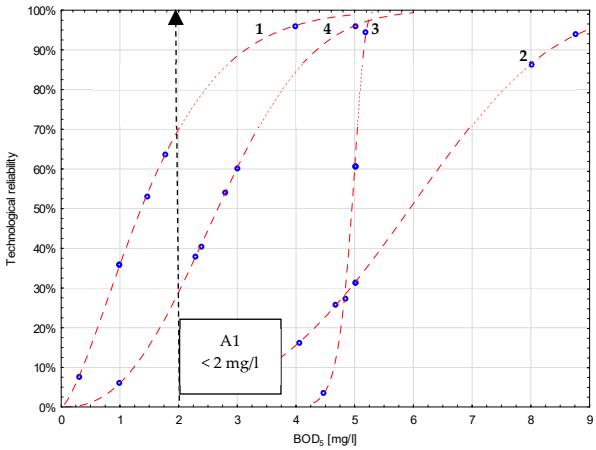
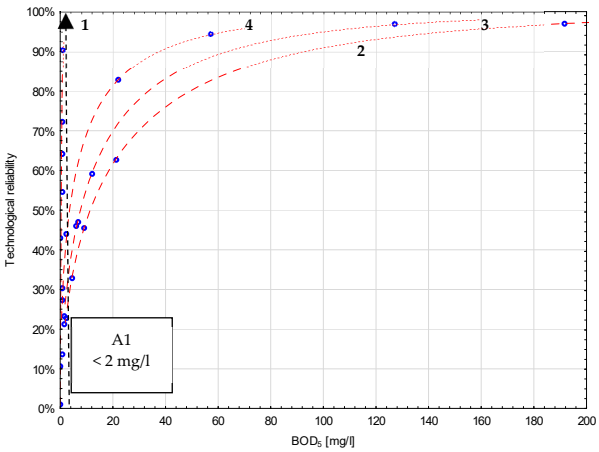
Supplementary materials

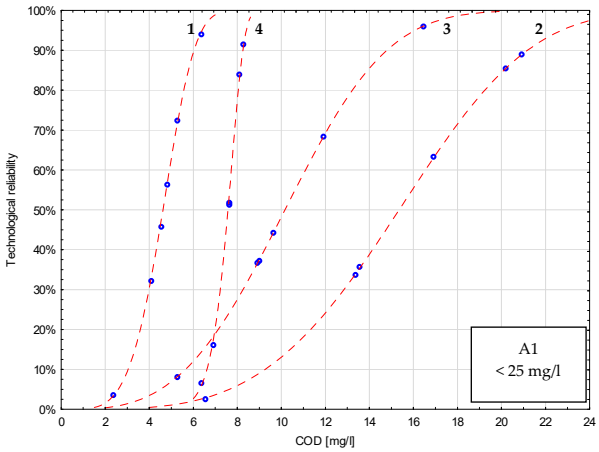
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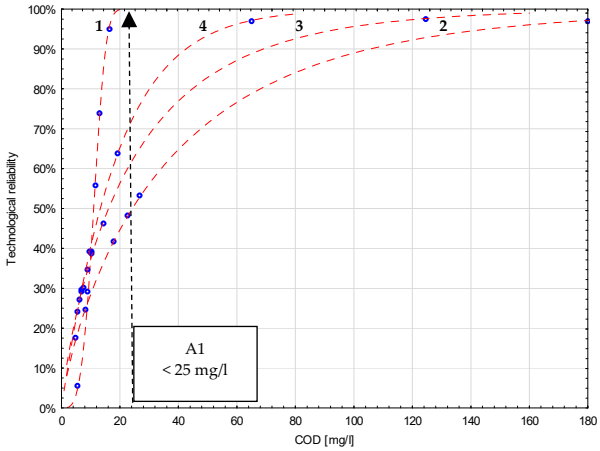
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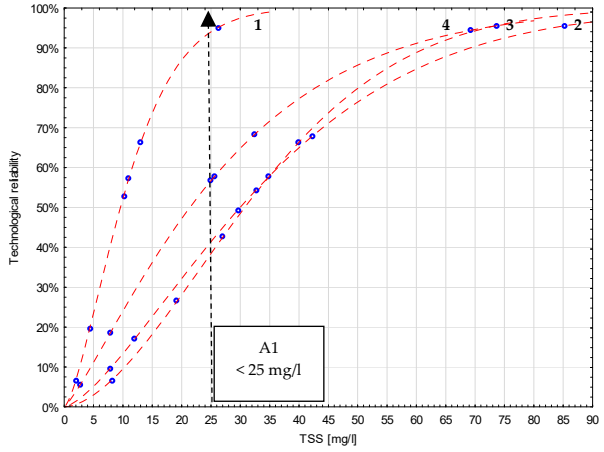
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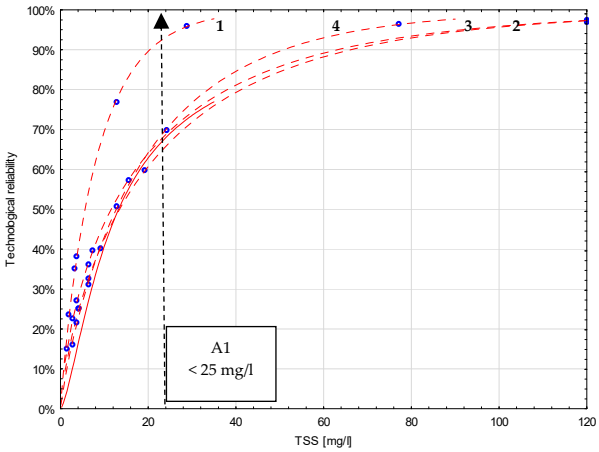
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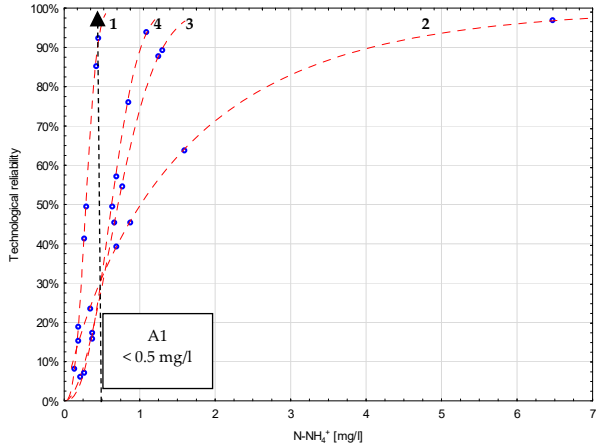
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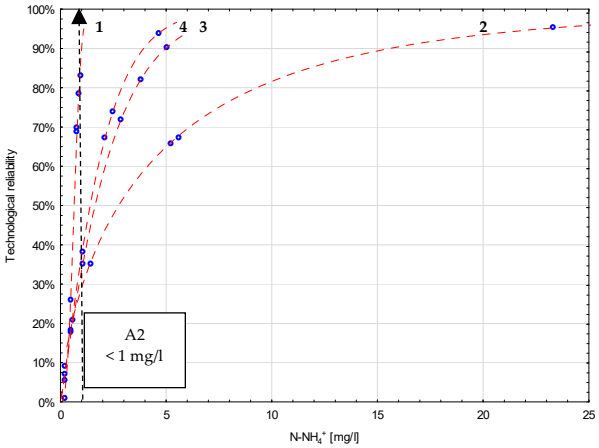
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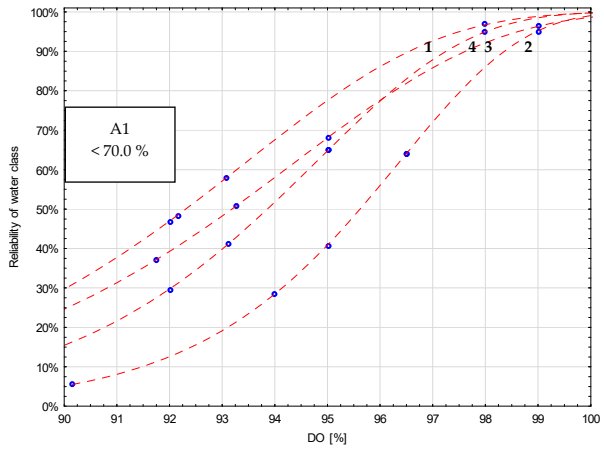
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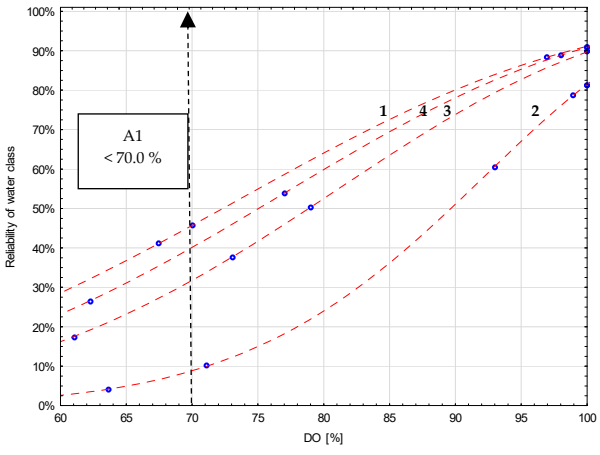
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(**i**)

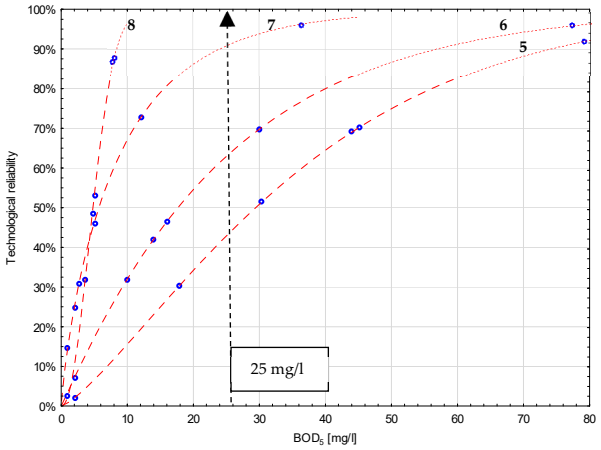


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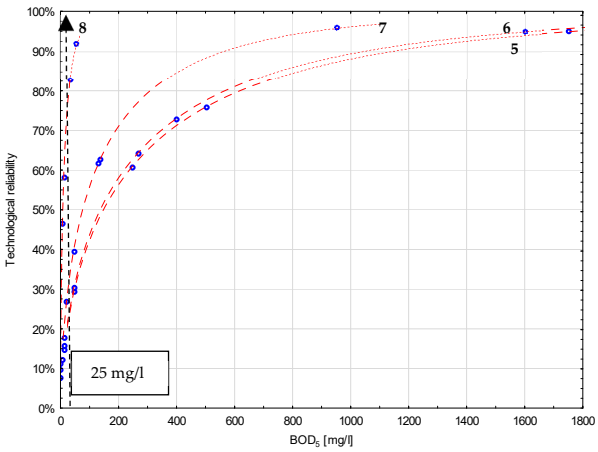


(**j**)

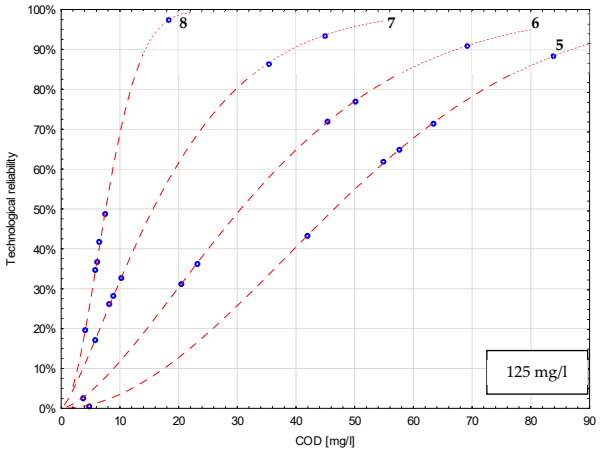
Figure S1. Distribution function in longitudinal section (1–4 point) for reliability of Raba class at (**a–e**) pre-pandemic period; (**f–j**) COVID-19 period


Technological reliability
BOD5 [mg/l]
25 mg/l
8
7
6
5

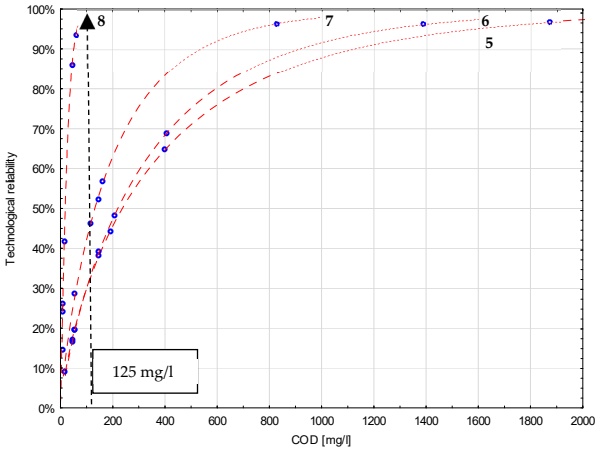
(**a**)


Technological reliability
BOD5 [mg/l]
25 mg/l
8
7
6
5

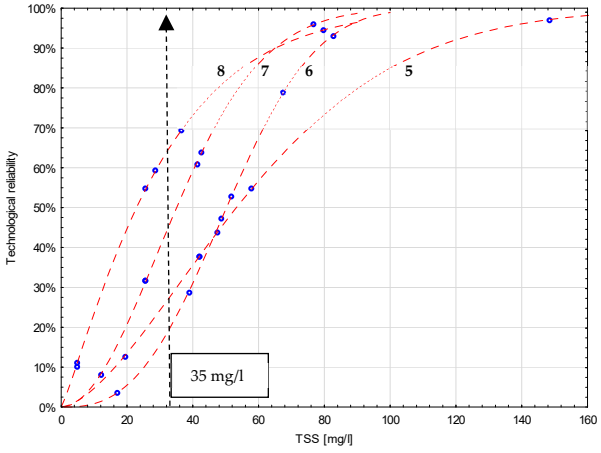
(**f**)


Technological reliability
COD [mg/l]
125 mg/l
8
7
6
5

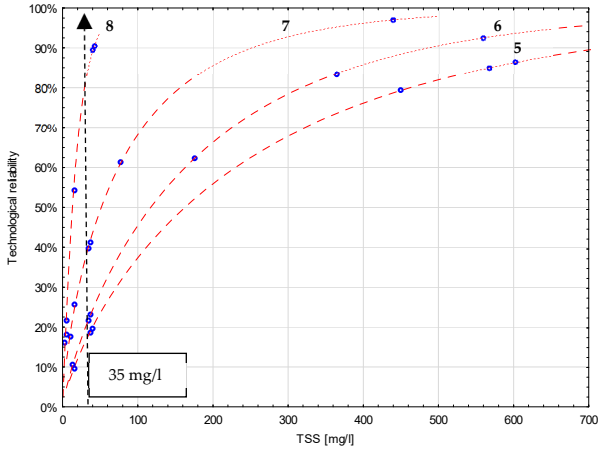
(**b**)


Technological reliability
COD [mg/l]
125 mg/l
8
7
6
5

(**g**)


Technological reliability
TSS [mg/l]
35 mg/l
8
7
6
5

(**c**)


Technological reliability
TSS [mg/l]
35 mg/l
8
7
6
5

(**h**)

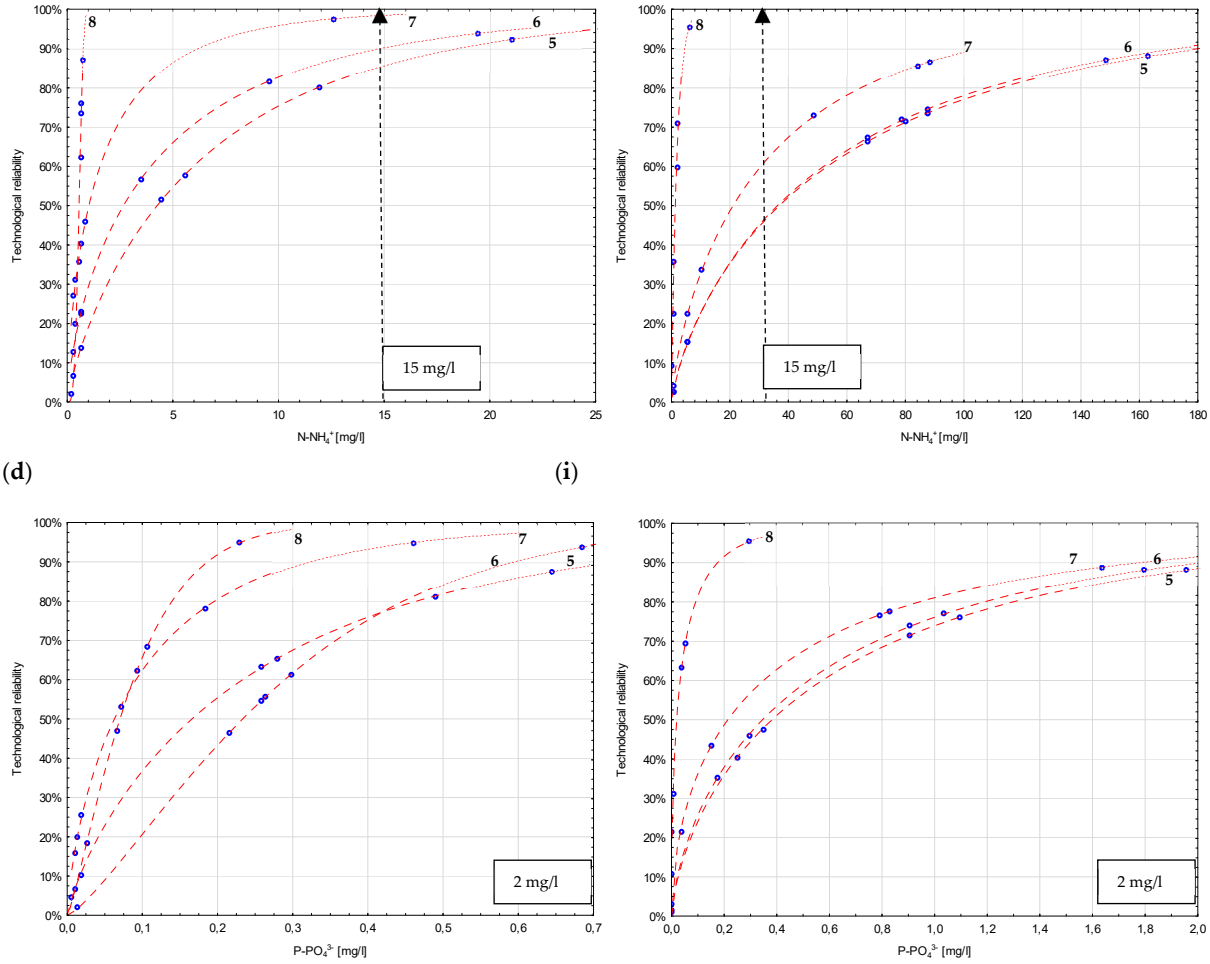


Figure S2. Distribution function in cross section (5–8 point) for reliability of Raba class at (**a–e**) pre-pandemic period; (**f–j**) COVID-19 period

2. Tables

Table S1. Results of the estimation of the Weibull distribution parameters together with the measures of goodness of fit to empirical data – pre-pandemic period

Point	Physicochemical parameters	Distribution parameters			Hollander-Proschan test	
		θ	b	c	value	p*
Longitudinal section						
50 m upstream WWTP	BOD_5	0.02778	1.4397	1.7574	0.109821	0.91255
	COD_{Cr}	-0.5000	4.5025	5.0124	-0.063182	0.94962
	Suspended solids	-0.0152	1.4618	12.311	0.027857	0.97778
	NH_4^+—N	0.06364	2.7951	0.32746	0.061804	0.95072
	DO	-10.000	42.509	96.448	0.025020	0.98004
50 m downstream WWTP	BOD_5	3.8939	3.5621	6.5823	0.200434	0.84114
	COD_{Cr}	-1.0000	3.7297	16.936	-0.135206	0.89245
	Suspended solids	-1.0000	1.7250	38.041	0.065694	0.94762
	NH_4^+—N	0.17576	0.86311	1.5476	0.212545	0.83168
	DO	81.919	26.702	93.584	0.180711	0.85659
100 m downstream WWTP	BOD_5	-5.0000	29.682	5.0129	-0.089736	0.92850
	COD_{Cr}	1.6162	3.1999	11.401	0.129701	0.89680
	Suspended solids	5.0000	1.4360	38.690	0.083284	0.93363
	NH_4^+—N	-0.0136	1.9736	0.85815	-0.016553	0.98679
	DO	-10.00	33.801	94.881	-0.000322	0.99974
150 m downstream WWTP	BOD_5	-0.2000	2.4560	3.0979	0.070500	0.94380
	COD_{Cr}	-1.0000	13.986	7.7763	-0.013494	0.98923
	Suspended solids	-0.5000	1.2156	28.939	-0.021082	0.98318
	NH_4^+—N	0.00657	2.5116	0.72811	0.004323	0.99655
	DO	86.970	25.817	94.516	0.182924	0.85486
Cross section						
WWTP outlet	BOD_5	-0.5000	1.3067	38.982	-0.212624	0.83162
	COD_{Cr}	-0.5000	1.9274	56.247	-0.442434	0.65818
	Suspended solids	14.0000	1.5944	67.029	0.216048	0.82895
	NH_4^+—N	0.12677	0.82282	6.6383	-0.032339	0.97420
	PO_4^{3-}—P	-0.0020	1.2959	0.30956	-0.200984	0.84071
Gravel bar	BOD_5	7.3838	0.59237	253.69	0.107527	0.91437
	COD_{Cr}	43.9900	0.84581	338.26	0.180963	0.85640
	Suspended solids	11.0000	0.84528	180.86	0.084843	0.93239
	NH_4^+—N	-0.1000	0.77196	58.234	-0.261012	0.79408
	PO_4^{3-}—P	-0.0002	0.68278	0.59180	-0.307219	0.75868
Main stream	BOD_5	0.8788	0.8788	8.8262	0.197527	0.84342
	COD_{Cr}	5.5758	1.3108	20.692	0.205194	0.83742
	Suspended solids	3.6566	1.9490	42.352	0.105972	0.91560
	NH_4^+—N	0.3096	0.67177	1.7688	0.290550	0.77140
	PO_4^{3-}—P	0.00956	0.73877	0.10304	0.163780	0.86990
Opposite WWTP	BOD_5	-0.2000	2.1227	5.7116	-0.156222	0.87586
	COD_{Cr}	3.7929	1.8832	9.2110	0.270002	0.78716
	Suspended solids	-0.5000	1.1485	31.528	0.011505	0.99082
	NH_4^+—N	-0.5000	3.8072	0.61825	-0.285731	0.77508
	PO_4^{3-}—P	0.0026	1.2264	0.09460	0.022170	0.98231

* test probability; at $p \leq 0.05$ the null hypothesis that the empirical data can be described by the Weibull distribution should be rejected;

Distribution parameters: θ – position parameter, b – shape parameter (> 0), c – scale parameter (> 0)

Table S2. Results of the estimation of the Weibull distribution parameters together with the measures of goodness of fit to empirical data – COVID-19 period

Point	Physicochemical parameters	Distribution parameters			Hollander-Proschan test	
		θ	b	c	value	p*
Longitudinal section						
50 m upstream WWTP	BOD_5	-0.0010	1.1745	0.48751	-0.369438	0.71180
	COD_{Cr}	-1.0000	3.8008	12.143	0.026488	0.97887
	Suspended solids	0.0000	2.7728	0.74071	-0.395944	0.69215
	NH_4^+—N	0.0000	0.92831	8.3014	0.198757	0.84245
	DO	-10.00	8.1316	93.793	-0.229475	0.81850
50 m downstream WWTP	BOD_5	1.7798	0.57437	21.550	0.244743	0.80666
	COD_{Cr}	4.6515	0.81597	37.945	0.236695	0.81289
	Suspended solids	4.096	0.75318	21.878	0.269790	0.78732
	NH_4^+—N	4.6699	0.69186	4.6699	0.086893	0.93076
	DO	46.111	3.8635	79.531	0.099108	0.92105
100 m downstream WWTP	BOD_5	0.4333	0.57012	14.537	0.193626	0.84647
	COD_{Cr}	7.0909	0.82491	25.112	0.293287	0.76930
	Suspended solids	2.7525	0.70693	19.392	0.270658	0.78665
	NH_4^+—N	0.0000	1.0795	2.3002	-0.045166	0.96397
	DO	52.222	4.3157	81.713	0.122683	0.90236
150 m downstream WWTP	BOD_5	0.07778	0.51234	7.2945	0.144958	0.88474
	COD_{Cr}	5.3636	1.0305	18.953	0.262625	0.79284
	Suspended solids	2.4343	0.86546	19.395	0.194935	0.84544
	NH_4^+—N	0.04394	1.1645	1.9246	0.016812	0.98659
	DO	43.737	4.9909	84.869	0.079268	0.93682
Cross section						
WWTP outlet	BOD_5	11.8990	0.58872	275.38	0.122919	0.90217
	COD_{Cr}	47.9800	0.77608	379.49	0.223747	0.82295
	Suspended solids	14.1820	0.80747	256.16	0.013865	0.98894
	NH_4^+—N	-0.1000	0.75622	59.888	-0.248026	0.80411
	PO_4^{3-}—P	-0.0001	0.68851	0.65046	-0.359198	0.71945
Gravel bar	BOD_5	7.3838	0.59237	253.69	0.107527	0.91437
	COD_{Cr}	43.99	0.84581	338.26	0.180963	0.85640
	Suspended solids	11.576	0.84528	180.86	0.084843	0.93239
	NH_4^+—N	-0.1000	0.77196	58.234	-0.261012	0.79408
	PO_4^{3-}—P	-0.0002	0.68278	0.59180	-0.307219	0.75868
Main stream	BOD_5	-0.0455	0.60193	140.13	0.085670	0.93173
	COD_{Cr}	4.7879	0.85823	201.59	0.140722	0.88809
	Suspended solids	8.6667	0.75785	83.433	0.238663	0.81137
	NH_4^+—N	-0.1000	0.75011	34.328	-0.083783	0.93323
	PO_4^{3-}—P	-0.0001	0.56851	0.40782	-0.162230	0.87112
Opposite WWTP	BOD_5	0.3899	0.64669	13.777	0.001833	0.99854
	COD_{Cr}	4.5909	1.1579	24.739	0.177905	0.85880
	Suspended solids	3.5455	1.0492	18.598	0.133555	0.89375
	NH_4^+—N	0.08364	0.98511	1.8943	0.099639	0.92063
	PO_4^{3-}—P	0.00056	0.55008	0.03858	0.114857	0.90856

* test probability; at $p \leq 0.05$ the null hypothesis that the empirical data can be described by the Weibull distribution should be rejected;

Distribution parameters: θ – position parameter, b – shape parameter (> 0), c – scale parameter (> 0)