31/08/2020	1928.451	15	0.56	2.30	78473.20	0.04	0.004	5.00	141.48	-78336.72	5682.10	1.50	4078.18	3975.41	2244.54	1835.18	1.26	1797.42	-79936.90
01/09/2020	1987.921	14.1	0.56	1.90	64825.69	0	0	0.00	0.00	-64825.69	5857.32	0.00	4078.18	3975.41	2243.00	1835.18	0.00	1852.85	-66604.83
02/09/2020	1992.103	15.3	0.56	2.70	92120.71	0	0	0.00	0.00	-92120.71	5869.64	0.00	4819.66	4698.21	2650.82	2168.85	0.00	1856.75	-93170.69
03/09/2020	2995.112	17.1	0.56	1.30	44354.42	28	2.8	3500.00	99032.59	51178.17	8824.97	1050.00	4819.66	4698.21	3728.82	2168.85	882.00	2791.61	49790.87
04/09/2020	2448.477	17.4	0.56	2.30	78473.20	10	1	1250.00	35368.78	-44354.42	7214.33	375.00	4819.66	4698.21	3035.82	2168.85	315.00	2282.12	-45814.09
05/09/2020	2627.219	15.2	0.56	2.40	81885.08	4	0.4	500.00	14147.51	-68237.56	7740.99	150.00	4819.66	4698.21	2804.82	2168.85	126.00	2448.72	-70784.89
06/09/2020	1929.616	13.6	0.56	1.90	64825.69	0	0	0.00	0.00	-64825.69	5685.53	0.00	4078.18	3975.41	2243.00	1835.18	0.00	1798.51	-66433.04
07/09/2020	2011.620	15.7	0.56	2.70	92120.71	0	0	0.00	0.00	-92120.71	5927.15	0.00	4819.66	4698.21	2650.82	2168.85	0.00	1874.94	-93228.20
08/09/2020	1815.527	16.8	0.56	0.60	20471.27	0.04	0.004	5.00	141.48	-20334.79	5349.37	1.50	4819.66	4698.21	2652.36	2168.85	1.26	1692.17	-20860.76
09/09/2020	1852.826	18	0.56	1.50	51178.17	3	0.3	375.00	10610.63	-40942.54	5459.27	112.50	4819.66	4698.21	2766.32	2168.85	94.50	1726.94	-41301.65
10/09/2020	2015.280	13.7	0.56	2.50	85296.96	0	0	0.00	0.00	-85296.96	5937.94	0.00	4078.18	3975.41	2243.00	1835.18	0.00	1878.35	-87156.71
11/09/2020	1952.791	14	0.56	2.30	78473.20	0	0	0.00	0.00	-78473.20	5753.82	0.00	4078.18	3975.41	2243.00	1835.18	0.00	1820.11	-80148.84
12/09/2020	1865.753	15.1	0.56	2.00	68237.56	0	0	0.00	0.00	-68237.56	5497.36	0.00	4819.66	4698.21	2650.82	2168.85	0.00	1738.99	-68915.26
13/09/2020	1814.703	16.6	0.56	2.80	95532.59	0	0	0.00	0.00	-95532.59	5346.94	0.00	4819.66	4698.21	2650.82	2168.85	0.00	1691.41	-96059.87
14/09/2020	1876.297	20.8	0.56	3.10	105768.22	0	0	0.00	0.00	-105768.22	5528.43	0.00	5561.15	5421.01	3058.63	2502.52	0.00	1748.81	-105735.50
15/09/2020	1722.298	23.8	0.56	3.20	109180.10	0	0	0.00	0.00	-109180.10	5074.68	0.00	6302.64	6143.81	3466.45	2836.19	0.00	1605.28	-107952.14
16/09/2020	1854.680	19.1	0.56	2.30	78473.20	0	0	0.00	0.00	-78473.20	5464.73	0.00	5561.15	5421.01	3058.63	2502.52	0.00	1728.67	-78376.78
17/09/2020	1792.550	14.6	0.56	2.70	92120.71	0	0	0.00	0.00	-92120.71	5281.67	0.00	4078.18	3975.41	2243.00	1835.18	0.00	1670.76	-93324.21
18/09/2020	2059.089	16	0.56	2.80	95532.59	0	0	0.00	0.00	-95532.59	6067.02	0.00	4819.66	4698.21	2650.82	2168.85	0.00	1919.19	-96779.94
19/09/2020	1880.417	17.4	0.56	2.70	92120.71	0	0	0.00	0.00	-92120.71	5540.57	0.00	4819.66	4698.21	2650.82	2168.85	0.00	1752.65	-92841.61
20/09/2020	1912.834	15.9	0.56	2.80	95532.59	0	0	0.00	0.00	-95532.59	5636.08	0.00	4819.66	4698.21	2650.82	2168.85	0.00	1782.87	-96349.01
21/09/2020	1885.026	15.4	0.56	2.60	88708.83	0	0	0.00	0.00	-88708.83	5554.15	0.00	4819.66	4698.21	2650.82	2168.85	0.00	1756.95	-89443.32
22/09/2020	1880.478	15.3	0.56	2.50	85296.96	0	0	0.00	0.00	-85296.96	5540.75	0.00	4819.66	4698.21	2650.82	2168.85	0.00	1752.71	-86018.04
23/09/2020	2137.388	17	0.56	1.40	47766.29	134	13.4	16750.00	473941.68	409425.38	6297.72	5025.00	4819.66	4698.21	7809.82	2168.85	4221.00	1992.17	420476.33
24/09/2020	4765.570	14.2	0.56	1.70	58001.93	29	2.9	3625.00	102569.47	40942.54	14041.55	1087.50	4078.18	3975.41	3359.50	1835.18	913.50	4441.78	33690.67
25/09/2020	6972.390	10.7	0.56	1.20	40942.54	197	19.7	24625.00	696765.01	631197.47	20543.85	7387.50	2532.74	2468.92	8977.51	1139.73	6205.50	6498.66	631605.86
26/09/2020	9722.637	13.1	0.56	1.80	61413.81	113	11.3	14125.00	399667.24	324128.43	28647.33	4237.50	4078.18	3975.41	6593.50	1835.18	3559.50	9062.05	310124.78
27/09/2020	7765.725	13.7	0.56	0.70	23883.15	54	5.4	6750.00	190991.42	160358.28	22881.37	2025.00	4078.18	3975.41	4322.00	1835.18	1701.00	7238.09	146604.08
28/09/2020	5281.497	12.4	0.56	0.20	6823.76	44	4.4	5500.00	155622.64	143298.88	15561.70	1650.00	4078.18	3975.41	3937.00	1835.18	1386.00	4922.65	135929.36
29/09/2020	4205.138	15.8	0.56	2.00	68237.56	11	1.1	1375.00	38905.66	-30706.90	12390.26	412.50	4819.66	4698.21	3074.32	2168.85	346.50	3919.43	-37249.00
30/09/2020	2384.742	15.9	0.56	1.00	34118.78	27	2.7	3375.00	95495.71	58001.93	7026.54	1012.50	4819.66	4698.21	3690.32	2168.85	850.50	2222.71	58319.55
01/10/2020	5970.939	13	0.56	0.40	13647.51	91	9.1	11375.00	321855.92	296833.40	17593.11	3412.50	4078.18	3975.41	5746.50	1835.18	2866.50	5565.25	291826.97
02/10/2020	2616.127	12.8	0.56	0.70	23883.15	6	0.6	750.00	21221.27	-3411.88	7708.31	225.00	4078.18	3975.41	2474.00	1835.18	189.00	2438.38	-6481.01
03/10/2020	5382.063	12.3	0.56	0.30	10235.63	69	6.9	8625.00	244044.60	225183.96	15858.02	2587.50	4078.18	3975.41	4899.50	1835.18	2173.50	5016.39	219855.62
04/10/2020	2639.354	12.1	0.56	1.20	40942.54	5	0.5	625.00	17684.39	-23883.15	7776.74	187.50	4078.18	3975.41	2435.50	1835.18	157.50	2460.03	-27114.21
05/10/2020	3111.123	12.1	0.56	0.80	27295.03	47	4.7	5875.00	166233.28	133063.25	9166.79	1762.50	4078.18	3975.41	4052.50	1835.18	1480.50	2899.74	132369.14
06/10/2020	4007.030	13.3	0.56	1.30	44354.42	58	5.8	7250.00	205138.94	153534.52	11806.54	2175.00	4078.18	3975.41	4476.00	1835.18	1827.00	3734.78	151229.16
07/10/2020	6451.544	12.2	0.56	1.00	34118.78	36	3.6	4500.00	127327.62	88708.83	19009.20	1350.00	4078.18	3975.41	3629.00	1835.18	1134.00	6013.20	77143.81
08/10/2020	5096.400	13.6	0.56	0.40	13647.51	58	5.8	7250.00	205138.94	184241.42	15016.32	2175.00	4078.18	3975.41	4476.00	1835.18	1827.00	4750.13	178726.28
09/10/2020	3347.516	12	0.56	1.10	37530.66	17	1.7	2125.00	60126.93	20471.27	9863.31	637.50	2532.74	2468.92	2047.51	1139.73	535.50	3120.07	14730.20
10/10/2020	5186.749	8.9	0.56	1.00	34118.78	54	5.4	6750.00	190991.42	150122.64	15282.53	2025.00	2532.74	2468.92	3472.01	1139.73	1701.00	4834.34	142421.85
11/10/2020	8329.850	8.8	0.56	1.10	37530.66	33	3.3	4125.00	116716.98	75061.32	24543.54	1237.50	2532.74	2468.92	2663.51	1139.73	1039.50	7763.89	56136.02
12/10/2020	3202.747	10.4	0.56	1.10	37530.66	20	2	2500.00	70737.56	30706.90	9436.75	750.00	2532.74	2468.92	2163.01	1139.73	630.00	2985.14	25672.89
13/10/2020	2160.122	10	0.56	1.00	34118.78	15	1.5	1875.00	53053.17	17059.39	6364.71	562.50	2532.74	2468.92	1970.51	1139.73	472.50	2013.36	14629.93
14/10/2020	2119.678	9	0.56	0.80	27295.03	0	0	0.00	0.00	-27295.03	6245.54	0.00	2532.74	2468.92	1393.01	1139.73	0.00	1975.66	-31007.82
15/10/2020	2096.840	9.2	0.56	0.70	23883.15	0	0	0.00	0.00	-23883.15	6178.25	0.00	2532.74	2468.92	1393.01	1139.73	0.00	1954.37	-27528.65
16/10/2020	2088.214	7.7	0.56	0.80	27295.03	0	0	0.00	0.00	-27295.03	6152.83	0.00	2532.74	2468.92	1393.01	1139.73	0.00	1946.33	-30915.12
17/10/2020	2024.065	7.6	0.56	0.90	30706.90	0	0	0.00	0.00	-30706.90	5963.82	0.00	2532.74	2468.92	1393.01	1139.73	0.00	1886.54	-34137.98

18/10/2020	1907.713	9.4	0.56	0.40	13647.51	4	0.4	500.00	14147.51	0.00	5620.99	150.00	2532.74	2468.92	1547.01	1139.73	126.00	1778.10	-2714.25
19/10/2020	2041.984	9.9	0.56	0.90	30706.90	5	0.5	625.00	17684.39	-13647.51	6016.62	187.50	2532.74	2468.92	1585.51	1139.73	157.50	1903.24	-16663.89
20/10/2020	1974.865	12.2	0.56	0.30	10235.63	0.04	0.004	5.00	141.48	-10099.16	5818.85	1.50	4078.18	3975.41	2244.54	1835.18	1.26	1840.69	-11836.10
21/10/2020	5601.422	16.2	0.56	0.80	27295.03	75	7.5	9375.00	265265.87	228595.84	16504.35	2812.50	4819.66	4698.21	5538.32	2168.85	2362.50	5220.84	223923.66
22/10/2020	2148.699	13.6	0.56	1.00	34118.78	0	0	0.00	0.00	-34118.78	6331.05	0.00	4078.18	3975.41	2243.00	1835.18	0.00	2002.71	-36371.65
23/10/2020	2060.536	12.5	0.56	0.70	23883.15	0	0	0.00	0.00	-23883.15	6071.28	0.00	4078.18	3975.41	2243.00	1835.18	0.00	1920.54	-25876.25
24/10/2020	2006.124	14.1	0.56	0.60	20471.27	6	0.6	750.00	21221.27	0.00	5910.96	225.00	4078.18	3975.41	2474.00	1835.18	189.00	1869.82	-1271.78
25/10/2020	2766.202	12	0.56	0.30	10235.63	35	3.5	4375.00	123790.74	109180.10	8150.50	1312.50	2532.74	2468.92	2740.51	1139.73	1102.50	2578.26	106834.85
26/10/2020	2026.669	10.6	0.56	0.80	27295.03	5	0.5	625.00	17684.39	-10235.63	5971.49	187.50	2532.74	2468.92	1585.51	1139.73	157.50	1888.97	-13206.89
27/10/2020	2215.537	10.1	0.56	0.50	17059.39	17	1.7	2125.00	60126.93	40942.54	6527.98	637.50	2532.74	2468.92	2047.51	1139.73	535.50	2065.01	38536.80
28/10/2020	8681.159	10.5	0.56	0.60	20471.27	95	9.5	11875.00	336003.43	303657.16	25578.66	3562.50	2532.74	2468.92	5050.51	1139.73	2992.50	8091.33	289493.74
29/10/2020	5786.002	10.9	0.56	0.50	17059.39	51	5.1	6375.00	180380.79	156946.40	17048.20	1912.50	2532.74	2468.92	3356.51	1139.73	1606.50	5392.88	147199.43
30/10/2020	2890.531	14.3	0.56	0.40	13647.51	10	1	1250.00	35368.78	20471.27	8516.82	375.00	4078.18	3975.41	2628.00	1835.18	315.00	2694.14	16967.62
31/10/2020	2708.694	13.6	0.56	0.80	27295.03	21	2.1	2625.00	74274.44	44354.42	7981.05	787.50	4078.18	3975.41	3051.50	1835.18	661.50	2524.66	42415.04
01/11/2020	2518.570	14.9	0.56	0.40	13647.51	58	5.8	7250.00	205138.94	184241.42	7420.86	2175.00	4078.18	3975.41	4476.00	1835.18	1827.00	2347.45	186321.74
02/11/2020	5750.575	16	0.56	0.40	13647.51	27	2.7	3375.00	95495.71	78473.20	16943.82	1012.50	4819.66	4698.21	3690.32	2168.85	850.50	5359.86	68873.54
03/11/2020	2467.480	8.8	0.56	0.90	30706.90	16	1.6	2000.00	56590.05	23883.15	7270.32	600.00	2532.74	2468.92	2009.01	1139.73	504.00	2299.83	20641.57
04/11/2020	2229.483	6	0.56	0.90	30706.90	0	0	0.00	0.00	-30706.90	6569.08	0.00	2532.74	2468.92	1393.01	1139.73	0.00	2078.00	-34743.24
05/11/2020	1772.094	4.9	0.56	0.90	30706.90	0	0	0.00	0.00	-30706.90	5221.40	0.00	2532.74	2468.92	1393.01	1139.73	0.00	1651.69	-33395.56
06/11/2020	2215.152	6.4	0.56	0.90	30706.90	0	0	0.00	0.00	-30706.90	6526.85	0.00	2532.74	2468.92	1393.01	1139.73	0.00	2064.65	-34701.01
07/11/2020	2265.764	7.4	0.56	0.80	27295.03	0	0	0.00	0.00	-27295.03	6675.97	0.00	2532.74	2468.92	1393.01	1139.73	0.00	2111.82	-31438.26
08/11/2020	2070.590	9.1	0.56	0.40	13647.51	0.04	0.004	5.00	141.48	-13511.04	6100.90	1.50	2532.74	2468.92	1394.55	1139.73	1.26	1929.91	-17075.46
09/11/2020	2096.313	12.3	0.56	0.80	27295.03	0	0	0.00	0.00	-27295.03	6176.69	0.00	4078.18	3975.41	2243.00	1835.18	0.00	1953.88	-29393.54
10/11/2020	2056.171	12.2	0.56	0.80	27295.03	1	0.1	125.00	3536.88	-23883.15	6058.42	37.50	4078.18	3975.41	2281.50	1835.18	31.50	1916.47	-25769.89
11/11/2020	2126.634	11	0.56	0.40	13647.51	0	0	0.00	0.00	-13647.51	6266.03	0.00	2532.74	2468.92	1393.01	1139.73	0.00	1982.14	-17380.81
12/11/2020	3081.075	10.3	0.56	0.50	17059.39	30	3	3750.00	106106.35	85296.96	9078.25	1125.00	2532.74	2468.92	2548.01	1139.73	945.00	2871.74	81556.44
13/11/2020	2576.941	10	0.56	0.30	10235.63	12	1.2	1500.00	42442.54	30706.90	7592.85	450.00	2532.74	2468.92	1855.01	1139.73	378.00	2401.85	26768.80
14/11/2020	2805.828	12.7	0.56	0.60	20471.27	17	1.7	2125.00	60126.93	37530.66	8267.25	637.50	4078.18	3975.41	2897.50	1835.18	535.50	2615.19	34931.09
15/11/2020	5511.844	12.8	0.56	0.30	10235.63	65	6.5	8125.00	229897.08	211536.45	16240.41	2437.50	4078.18	3975.41	4745.50	1835.18	2047.50	5137.35	205451.71
16/11/2020	3080.444	10.2	0.56	0.30	10235.63	11	1.1	1375.00	38905.66	27295.03	9076.39	412.50	2532.74	2468.92	1816.51	1139.73	346.50	2871.15	21779.87
17/11/2020	2133.495	12	0.56	0.30	10235.63	1	0.1	125.00	3536.88	-6823.76	6286.25	37.50	2532.74	2468.92	1431.51	1139.73	31.50	1988.54	-10483.76
18/11/2020	2148.523	12.9	0.56	0.90	30706.90	0.04	0.004	5.00	141.48	-30570.43	6330.53	1.50	4078.18	3975.41	2244.54	1835.18	1.26	2002.55	-32819.04
19/11/2020	2752.413	7.8	0.56	0.30	10235.63	34	3.4	4250.00	120253.86	105768.22	8109.87	1275.00	2532.74	2468.92	2702.01	1139.73	1071.00	2565.40	103370.10
20/11/2020	2514.006	5.2	0.56	0.50	17059.39	5	0.5	625.00	17684.39	0.00	7407.41	187.50	2532.74	2468.92	1585.51	1139.73	157.50	2343.20	-4407.17
21/11/2020	2156.149	8.5	0.56	0.30	10235.63	2	0.2	250.00	7073.76	-3411.88	6353.00	75.00	2532.74	2468.92	1470.01	1139.73	63.00	2009.65	-7045.14
22/11/2020	2378.471	8.9	0.56	0.20	6823.76	17	1.7	2125.00	60126.93	51178.17	7008.06	637.50	2532.74	2468.92	2047.51	1139.73	535.50	2216.87	48292.35
23/11/2020	2101.421	6.9	0.56	0.60	20471.27	0	0	0.00	0.00	-20471.27	6191.75	0.00	2532.74	2468.92	1393.01	1139.73	0.00	1958.64	-24130.27
24/11/2020	2089.033	8.3	0.56	0.40	13647.51	0	0	0.00	0.00	-13647.51	6155.25	0.00	2532.74	2468.92	1393.01	1139.73	0.00	1947.10	-17270.02
25/11/2020	2051.554	6.8	0.56	0.50	17059.39	0	0	0.00	0.00	-17059.39	6044.82	0.00	2532.74	2468.92	1393.01	1139.73	0.00	1912.16	-20571.47
26/11/2020	1999.317	8.5	0.56	0.10	3411.88	7	0.7	875.00	24758.15	20471.27	5890.90	262.50	2532.74	2468.92	1662.51	1139.73	220.50	1863.48	17767.61
27/11/2020	2575.423	6.5	0.56	0.20	6823.76	6	0.6	750.00	21221.27	13647.51	7588.37	225.00	2532.74	2468.92	1624.01	1139.73	189.00	2400.44	9152.88
28/11/2020	2053.429	4.9	0.56	0.40	13647.51	0	0	0.00	0.00	-13647.51	6050.34	0.00	2532.74	2468.92	1393.01	1139.73	0.00	1913.91	-17165.11
29/11/2020	1995.992	1.3	0.56	0.20	6823.76	0	0	0.00	0.00	-6823.76	5881.10	0.00	2532.74	2468.92	1393.01	1139.73	0.00	1860.38	-10172.12
30/11/2020	2328.944	2.1	0.56	0.10	3411.88	51	5.1	6375.00	180380.79	170593.91	6862.13	1912.50	2532.74	2468.92	3356.51	1139.73	1606.50	2170.71	171033.02
01/12/2020	5992.512	8.2	0.56	0.30	10235.63	76	7.6	9500.00	268802.74	249067.11	17656.68	2850.00	2532.74	2468.92	4319.01	1139.73	2394.00	5585.36	241049.17
02/12/2020	2089.826	6	0.56	0.10	3411.88	0.04	0.004	5.00	141.48	-3275.40	6157.58	1.50	2532.74	2468.92	1394.55	1139.73	1.26	1947.84	-6896.50
03/12/2020	2574.424	5.7	0.56	0.10	3411.88	37	3.7	4625.00	130864.49	122827.62	7585.43	1387.50	2532.74	2468.92	2817.51	1139.73	1165.50	2399.51	121234.43
04/12/2020	2989.154	5.1	0.56	0.20	6823.76	12	1.2	1500.00	42442.54	34118.78	8807.41	450.00	2532.74	2468.92	1855.01	1139.73	378.00	2786.06	28966.11
05/12/2020	2038.532	2.2	0.56	0.30	10235.63	0.04	0.004	5.00	141.48	-10099.16	6006.45	1.50	2532.74	2468.92	1394.55	1139.73	1.26	1900.03	-13569.13
06/12/2020	1909.004	1.1	0.56	0.20	6823.76	0	0	0.00	0.00	-6823.76	5624.80	0.00	2532.74	2468.92	1393.01	1139.73	0.00	1779.30	-9915.81
07/12/2020	3702.049	2.3	0.56	0.10	3411.88	54	5.4	6750.00	190991.42	180829.54	10907.93	2025.00	2532.74	2468.92	3472.01	1139.73	1701.00	3450.52	177503.36
08/12/2020	1941.469	1.1	0.56	0.30	10235.63	0	0	0.00	0.00	-10235.63	5720.45	0.00	2532.74	2468.92	1393.01	1139.73	0.00	1809.56	-13423.35
09/12/2020	1937.679	0.8	0.56	0.10	3411.88	0	0	0.00	0.00	-3411.88	5709.29	0.00	2532.74	2468.92	1393.01	1139.73	0.00	1806.03	-6588.42
10/12/2020	1877.376	1.1	0.56	0.30	10235.63	0	0	0.00	0.00	-10235.63	5531.61	0.00	2532.74	2468.92	1393.01	1139.73	0.00	1749.82	-13234.50
11/12/2020	3022.972	3	0.56	0.10	3411.88	33	3.3	4125.00	116716.98	109180.10	8907.06	1237.50	2532.74	2468.92	2663.51	1139.73	1039.50	2817.58	105891.29
12/12/2020	3027.327	7.9	0.56	0.10	3411.88	14	1.4	1750.00	49516.29	44354.42	8919.89	525.00	2532.74	2468.92	1932.01	1139.73	441.00	2821.64	39276.27
13/12/2020	2260.587	7.4	0.56	0.30	10235.63	8	0.8	1000.00	28295.03	17059.39	6660.72	300.00	2532.74	2468.92	1701.01	1139.73	252.00	2106.99	13679.41
14/12/2020	3533.663	9.7	0.56	0.20	6823.76	55	5.5	6875.00	194528.30	180829.54	10411.79	2062.50	2532.74	2468.92	3510.51	1139.73	1732.50	3293.57	178093.00
15/12/2020	2706.457	8.3	0.56	0.10	3411.88	8	0.8	1000.00	28295.03	23883.15	7974.46	300.00	2532.74	2468.92	1701.01	1139.73	252.00	2522.57	19189.43
16/12/2020	2041.381	7.2	0.56	0.40	13647.51	0.04	0.004	5.00	141.48	-13511.04	6014.84	1.50	2532.74	2468.92	1394.55	1139.73	1.26	1902.68	-16989.40
17/12/2020	3143.485	9.1	0.56	0.40	13647.51	18	1.8	2250.00	63663.81	47766.29	9262.14	675.00	2532.74	2468.92	2086.01	1139.73	567.00	2929.91	42719.89
18/12/2020	2005.317	8.4	0.56	0.50	17059.39	0	0	0.00	0.00	-17059.39	5908.58	0.00	2532.74	2468.92	1393.01	1139.73	0.00	1869.07	-20435.23
19/12/2020	1950.083	9.1	0.56	0.30	10235.63	2	0.2	250.00	7073.76	-3411.88	5745.84	75.00	2532.74	2468.92	1470.01	1139.73	63.00	1817.59	-6437.97
20/12/2020	1898.948	8.5	0.56	0.30	10235.63	0	0	0.00	0.00	-10235.63	5595.17	0.00	2532.74	2468.92	1393.01	1139.73	0.00	1769.93	-13298.06
21/12/2020	4895.114	8.4	0.56	0.10	3411.88	102	10.2	12750.00	360761.58	344599.70	14423.24	3825.00	2532.74	2468.92	5320.01	1139.73	3213.00	4562.52	342246.20
22/12/2020	6937.952	11.5	0.56	0.20	6823.76	59	5.9	7375.00	208675.81	194477.06	20442.38	2212.50	2532.74	2468.92	3664.51	1139.73	1858.50	6466.56	182083.92
23/12/2020	6772.977	11.5	0.56	0.10	3411.88	79	7.9	9875.00	279413.38	266126.50	19956.28	2962.50	2532.74	2468.92	4434.51	1139.73	2488.50	6312.80	256089.46
24/12/2020	5040.730	5.7	0.56	0.20	6823.76	35	3.5	4375.00	123790.74	112591.98	14852.29	1312.50	2532.74	2468.92	2740.51	1139.73	1102.50	4698.24	103544.93
25/12/2020	2245.300	3.1	0.56	0.40	13647.51	0	0	0.00	0.00	-13647.51	6615.68	0.00	2532.74	2468.92	1393.01	1139.73	0.00	2092.75	-17730.45
26/12/2020	2038.084	4	0.56	0.20	6823.76	10	1	1250.00	35368.78	27295.03	6005.13	375.00	2532.74	2468.92	1778.01	1139.73	315.00	1899.61	24757.64
27/12/2020	8438.528	4.9	0.56	0.10	3411.88	103	10.3	12875.00	364298.45	348011.58	24863.76	3862.50	2532.74	2468.92	5358.51	1139.73	3244.50	7865.18	335311.06
28/12/2020	3018.134	3.3	0.56	0.20	6823.76	10	1	1250.00	35368.78	27295.03	8892.80	375.00	2532.74	2468.92	1778.01	1139.73	315.00	2813.07	21869.97
29/12/2020	2508.446	3	0.56	0.10	3411.88	16	1.6	2000.00	56590.05	51178.17	7391.03	600.00	2532.74	2468.92	2009.01	1139.73	504.00	2338.01	47815.89
30/12/2020	3510.425	3.6	0.56	0.20	6823.76	22	2.2	2750.00	77811.32	68237.56	10343.31	825.00	2532.74	2468.92	2240.01	1139.73	693.00	3271.91	62483.99
31/12/2020	3510.425	3.6	0.56	0.20	6823.76	0.04	0.004	5.00	141.48	-6687.28	10343.31	1.50	2533.74	2469.89	1395.10	1140.18	1.26	3271.91	-14493.11

Table 3: Yearly water balance for the Breda's municipality.

	Evaporation *unpaved area	Net rainfall	Rainfall	Infiltration	WWTP Effluent	Stormwater	Water consumption	water intake	combined + pressure sewage	separate sewage wwtp	separate sewage canals
(m3/yr)	44411926.54	18838800.00	68610804.86	5360078.32	25769610.66	10549728.00	10632054.03	10364126.27	13188639.11	4784424.31	7289363.29
(M m3 /yr)	44.41	18.84	68.61	5.36	25.77	10.55	10.63	10.36	13.19	4.78	7.29

Table 4: Montlhy water balance for the rural area and urban area of Breda's municipality.

	Montlhy water balance (m3)	Montlhy water balance (M m3)	Evaporation unpaved rural (Mm3/month)	Evaporation unpaved urban (Mm3/month)	Net rainfall rural (Mm3/month)	Net rainfall urban (Mm3/month)	Tot rainfall rural (Mm3/month)	Tot rainfall urban (Mm3/month)	Infiltration rural (Mm3/month)	Infiltration urban (Mm3/month)	WWTP Effluent rural (Mm3/month)	WWTP Effluent urban (Mm3/month)	Stormwater Rural (Mm3/d)
January	1428118.38	1.428	0.31	0.29	0.05	0.96	1.44	2.26	1.07	1.00	0.27	1.82	0.03
february	7656377.91	7.656	0.54	0.50	0.17	3.19	4.75	7.48	4.05	3.79	0.43	2.91	0.09
March	103444.03	0.103	1.54	1.44	0.08	1.51	2.25	3.55	0.64	0.60	0.39	2.62	0.04
April	-5856404.75	-5.856	2.98	2.78	0.01	0.15	0.23	0.36	-2.75	-2.58	0.19	1.30	0.00
May	-6854512.68	-6.855	3.87	3.62	0.02	0.33	0.48	0.76	-3.40	-3.18	0.19	1.30	0.01
June	3836658.38	3.837	3.63	3.40	0.18	3.33	4.96	7.81	1.15	1.08	0.27	1.85	0.10
July	-1778684.80	-1.779	3.20	2.99	0.08	1.43	2.13	3.35	-1.15	-1.07	0.24	1.60	0.04
August	-3970826.61	-3.971	3.26	3.05	0.04	0.81	1.21	1.91	-2.09	-1.96	0.24	1.59	0.02
September	516375.55	0.516	2.10	1.97	0.08	1.55	2.31	3.64	0.13	0.12	0.26	1.74	0.05
October	3838898.98	3.839	0.79	0.74	0.10	1.98	2.95	4.64	2.05	1.92	0.33	2.20	0.06
November	1088800.81	1.089	0.50	0.47	0.05	0.86	1.27	2.00	0.73	0.68	0.22	1.51	0.03
December	4305698.88	4.306	0.23	0.21	0.09	1.79	2.66	4.19	2.34	2.19	0.30	2.02	0.05

	Stormwater Urban (Mm3/d)	Water consumption rural (Mm3/month)	Water consumption urban (Mm3/month)	Water intake rural (Mm3/month)	Water intake urban (Mm3/month)	Combined + pressure sewage rural (Mm3/month)	Combined + pressure sewage urban (Mm3/month)	Separate Sewer System wwtp rural (Mm3/month)	Separate Sewer System wwtp urban (Mm3/month)	Separate sewer system stormwater rural (Mm3/month)	Separate sewer system stormwater urban (Mm3/month)	Extraneous water rural (Mm3/d)	Extraneous water urban (Mm3/d)
January	0.54	0.08	0.60	0.08	0.59	0.06	0.63	0.04	0.27	0.01	0.24	0.09	0.58
february	1.79	0.07	0.57	0.07	0.56	0.09	1.30	0.03	0.26	0.04	0.80	0.14	0.92
March	0.85	0.08	0.60	0.08	0.59	0.07	0.80	0.04	0.27	0.02	0.38	0.12	0.83
April	0.09	0.11	0.74	0.10	0.72	0.06	0.46	0.05	0.33	0.00	0.04	0.06	0.41
May	0.18	0.13	0.84	0.12	0.82	0.07	0.56	0.06	0.38	0.00	0.08	0.06	0.41
June	1.86	0.15	0.96	0.15	0.94	0.14	1.55	0.07	0.43	0.04	0.84	0.09	0.59
July	0.80	0.16	0.99	0.15	0.97	0.11	0.98	0.07	0.45	0.02	0.36	0.07	0.50
August	0.46	0.18	1.09	0.17	1.06	0.11	0.85	0.08	0.49	0.01	0.20	0.07	0.50
September	0.87	0.14	0.90	0.14	0.87	0.10	0.97	0.06	0.40	0.02	0.39	0.08	0.55
October	1.11	0.10	0.73	0.10	0.71	0.09	1.01	0.05	0.33	0.03	0.50	0.10	0.69
November	0.48	0.09	0.64	0.09	0.63	0.06	0.62	0.04	0.29	0.01	0.22	0.07	0.48
December	1.00	0.08	0.60	0.08	0.59	0.07	0.88	0.04	0.27	0.02	0.45	0.09	0.64

Table 5: Montlhy water balance for Breda's municipality.

	Evaporation *unpaved area (Mm3/month)	Net rainfall (Mm3/month)	Rainfall (Mm3/month)	Infiltration (Mm3/month)	WWTP Effluent (Mm3/month)	Stormwater (Mm3/month)	Water consumption (Mm3/month)	water intake (Mm3/month)	combined + pressure sewage (Mm3/month)	separate sewage wwtp (Mm3/month)	separate sewage canals (Mm3/month)	Extraneous water (Mm3/month)
January	0.61	1.02	3.70	2.08	2.09	0.57	0.68	0.66	0.69	0.31	0.26	0.66
february	1.04	3.36	12.24	7.83	3.34	1.88	0.65	0.63	1.39	0.29	0.85	1.06
March	2.97	1.59	5.80	1.24	3.00	0.89	0.68	0.66	0.86	0.31	0.40	0.95
April	5.76	0.16	0.59	-5.33	1.50	0.09	0.85	0.83	0.52	0.38	0.04	0.47
May	7.48	0.34	1.25	-6.58	1.50	0.19	0.96	0.94	0.64	0.43	0.09	0.47
June	7.03	3.51	12.77	2.23	2.12	1.96	1.11	1.08	1.69	0.50	0.88	0.67
July	6.19	1.50	5.47	-2.22	1.83	0.84	1.15	1.12	1.09	0.52	0.38	0.58
August	4.07	1.64	5.96	0.25	1.99	0.92	1.03	1.01	1.07	0.47	0.41	0.63
September	4.07	1.64	5.96	0.25	1.99	0.92	1.03	1.01	1.07	0.47	0.41	0.63
October	1.53	2.08	7.58	3.97	2.52	1.17	0.83	0.81	1.10	0.38	0.52	0.80
November	0.96	0.90	3.28	1.41	1.73	0.50	0.73	0.71	0.68	0.33	0.23	0.55
December	0.44	1.88	6.86	4.53	2.32	1.05	0.68	0.66	0.95	0.31	0.47	0.73

Table 7: Nitrification / Denitrification CapEx and OpEx cost to treat wastewater treatment plant effluent. for enhancing river streamflow.

m3/yr	CAPEX + OPEX 2005 € factor	CAPEX + OPEX 2005 €	Inflaction	CAPEX + OPEX 2022 €	CAPEX 98%	OPEX 2%
24667633.53	0.2	4933526.7	35.66%	6692822	6558965.88	133856.447

Table 8: Phosphorus removal CapEx and OpEx cost to treat wastewater treatment plant effluent. for enhancing river streamflow.

m3/h to treat	to MGD	CAPEX 2004 $	OPEX 2004 $	Inflaction	convertion rate $ -> €	CAPEX 2022 €	OPEX 2022 €
24667633.53	5426.120804	5814000	654000	49.79%	0.9	7837911.54	881663.94

Table 9: Pipe design and CapEx and OpEx cost to transport wastewater treatment plant effluent to the river(s).

Discharge avarage (m3/h)	Discharge avarage (m3/s)	design minimum velocity (m/s)	Diameter (m)	Diameter (mm)	Commercial diameter (mm)	Commercial diameter (m)
2932	0.586111111	1.2	0.78879568	788.7957	1050	1.05

Diameter (mm)	($/m) in 2016	Inflation between 2016-2021	($/m) in 2021	Exchange rate	PC (€/m) in 2021	min distance (m)	CAPEX (€)	OPEX (€)
1050	510.2	10.13%	561.88326	0.88	494.457269	15000	7416859.032	45000

Table 10: Pumping stations CapEx and OpEx cost to transport wastewater treatment plant effluent.

	cost 2006 £	inflaction	cost 2021 £	exchange rate	cost 2021 €	Cost 4 pumps €
Large pumping station >200L/s CAPEX	1467199	39.19%	2042195	1.20	2450634	9802536

	cost 2006 £	inflaction	cost 2021 £	exchange rate	cost 2021 €	Cost 12 pumps €
Large pumping station >200L/s OPEX	46520	39.19%	64752	1.20	77703	310812

Table 11: Urban and rural wetlands, CapEx and OpEx.

CAPEX			
IMPROVEMENT	(€/ha)	Urban	Rural
Preventing overgrazing	60	90	60
Re-seeding of bare peat	497.5	1094.5	497.5
Stabilisation of bare peat	1700	3740	1700
Blocking grips	1875	4125	1875
Planting bare peat	2700	5940	2700
Hagged/gully blocking	2500	5500	2500
Reduction of moorland burning	164	360.8	164
sum of the cost		20850.3	9496.5

OPEX			
IMPROVEMENT	(€/ha)	Urban	Rural
Preventing overgrazing	40	88	1,005
Re-seeding of bare peat	50	110	50
Stabilisation of bare peat	50	110	50
Blocking grips	50	110	50
Planting bare peat	50	110	50
Hagged/gully blocking	50	110	50
Cessation of moorland burning	380	836	380
sum of the cost		1474	630

Table 12: UV treatment for urban wetland, CapEx and OpEx.

Average flow urban wetland (m3/hr)	Flow (MGD)	Capital cost (2001)	O&M (2001)	Inflaction	Capital cost (2021) $	O&M (2021) $	Capital cost (2021) €	O&M (2021) €
33.35	0.0073367	51000	2700	49.70%	76347	4041.9	68712.3	3637.71

Table 13: UV treatment for rural wetland, CapEx and OpEx.

Average flow rural wetland (m3/hr)	Flow (MGD)	Capital cost (2001)	O&M (2001)	Inflaction	Capital cost (2021) $	O&M (2021) $	Capital cost (2021) €	O&M (2021) €
14.48	0.0031844	25500	1800	49.70%	38173.5	2694.6	34356.2	2425.14

Table 14: Installation of one sewer mining unit, CapEx and OpEx.

	aus$/m3 (2001)	volume (m3)	aus$ (2001)	Inflaction (%)	aus$ (2021)	conversion rate AUS $ to €	€ (2021)
CAPEX	0.42	100	350000	60.44	561540	0.63	353770
OPEX	0.6	36600	21960	60.44	32911.452	0.63	20734.2

Table 15: Framework for strategy 1 calculation.

Circularity Strategy 1		
Volume of freshwater used (%)	99.30%	(sewer mining / water demand)
Reclaimed wwtp effluent (%)	96.01%	(wwtp reclaimed / wwtp produced)
Reclaimed stormwater (%)	45.00%	(reclaimed / stormwater produced)
Water stored as gw (%)	57.20%	(gw restored / gw consumed)
water stored as surface water (M m3)	24.66763353	(Mm3 water restored)

Adaptability Strategy 1		
Renewable surface water + renewable groundwater + reclaimed water	28.49	(sewer mining + injection wells)
Tot volume of water stored in reservoirs expressed as a multiple of average daily consumption (n days)	209.36	(water stored/averag. cons. Daily)
Contribution of alternative sources by volume to total available water (%)	0.70%	(sewer mining / water demand)
Total treatment capacity not relying on a central structure (%)	0.28%	(sewer mining / wwtp)

Table 16 UV treatment for stormwater for ASR project, CapEx and OpEx.

Flow (m3/hr)	Flow (MGD)	CAPEX € (2001)	OPEX € (2001)	Inflaction	CAPEX € (2021)	OPEX € (2021)
400.00	0.087987699	51000	2700	49.70%	76347	4041.9

Table 17: Pipe design to transport stormwater from urban area to ASR location, CapEx and OpEx.

Discharge avarage (m3/h)	Discharge avarage (m3/s)	design minimum velocity (m/s)	Diameter (m)	Diameter (mm)	Commercial diameter (mm)	Commercial diameter (m)
350	0.097222222	1	0.351923237	351.9232368	315	0.315

Diameter (mm)	(€/m) in 2015	Inflation between 2016-2021	(€/m) in 2021	min distance (m)	CAPEX (€)	OPEX (€)
315	32.34	2.89%	33.274626	8000	266197.008	5000

Table 18: Pipe design to transport stormwater from rural area to ASR location, CapEx and OpEx.

Discharge avarage (m3/h)	Discharge avarage (m3/s)	design minimum velocity (m/s)	Diameter (m)	Diameter (mm)	Commercial diameter (mm)	Commercial diameter (m)
50	0.013888889	1	0.133014481	133.0145	125	0.125

Diameter (mm)	(€/m) in 2015	Inflation between 2016-2021	(€/m) in 2021	min distance (m)	CAPEX (€)	OPEX (€)
200	5.51	2.89%	5.669239	8000	45353.912	5000

Table 19: CapEx and OpEx for storage tanks in urban and rural area.

Underground Tanks cost Capex(35$ x m3)	Underground Tanks cost Opex 2% of Capex	Tank 1 (m3)	Tank 2 (m3)	Capex ($) tank 1	Capex ($) tank 2	Opex ($) tank 1	Opex ($) tank 2	change rate	Capex ($) tank 1	Capex ($) tank 2	Opex ($) tank 1	Opex ($) tank 2
35	2%	60000	10000	2100000	350000	42000	7000	0.88	1848000	308000	36960	6160

Table 20: CapEx and OpEx for pumping station that transport stormwater from rural area to ASR project location.

	cost 2006 £	inflaction	cost 2021 £	exchange rate	cost 2021 €
Large pumping station <50 L/s CAPEX	195000.00	39.19%	271420.50	1.20	325704.60

	cost 2006 £	inflaction	cost 2021 £	exchange rate	cost 2021 €
Large pumping station <50 L/s OPEX	6000.00	39.19%	8351.40	1.20	10021.68

Table 21: CapEx and OpEx for pumping station that transport stormwater from urban area to ASR project location.

	cost 2006 £	inflaction	cost 2021 £	exchange rate	cost 2021 €
Large pumping station <50 L/s CAPEX	277000.00	39.19%	385556.30	1.20	462667.56

	cost 2006 £	inflaction	cost 2021 £	exchange rate	cost 2021 €
Large pumping station <50 L/s OPEX	8000.00	39.19%	11135.20	1.20	13362.24

Table 22: Design and CapEx and OpEx for pipe that transport wastewater treatment plant effluent to the south of Breda's municipality.

Discharge avarage (m3/h)	Discharge avarage (m3/s)	design minimum velocity (m/s)	Diameter (m)	Diameter (mm)	Commercial diameter (mm)	Commercial diameter (m)
2110	0.58611111	1.2	0.788796	788.7957	1050	1.05

Diameter (mm)	($/m) in 2016	Inflation between 2016-2021	($/m) in 2021	Exchange rate	PC (€/m) in 2021	min distance (m)	CAPEX (€)	OPEX (€)
1050	510.2	10.13%	561.8833	0.88	494.457269	10000	4944573	45000

Table 23:Framework calculation for strategy 2.

Circularity Strategy 2		
Volume of freshwater used (%)	99.30%	(sewer mining / water demand)
Reclaimed wwtp effluent (%)	96.01%	(wwtp reclaimed / wwtp produced)
Reclaimed stormwater (%)	45.00%	(reclaimed / stormwater produced)
Water stored as gw (%)	6.57	(gw restored / gw consumed)
water stored as surface water (M m3)	0	(Mm3 water restored)

Adaptability Strategy 2		
Renewable surface water + renewable groundwater + reclaimed water	23.17	(sewer mining + injection wells)
Tot volume of water stored in reservoirs expressed as a multiple of average daily consumption (n days)	24.05	(water stored/averag. cons. Daily)
Contribution of alternative sources by volume to total available water (%)	0.70%	(sewer mining / water demand)
Total treatment capacity not relying on a central structure (%)	0.28%	(sewer mining / wwtp)

Table 24:Framework calculation for final strategy.

Circularity Strategy 3		
Volume of freshwater used (%)	98.95%	(sewer mining / water demand)
Reclaimed wwtp effluent (%)	96.15%	(wwtp reclaimed / wwtp produced)
Reclaimed stormwater (%)	45.00%	(reclaimed / stormwater produced)
Water stored as gw (%)	57.20%	(gw restored / gw consumed)
water stored as surface water (M m3)	0.00	(Mm3 water restored)

Adaptability Strategy 3		
Renewable surface water + renewable groundwater + reclaimed water		(sewer mining + injection wells)
Tot volume of water stored in reservoirs expressed as a multiple of average daily consumption (n days)	209.36	(water stored/averag. cons. Daily)
Contribution of alternative sources by volume to total available water (%)	1.05%	(sewer mining / water demand)
Total treatment capacity not relying on a central structure (%)	0.43%	(sewer mining / wwtp)

APPENDIX-B

Maps

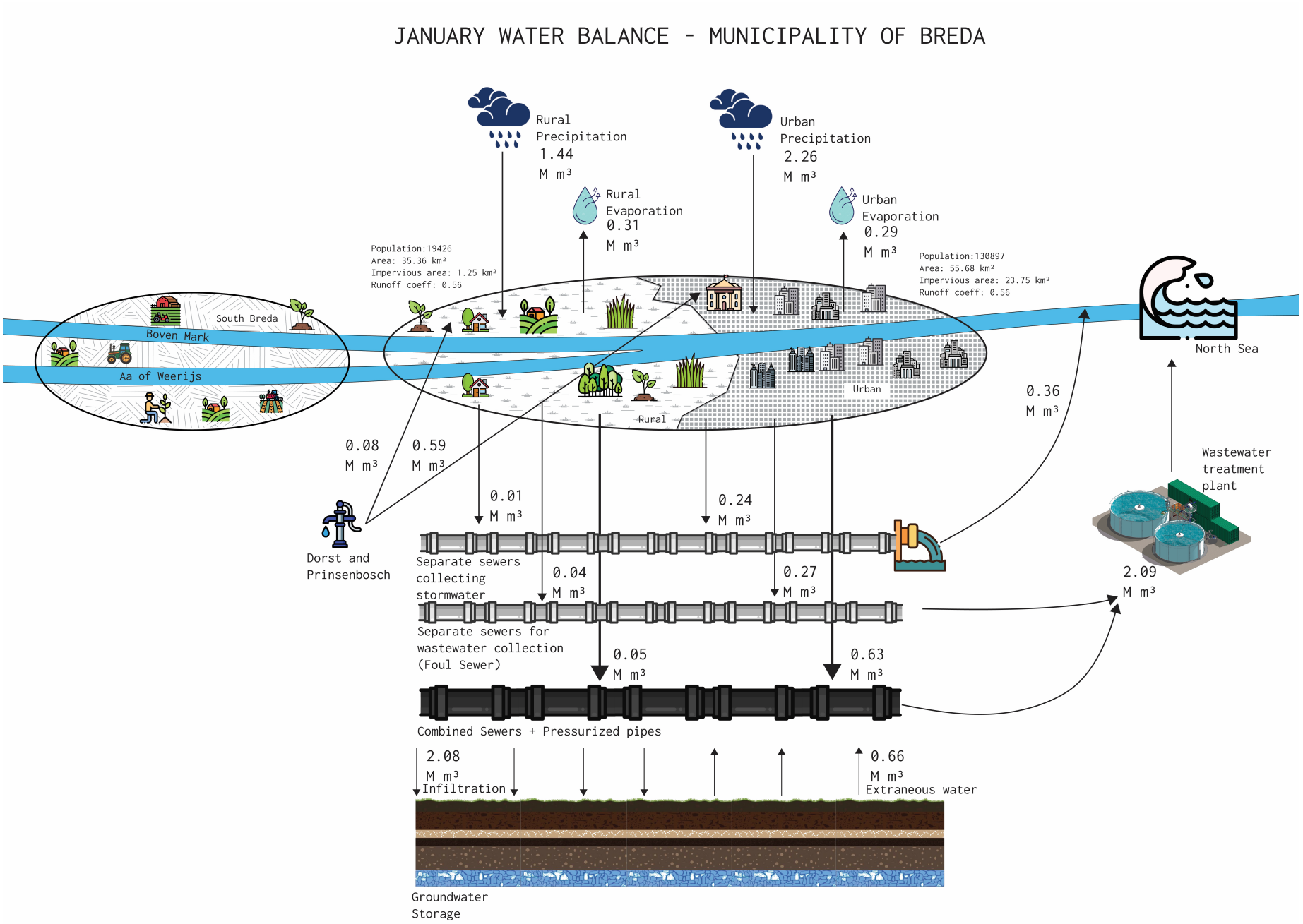


Figure 1: January water balance conceptual map for Breda's municipality.

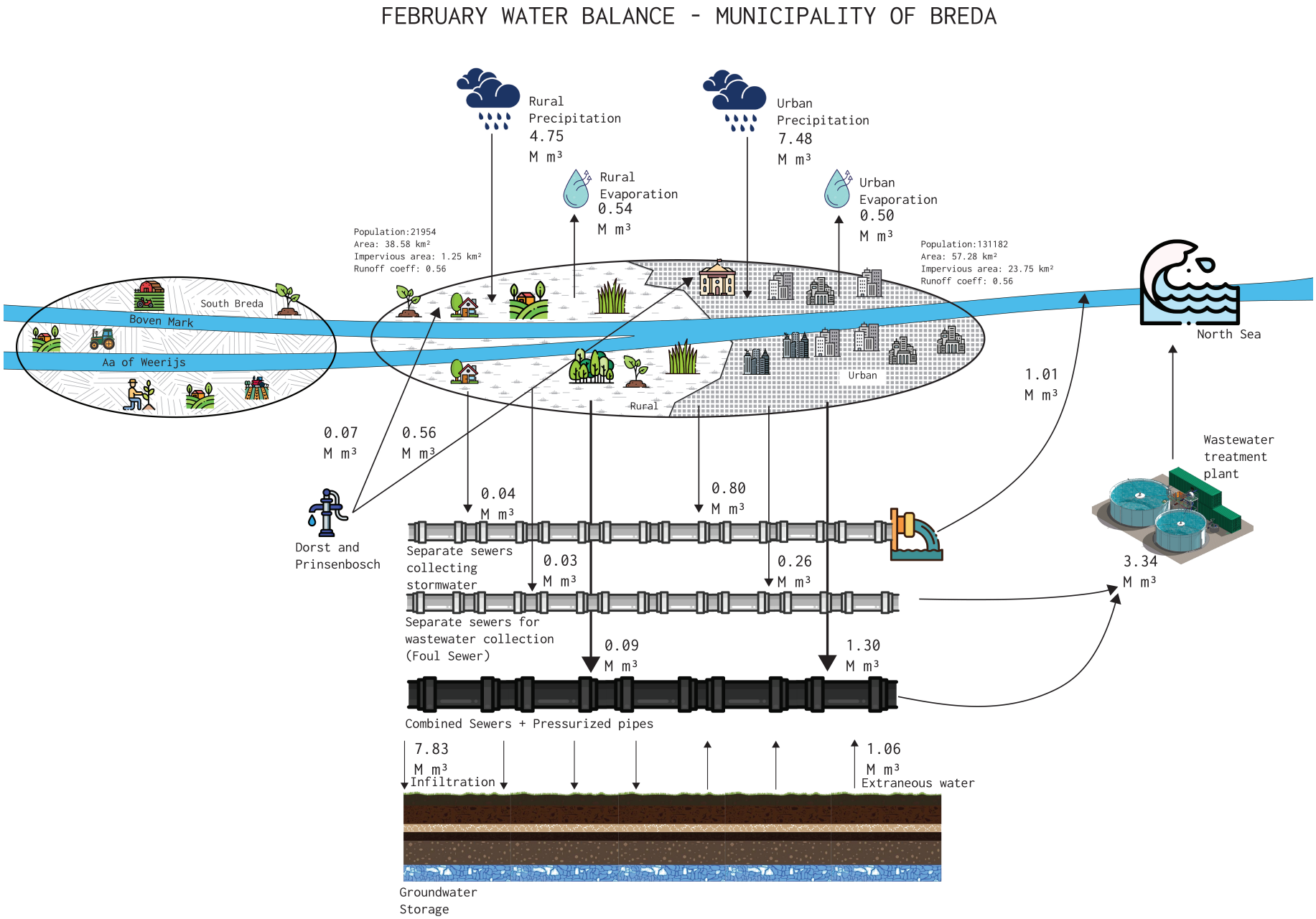


Figure 2: February water balance conceptual map for Breda's municipality.

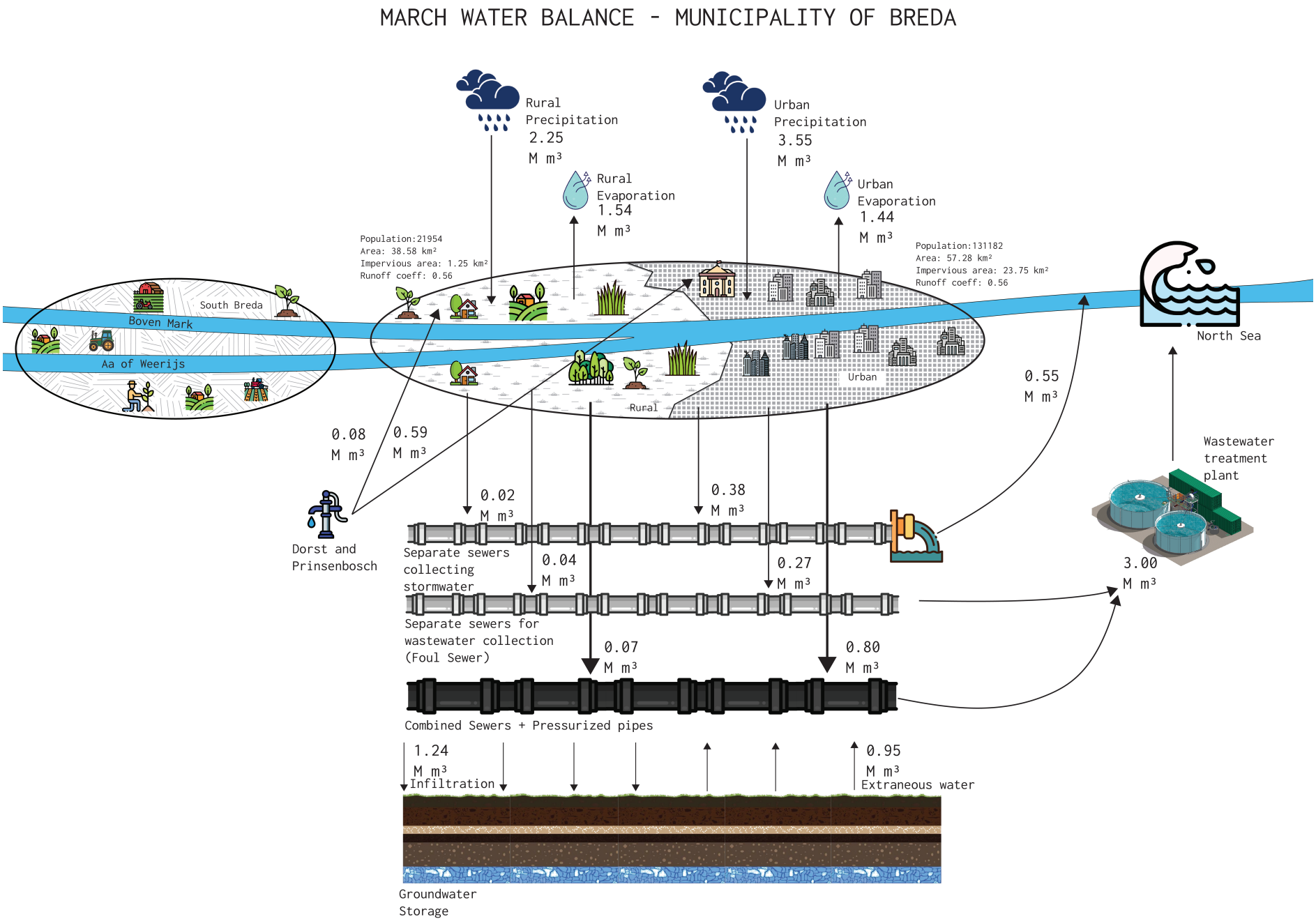


Figure 3: March water balance conceptual map for Breda's municipality.

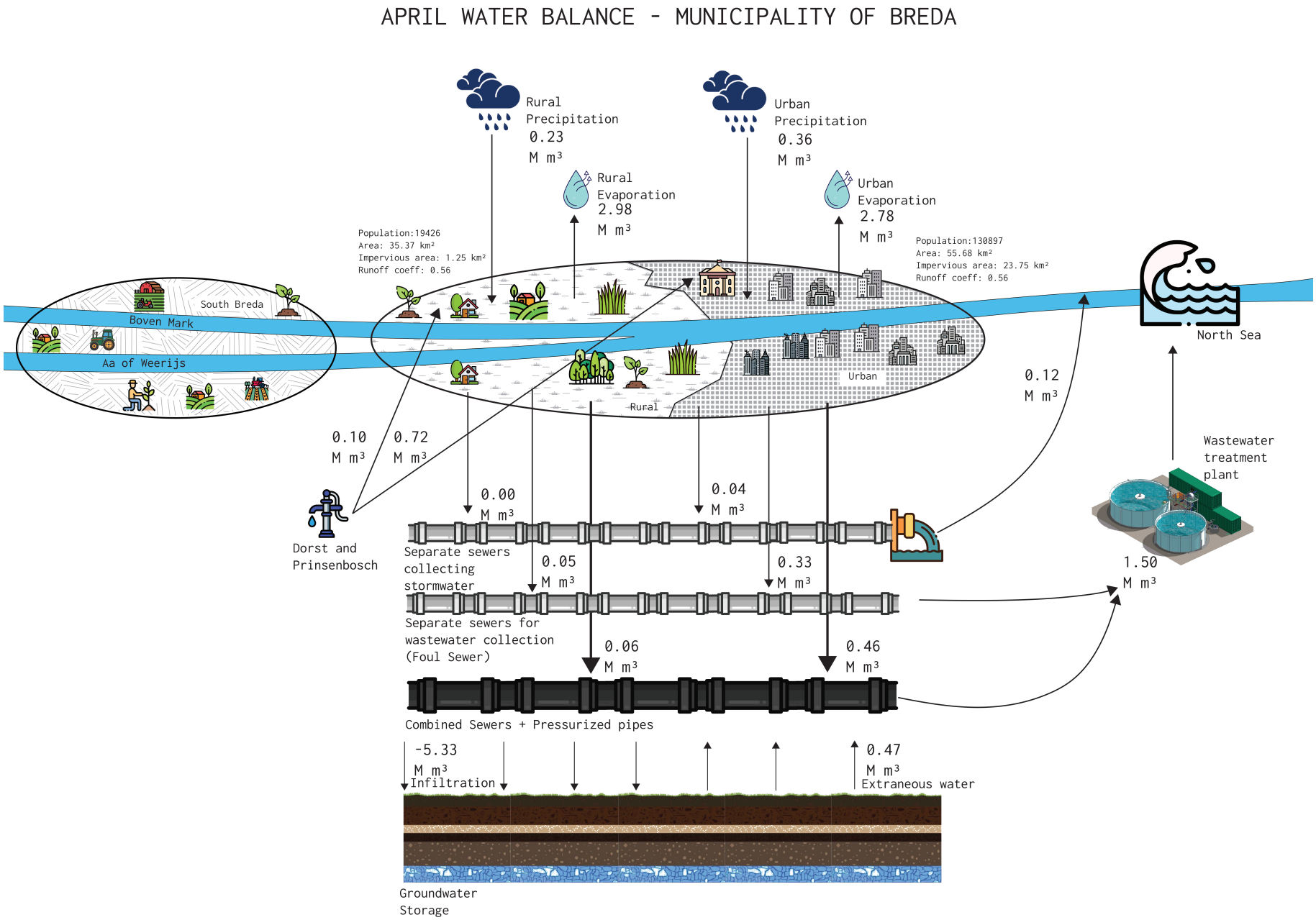


Figure 4: April water balance conceptual map for Breda's municipality.

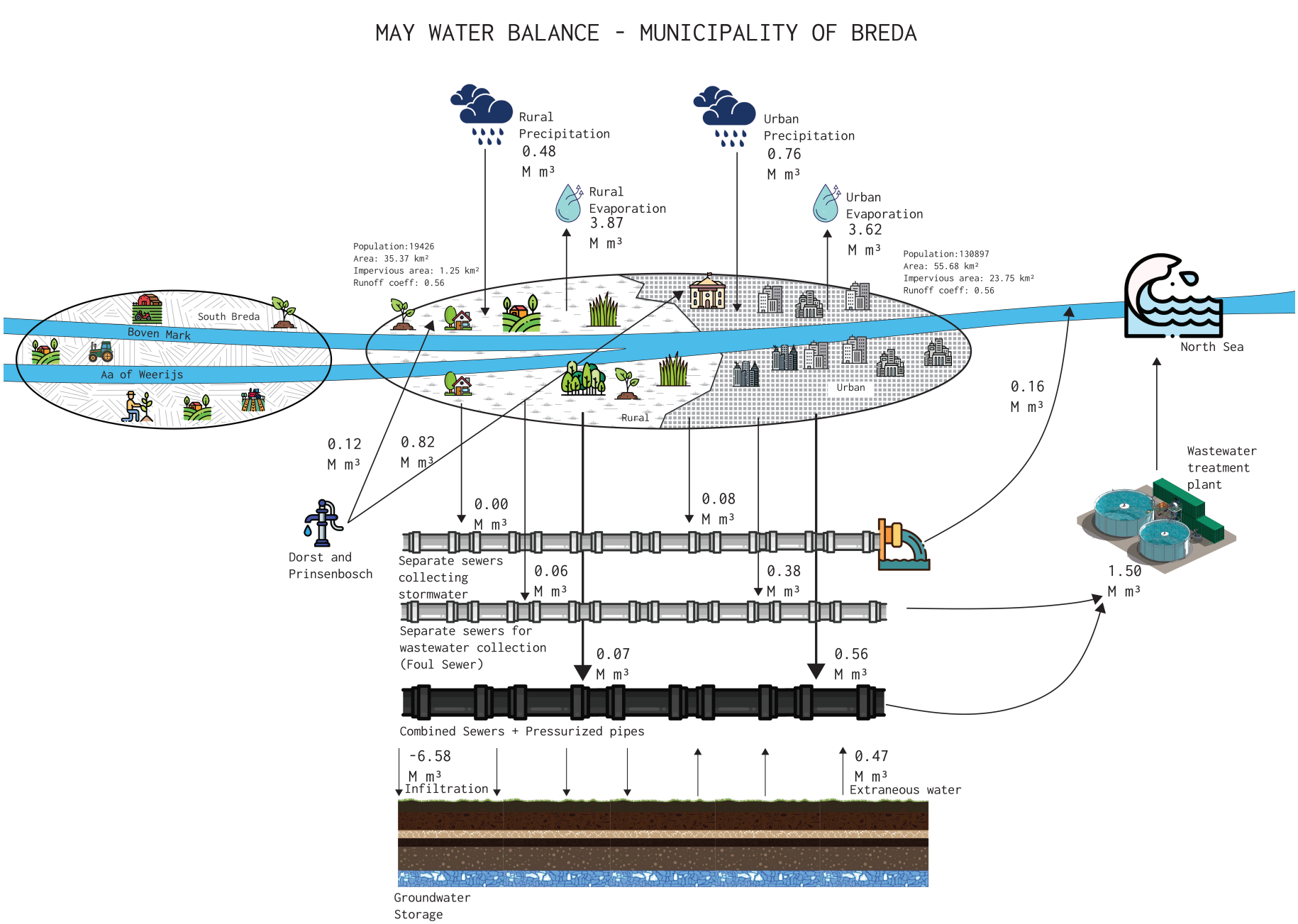


Figure 5: May water balance conceptual map for Breda's municipality.

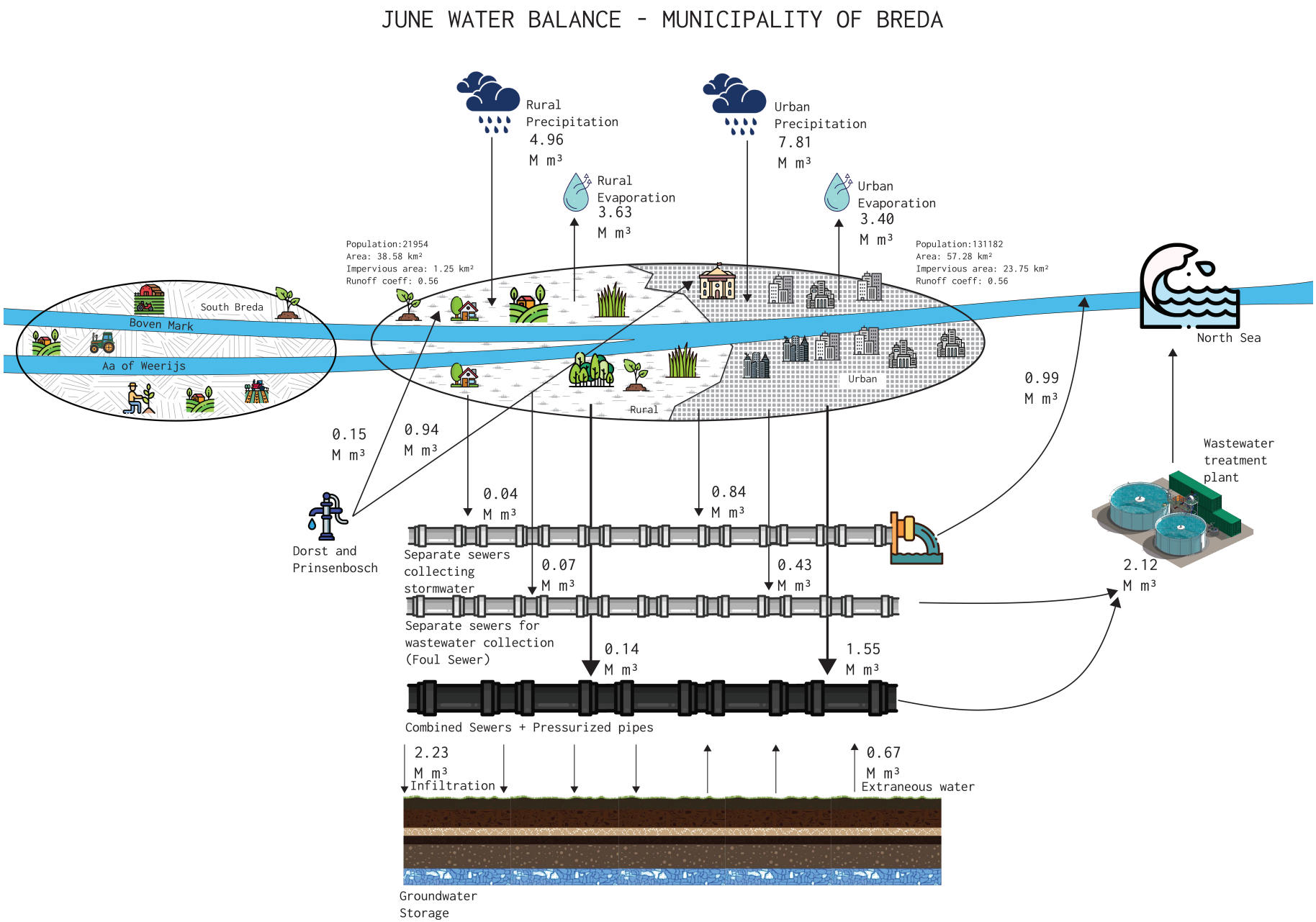


Figure 6: June water balance conceptual map for Breda's municipality.

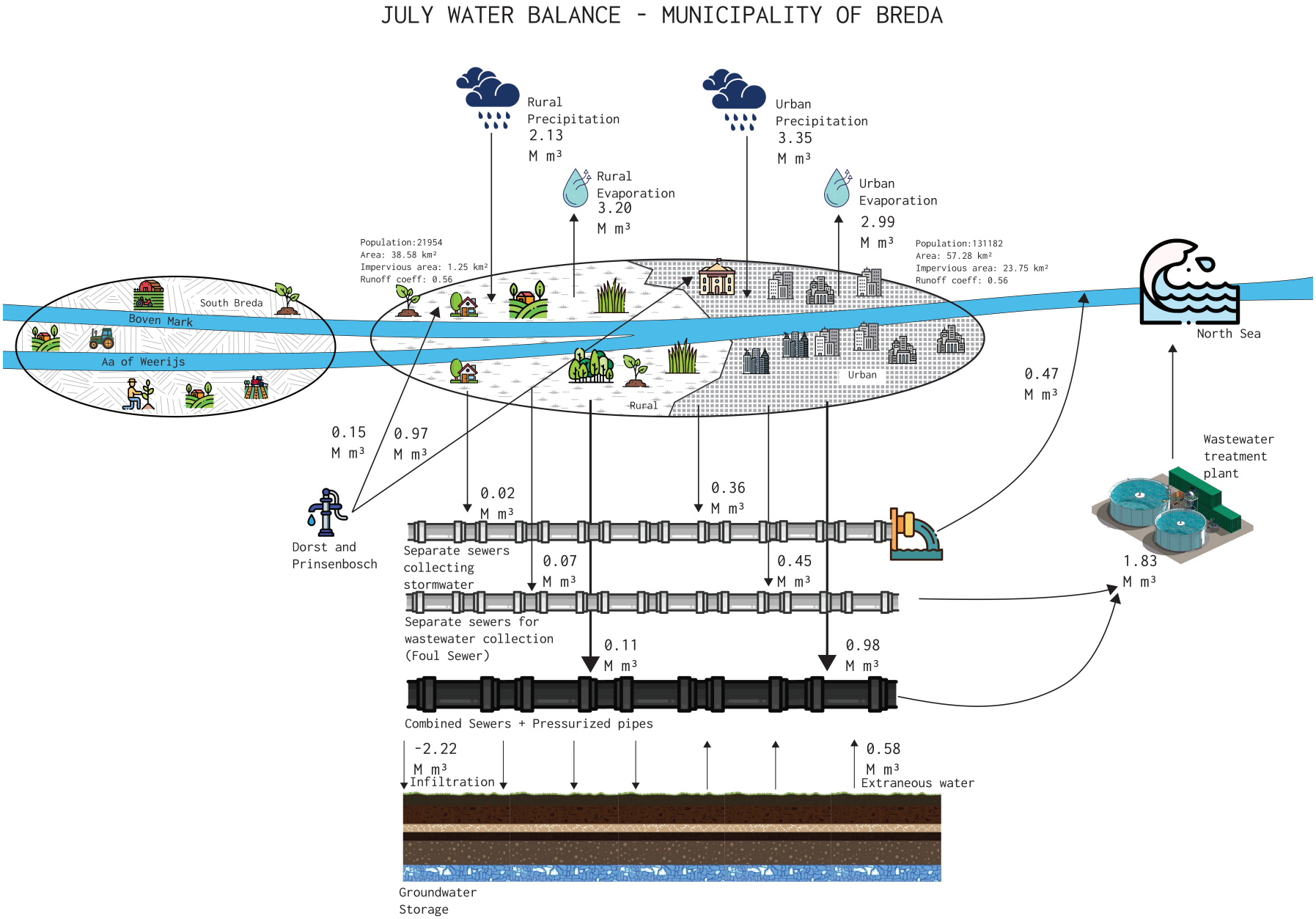


Figure 7: July water balance conceptual map for Breda's municipality.

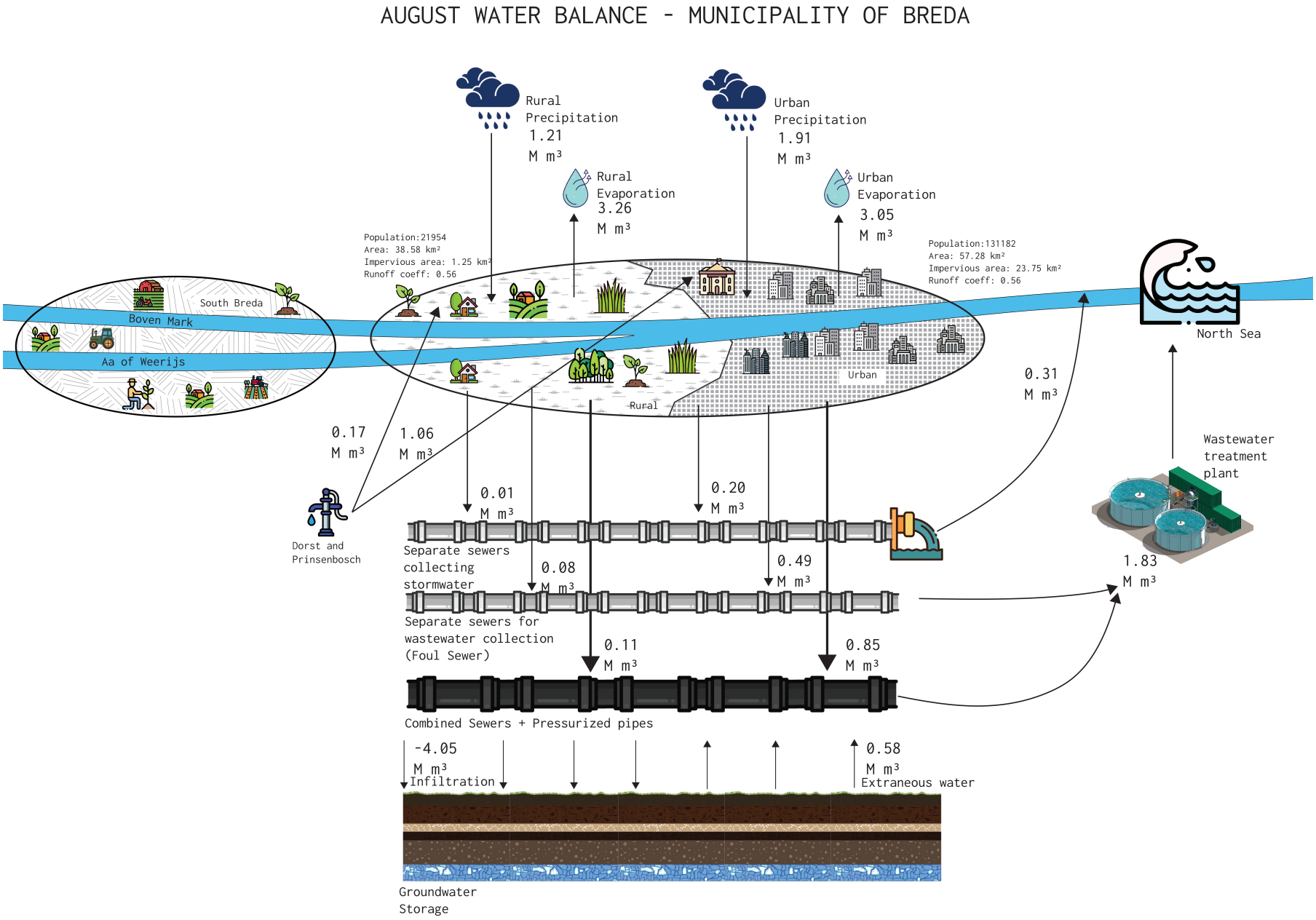


Figure 8: August water balance conceptual map for Breda's municipality.

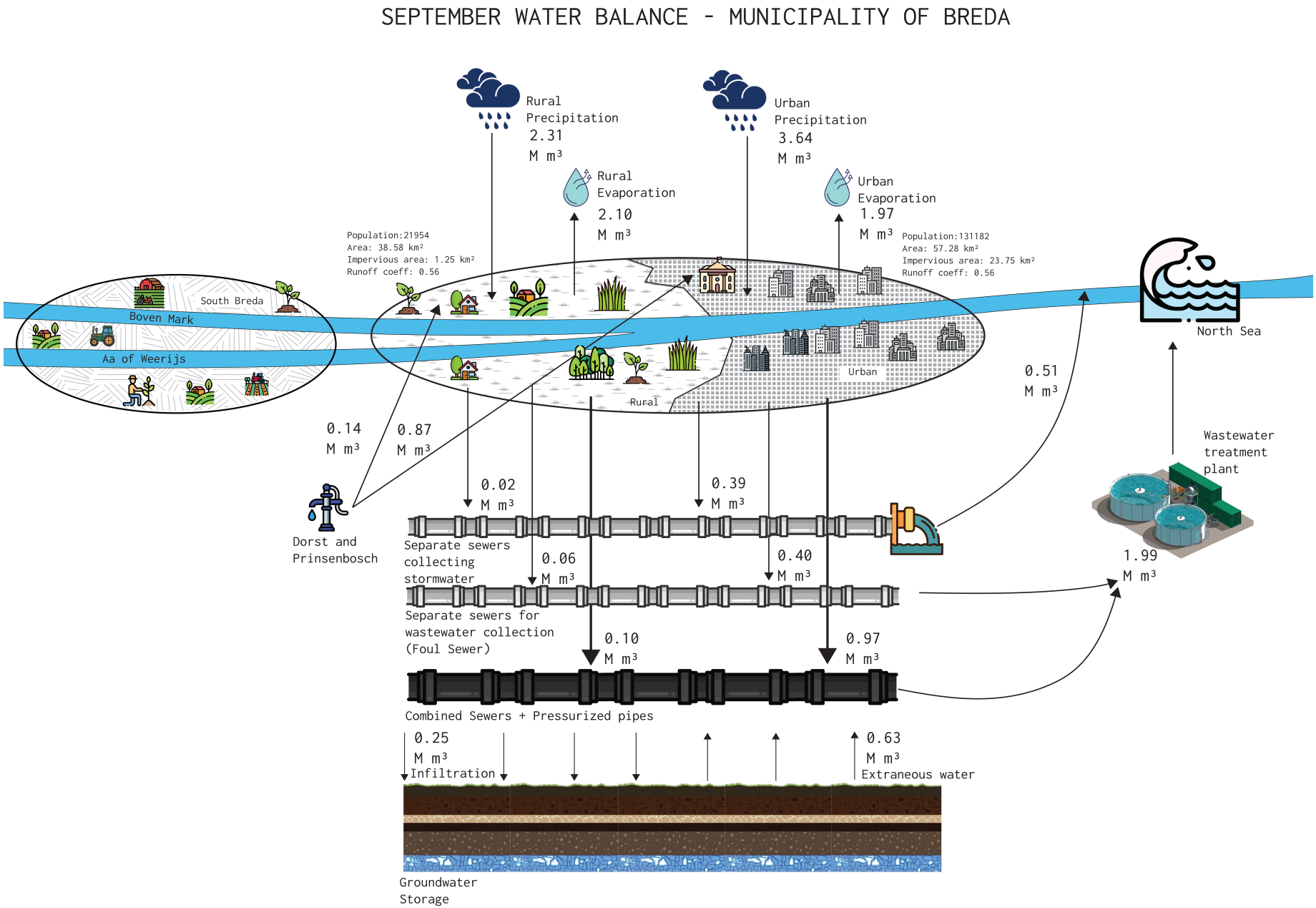


Figure 9: September water balance conceptual map for Breda's municipality.

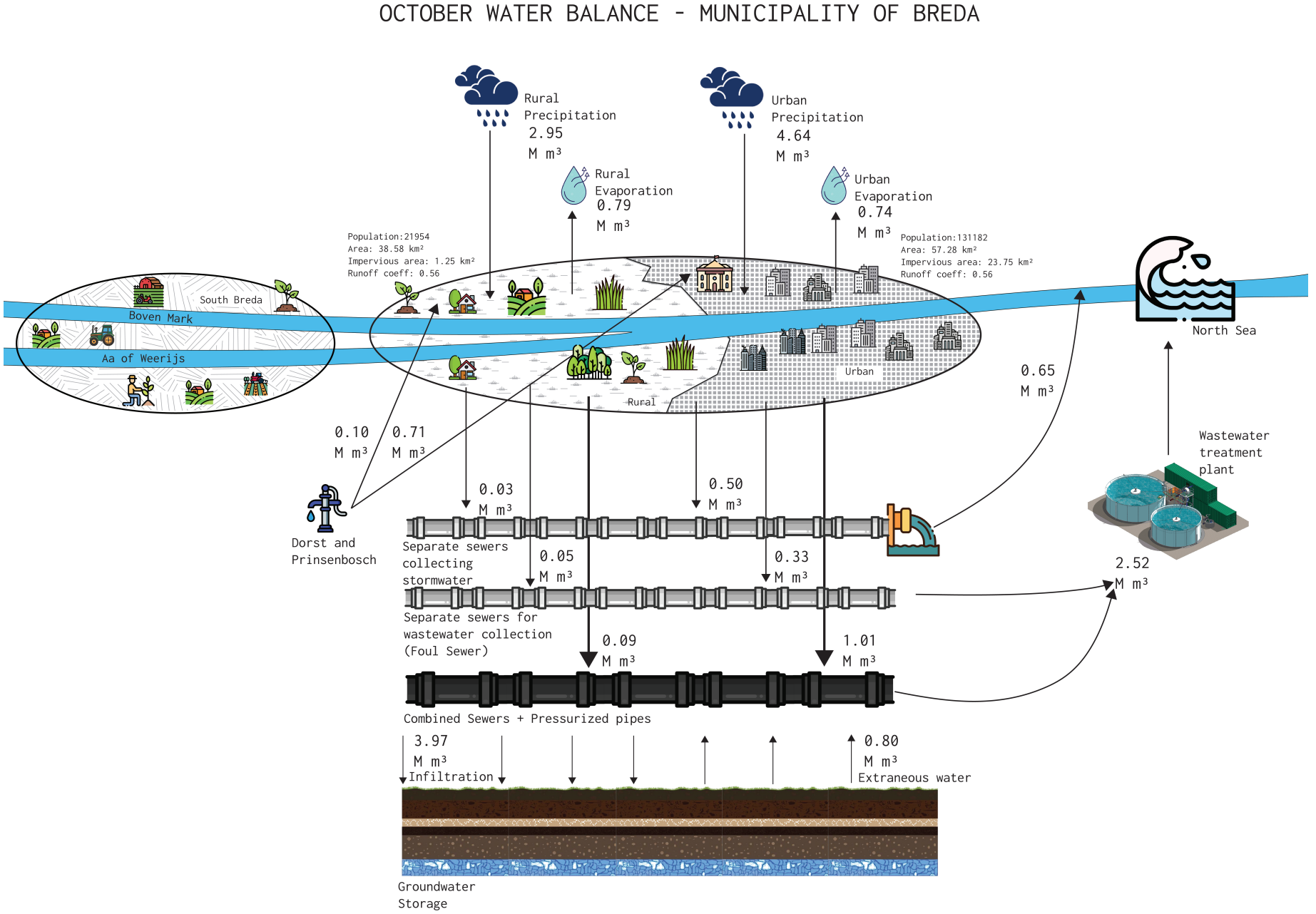


Figure 10: October water balance conceptual map for Breda's municipality.

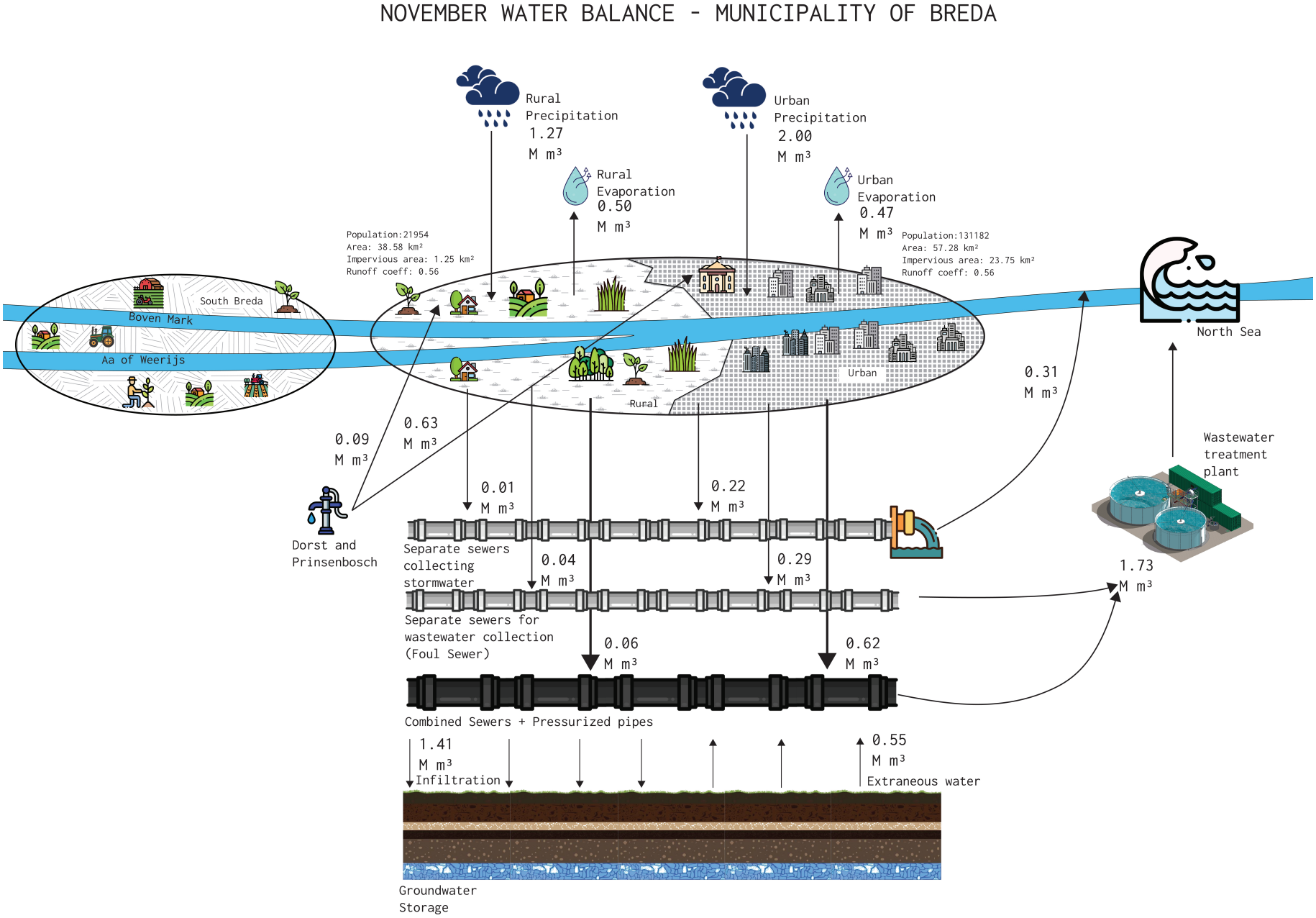


Figure 11: Novemebr water balance conceptual map for Breda's municipality.

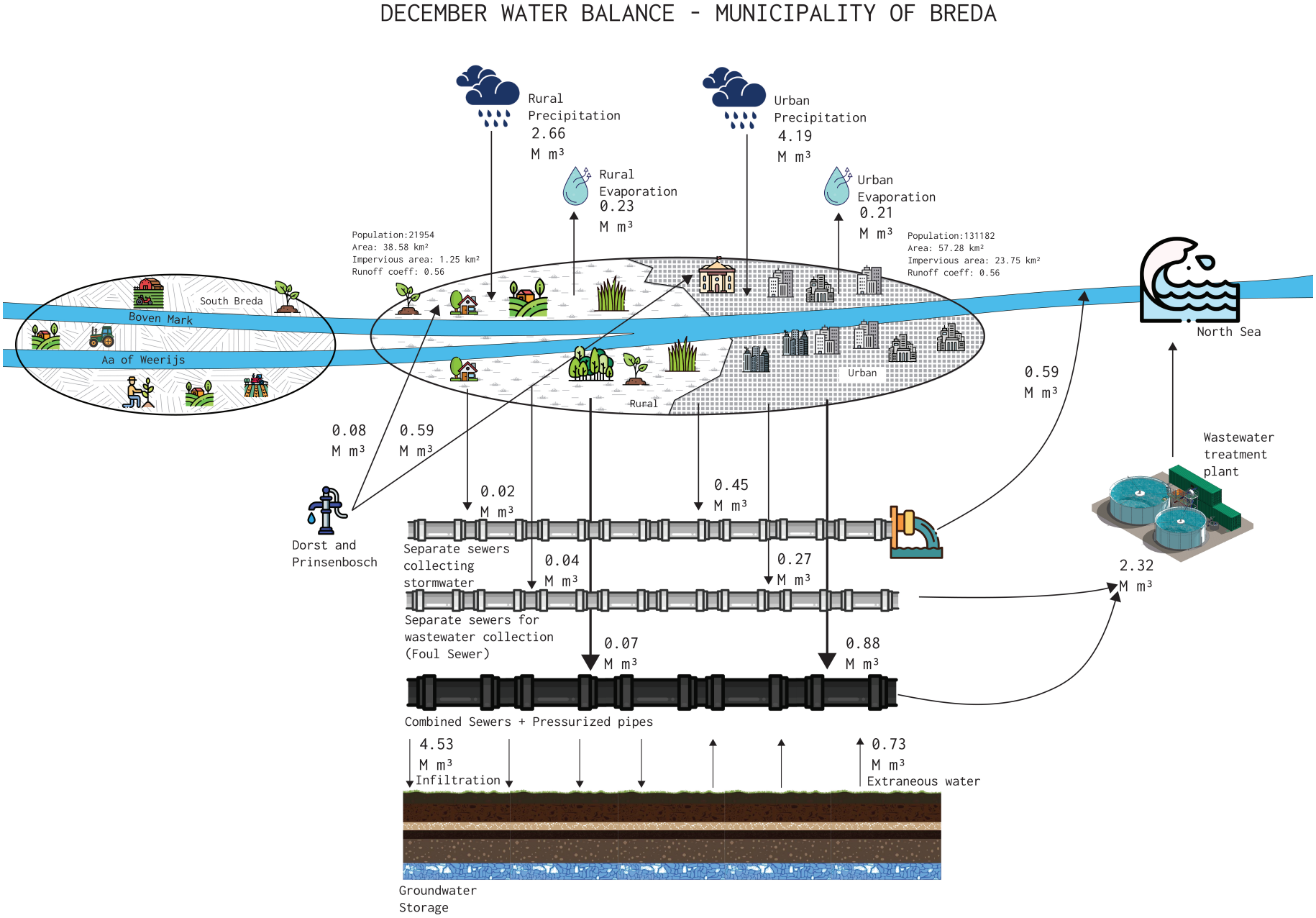


Figure 12: December water balance conceptual map for Breda's municipality.

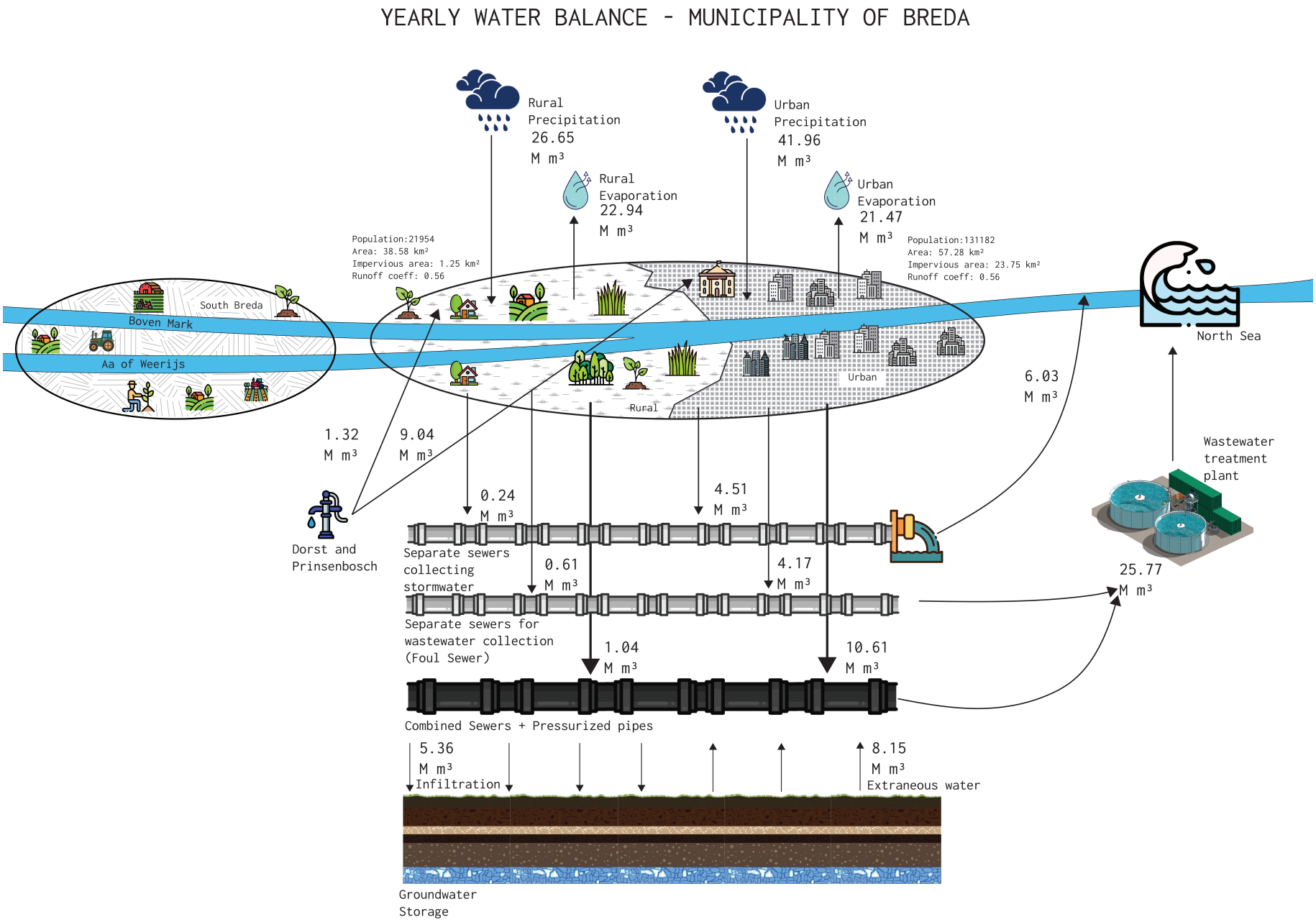


Figure 13: Yearly water balance conceptual map for Breda's municipality.

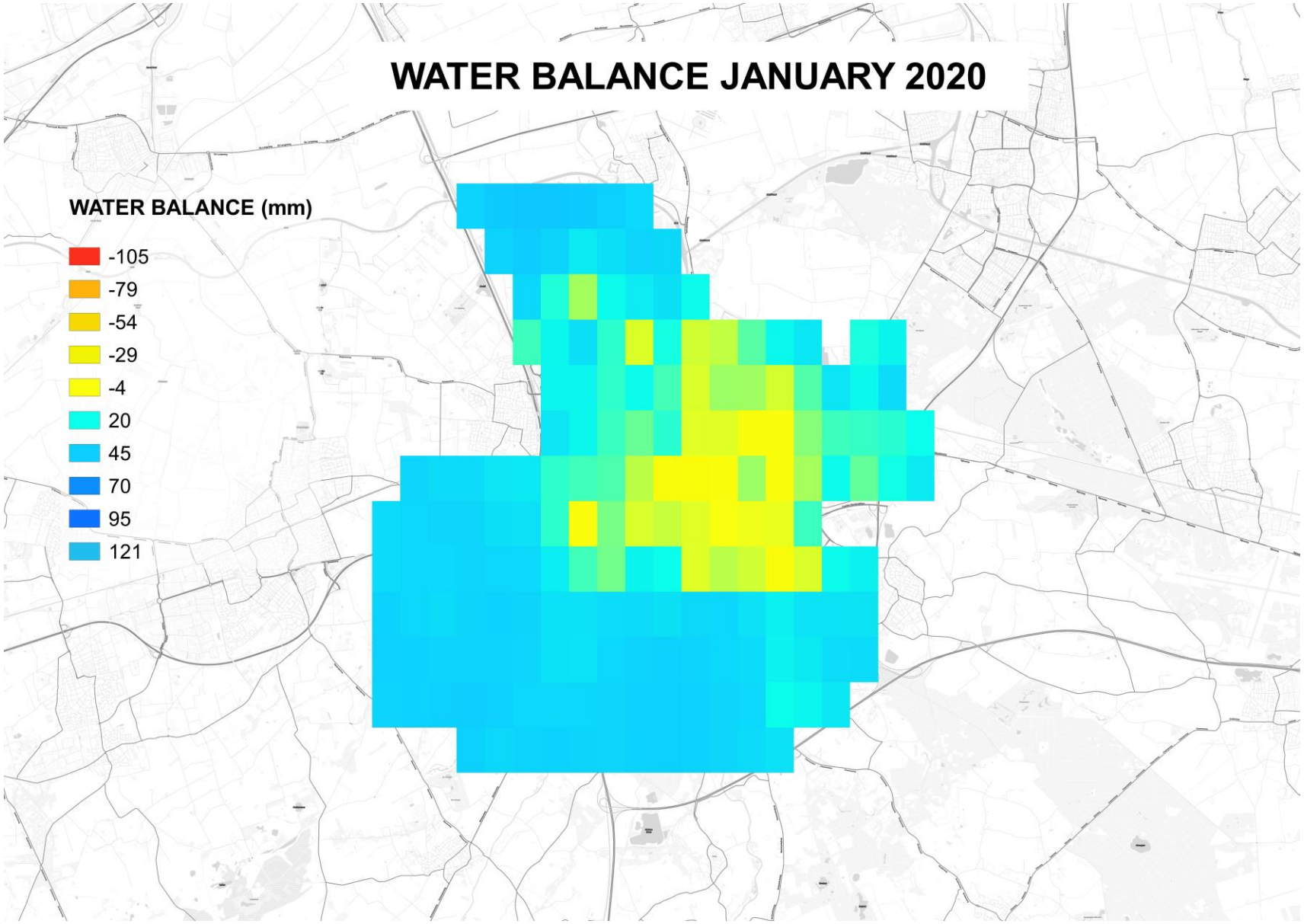


Figure 14: January water balance for Breda's municipality produced by QGIS 3.10 software.

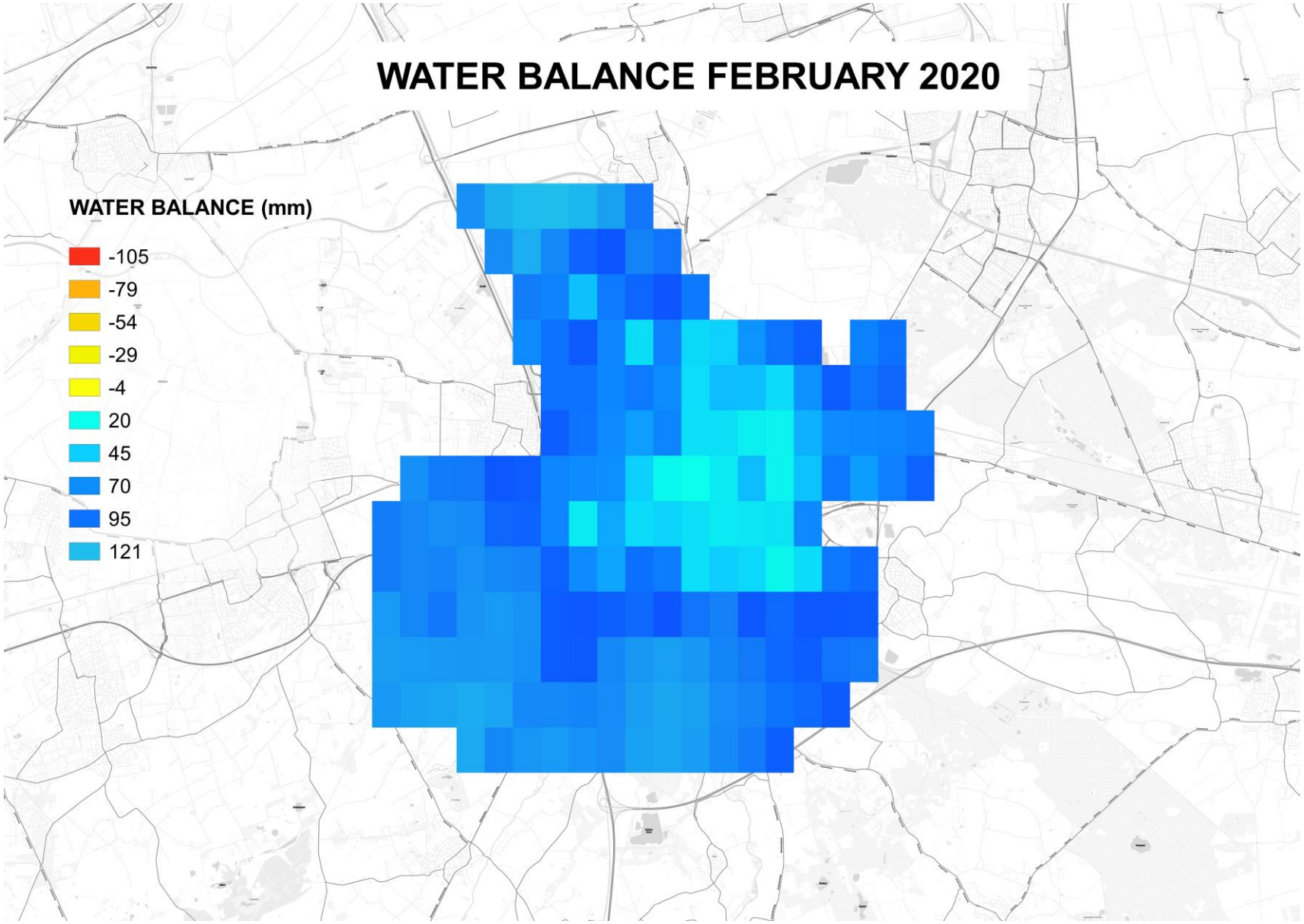


Figure 15: February water balance for Breda's municipality produced by QGIS 3.10 software.

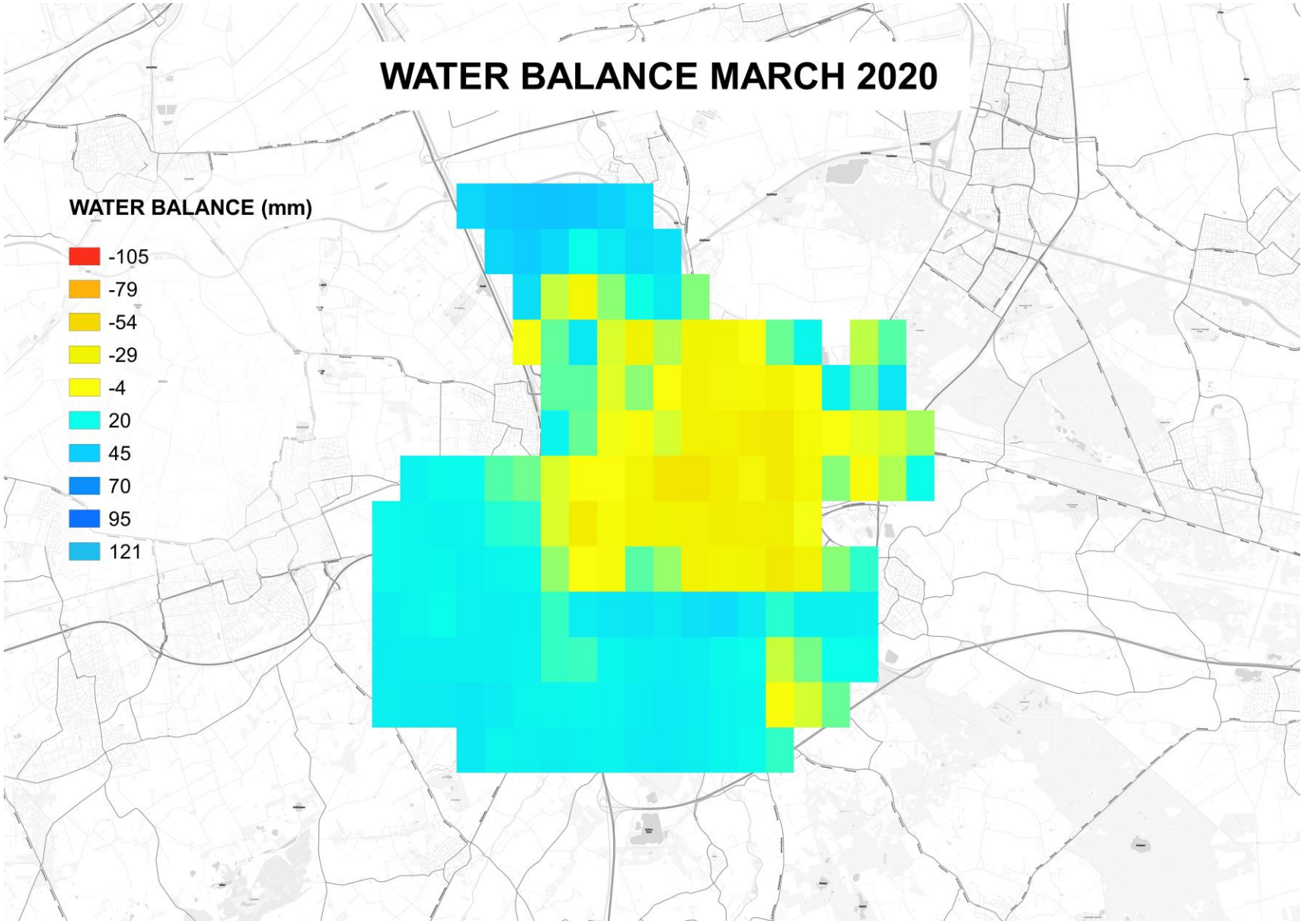


Figure 16: March water balance for Breda's municipality produced by QGIS 3.10 software.

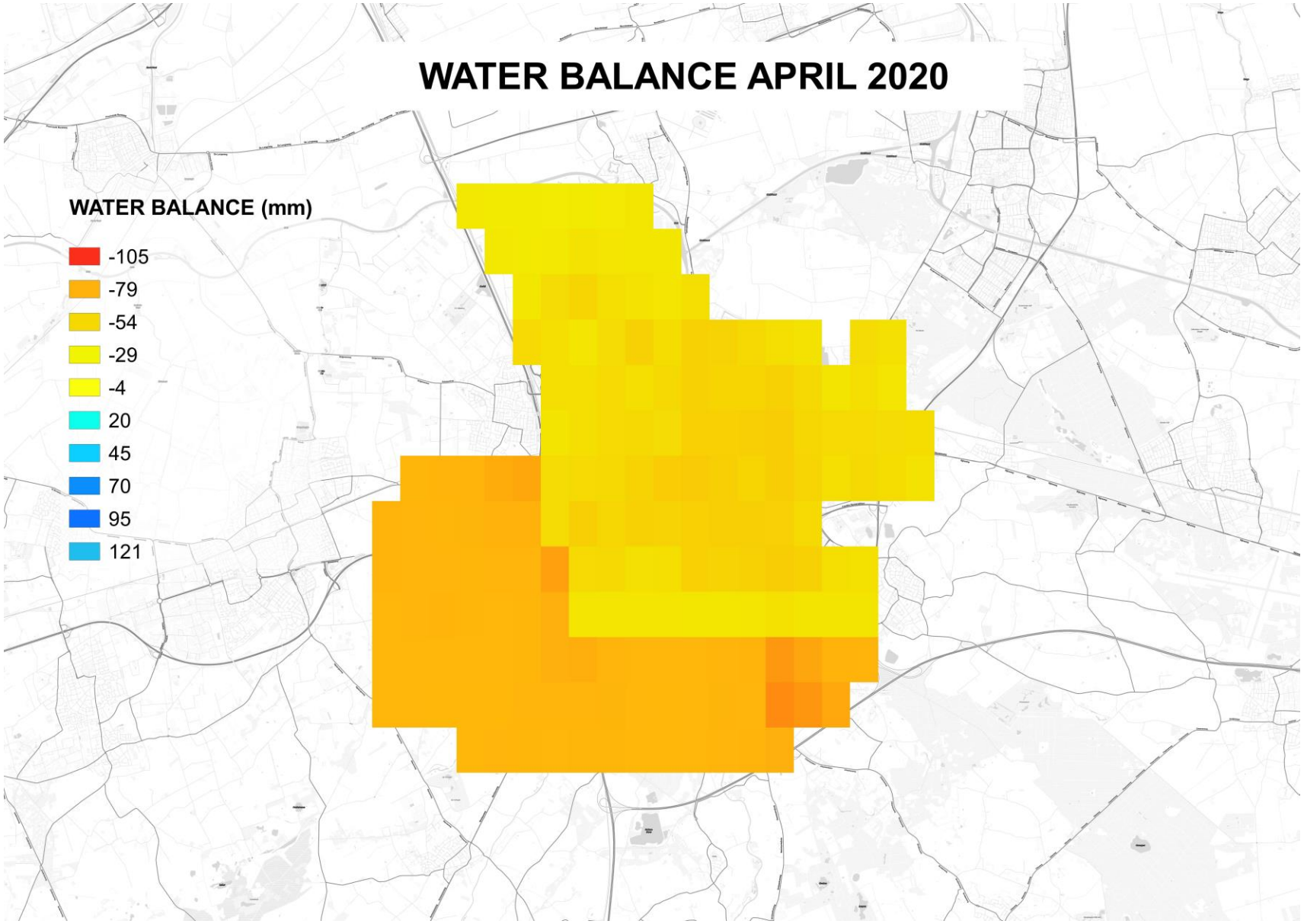


Figure 17: April water balance for Breda's municipality produced by QGIS 3.10 software.

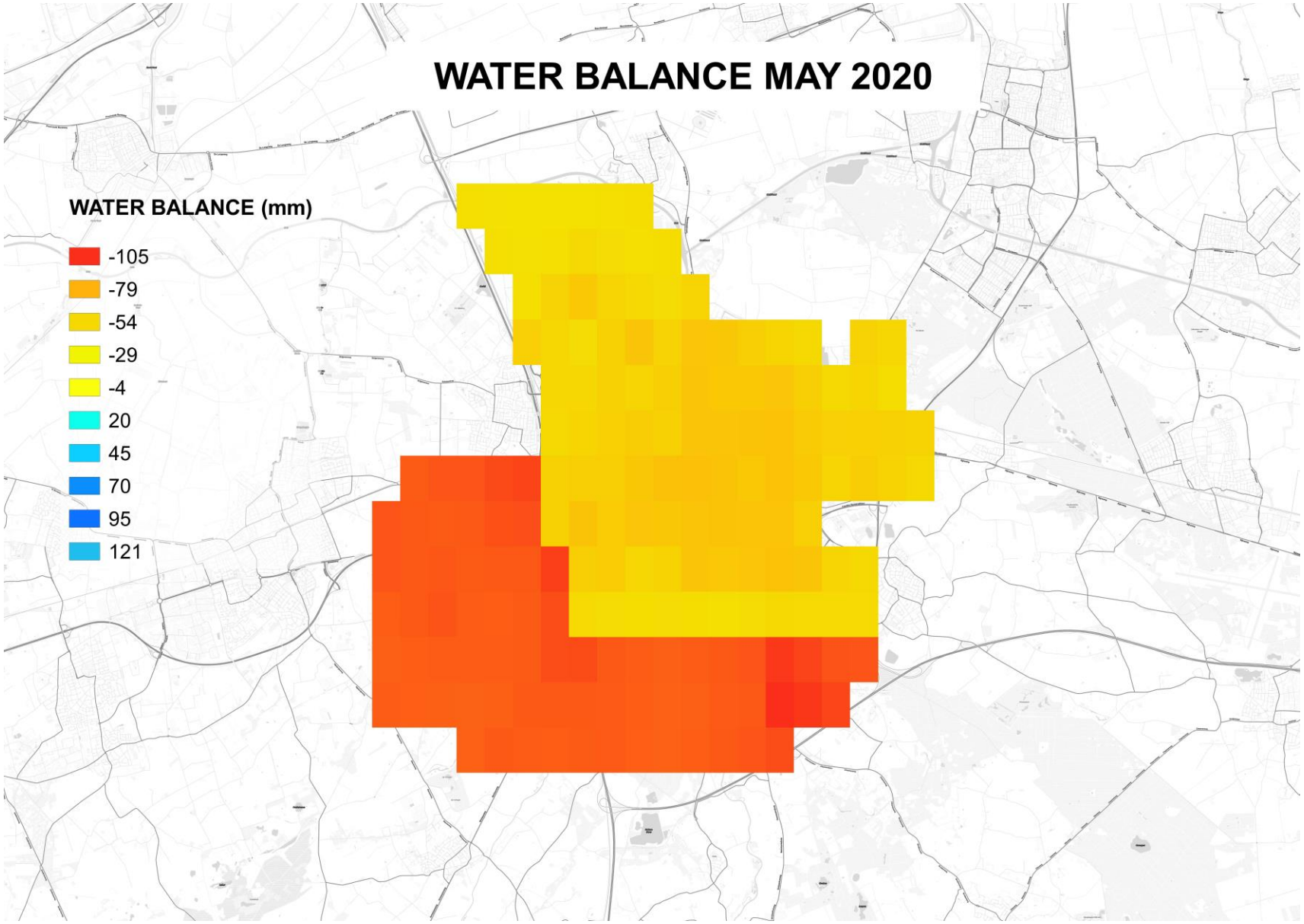


Figure 18: May water balance for Breda's municipality produced by QGIS 3.10 software.

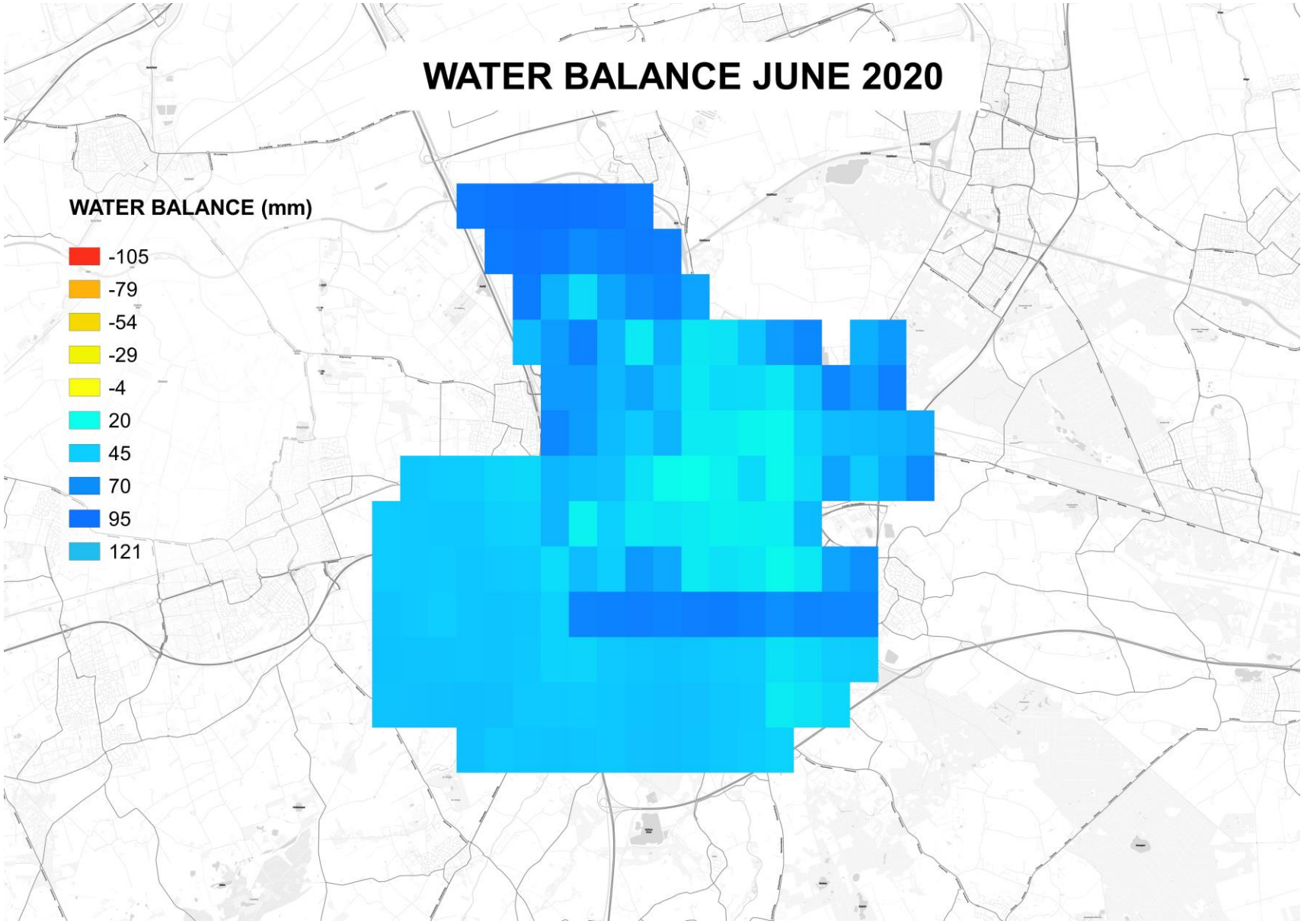


Figure 19: June water balance for Breda's municipality produced by QGIS 3.10 software.

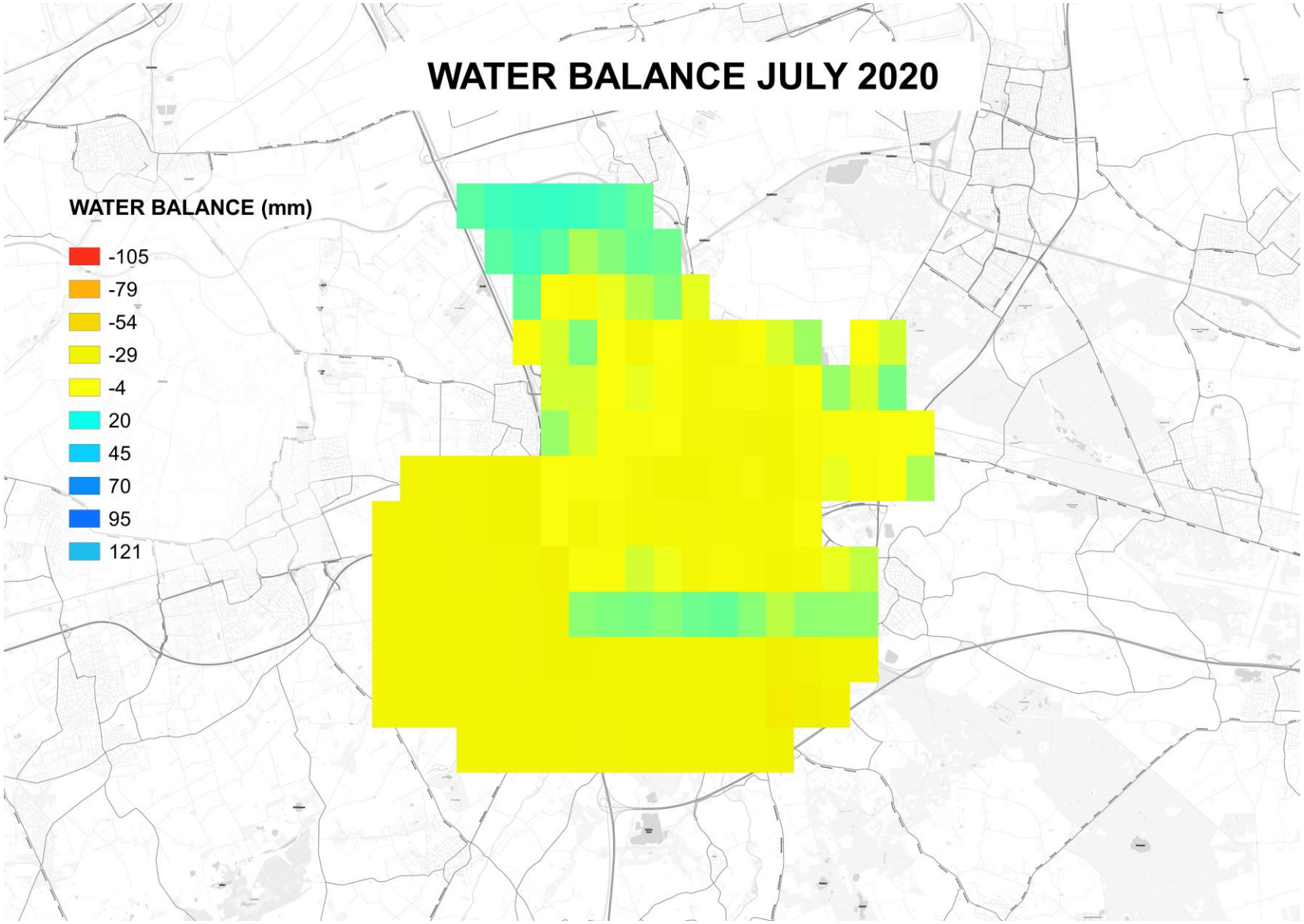


Figure 20: July water balance for Breda's municipality produced by QGIS 3.10 software.

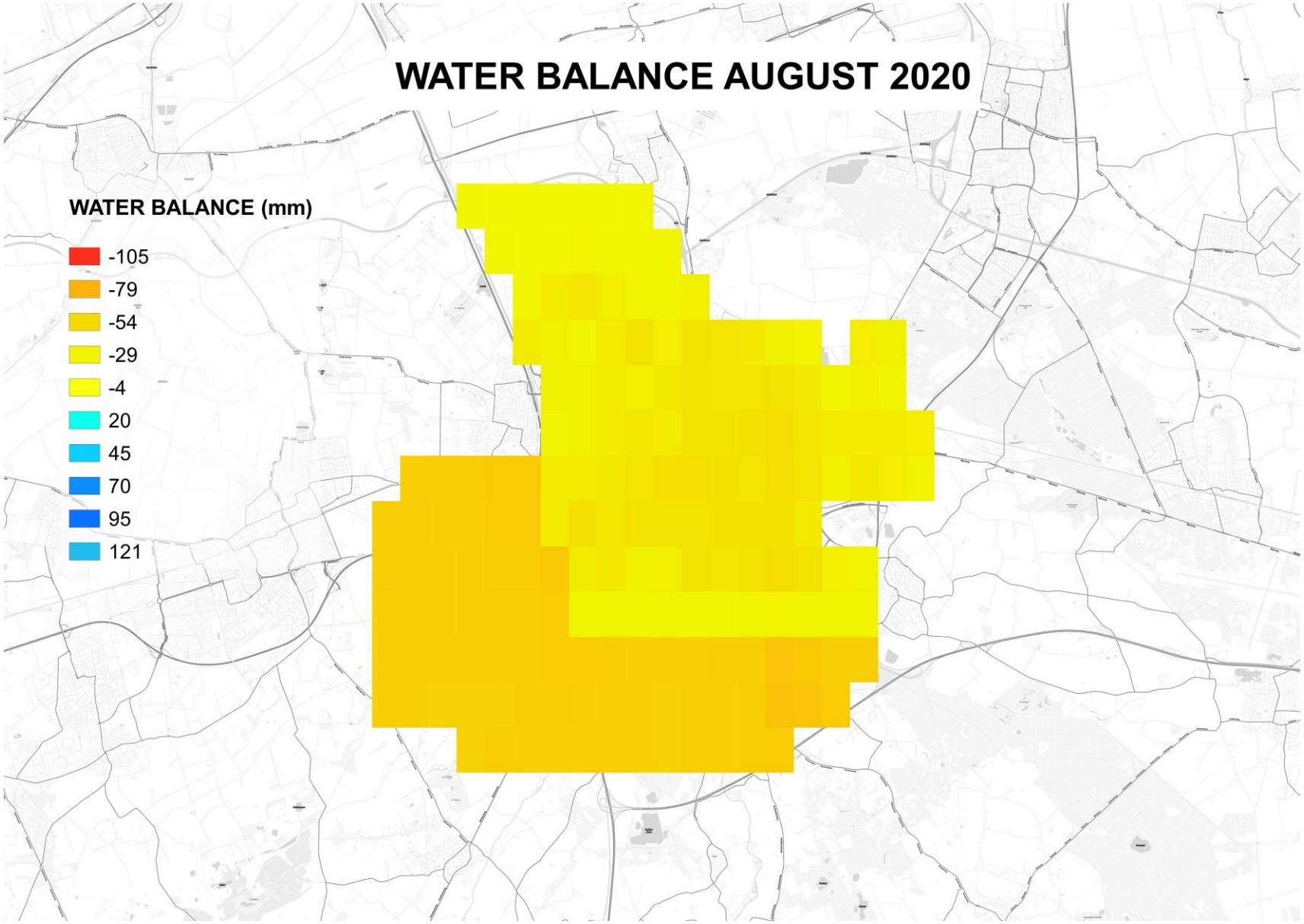


Figure 21: August water balance for Breda's municipality produced by QGIS 3.10 software.

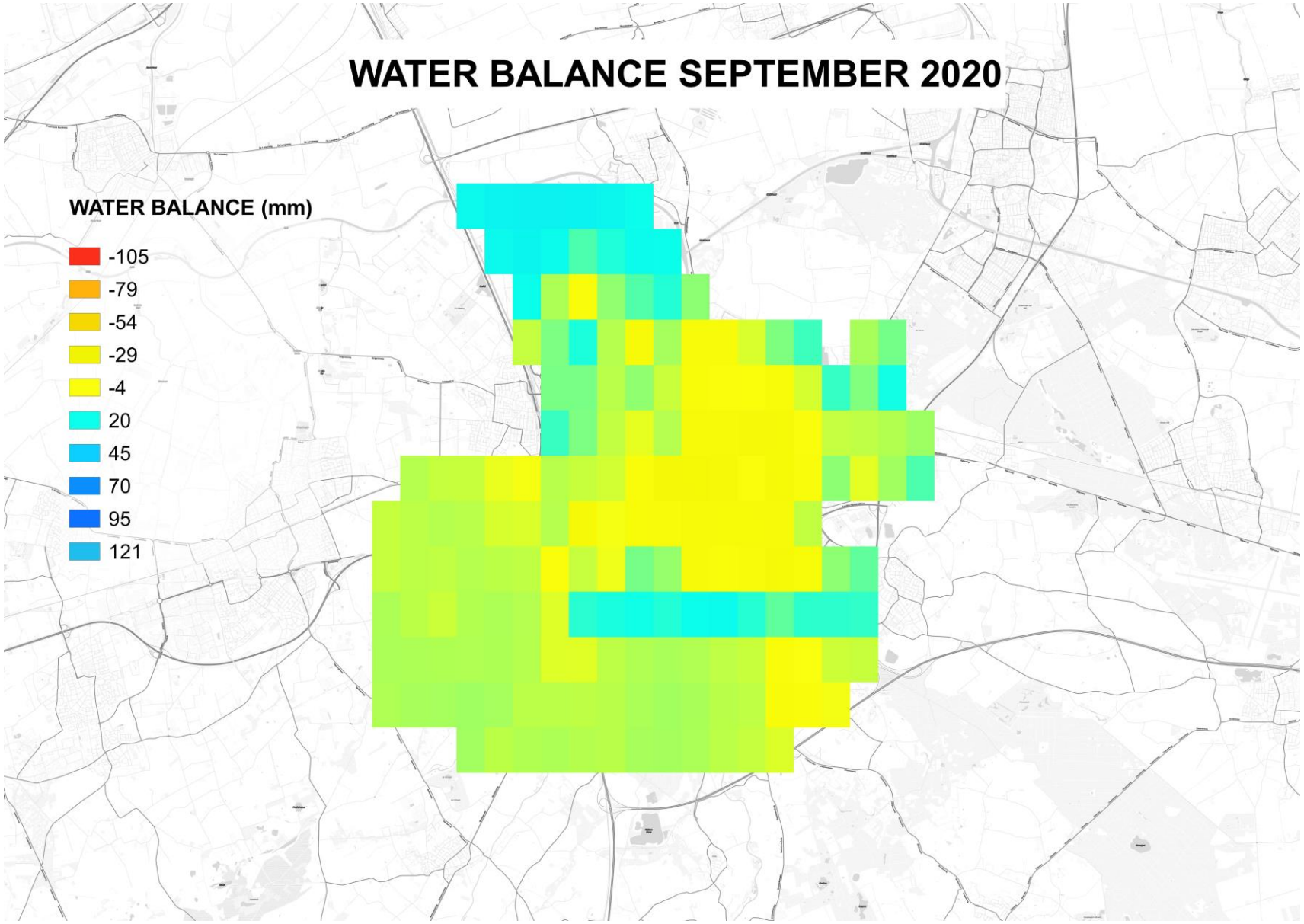


Figure 22: September water balance for Breda's municipality produced by QGIS 3.10 software.

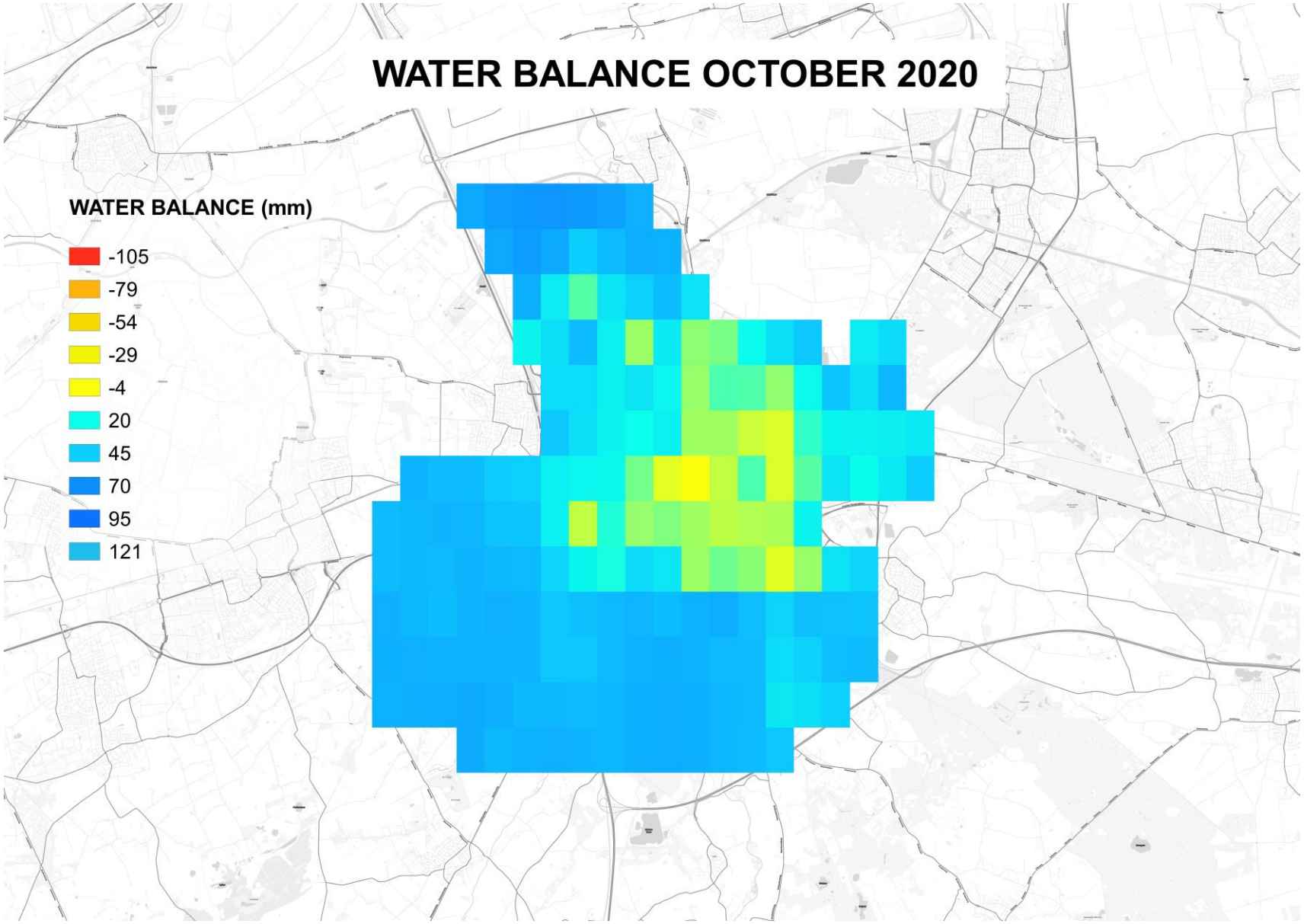


Figure 23: October water balance for Breda's municipality produced by QGIS 3.10 software.

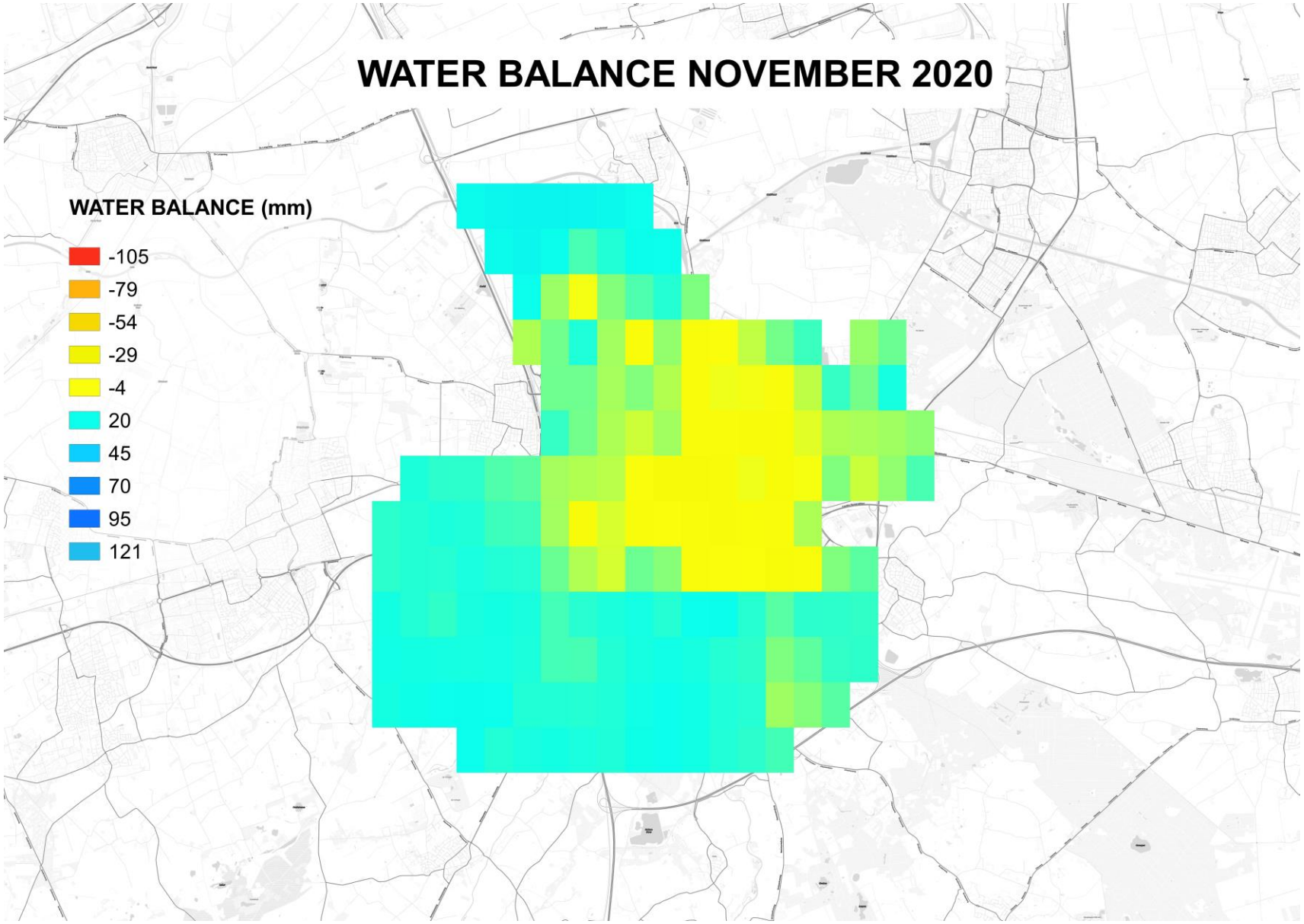


Figure 24: November water balance for Breda's municipality produced by QGIS 3.10 software.

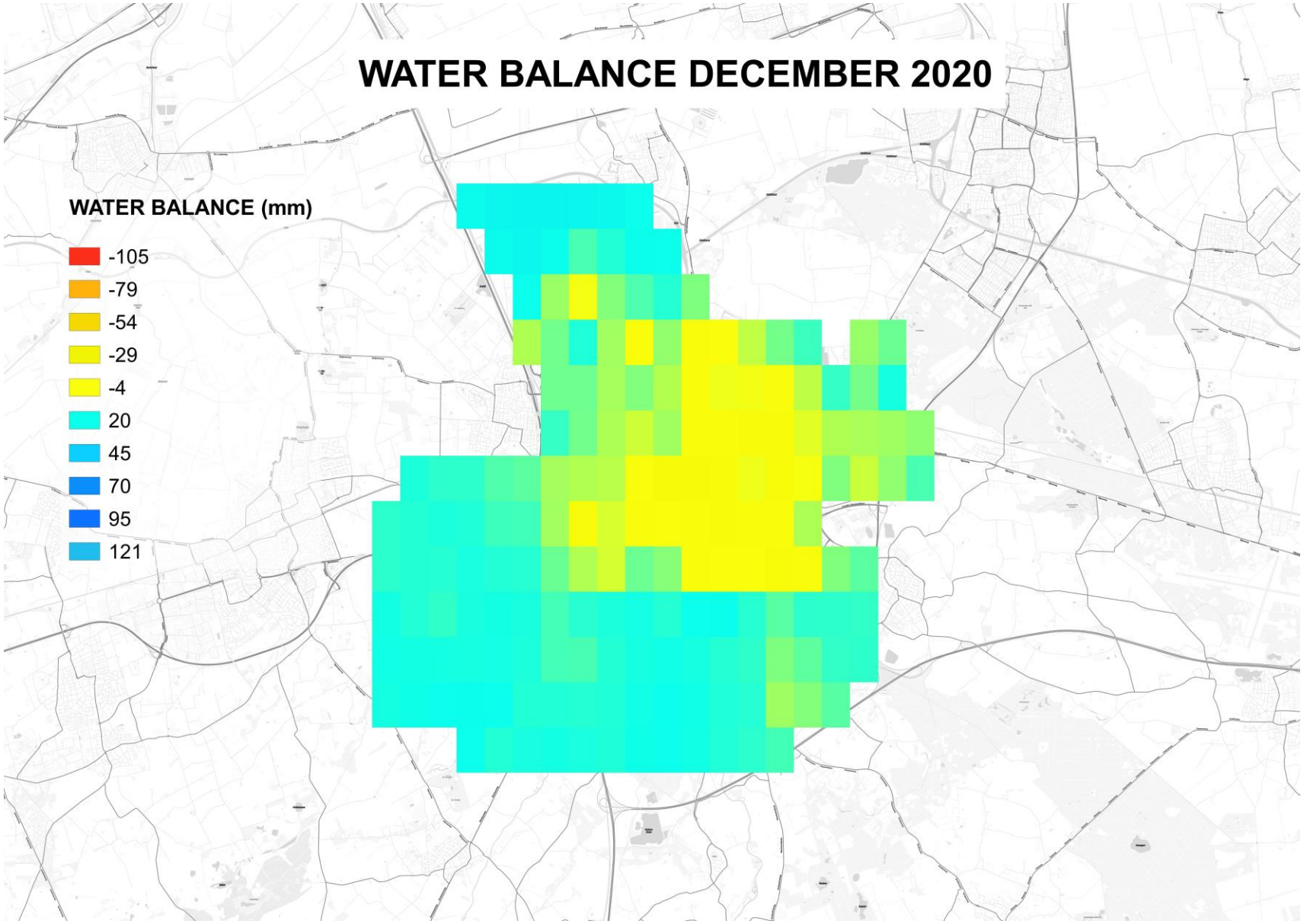


Figure 25: December water balance for Breda's municipality produced by QGIS 3.10 software.

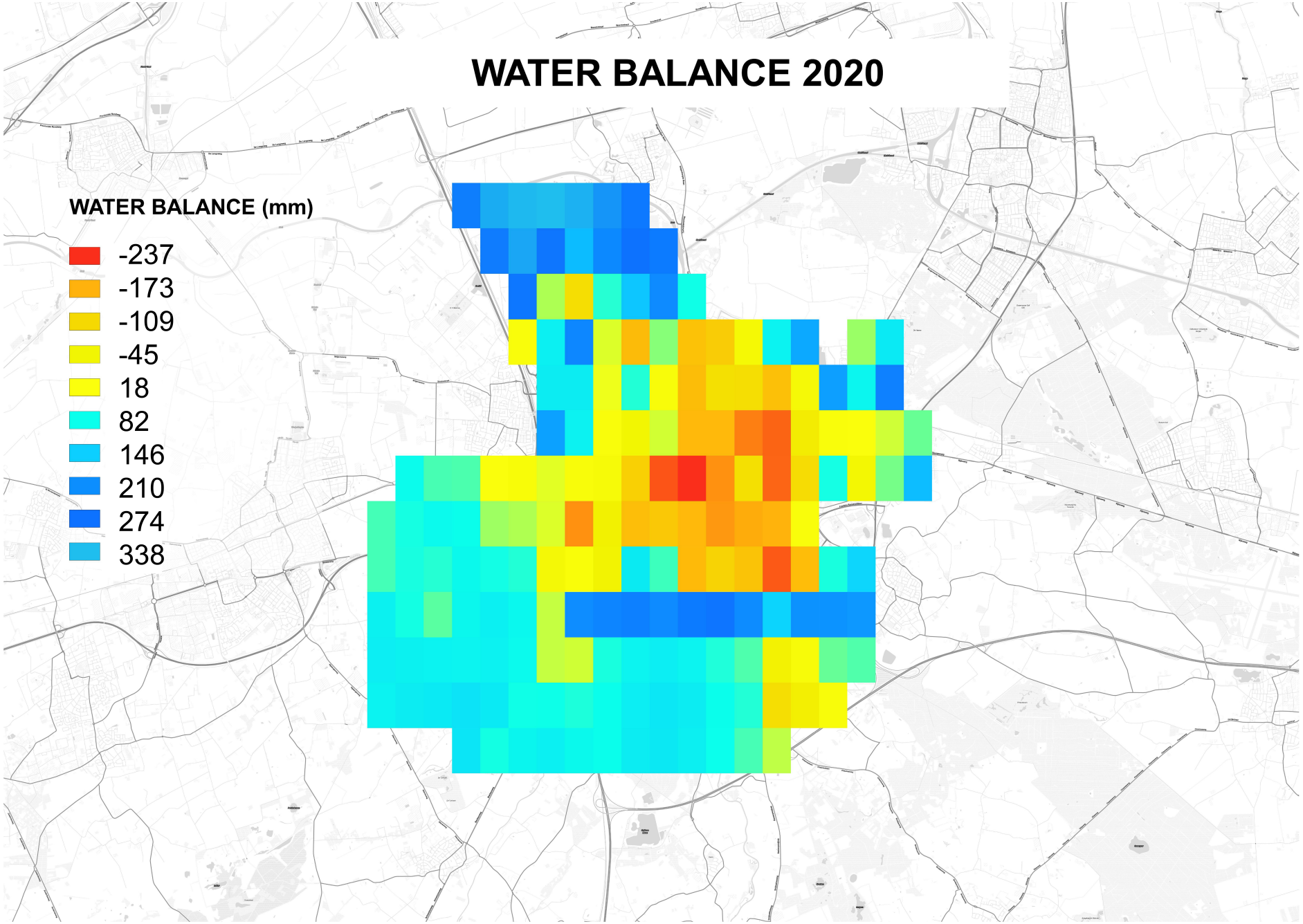


Figure 26: Yearly water balance for Breda's municipality produced by QGIS 3.10 software.

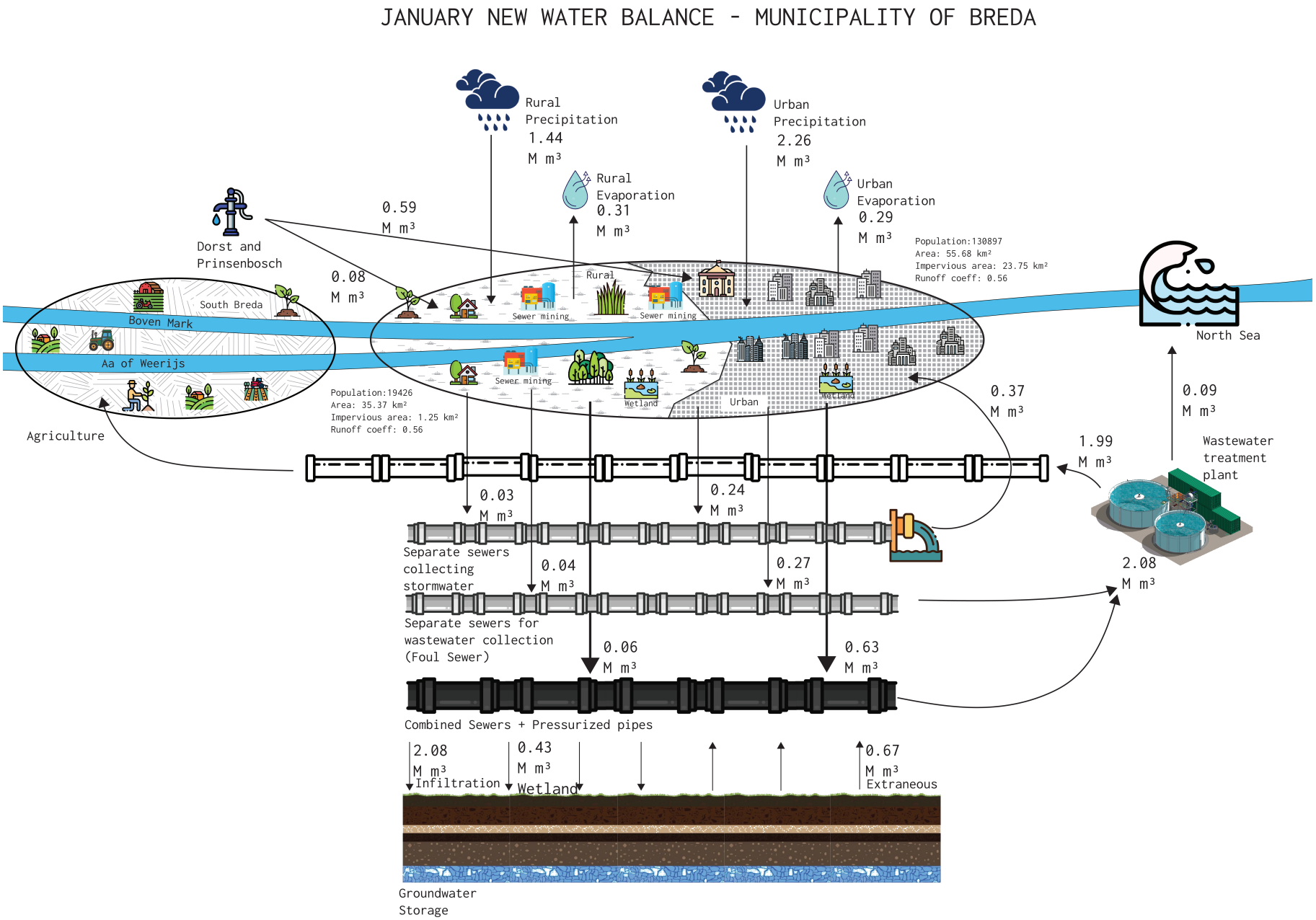


Figure 27: January water balance after strategy implementation, conceptual map for Breda's municipality.

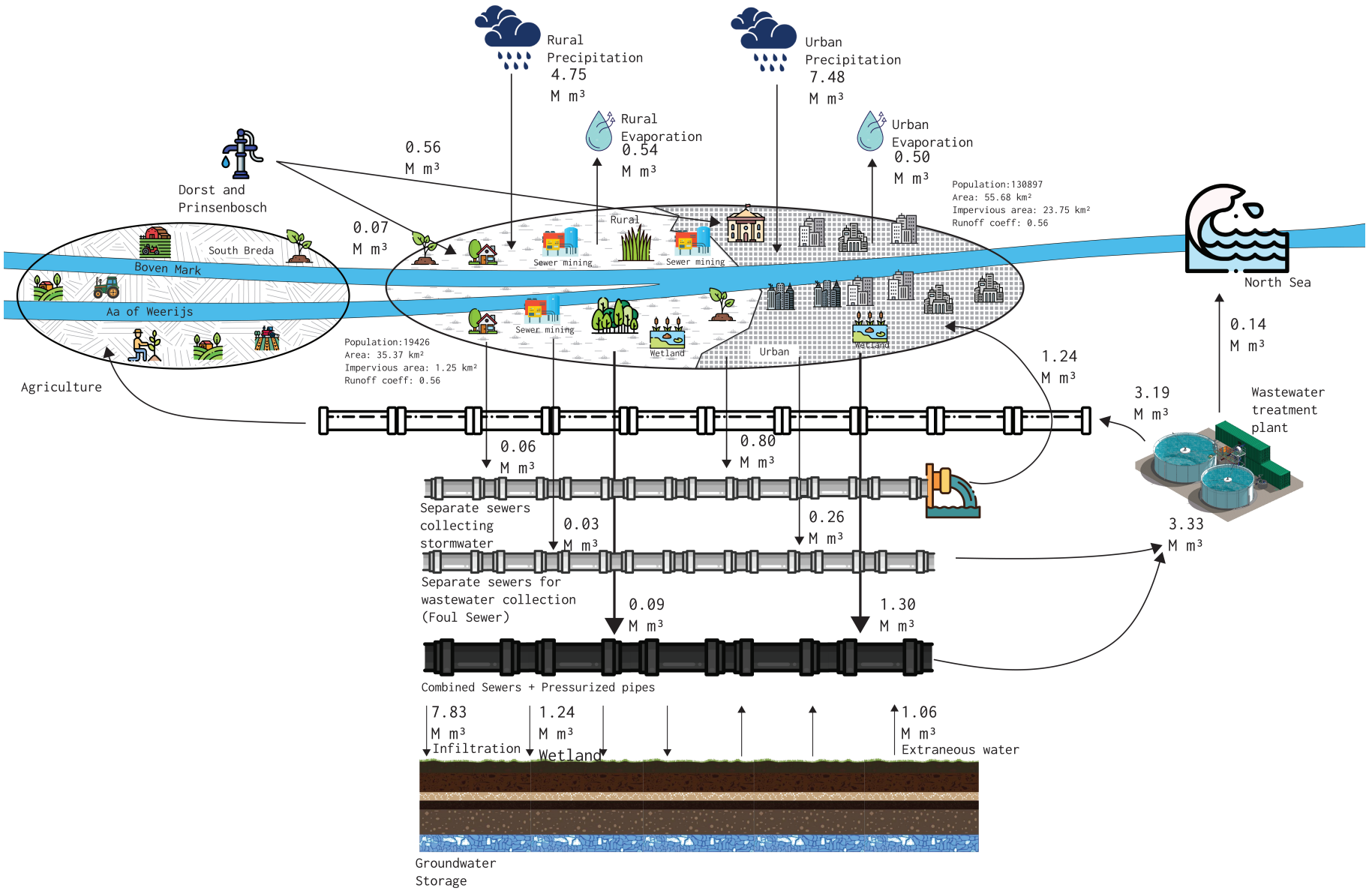


Figure 28: February water balance conceptual after strategy implementation, map for Breda's municipality.

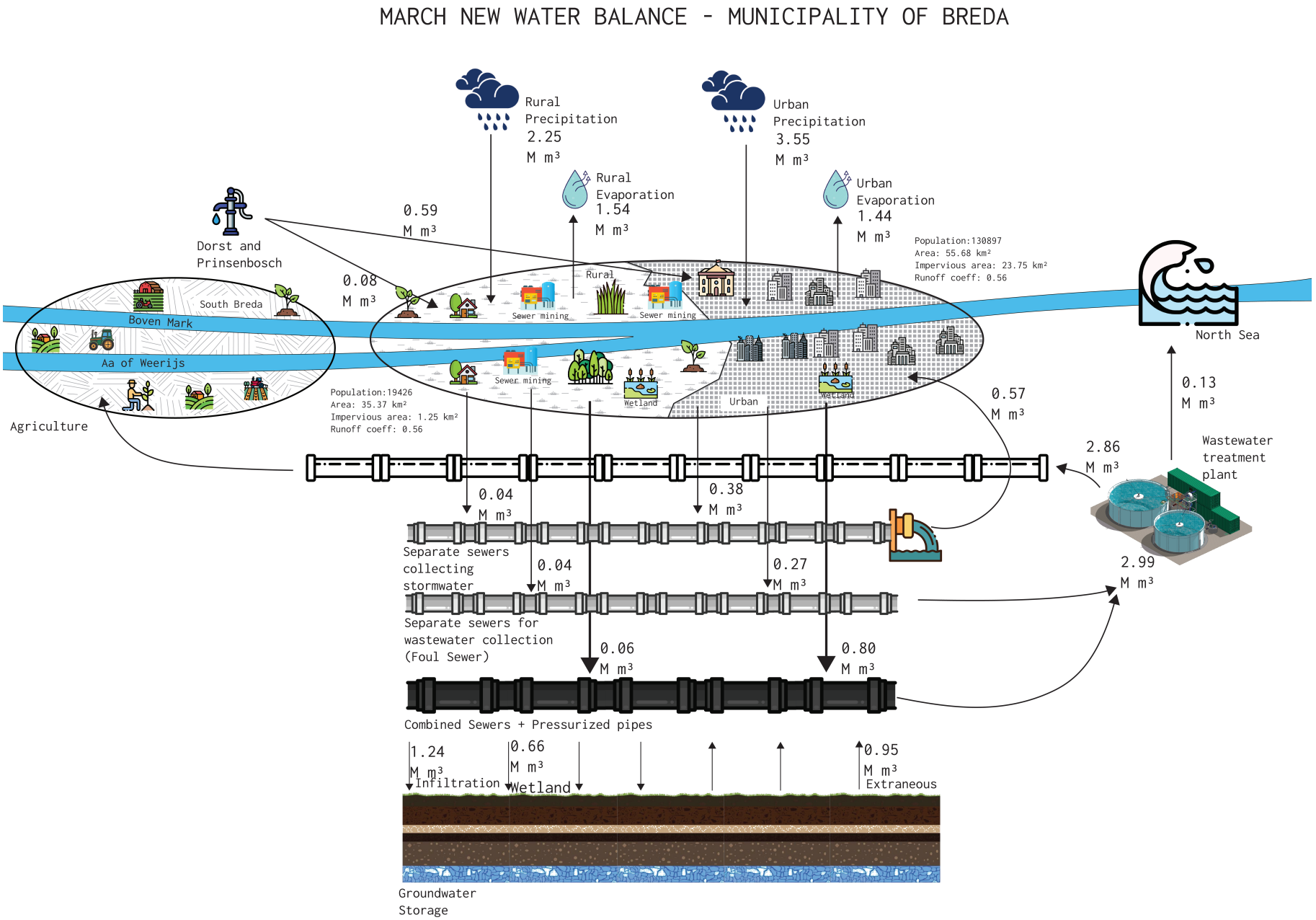


Figure 29: March water balance after strategy implementation, conceptual map for Breda's municipality.

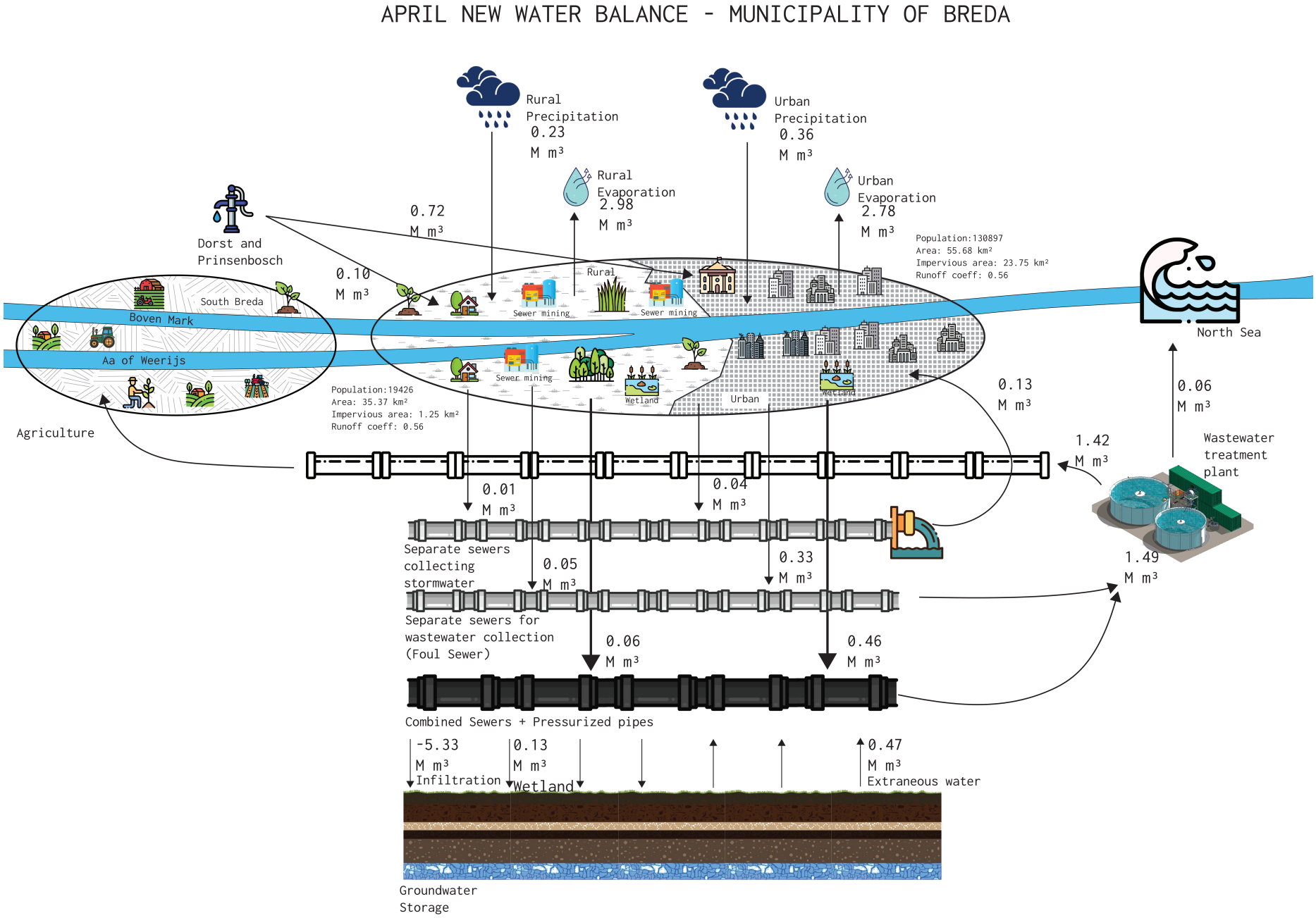


Figure 30: April water balance after strategy implementation, conceptual map for Breda's municipality.

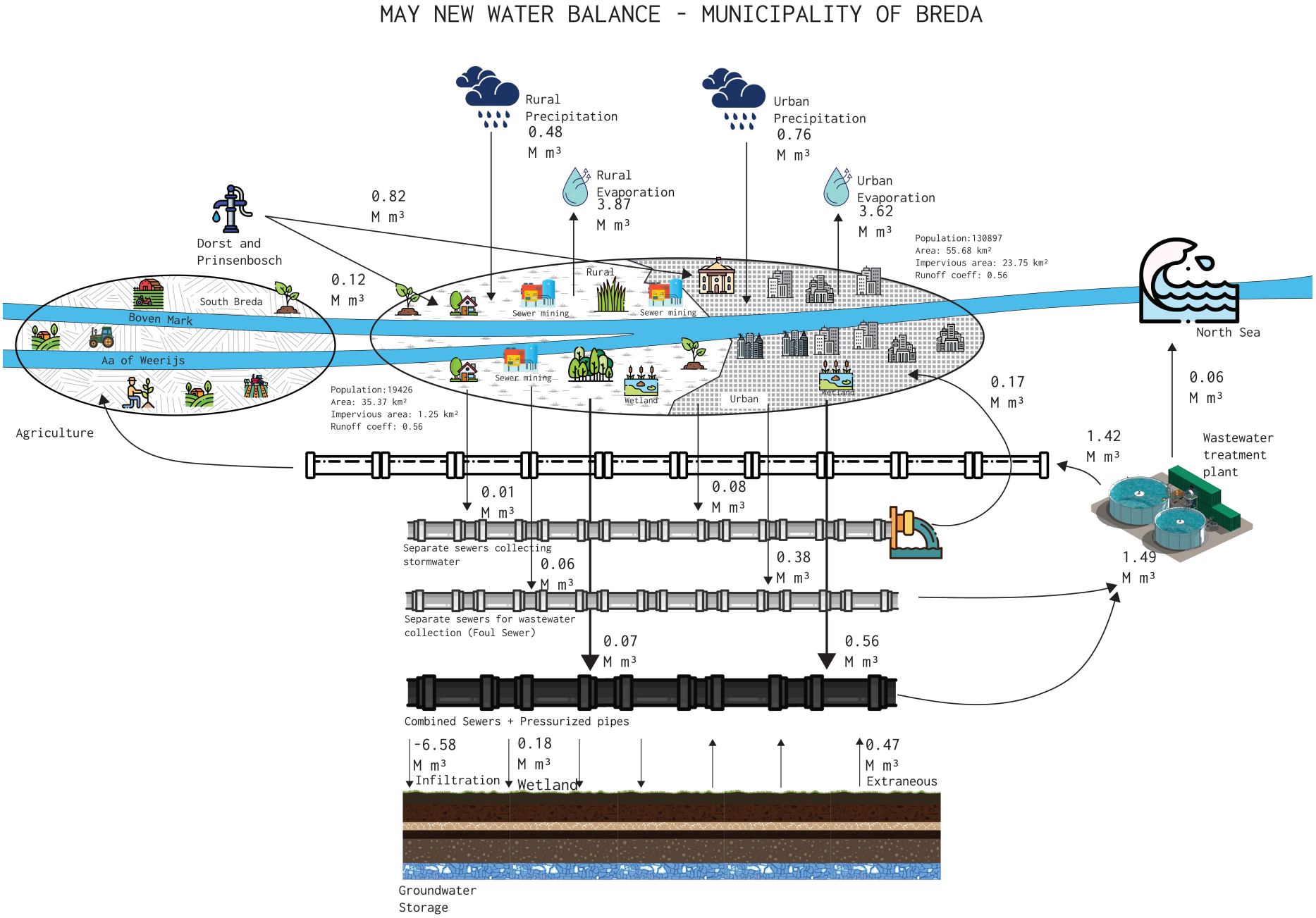


Figure 31: May water balance after strategy implementation, conceptual map for Breda's municipality.

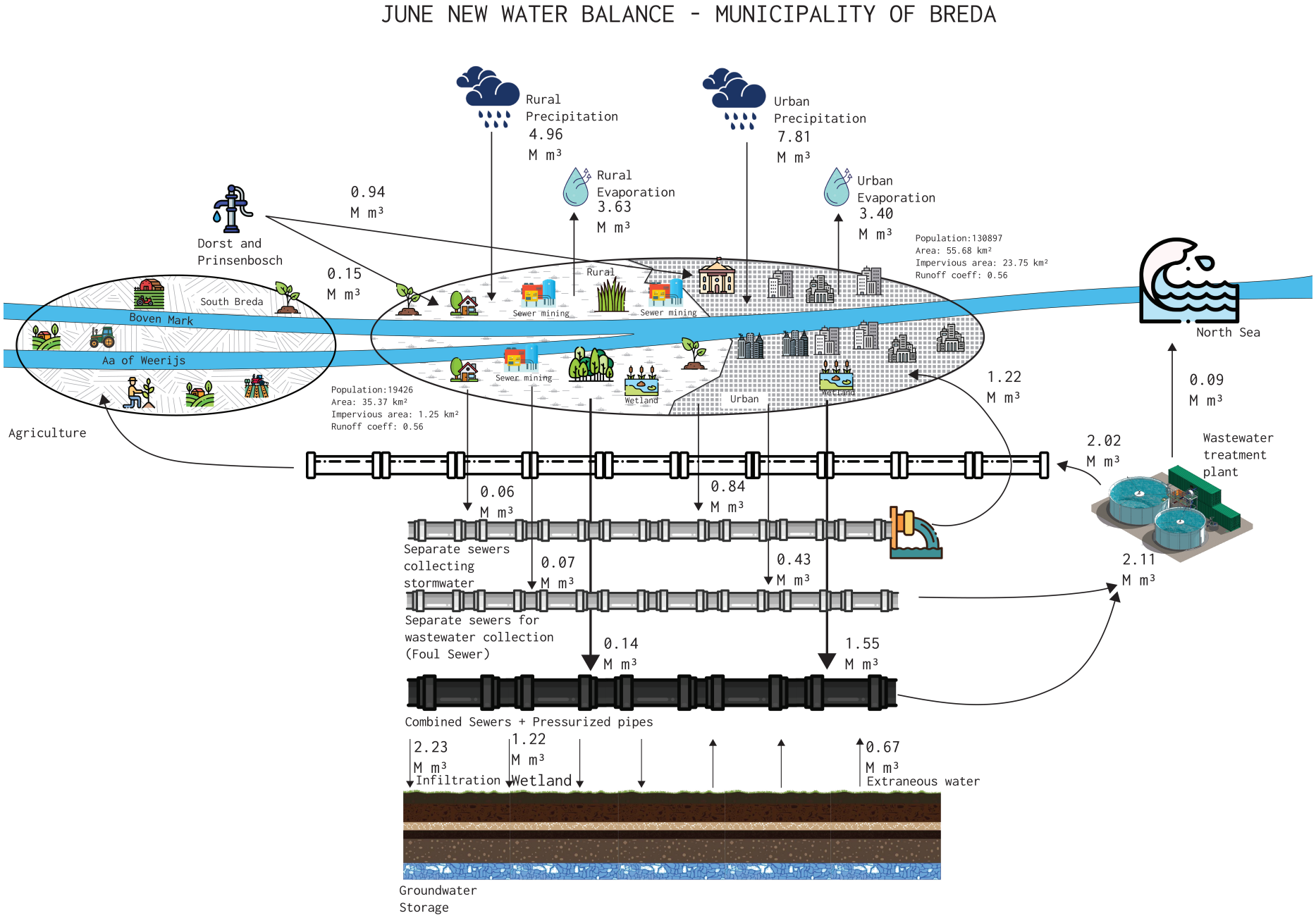


Figure 32: June water balance after strategy implementation, conceptual map for Breda's municipality.

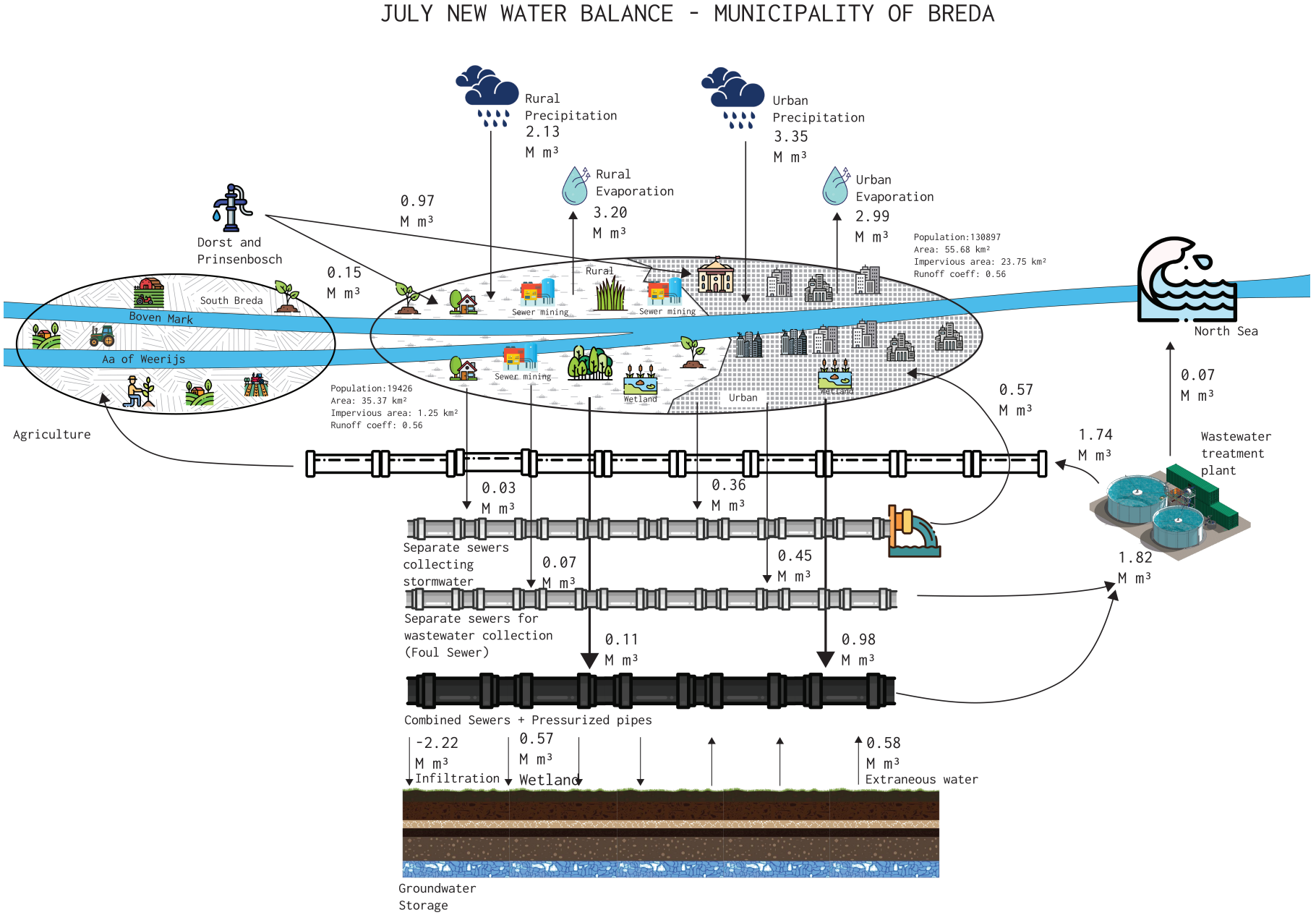


Figure 33: July water balance after strategy implementation, conceptual map for Breda's municipality.

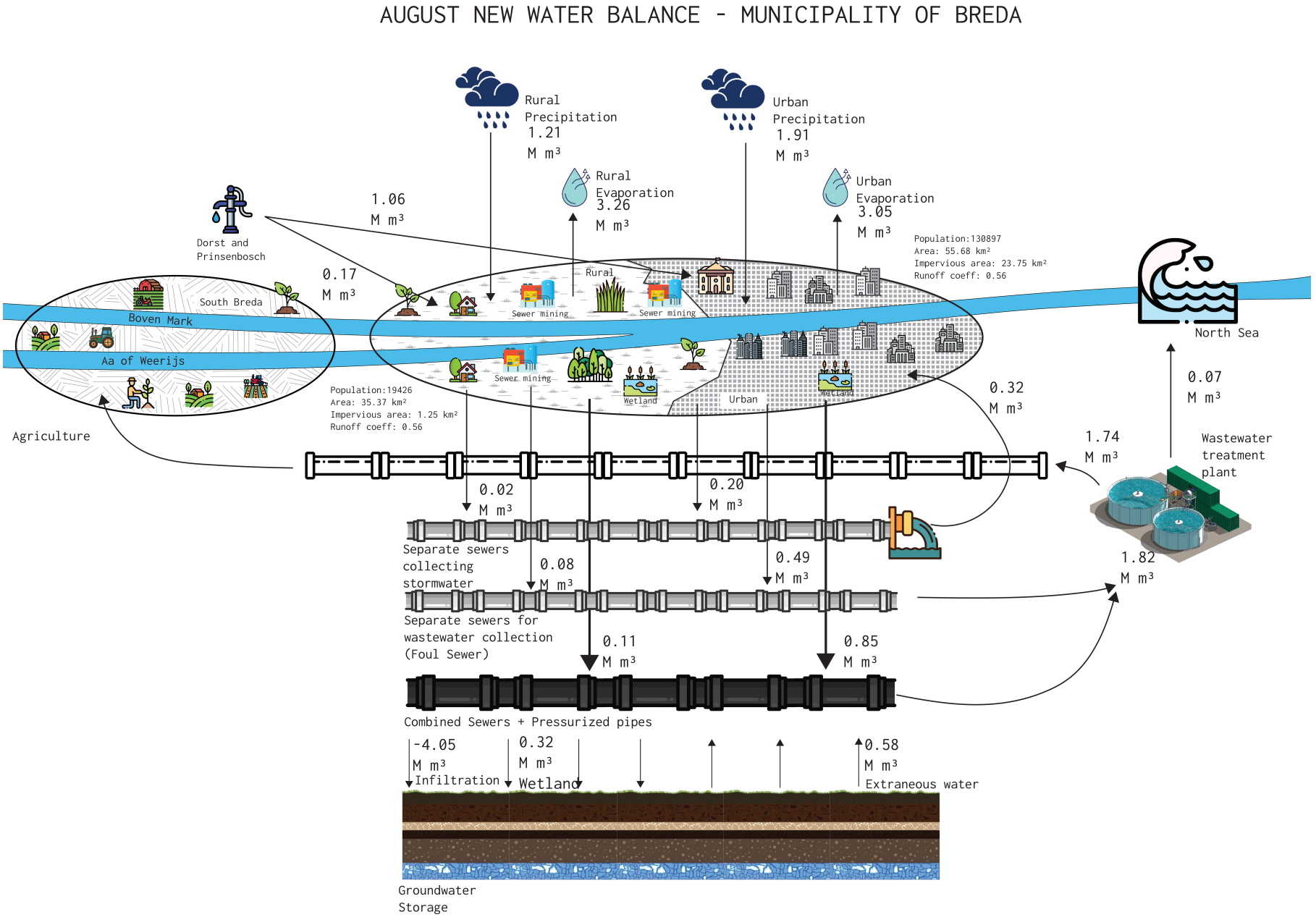


Figure 34: August water balance after strategy implementation, conceptual map for Breda's municipality.

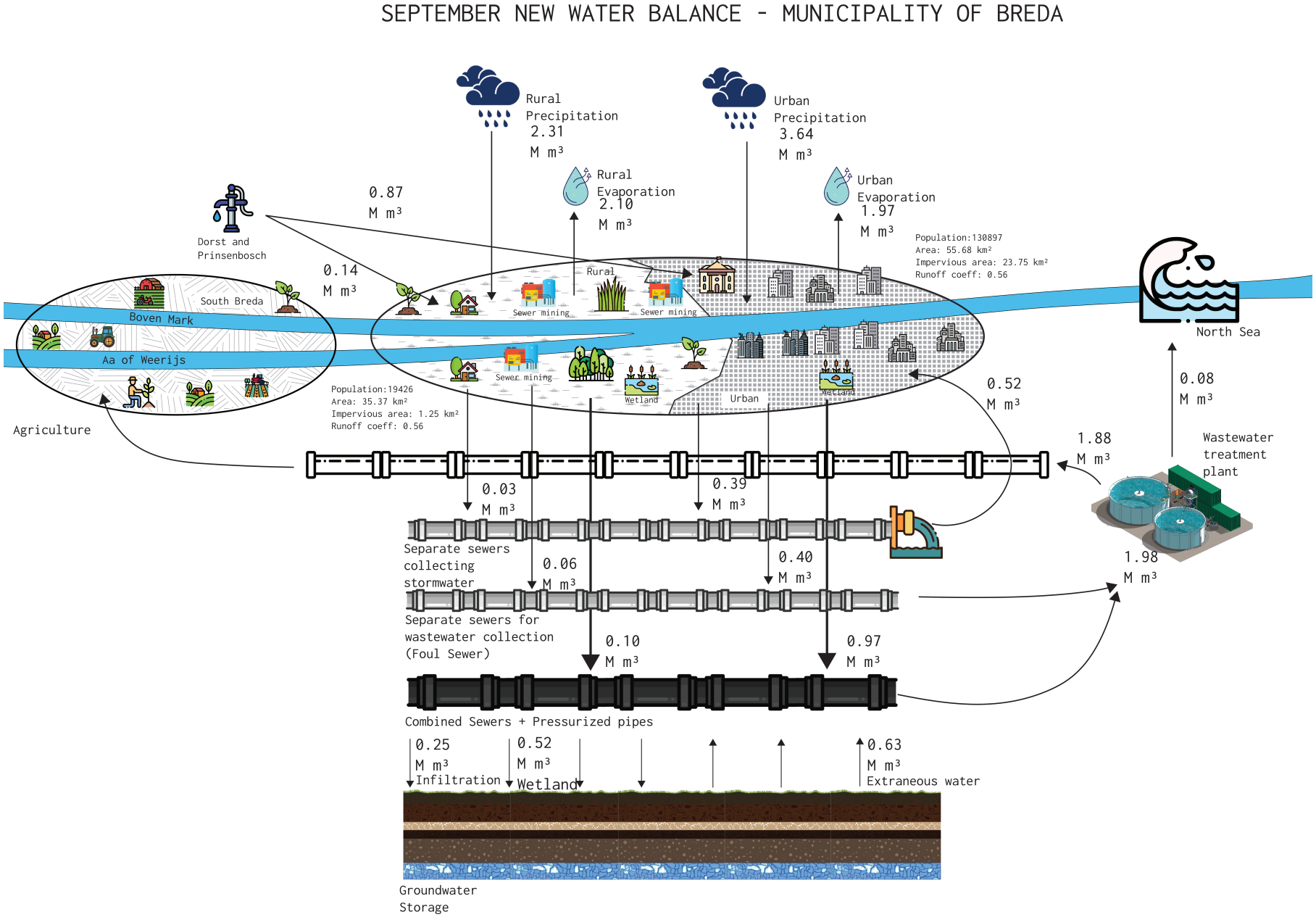


Figure 35: September water balance after strategy implementation, conceptual map for Breda's municipality.

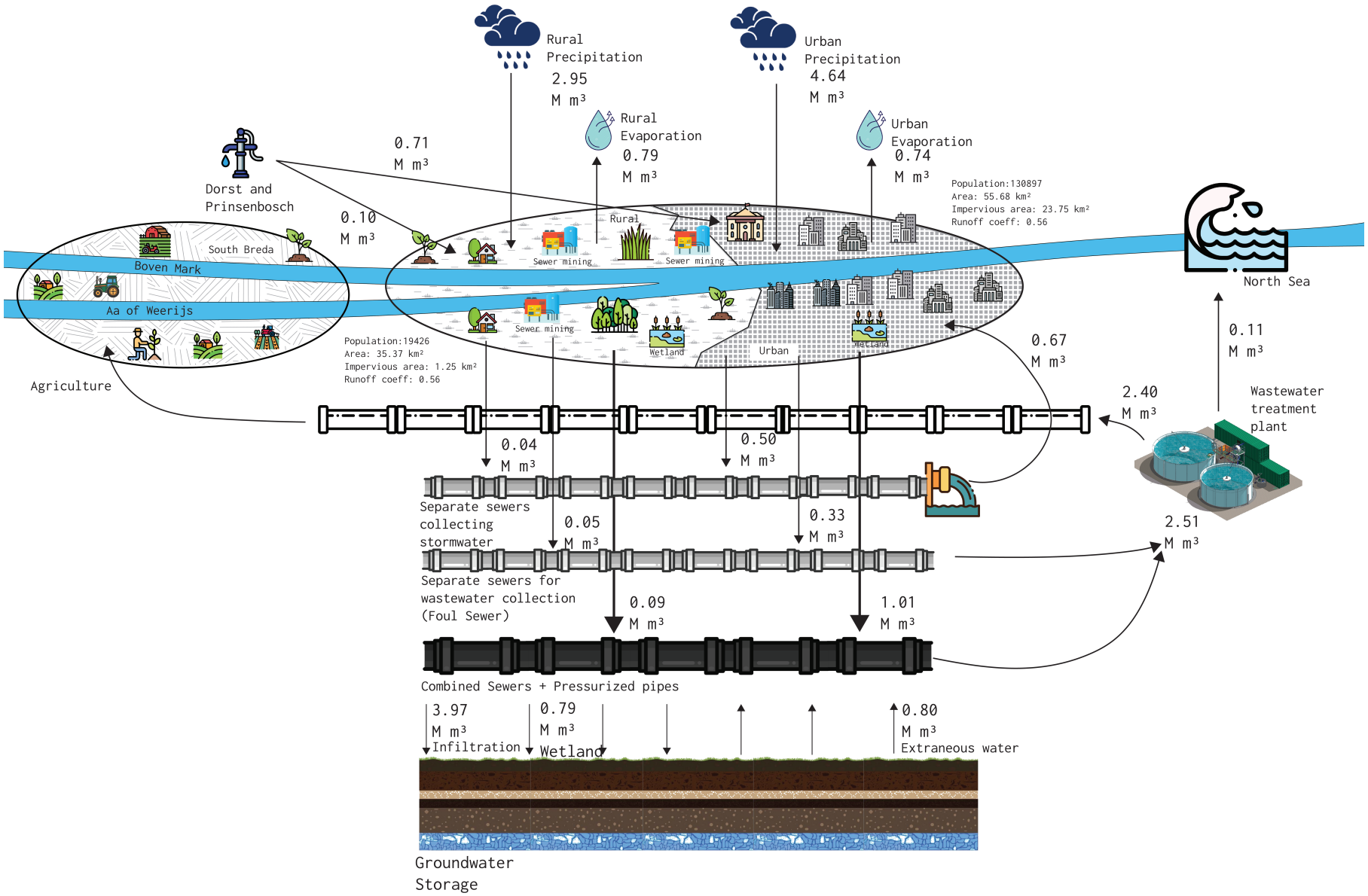


Figure 36: October water balance after strategy implementation, conceptual map for Breda's municipality.

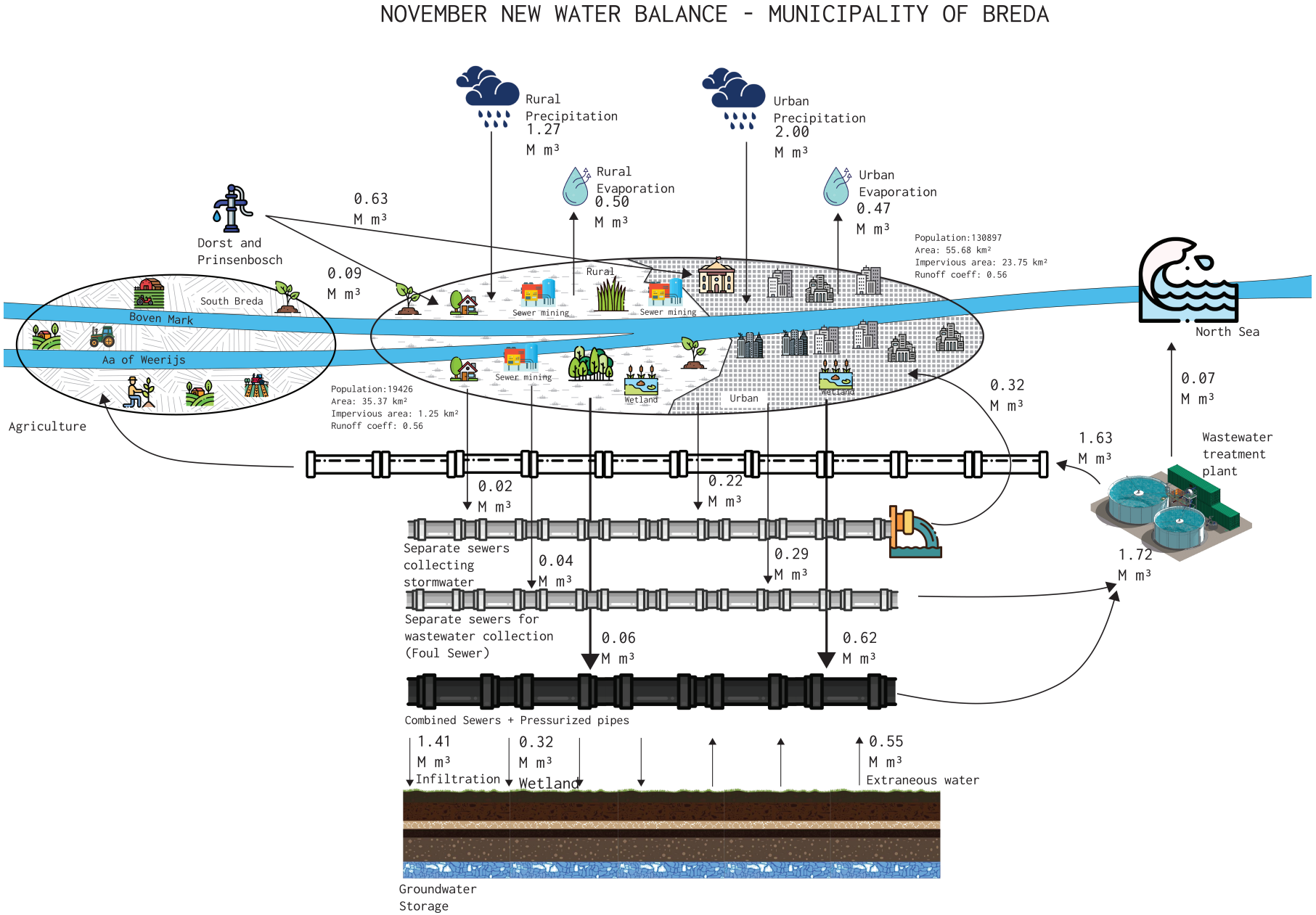


Figure 37: Novemebr water balance after strategy implementation, conceptual map for Breda's municipality.

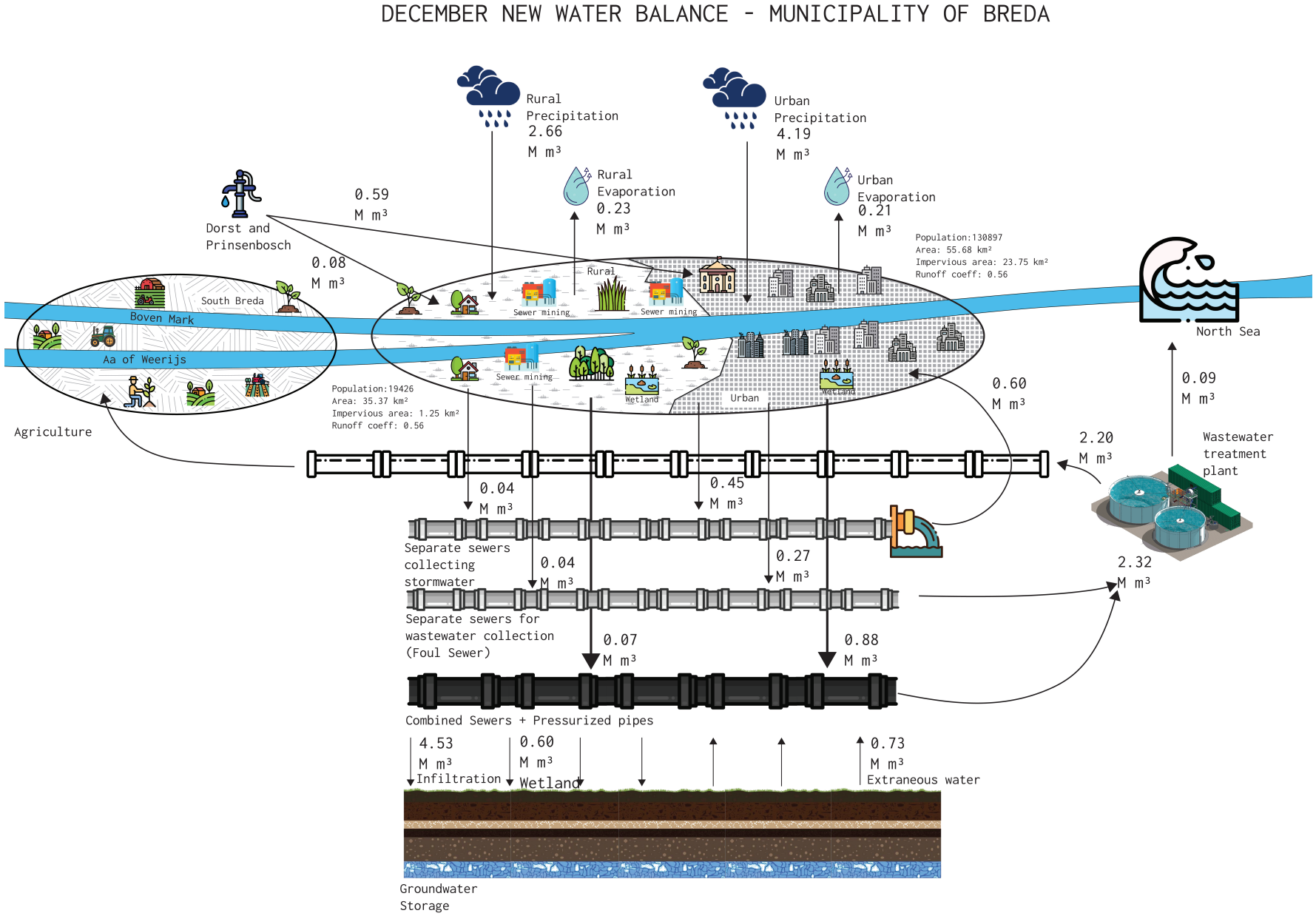


Figure 38: December water balance after strategy implementation, conceptual map for Breda's municipality.

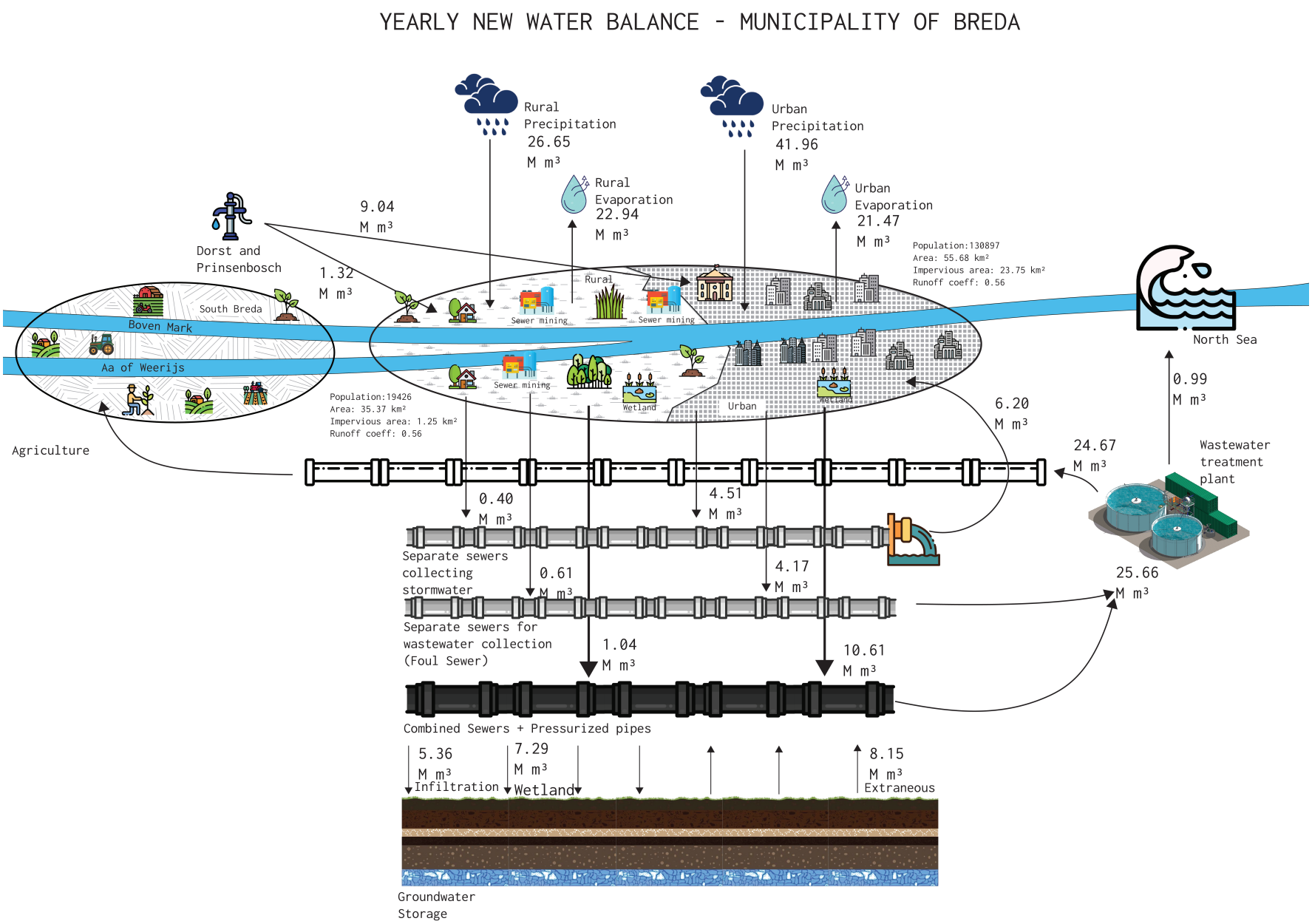


Figure 39: Yearly water balance after strategy implementation, conceptual map for Breda's municipality.

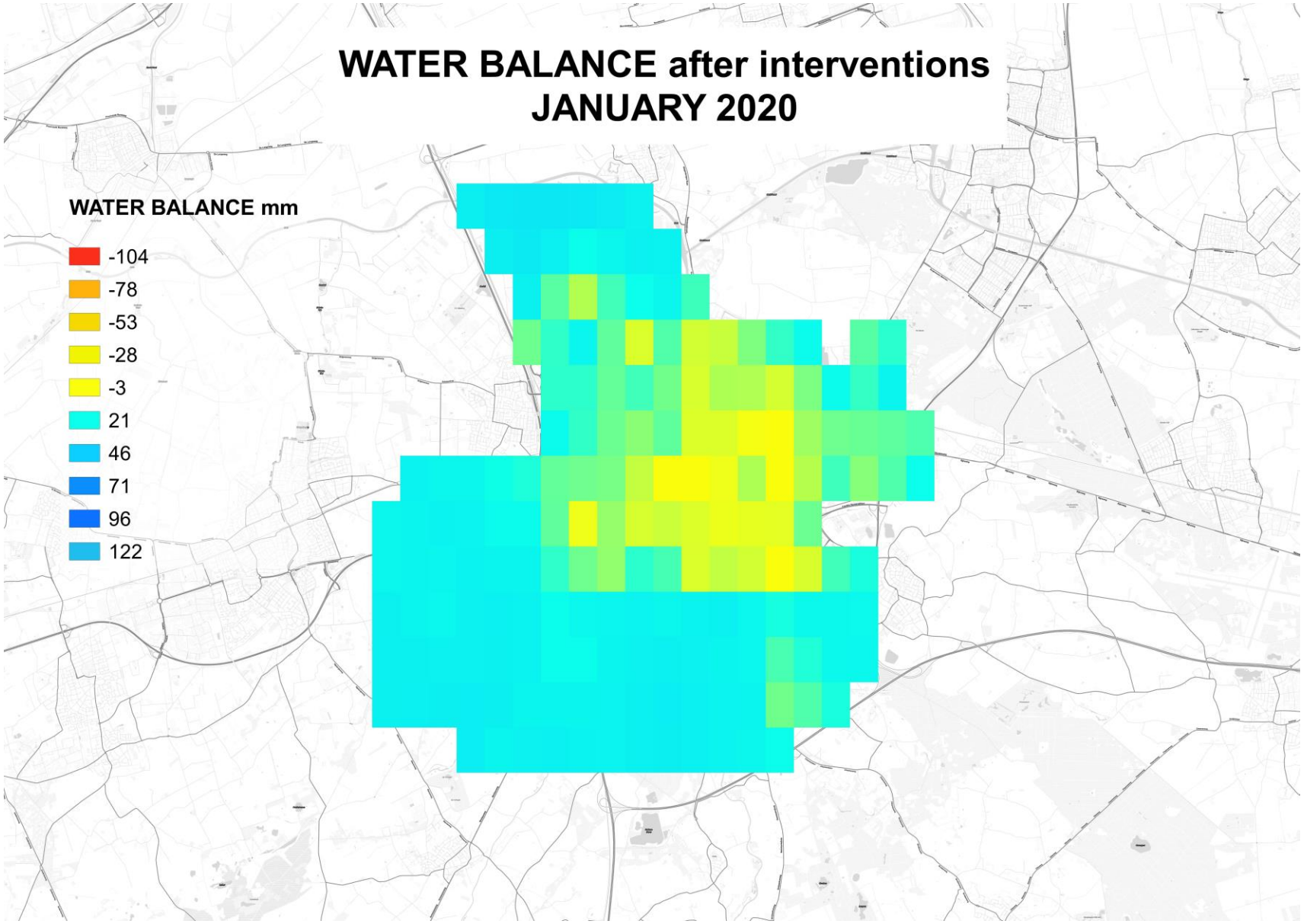


Figure 40: January water balance for Breda's municipality after strategy implementation, produced by QGIS 3.10 software.

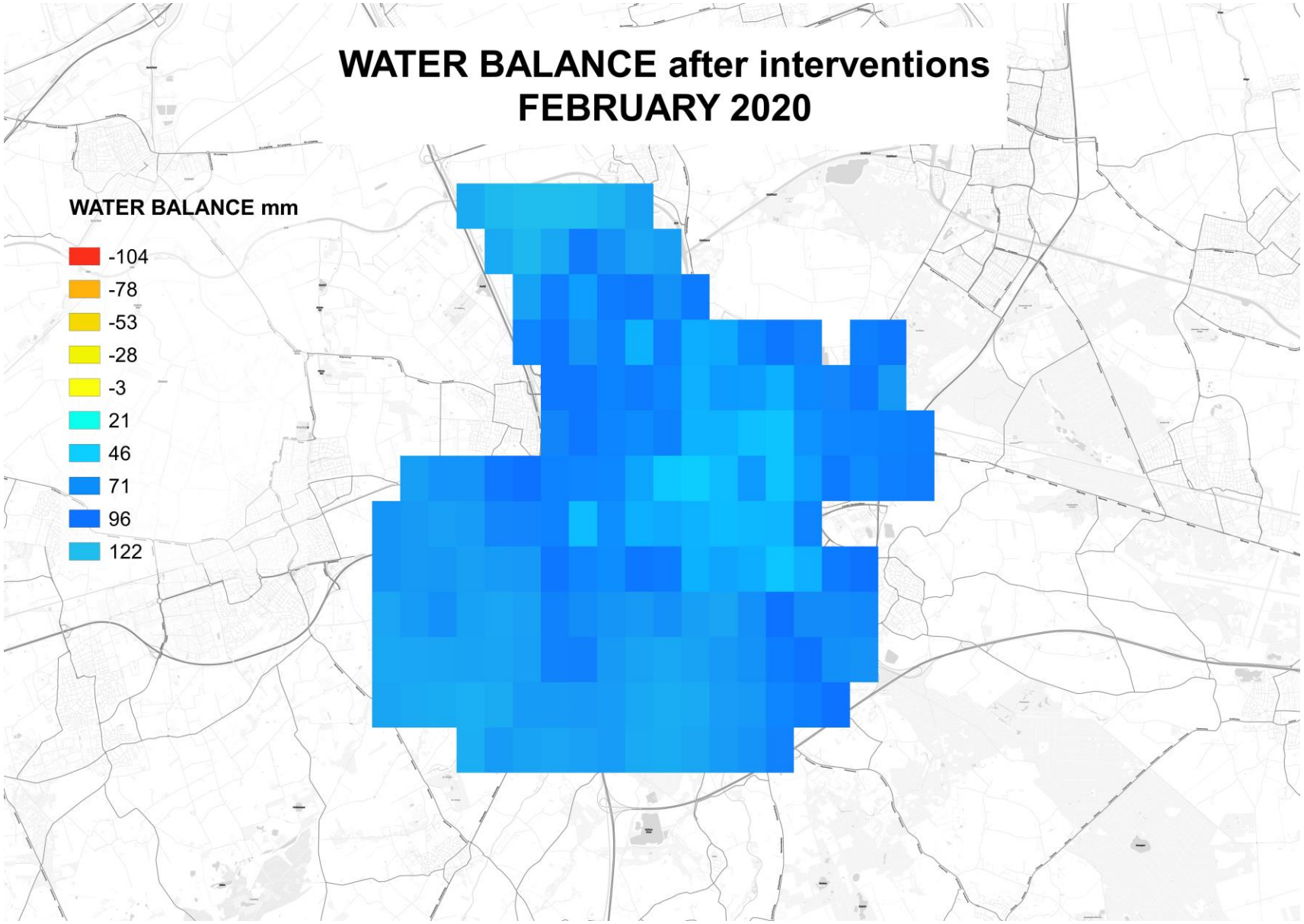


Figure 41: February water balance for Breda's municipality after strategy implementation, produced by QGIS 3.10 software.

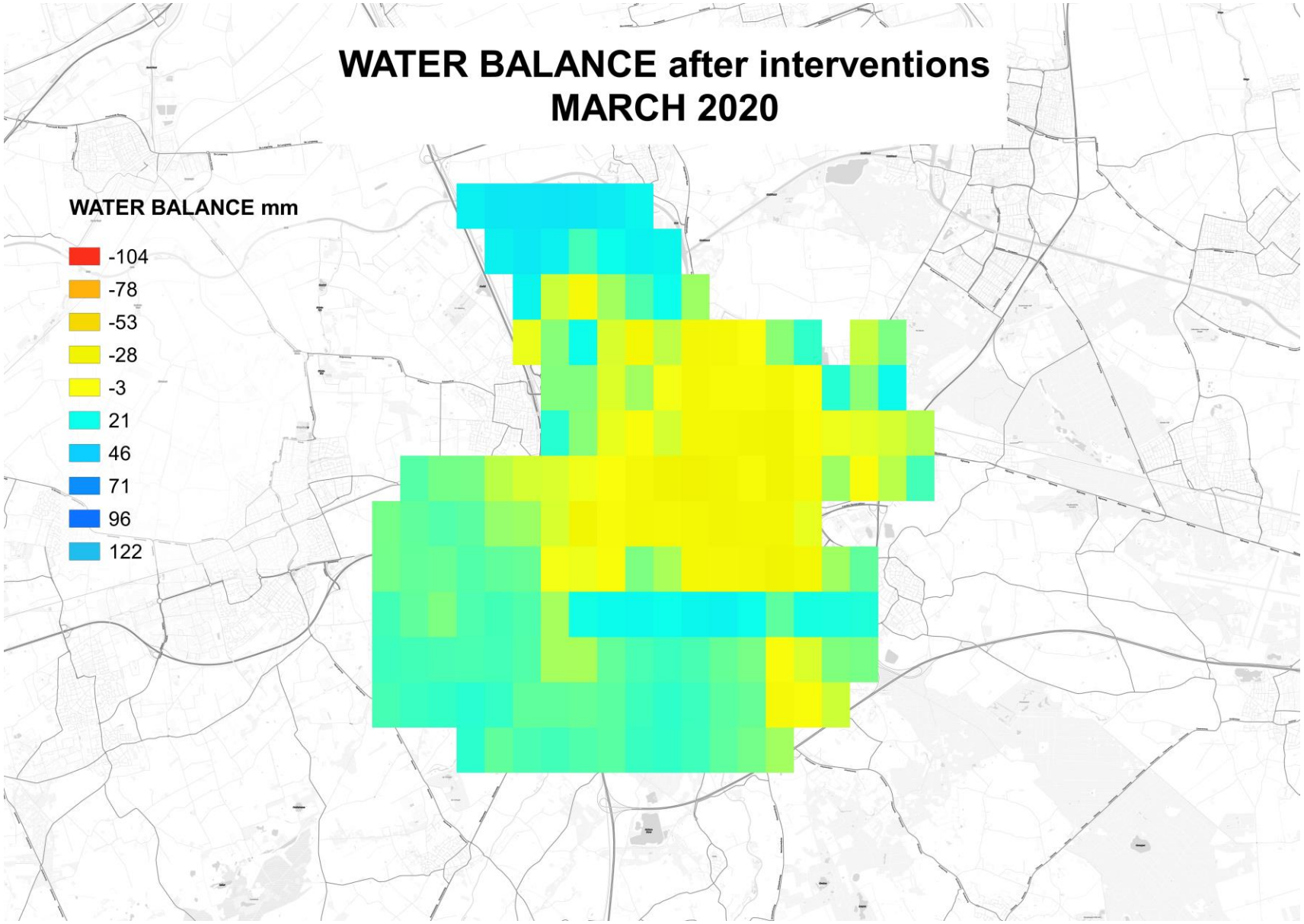


Figure 42: March water balance for Breda's municipality after strategy implementation, produced by QGIS 3.10 software.

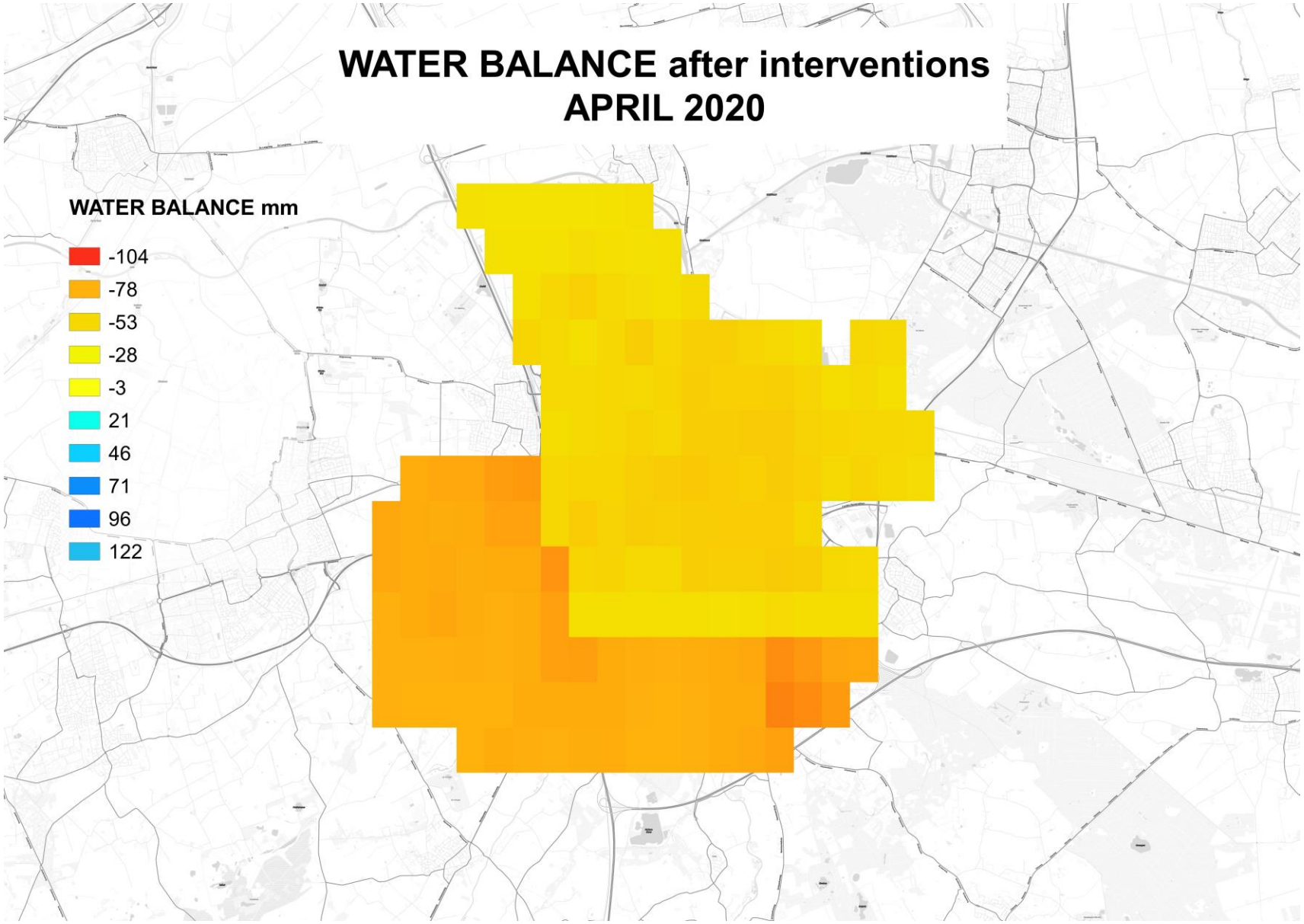


Figure 43: April water balance for Breda's municipality after strategy implementation, produced by QGIS 3.10 software.

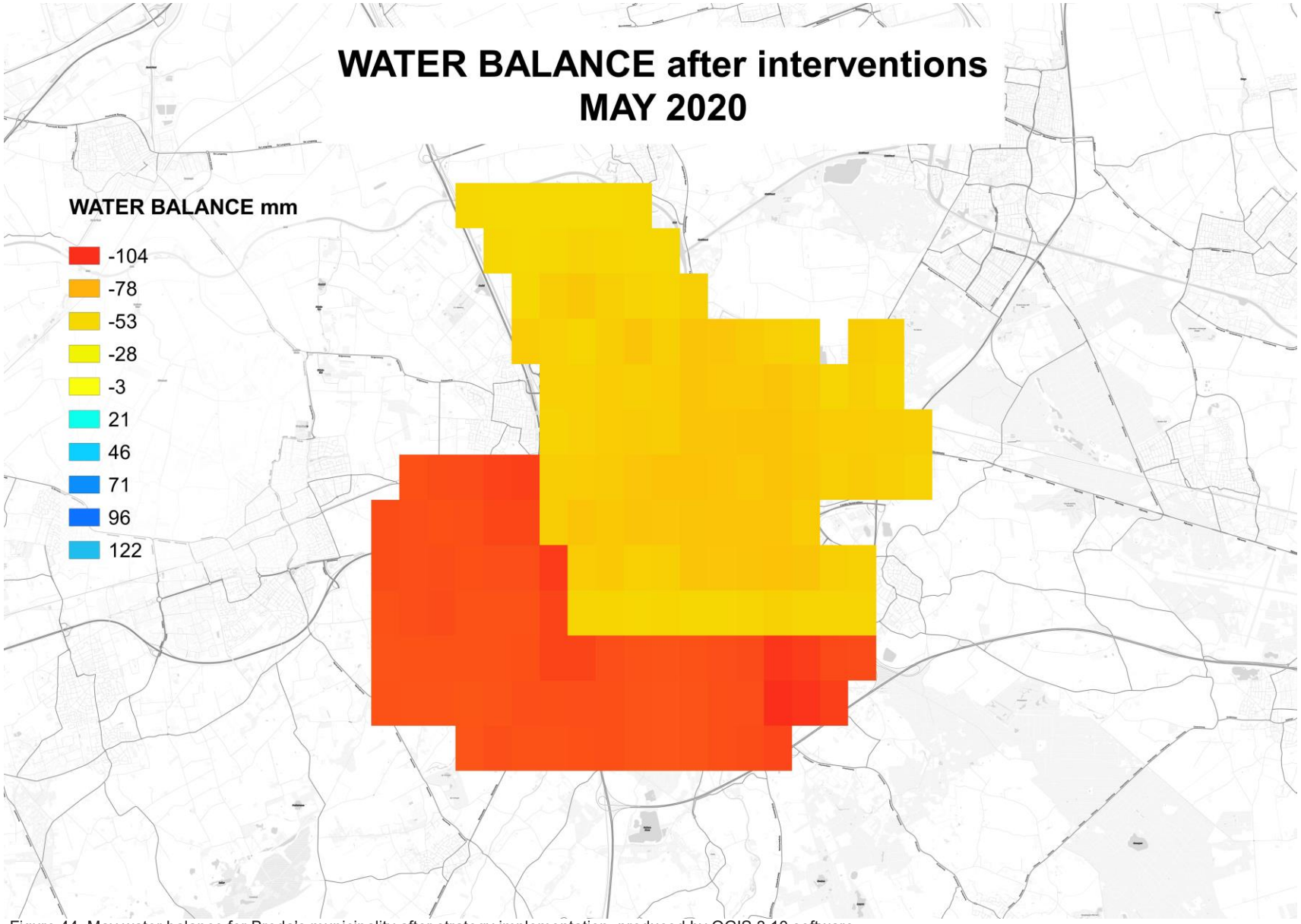


Figure 44: May water balance for Breda's municipality after strategy implementation, produced by QGIS 3.10 software.

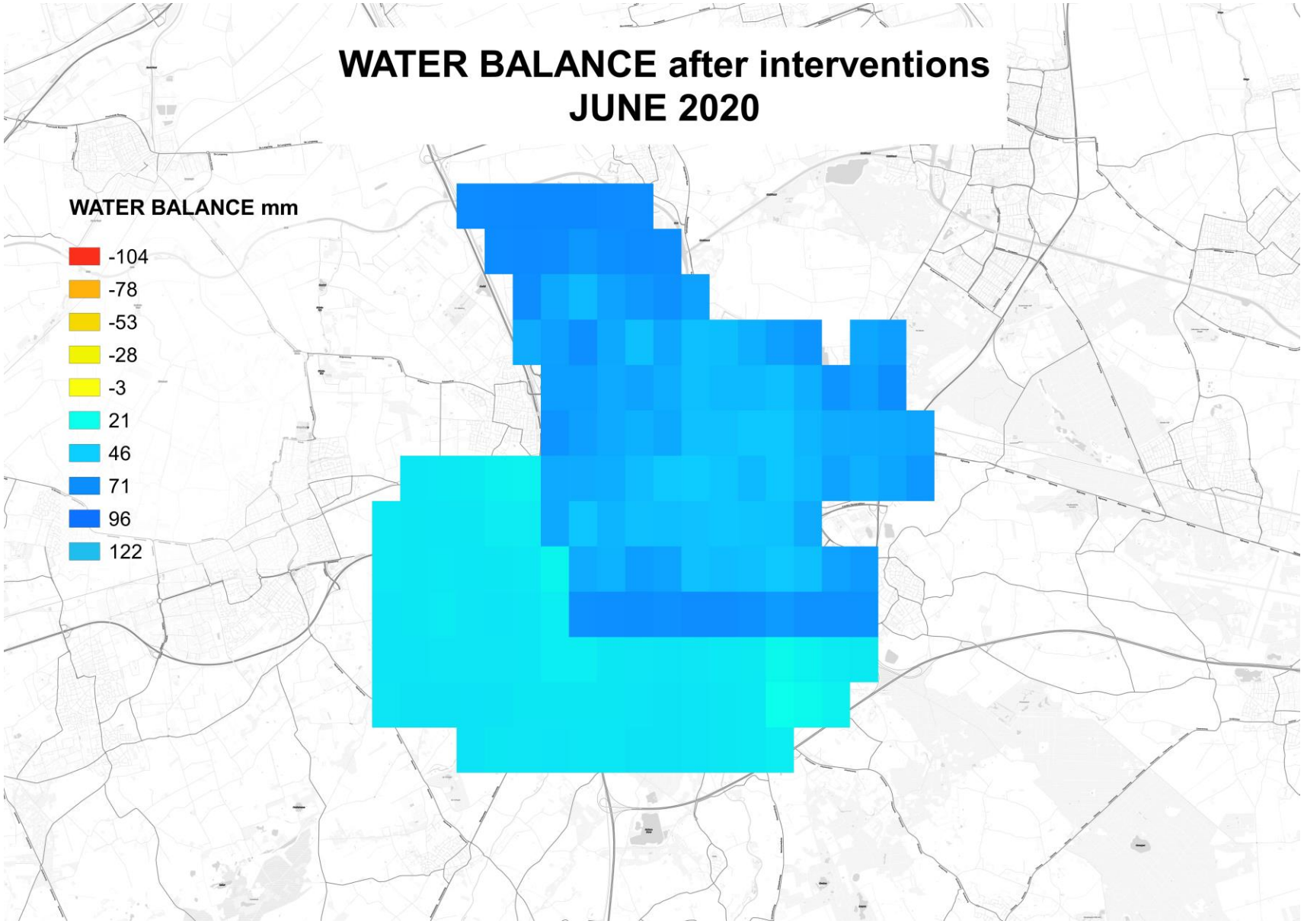


Figure 45: June water balance for Breda's municipality after strategy implementation, produced by QGIS 3.10 software.

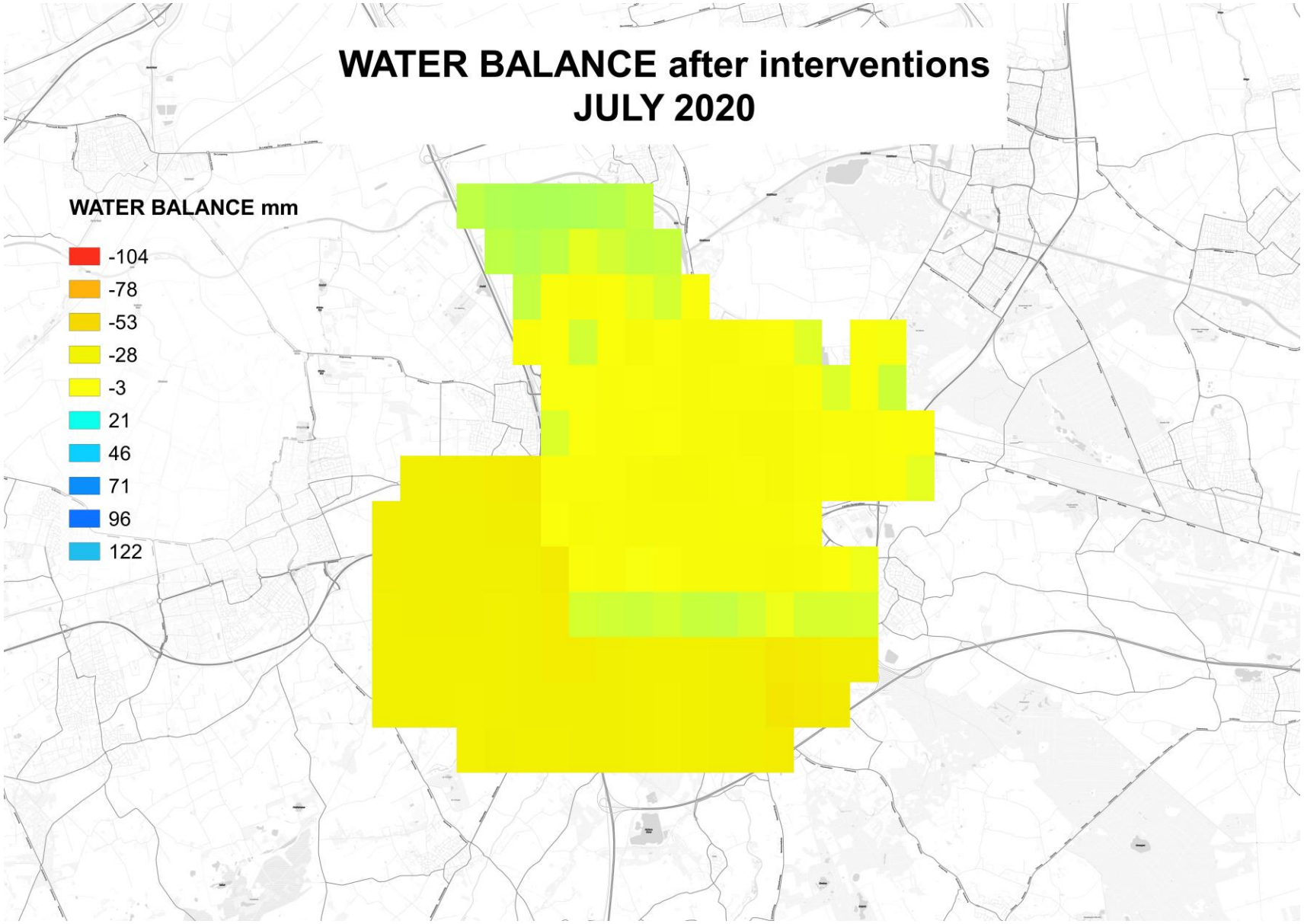


Figure 46: July water balance for Breda's municipality after strategy implementation, produced by QGIS 3.10 software.

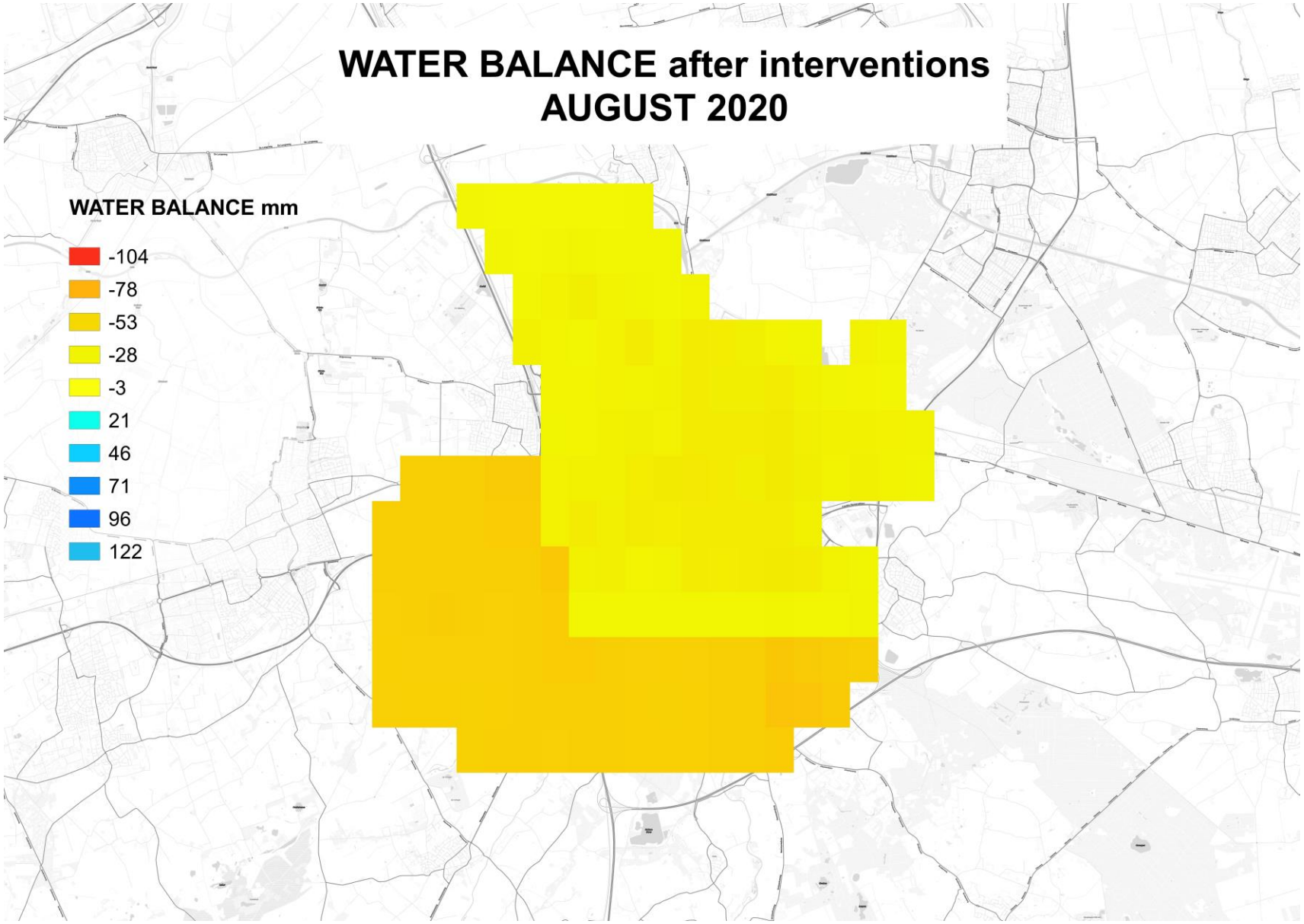


Figure 47: August water balance for Breda's municipality after strategy implementation, produced by QGIS 3.10 software.

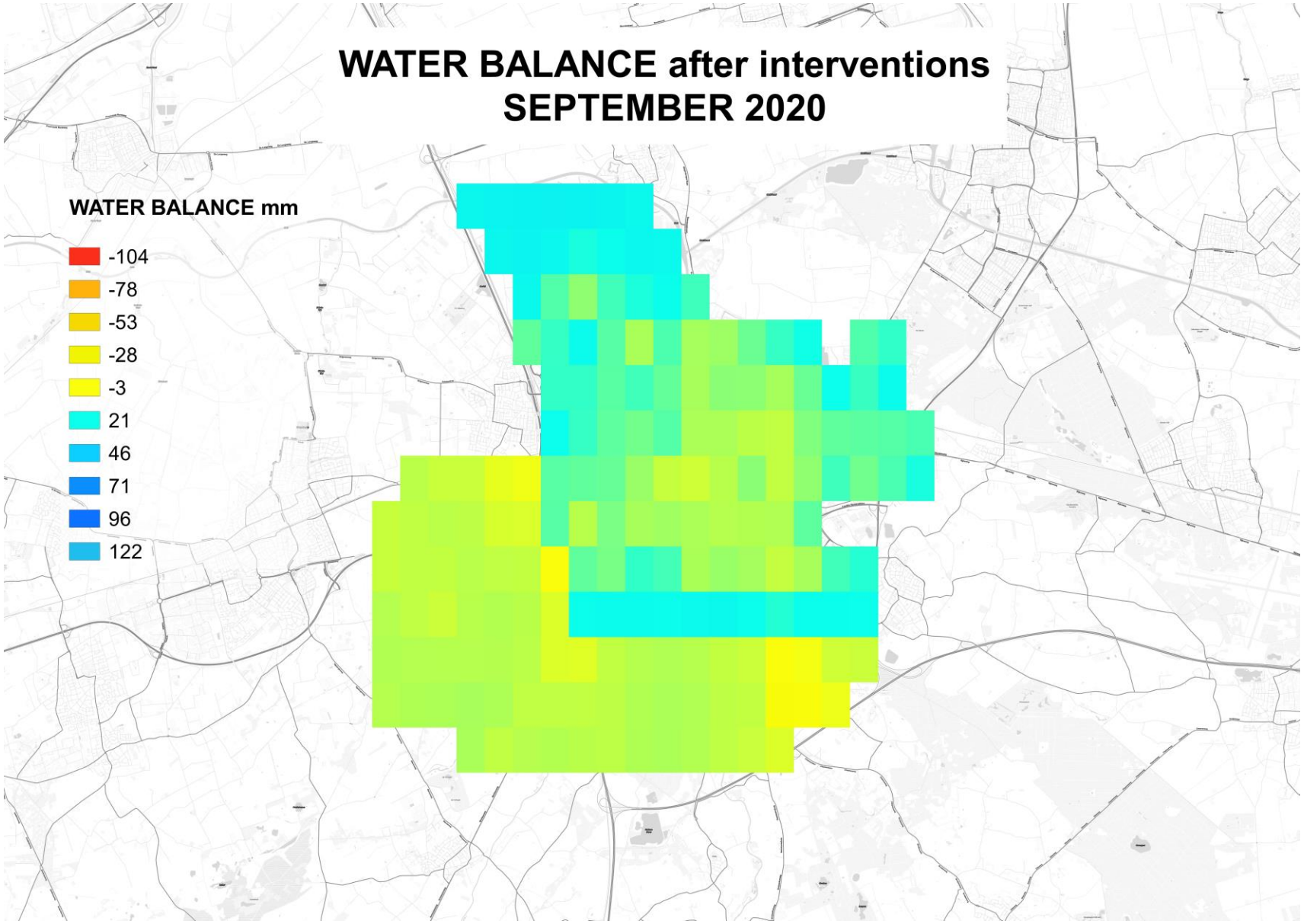


Figure 48 September water balance for Breda's municipality after strategy implementation, produced by QGIS 3.10 software.

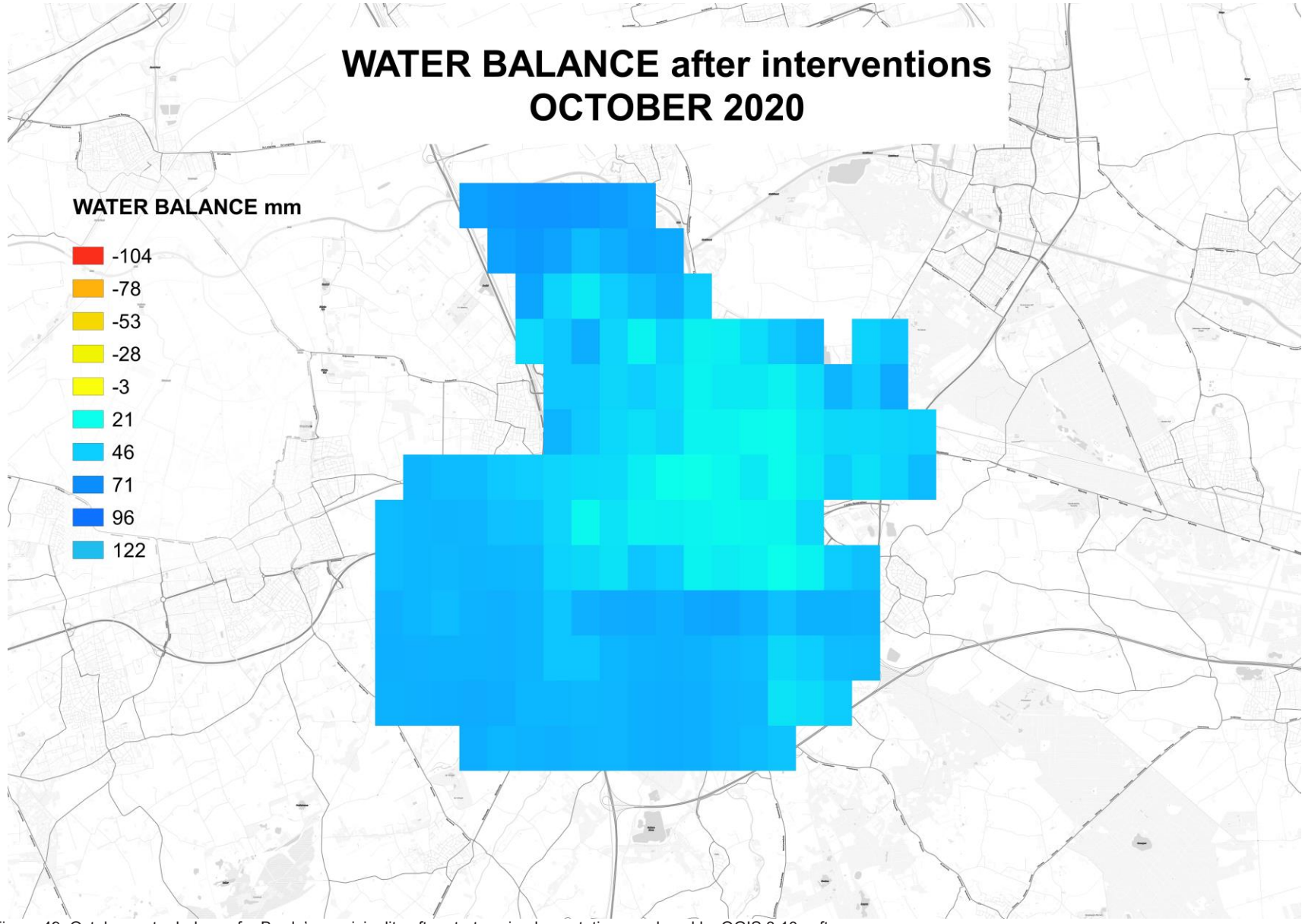


Figure 49: October water balance for Breda's municipality after strategy implementation, produced by QGIS 3.10 software.

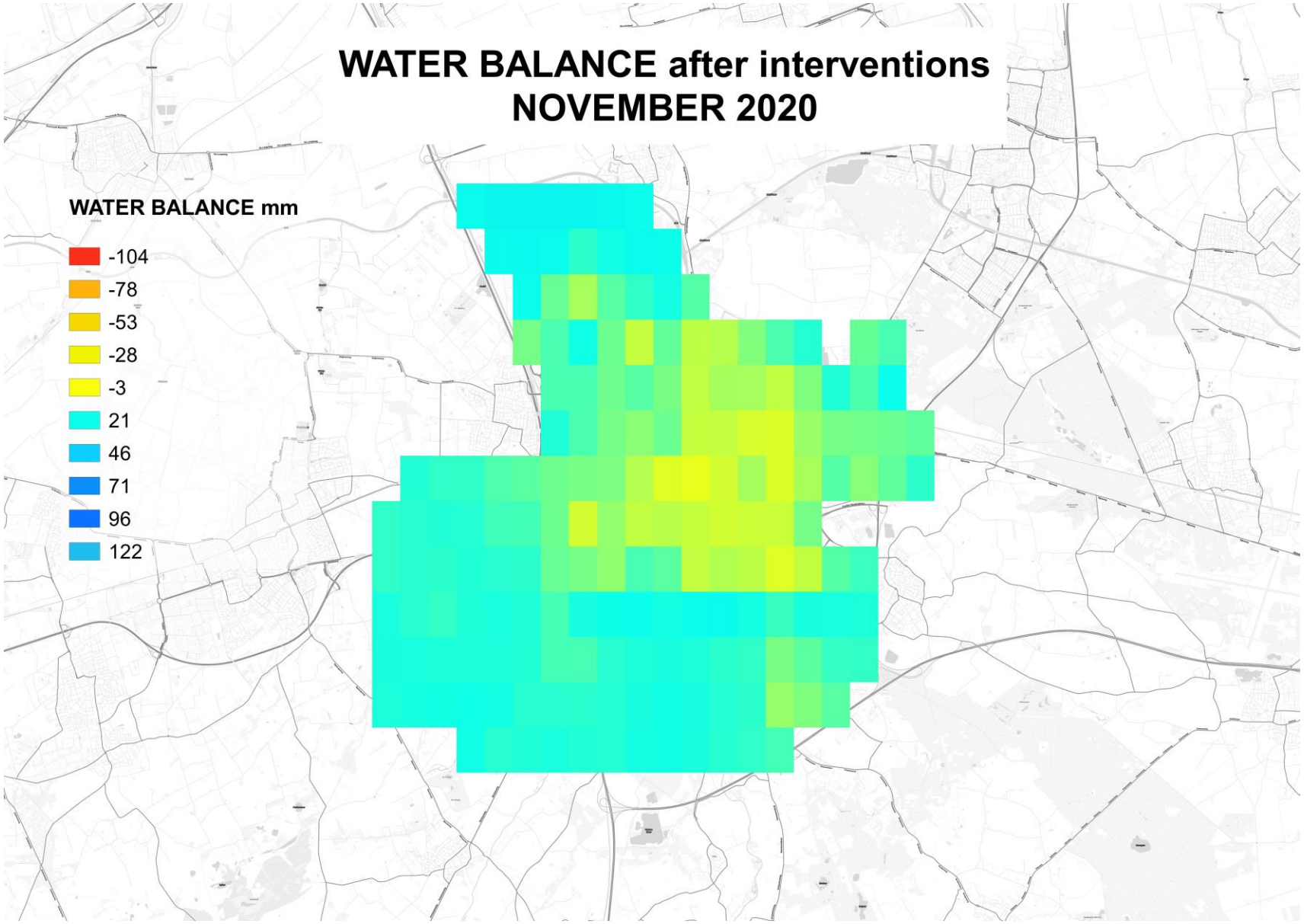


Figure 50: November water balance for Breda's municipality after strategy implementation, produced by QGIS 3.10 software.

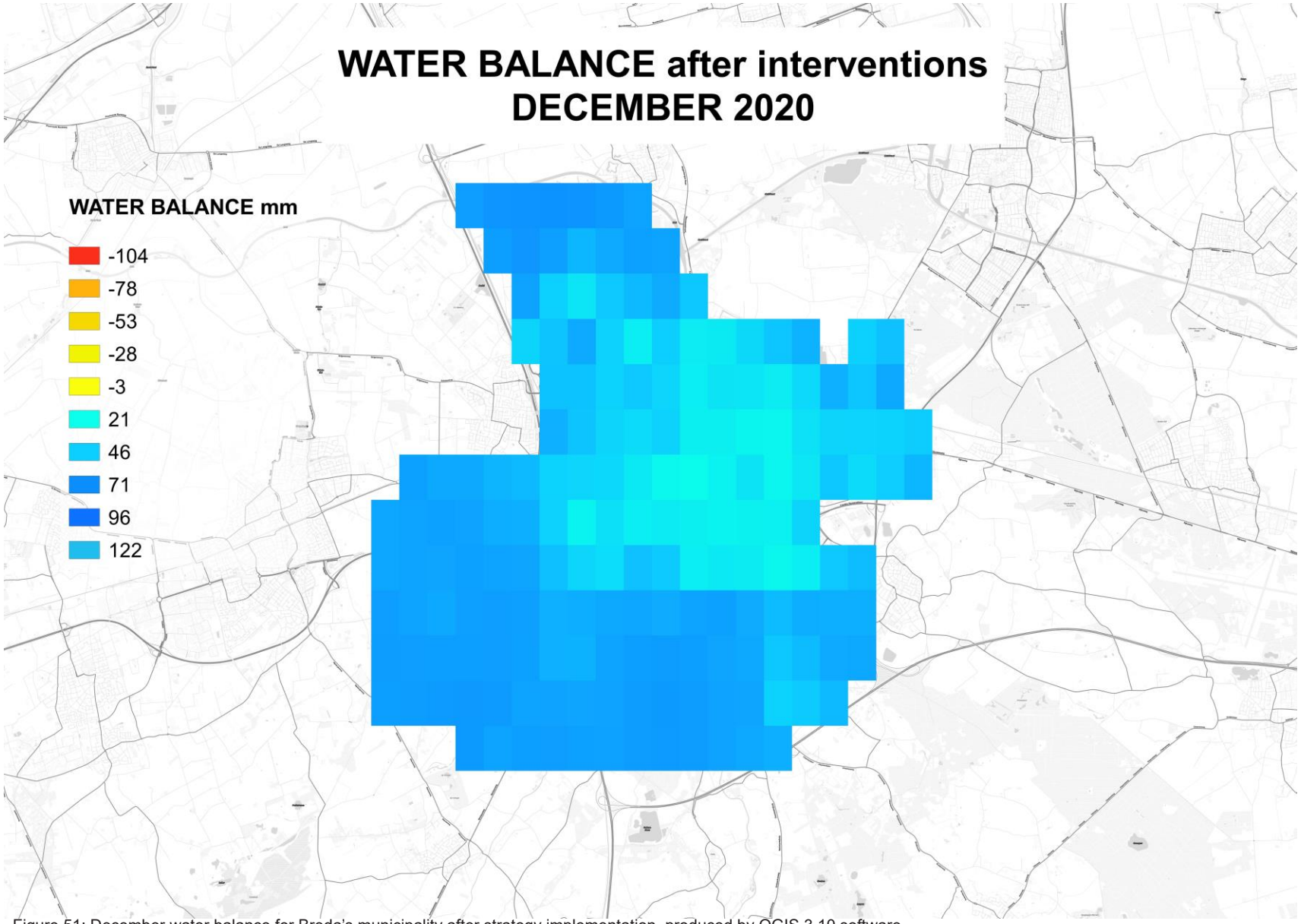


Figure 51: December water balance for Breda's municipality after strategy implementation, produced by QGIS 3.10 software.

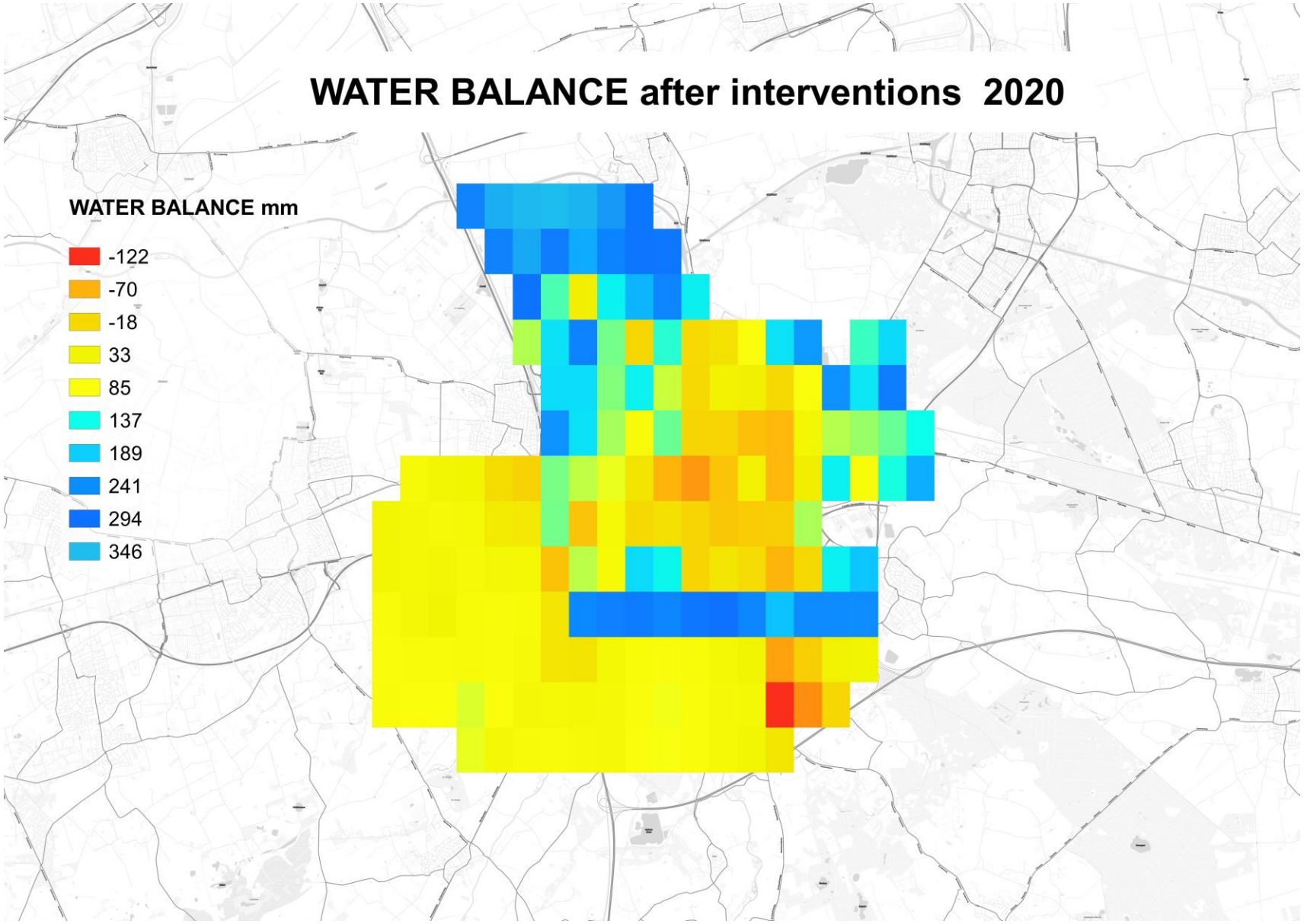


Figure 52: Yearly water balance for Breda's municipality after strategy implementation, produced by QGIS 3.10 software.

APPENDIX-C

Workshop and interview transcript

For confidentiality and privacy reasons, people who attended both the workshop and the interview will be referred to by the letters of the alphabet. Person A works at the drinking water distribution company for the Brabant region (Brabant Water Nv) as a senior advisor. Person B is senior consultant in hydrology and water management at Waterschap Brabantse Delta (water board of Brabant). Person C is a full professor of Geo-Environmental Engineering at the TU Delft.

1. TRANSCRIPT OF THE WORKSHOP ON 16/12/21

1.1 BEFORE THE PRESENTATION OF THE STRATEGIES

Daniele: Acknowledge the drought problem in the Netherlands, especially in the south of the city of Breda, where agriculture is the main activity, how the water system should change to face this new challenge?

A: I think the water balance of Brabant, there is enough water coming in, in respect to water coming out or water we use, but, well, we don't keep the water enough in the system. Do you understand? So, I think the flux inwards in big enough, but the flux out is also too big. We need to get a new balance in that system.

Daniele: How do you think you can get this new balance into the system? Which kind of approach, technology or management or policy makers?

A: All stakeholders need to do something. As drinking water company, we should look for solutions to reduce the water use. Water boards should look to keep the water inwards… to hold the water. Municipality should look options to not just drain the water out of your city. Farmers should look for solutions to, well, for irrigation, like. Because I think if you drive around Brabant in this dry period, the amount of big water can on the field, I think it's increasing rapidly in the last couples of years. I think municipality is doing something, water company is doing something, but in the end all of this should add up. Doesn't make sense if we trying to reduce water use, to have a lower impact in our groundwater system and at the same time we are drilling wells to irrigate our land. Like, is the same groundwater system, so… (laugh). I think you should look at the complete solution, all stakeholders should interact and work together in this, to have a common goal. I doubt that the case right now.

Daniele: Do you feel there is no interaction? The drinkable water company and the water board for example?

A: There is communication, interaction between water boards and the drinking water company. We also participate in projects together with the water board to create more nature. Also, as drinkable water company we are one of the greatest landowners in all the province. We own quite a lot of ground, and we have a lot of projects to, well, to increase biodiversity, hold water, etc… also in co-operation with the water board. But I do think, overall, there could be more between province, municipality, drinkable water company and water board. We all have challenges, we need to make drinking water, that's our challenge, a water board needs to clean water and that there is enough water during summertime, province has the political choice sometimes to give permits. But in the end, we should work less against each other and more together.

B: There is a lot to do about drought and how to cope with drought. Several measures you can take. The first reaction of the water board is to react when the drought occurs… by lifting the wheels and supply water from canals and rivers. Another approach is to adapt the water system… we have a very intense drainage system in our country, we have a lot of ditches that drain the area, and because of that water leaves the area very quicky, within about a day or few days. New strategies would be to make less discharge, to reduce drainage from the area and… that would be rather a big transformation of the system.

Daniele: Global warming is a recognise problem for the future. How does the water management practice should change to tackle the uncertainties coming from climate change?

A: For a drinking water company, having global warming and longer period with drought, the interaction with the people is that they start to use more water, especially summer. What we saw in the last couples of years, is that we had an increase in the water being used. Also, in wintertime you have low water usage and distribution network that can easily suit that water usage, and in summertime the water usage can be up 1.7 or 1.8 times higher, in some areas, than in wintertime. As drinkable water company, we need to build our infrastructure based on this summer peak(s). We already seen that we need to do a lot of investment in the coming years, to produce enough water during summer peaks to make sure we can fulfil the obligation we have in delivering drinking water. On the other hands, people starting to ask for more water, and we need to produce that water, we need to take this water from groundwater resource, so it is also increase on our extraction of groundwater and maybe it affects the groundwater system, and that like I said before, if we want to be able to challenge this climate change and global warming, we should make sure we have a system which is in balance. So, we extract water, but we also make sure there is enough refill from above, we hold the water, and as customers we need to reduce our consumption. So, as a costumer, if I consume less, the drinkable water company has to produce less, and therefore less impact on the system. Is all connected. In the end, you want to have a robust system which can cope with challenges and changes we will face. Also, as a drinking water company, we start to look to other resource for drinkable water, as brackish groundwater, seawater, surface water. We are looking for all options. And then, as a water company, you have a more divers package of resource you can use, which will make you less vulnerable for changes. You need to be more robust, flexible.

B: Uncertainties is a thing that we always have to cope with, already in the actual situation. Specialists are aware of uncertainties; our board has to get used to a bit more. It's a subject we discuss about, and we try ways to cope with it. Uncertainties because of climate change gets a bit bigger, and that's why we need a transition in our strategies.

Daniele: which kind of strategies/approach you are referring to?

B: I think a natural system with a wide range of circumstances has… We want to be in control all the time, and now we become aware that is not possible anymore, because the range of circumstances are bigger, and we need to learn and build within our strategies that we cannot have control all the time.

Daniele: What does it mean a (an anthropocentric) circular water system to you? Do you consider the actual water system circular?

A: Well, is that… I think in the end, for me it counts if one drop of water gives a certain value. This can be…. Sometimes you are seeing project, for example, reusing effluent and you have discussion about reusing as industrial water or in the future for drinking water, but in the same time this effluent from wastewater treatment plant might be the necessary stream of water for a small river where a certain salamander having his/her habitat. If you then would take this effluent to give it to industrial partner, this would have a disadvantage for the habitat where the effluent was first going to. Well, then you think "is that right choice we made?". So, for me a circular system is not always reuse every drop, but it is "for every drop you should look what is the best added value for this drop". I think in the end this will result…. For example, the last week rained a lot, and then if all the water is discharged into the sea, then you add less value

to your system. If you hold in nature or in river, you can infiltrate in ground, then is already added value. The same count for the urban system, if you discharge your water, then it's gone! So, but to say ok, you need to capture your water, and if you hold in the city, you re-use the wate for flushing the toilet or to cool down the city, this adds value.

B: I think it is not possible to get a fully human circular water system, because you always have to handle with peak (high demands, high pressures), so you have to…

A: Our system is far from being circular, and as you said, we are moving towards a more natural system. I had the same thought as you that a natural system is a circular system. Maybe that you're answer that a natural system makes your system circular.

Daniele: What does it mean an adaptable water system to you?

A: Well, adaptable water system is able to cope with changes. Person B said that right now we want to be in control of our system, but maybe that also make us vulnerable. If you have a change, you need to be in control of that change, and that's difficult. But if you have a system that on itself can cope with these changes… for us as a drinking water company means that lour impact on the groundwater system, well we need to extract this water to make drinkable water, but there are ways to reduce the impact you have… well, if you have a system that is robust enough to cope with this different periods (dry, drought)… well, you don't want that everything dies if it is too wet or to dry. If you have a system that cope with these changes, then, in my terms, is a robust, flexible, adaptable system.

Daniele: Person B, do you agree or that or not?

B: I agree with what person A just said. I have an addition: often we try to build adaptability or apply adaptability, and you can apply in a technical way or in a natural way. When you build large reservoirs, you can cope with dry periods or peak discharges… but still a technical solution it costs a lot of money and it has limitation because of the design of the technical solution, but still, it is an option, in some areas or situation. The other way of adaptation is to make us of the natural system and the area… when you make use of the natural system you need to connect to the natural system and adjust the land use based on your natural system. That a rather a big change in our approach.

A: Also, a difficult one, I guess. People need to let go something

B: They can't do everything they want in every place.

1.2 AFTER THE PRESENTATION OF THE STRATEGIES

B: So, Daniele, what are your conclusion on this comparison?

Daniele: So, from this comparison, I think it is way useful to use wastewater for agriculture because it is a water that does not need to be treated, and even if we find out that it needs to be treated, will need to be treated less compared to other water (re)source. Things that normally are treated are nitrogen and phosphorous, which are useful for the soil. And even if agriculture does not need 20 M m3 per year, it might be possible to create 2 pipes one for agriculture (10 M m3) and the other one to enhance the rivers and wetlands. For stormwater I believe the best fit solutions are wetlands, first because are natural, so the water will infiltrate

on its own, and plus it cost less. Sewer mining is a nice technology, but unfortunately the water that has been treated can be used mainly for irrigation or agriculture. Can also be used as flushing toilet water or all the water within the house that does not have to be drinkable water. But at the same time, if I want to apply this water within the private citizens, it will need more structure, because you need to replace the pipes in the house, you need to deal with social acceptance of the water reused, and so on. While for irrigation is more suitable and easier to apply. I think sewer mining is a nice idea to decentralize a bit the system and do not rely on one big wastewater treatment plant. And plus, wastewater is very nice for agriculture, as said before.

A: I do have a question or a point of discussion, maybe. Because at the begging of this presentation you determined a problem, as you have a deficit of water in the urban area, and in the end, you named few solutions, in the end you take water out of the urban area again. With the stormwater you go out in your urban areas, with injections wells or wetland. Wouldn't have been better to keep this water within the city to get a better balance?

Daniele: I agree with you. But one my teacher told me to focus on the rural area and to focus also on other stakeholders and what they prefer in term of solutions and how they would like to reuse the water. The urban area is where the water has been consumed and produced (wastewater and stormwater due to high urbanization) and try to solve the drought problem in the south. And the water considered is not suitable yet to drink, but if you recharge the aquifer, and refill it, this water will be therefore usable to drink, after all the process of infiltration and extraction.

B: The problem analysis… I agree with person A, you suggest deficit in the urban area, do we consider a problem, or it is normal based on the configuration of the analysis. So, the question is what the real problem is, and the choosing solution… my question is, what is the gain. So why we should invest 10 M € to this solution, and I think one way to get a feeling about these solutions, you could calculate the € per cube. Because the cost of drinking water is 1€/m^3 (including tax.) and for agriculture use is about 0.10€/m^3 (indication).

Daniele: So, first of all, the thing that in the first part we focusing in the urban area and then we move focus on the rural area and the complete system, it is first of all, I wanted to focus mainly on the water balance in the urban area, but then I have to face my teacher opinion and other stakeholders, and then focusing in the rural area where the drought problem is showed. Therefore, the question is, what can I do with this data? Is not about how to make the balance positive, but how to use this negative value to have a positive impact. I agree that money should be an indicator, but shouldn't be the main driver, this because you provide a social service to the community, where you won't directly gain benefits from that.

B: I understand. That's why you should invest money in ecological restoration, but also, I think you need to go into the problem of the rural area, agricultural area and ecological area, and you should question if there are other solutions in those area that need less investment, to reach the same level of solution. That's a big question, but I think you should address that.

Daniele: so, if there are other type of solutions which are more affective and cost less and will bring the same benefits in the rural area, so the two rivers area, instead of the ones applied now.

A: for example, if you look to Belgium, there everyone is obliged to have a rainwater tank, and for example, if my stormwater, I want that everybody in Breda has their own rainwater tank to

flush their toilet, and so therefore you keep stormwater within the boundaries of Breda, they start to flush the toilet with stormwater, which means that we need to pump less water from the groundwater in the urban area, because they don't use drinking water to flushing their toilet. Just to have an example, that add a positive value both on rural area and urban area. Just as you hold your stormwater, and you plant more trees and you cold down the city and if you cold down the city maybe the water use will go down. Instead of bringing water from A to B, you could change something in A, which might have an impact out of your city as well.

Daniele: But also, how much does it take, first to people to accept that, and how much does it cost for everyone to implement this network. Plus, you need to deal with multiple stakeholders because everyone is stakeholder of their house.

A: yes, but another example, if you look and the effect to have a wetland outside of the city, when your groundwater level is affected, or infiltrating your stormwater within the city. What the difference in the effect. Because we are extracting groundwater 100-150 even 300 m deep. So we are in different aquifer that where the wetland is.

B: yes, indeed. Where you extract is not where the groundwater aquifer is. Moreover, when you supply water to the wetland, you could use the stormwater of the area of the wetland. Maybe this water is already enough to recharge the wetland. This goes for both agricultural area and urban area. If they have basins to use the rainwater, the stormwater that falls in that area might…

Daniele: so, you don't to construct pipe and pumping station. But at the same time, do you feel there are other possibilities for agriculture? Because I feel like wastewater is a very nice water for agriculture for N and P. Do you think there are other possibilities? Maybe implement more sewer mining? But I think the inhabitants are less in the agricultural area, so they produce less wastewater.

B: But then the question is: is that problem to reuse the wastewater discharge or is the problem how I can supply in an economical way the agricultural area.

Daniele: I don't evaluate too much the cost, even if the stakeholder and the economic system evaluate that. I know that this type of solutions is not very remunerative. Then, why a farmer should buy a water that is more expensive. But at the same time, agriculture lost quite some money in the last drought periods and had a negative effect on society.

B: I do think that use of wastewater effluent, but if you use in agriculture is a good thing, but you always need to look "what is the most added value for my effluent". For example, Bavaria, distributed their wastewater to the nearby farmers, same in Belgium. But I do believe you should always look on, if there is a farmer next to your wastewater treatment plant, first using there instead of taking 10km away. You already passed a lot of farmers before you are there.

Daniele: I agree with you, the project in Dinteloord is what you are saying, without construct pipe or pumping stations. But, from what I know, in the area there are only agricultural land. This the solutions that I prepared based on my knowledge and my research. Which is partially and not complete of course.

Daniele: Do you think the proposed solutions might fit in the agenda of the water board?

B: I think it fits, because the water board is looking for innovation, circularity. These are examples that inspired people to look for solution. Rather out of the box ideas. It is good to inspire people.

Daniele: Do you think, based on the framework, showed before, do you think I miss something, or something to change?

A: more than Capex and Opex, but how can you determine the added value of a solution. If you asking people to invest 10 M €, they will ask you "what we get back from it? What is the added value?"

B: I agree with that, I think it should be somewhere in the indicators in the framework. Now you have circularity and adaptability as indicators, but I don't think that is the true gain of your applications. I think you should look to agricultural production and production loss, and ecological gain.

Daniele: Are the proposed solution suitable to mitigate the problem of drought / uncertainties? If not, why? How would you do different?

B: I think the amount of water you are talking about; it is rather a large amount, I think it can offer some solutions, but it needs to fit in a certain system.

A: I think the solutions you named, they are solutions which have an impact on circularity or reusing water. But I kind have the feeling "I have the city of Breda, I have a problem in the south, and I will solve the problem with the city of Breda". But I think you should look a little bit broader than that, because, what if "is the way to bring the water from Breda to the south of maybe in east, or in the north, where there are more added values?". Before starting to move water, you need a bigger picture. I think it is something to keep in mind.

2. TRANSCRIPT OF THE INTERVIEW ON 20/01/22

2.1 BEFORE THE PRESENTATION OF THE STRATEGIES

Daniele: Acknowledge the drought problem in the Netherlands, especially in the south of the city of Breda, where agriculture is the main activity, how the water system should change to face this new challenge?

C: Ok, I'm going to go back way. I understand the groundwater system Looking at the geological setting, the hydrogeological setting, it is a sandy soil. It's a above sea level. It's an area where… which are actually … How do you call it? Aeolian sediments, so the sediments come from sand deposition in the Ice Age. It is relatively poor sands. So, it's actually in the past there were forests and heathers. We reclaimed the land by our farmers at a lot of fertilizer and what you now see is it's a very technologically advanced farming system where a high amount of engineering is used, so there's a lot of groundwater pumping in the summer. I think the predominant crops are maze. I don't think that there's a lot of animal husbandry around Breda, but what you do know is because of this system is that there is an excessive use of water by farms in the summer and if you if you want to make the system more robust, I think you need to carefully consider your crops carefully. Consider there so you need to do to carefully analyse your agricultural farming system because there will be. Probably the most dominant use. Of course, forests in the neighbourhood also have a significant amount of water use, and I did once a project close to Eindhoven, similar sediment type where there, so I'm not into water management, but there was an oil contamination because of one of an army pipelines that we have throughout the Netherlands pumping kerosene to the different airfields and this was pumping uh, and this pipeline went under the 8:52 I think is the road they're going from end of two to Antwerp. And I had to go down, made abandoned, and I had to go over a because the 8:52 was lying a little lower. And what we found that there was an oil spill, and we did an investigation there tomorrow, surprise, I saw that the groundwater could vary by 5 meters in the area. So, winter levels and summer levels ranged about 5 meters, which was exorbitant, really high. Agriculture was there, but rather far away so that forests also had a huge impact on there. So, in that sense, yes, you need to understand. Ok, what's the water demand and how much water is actually being wasted by the farmers? Because they over irrigate their fields. And I think you need to carefully assess what the water demand is of your forests.

Daniele: Global warming is a recognise problem for the future. How does the water management practice should change to tackle the uncertainties coming from climate change?

C: Well, what you see? What we see happening is that the intensity of summer storms tends to increase. We get prolonged periods of drought. I've never seen a soil without preferential flow. So, especially the sandy soils, if you look at the physics of these sandy soils, especially if there are, let's say, relatively poor, what you see is there will be inorganic or organic layer on top. And this organic layer especially will dry out, which will mean that the top layer of the system will become hydrophobic. Especially in these prolonged droughts with high temperatures, and when you then get a serious rainstorm event, but you'll then gives you will get a huge amount of fingering in your unsaturated zone, so the water will actually bypass the zone where you want to have to store the water to maintain or for your plants and your crops. And you're actually for the ecosystem to use. And the water is siphoned away down to the ground water level beyond the roots on very quickly. If you have deep groundwater levels.

Climate change will also well, what we see is we see an increased urbanization in the Netherlands also around Breda. So, you see that there's going to be a huge demand for building, the city will grow. And well, I think well it slowly realizing that we have to add green. And let's say we need plants in the in the city we need a green area to combat this heat island effect. And obviously water plays a serious role there and I'm not sure about if we have the right knowledge now about how the groundwater system of the city works with all the underground infrastructure that we're planning, and then how we can then more or less ensure that water will infiltrate in the right way. So, what you need to do is create buffer systems and you need to be trying out. The challenge will be is to keep the water in the zone where we can and where we need it. The way the system works our agricultural system. Damn. It's a challenge because the system is not working with us as the changes are more or less moving against us, in my opinion. The way the agricultural system works. Darn it it. It's a challenge because the system is not working with us since the changes are more or less moving against us in my feeling.

Daniele: What does it mean a (an anthropocentric) circular water system to you? Do you consider the actual water system circular?

C: OK, ideally yeah you would like to recycle your water. What are the challenges that we face? Is that we aren't very careful with our water. So, we tend to use it. We tend to do it. We tend to flush it through the sewer system. Actually, lots of different qualities of water merged and as a consequence the sewers have a hard time, and they cannot remove everything. There is a danger. There is a problem that we face. Is that what you will see is there is a huge amount of recalcitrant organic compounds which we which we use in our economy. They end up in the water systems in the sewer systems. They end up in the surface water. They end up everything, whereas with one thing that you could say is that the filtering capacity of the soil is quite good. However, we don't know how it works with these recalcitrant organics, yeah? So, in a sense that I say is yes, I would prefer a recirculation system, but recirculation will also imply continuous loading or compounds that we cannot remove, and that's a that's a serious challenge that we have to look at. We are running an experiment Bergen op Zoo, where is more or less the same height but closer to the coast, and there we are. We're doing a test on a landfill. Old municipal solid waste landfill, which we tried to stabilize and the technique that we're using is re circulation and infiltration of leachates, which we passed through a water treatment plant to get rid of ammonium etc. So yes, you see that it doesn't stabilize out, but I think re circulation will also 'cause if we do go fully circular somehow, we also need flushing because we are not able to… technologically, remove all the all the recalcitrant compounds. And I find that boring, and I think what we're doing our system is so intensive, our economy so growing the amount of new chemicals being produced is so large that regulation cannot keep up. And as a consequence, we will always be there. I'm coming there after the fact. But we have to be aware that it's a challenge, so it might be a showstopper.

Daniele: What does it mean an adaptable water system to you?

C: I think adaptive water wastewater system is a mixture where yes. Take for instance to come to the quality of your water. In the summer, sometimes we will have to live with the fact that that we need to we need to keep the water in the system. Just because we cannot afford to let it go because let's say water will become scarce. However, in the Dutch system in the winter we have a surplus of water so adaptable water system is could say is that yes, in the summer you may have to keep the water and then accept the quality reduction in the in let's say in the ecosystem, but then at the same time when you know that you need to actually try to do also realize then OK in the winter I'll have to open up the system and I have to create a

flushing out the system so I have to clean the system, allowing the natural processes to go to flushing. Then, instead of flushing, infiltration into the groundwater needs to be limited somehow you would like to create the system. Ok I've got this surface layer system which I've been treating with where I've been keeping my water and recycling the water etc, but at a certain moment in time it says “Ok. Now it's time” for the early flush in the in the autumn storms. The early winter storms where we have peaks. That's where we actually have to clean the system somehow remove the water that's contaminated and then allow the system to re infiltrate and move in. So, we need, and I think that's something that we have to help the natural ecosystem to function, and I have no clue how. But if you would say ideally speaking ideologically, I would say yes. We know that we're going to contaminate the system if we are going to contaminate the system, then we're responsible for cleaning the system. Whenever we can, and that's it, and I'm assuming that rainwater will be relatively.

2.2 DURING THE PRESENTATION OF THE STRATEGIES

(regarding parameters to reuse wastewater as irrigation water for agriculture, Tab. 12)

C: There's a lot of parameters that are not being measured at the moment that you don't refer to. I know from research that and discussions that I've been involved in in the past when I was part of an Advisory Board to the government was that currently, like you say, coliform, that’s in stormwater. But when you look at wastewater treatment plants, it's the antibiotics that may come out of it. So, medicine. So, residues. It is a serious problem and of course these other compounds of serious concern which are arising but not... let's say not measured on a standard way. So, I think it's essential that you take those concerns into account because that has for instance, these antibiotics, where some people are worried about that especially because antibiotics are also a lot used in animal husbandry. But also, by us ourselves, and we're not too careful about it. And chemotherapy also leads to losses. The sewer system ends up in the treated, cannot be removed and then ends up in your agricultural system and starts changing the microbial population in population in the ecosystem. Because then you get resisted resistance again to add multi strain resistance against and antibiotics. Virtual threats that that we're worried about.

Daniele: I agree with you.

C: It's a side note. It's assigned no, you cannot do a lot with it, but I think it's an important thing to mention. If you're talking about sustainability and we neglect those items, and let's assume that you didn't start developing a whole approach where you come in. Let's say your cure or might be worse than the problem. If we then lead to all kinds of let's say. Let's say explosion of resistant bacteria, then society can really run into trouble.

2.3 AFTER THE PRESENTATION OF THE STRATEGIES

Daniele: Do you personally have any feedback on the two strategies that I present to you? Like would you like to change something? We think something is deeply wrong or we like something or wherever?

C: Yeah, well what I think is that really robust system should not require too much on engineering technology. And what I see is that, uh, although I'm surprised to see that the

membrane bioreactors with the reverse osmosis or your cheapest systems are relatively cheap. And I'm puzzled by that, because then I think you're missing out on certain aspects there. The membrane bioreactors will produce, and the reverse osmosis will produce a brine. Which is a waste horse, and it's a quite serious way source because it contains high amounts of nutrients. Uh, it could also be interesting from a recycling point. Can you reuse that? Because we will need phosphates. We will need those items. Resource are going to become scarce, so there could be an opportunity as well. But I would also try and take care of it. Let's say also take the waste products into account. So, the nice thing about a centralized sewer system is that you also have centralized waste treatment. The sludge of the sewer will be centralized and then you can, let's say you can market your side product. Work on valorisation. Localise systems are more difficult. Maintenance of a wetland as well. If you have, let's say accumulation of toxic compounds in the sludge of the wetland that will require regular treatment of sludge. You'll have to drag out the sludge and you'll have to treat it somehow. If you want to run it. Those aspects I very difficult to quantify. Again, I bet, but I think it's something that you need to take into account. Deep injection. Yeah, I don't have any experience there. Uh, it, it's something. I'm just wondering, will it really add to your system. Yes, you add water to the system, and it maintains there but I think actually what you do is that the ecosystem is bypassed and I think actually the biggest, the impact of drought is not on the ground water. The impact of drought that you want to. Let's say the solution to the drought where you can use let's say less higher quality water is really in in keeping the ecosystem functioning. Actually, you don't want to have the stunted growth of your natural ecosystem because it's too dry. So that would be and you won't solve that with your deep infiltration.