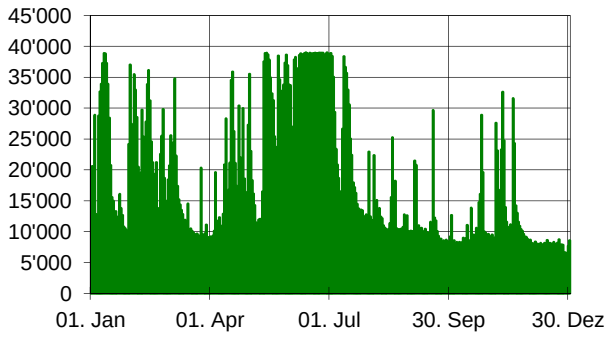
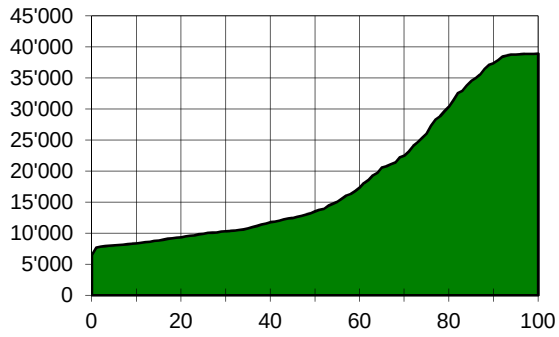
ARA Schönenwerd — Abwassermengen 2016

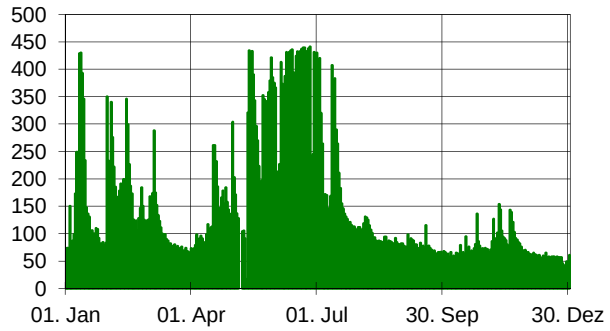
Tagestotal Q bio
m3 / Tag



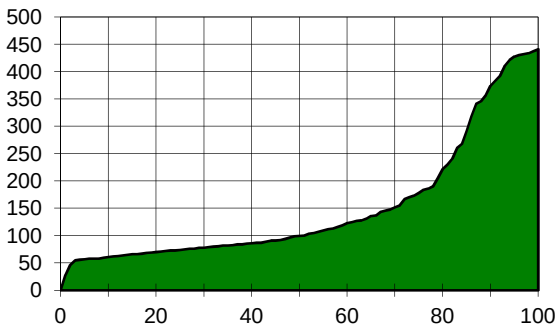
Tagestotal Q bio
m3 / Tag



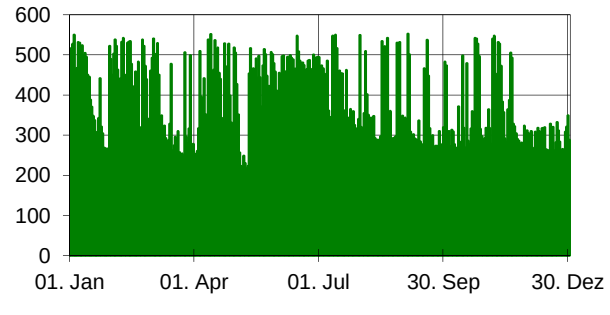
Tagesminimum Q min
l / s



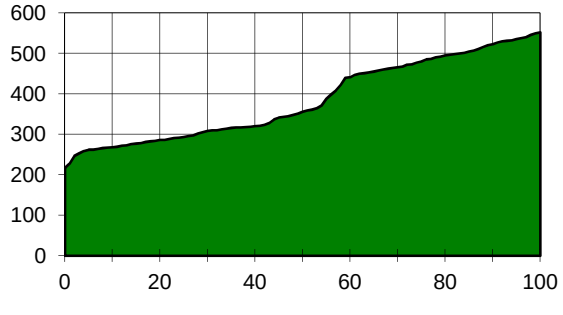
Tagesminimum Q min
l / s



Tagesmaximum Q max
l / s



Tagesmaximum Q max
l / s



	Q bio m3 / Tag	Q min l / s	Q max l / s
Mittelwert	18'497		
20%-Wert	9'344	70	286
50%-Wert	13'520	100	356
80%-Wert	30'392	222	495
Q tw 1)	11'432	85	321
2 Q tw			642

1) Mittel aus 20% und 50%-Wert

Fremdwasseranteil	***27*** **%**

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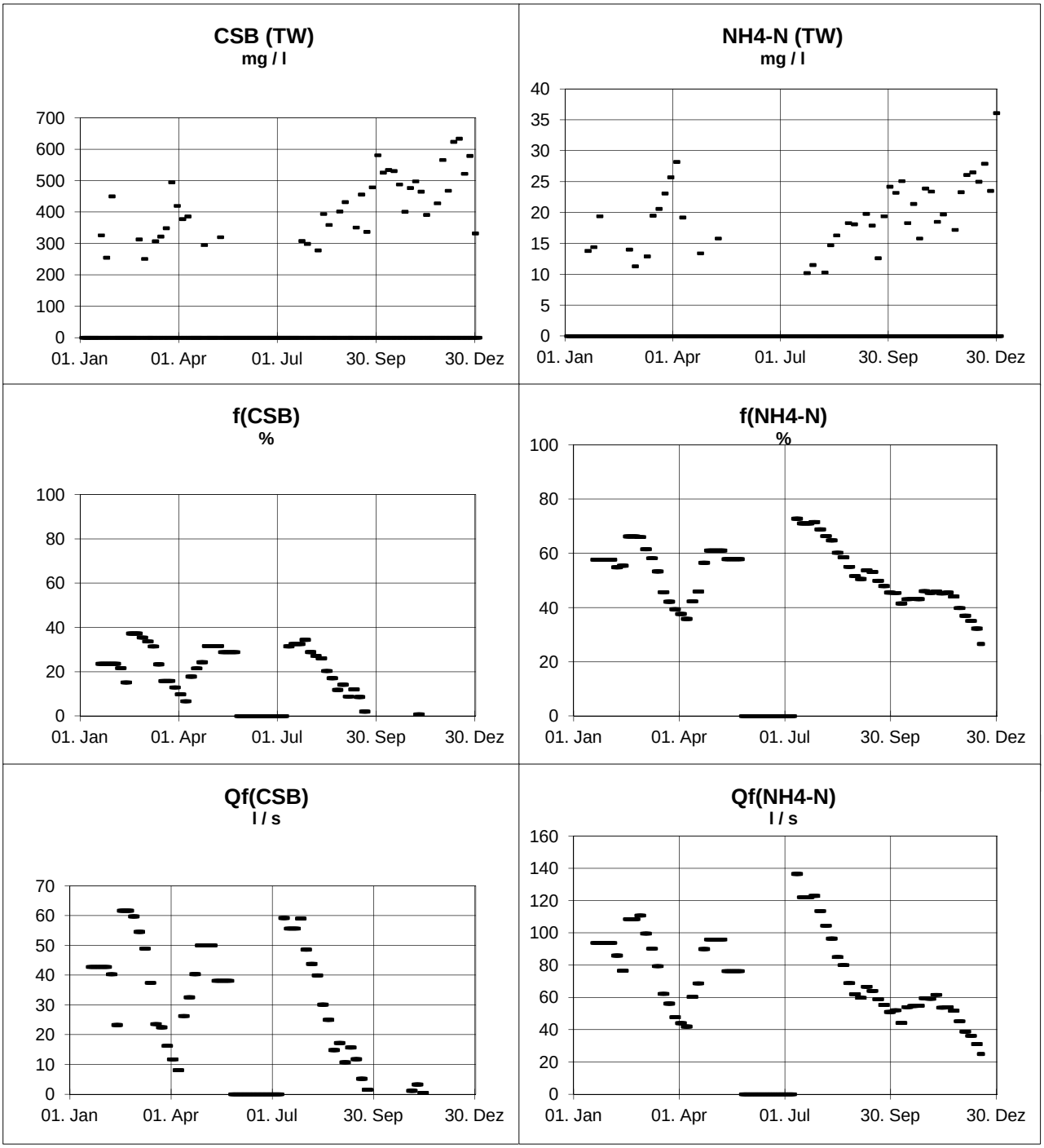
	Tagesmittelwerte m3 / d	l / s
Q tw	11'432	132
O fremd 2)	3'102	36
O schmutz 3)	8'330	96

2) = O tw * Fremdwasseranteil / 100

3) = O tw - O fremd



Vorgaben:

Q schmutz	200	l/EW*Tag
CSB	90	g/EW*Tag
NH4-N	7.5	g/EW*Tag
K soll (CSB)	450	mg / l
K soll (NH4-N)	37.5	mg / l

K soll: erwartete Konzentration im Zulauf, wenn nur Schmutzwasser zuläuft!

Schätzung aus EW biochemisch

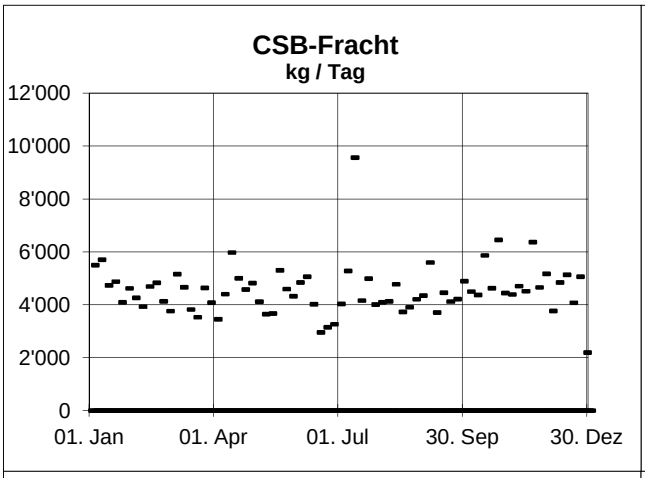
Q tw	11'432	m3 / Tag
Q schmutz (EW) [1)]	8'400	m3 / Tag
Q fremd (EW)	3'032	m3 / Tag
f (EW)	27	%

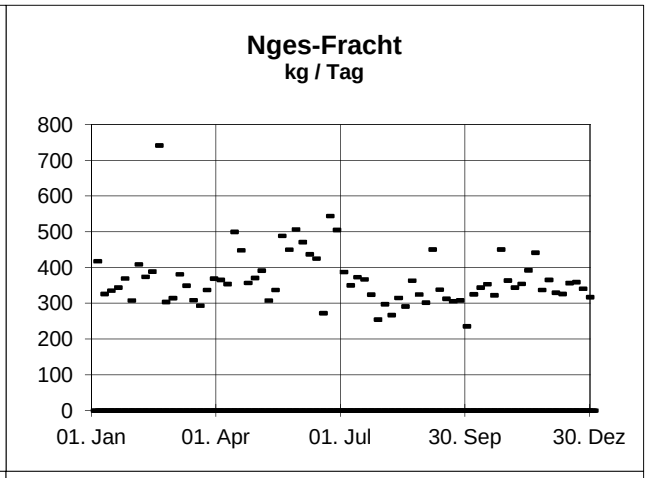
[1)] 200 l / EW * Tag

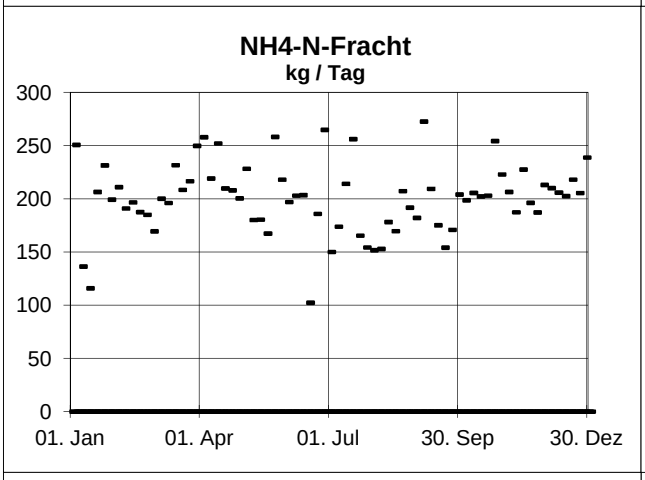
Schätzung aus den Zulaufkonzentrationen:

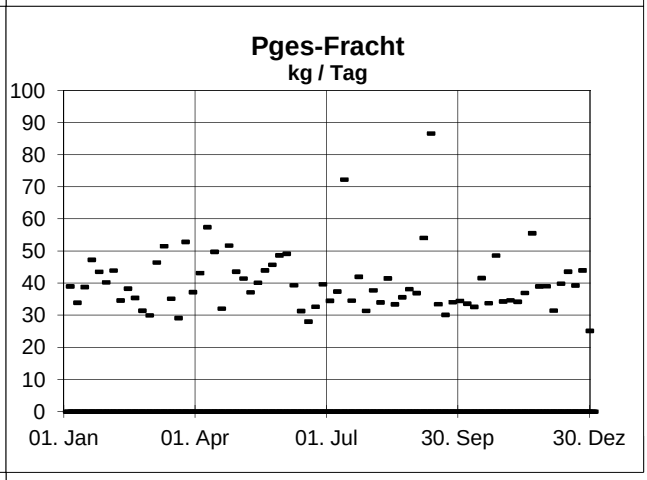
f(CSB)	Jahresmittel	7	%
f(NH4-N)	Jahresmittel	48	%

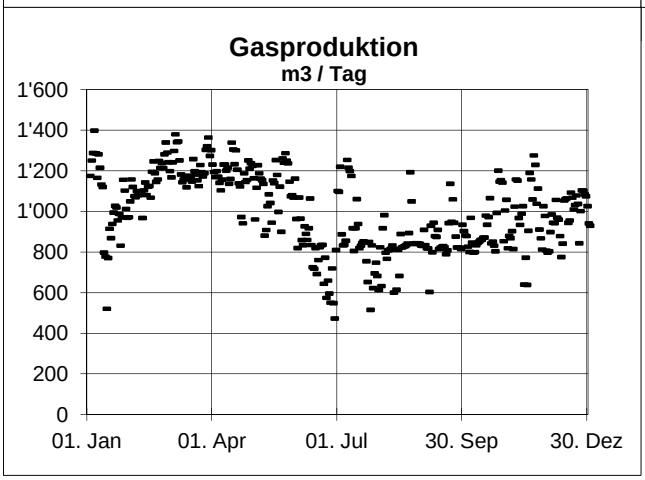
f Mittelwert	27	%
f gewählt	***27***	%











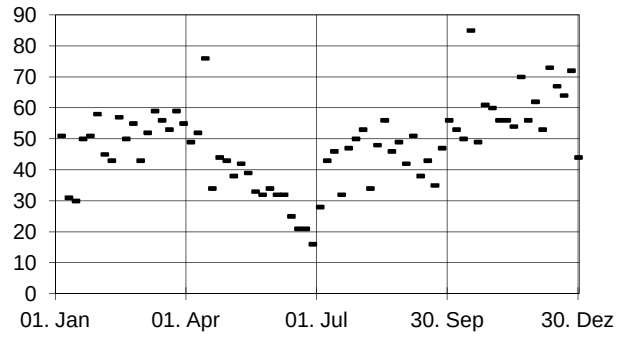
EZ angeschlossen	***19'660***
EW biochem. gewählt	*42'000*
EW biochem. 80%-Wert	*46'000*
EW Stickstoff	*27'000*
EW Phosphor	*25'000*

Zulauffrachten	**BSB5 kg/Tag**	**CSB kg/Tag**	**NH4-N kg/Tag**	**Pges kg/Tag**	**Gasp. m3/Tag**	**FS kg/Tag**
Mittelwert	1'531	4'545	201	40	1'012	2'633
50%-Wert	1'531	4'462	203	38	984	
80%-Wert	1'587	5'038	221	45	1'175	

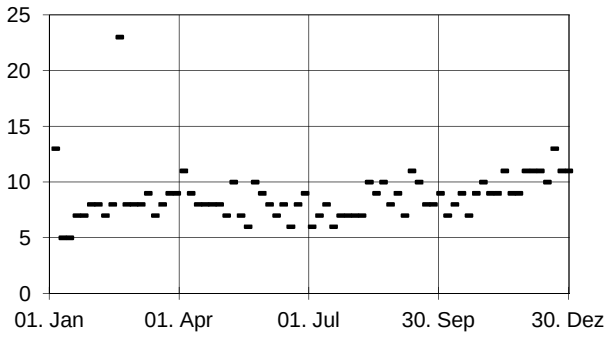
spezifische Be-lastung pro EW	**g / Tag**	**g / Tag**	**g / Tag**	**g / Tag**	Probenahmeort: **ab VKB**	**l / Tag**	**g / Tag**
	45	**90**	**7.5**	**1.6**		**30**	**85**

Einwohnerwerte	**BSB5 EW**	**CSB EW**	**NH4-N EW**	**Pges EW**	**Mittelwerte EW**	**Gasp. EW**	**FS EW**
Mittelwert	34'019	50'504	26'740	25'119	34'095	33'728	30'977
50%-Wert	34'018	49'572	27'069	23'957	33'654	32'783	
80%-Wert	35'274	55'983	29'525	28'150	37'233	39'167	

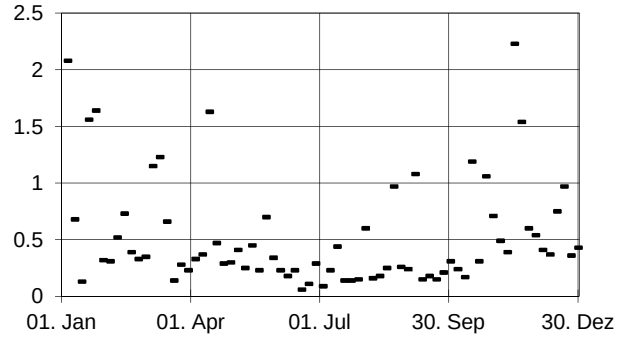
CSB
mg / l



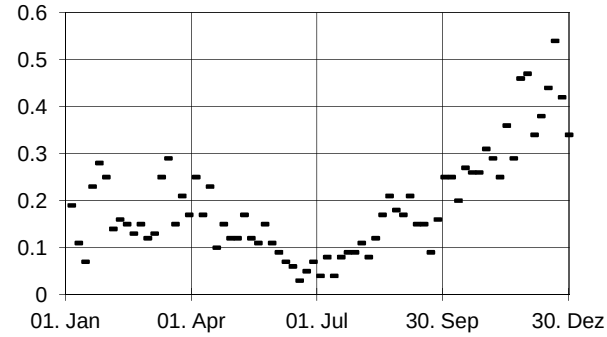
Nges
mg / l



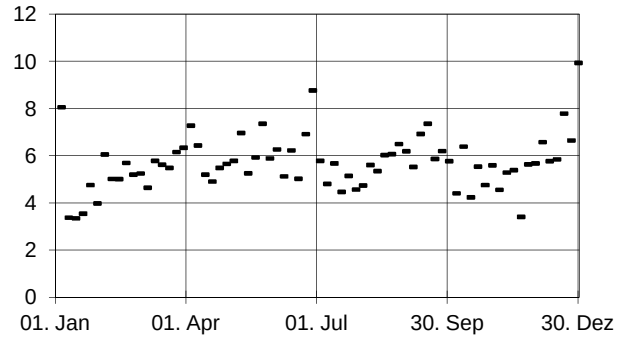
NH4-N
mg / l



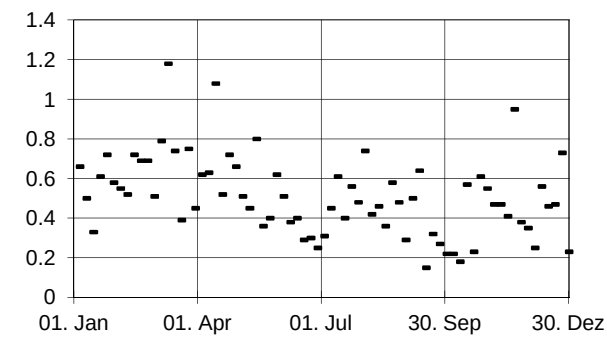
NO2-N
mg / l



NO3-N
mg / l



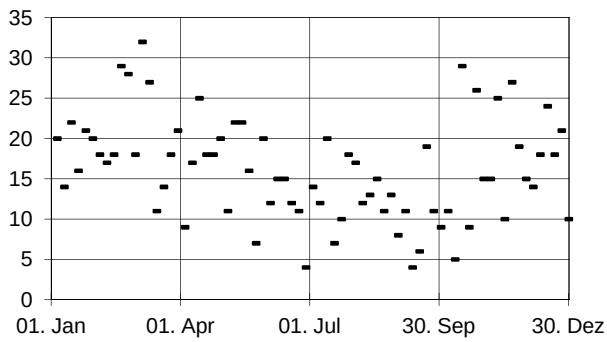
P ges
mg / l



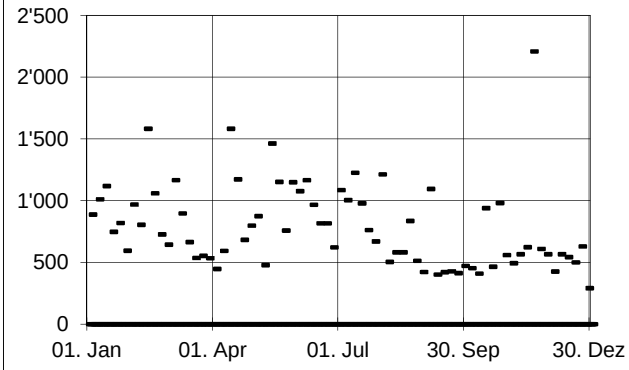
Angaben in mg/l	Mittel-wert	90%-Wert	Grenz-wert [1]
BSB5			15
CSB	47.8	61.8	
GUS	16.2	25.0	15
NH4-N	0.5	1.2	2
NO2-N [2]	0.2	0.3	0.3
NO3-N	5.7	7.0	
P ges	0.51	0.74	0.8

[1] nach GSchV vom 28. Oktober 1998
[2] Richtwert

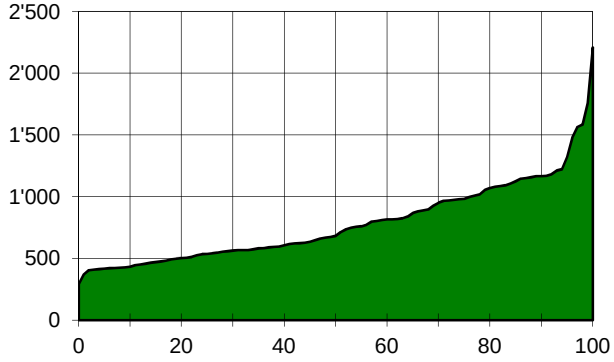
GUS
mg / l



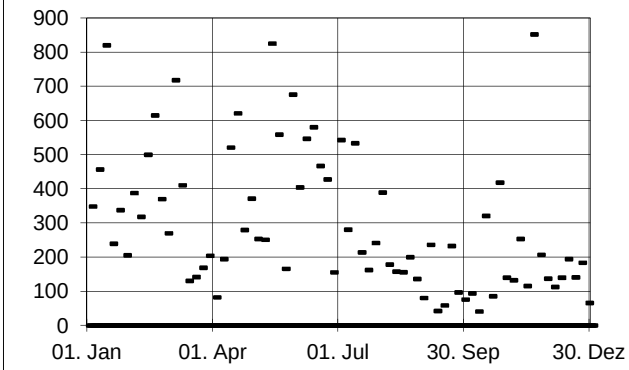
CSB-Fracht
kg / Tag



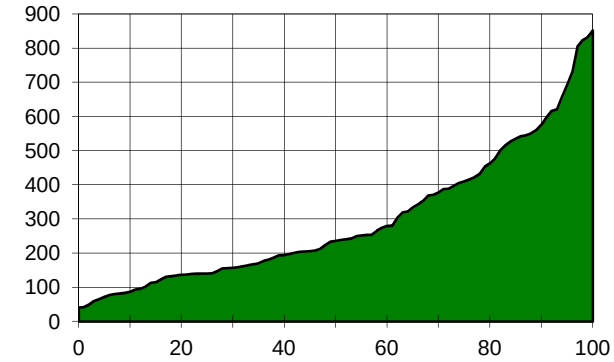
CSB-Fracht
kg / Tag



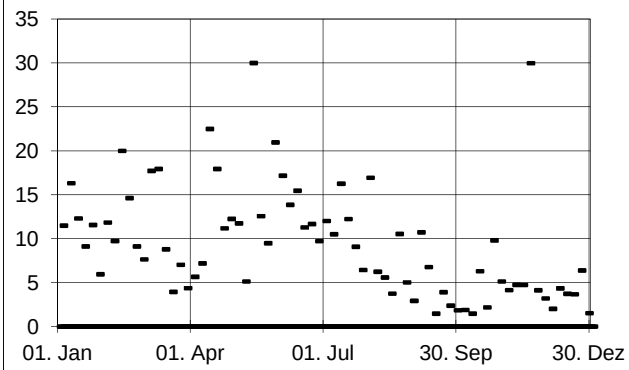
GUS-Fracht
kg / Tag



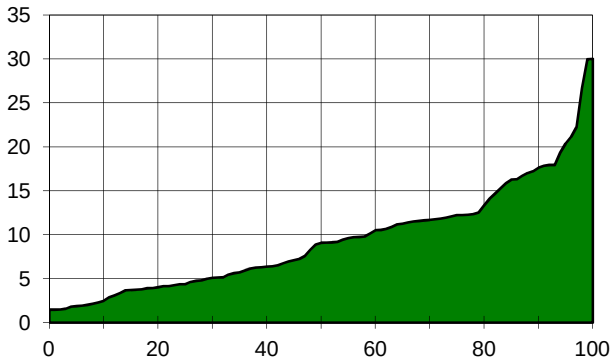
GUS-Fracht
kg / Tag



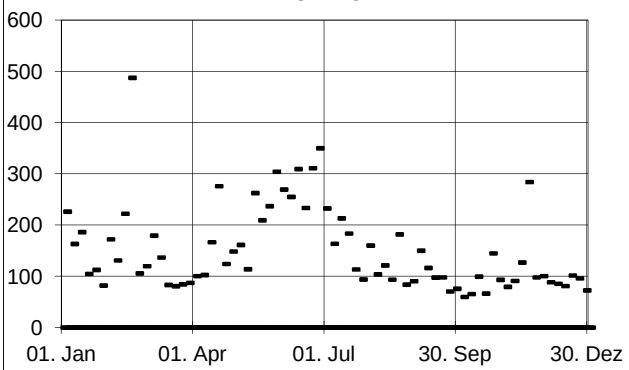
P ges-Fracht
kg / Tag



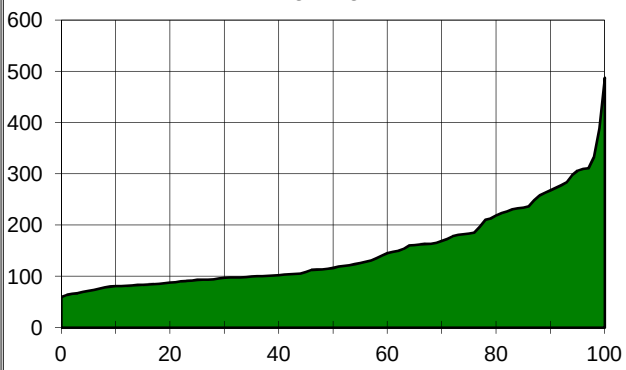
P ges-Fracht
kg / Tag

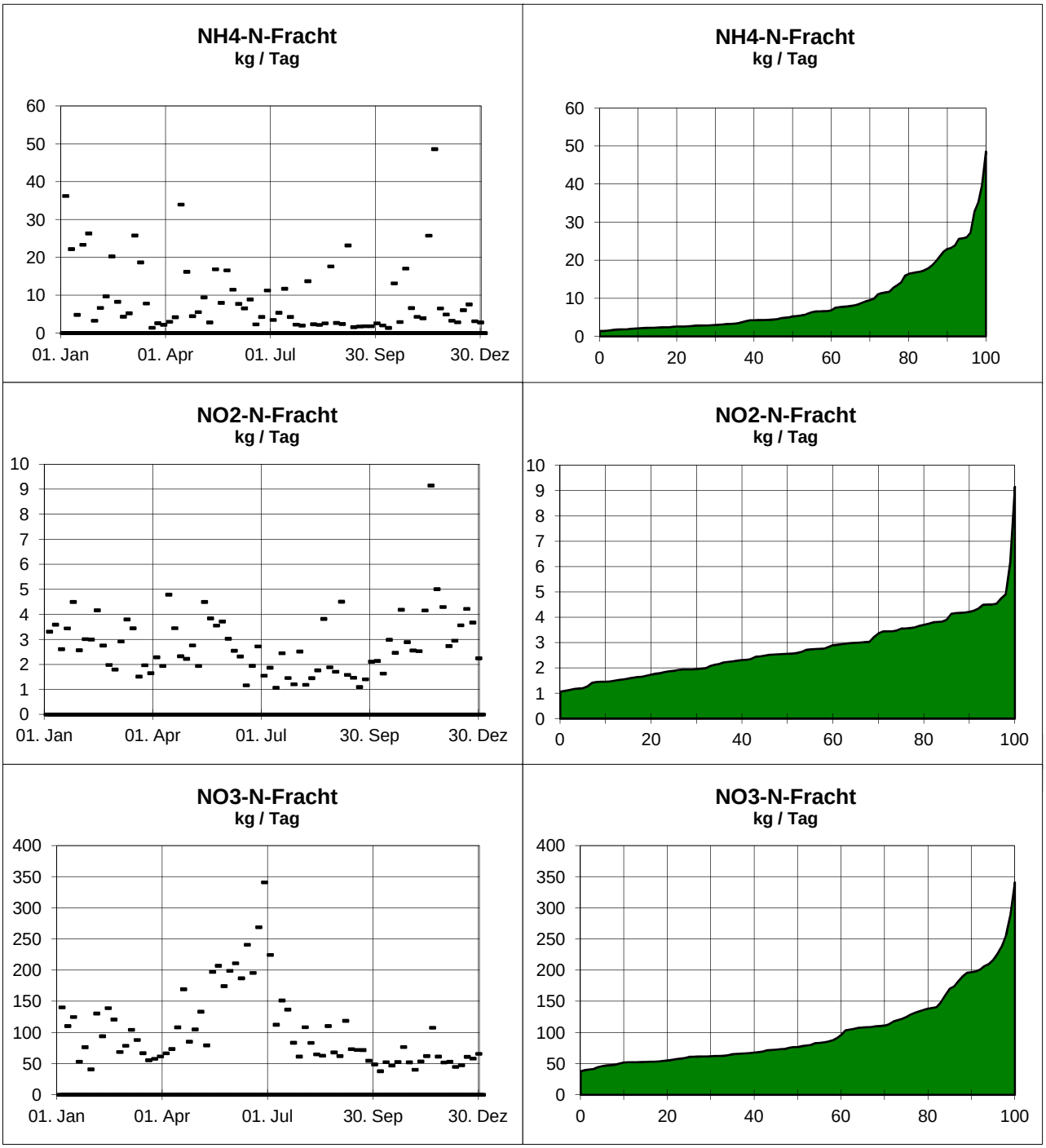


Nges-Fracht
kg / Tag



Nges-Fracht
kg / Tag



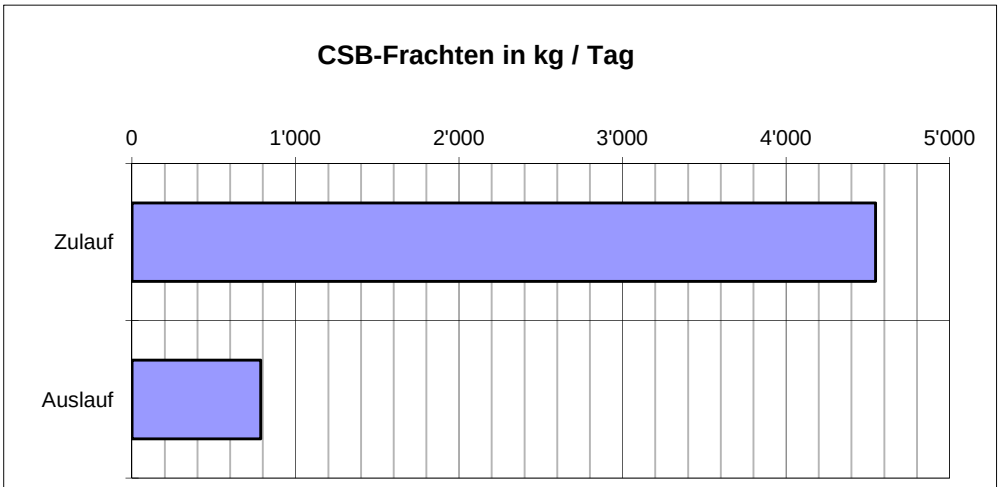


Auslauffrachten:

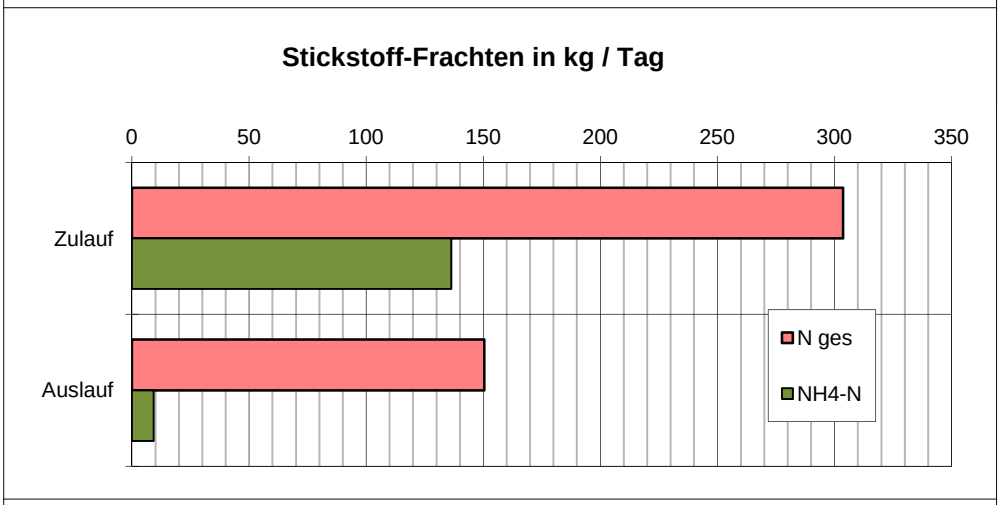
Angaben in kg/Tag	Mittel-wert	50%-Wert	80%-Wert	Mittel 5 - 95 %
CSB	786	683	1'071	756
GUS	297	236	463	282
Nges				
NH4-N	9.2	5.2	16.4	8.1
NO2-N	2.8	2.6	3.7	2.7
NO3-N	102.1	76.6	138.2	95.9
P ges	9.4	9.1	13.3	8.9

Abbauleistungen:

	Zulauf kg / Tag	Auslauf kg / Tag	Abbau	Grenz-wert
CSB	4'545	786	83%	80%
N ges	303.7	150.4	50%	30%
NH4-N	136.3	9.2	93%	90%
Pges	40.2	9.4	77%	80%

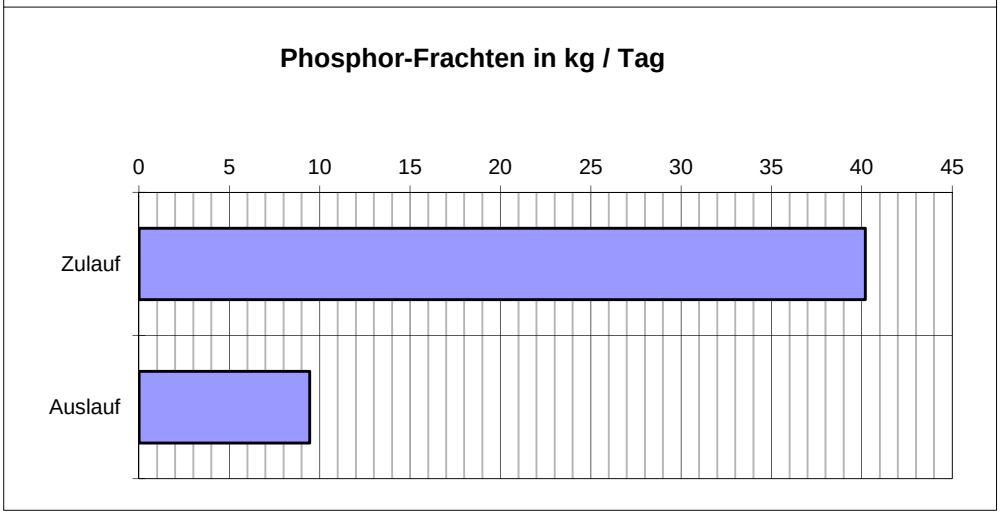


CSB-Abbau	
3'759	kg / Tag
83%	
80%	
Richtwert	

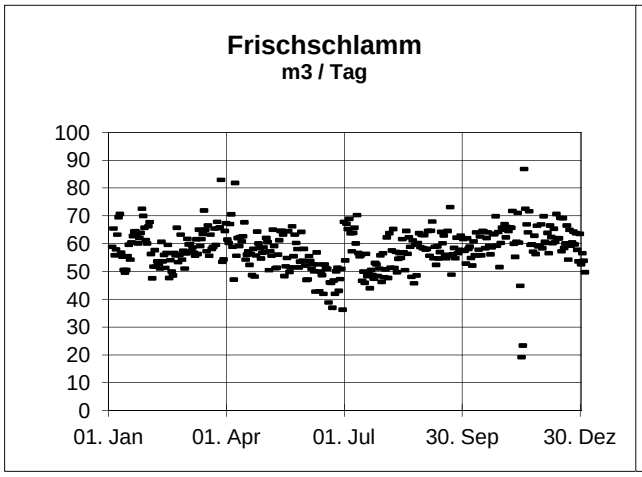


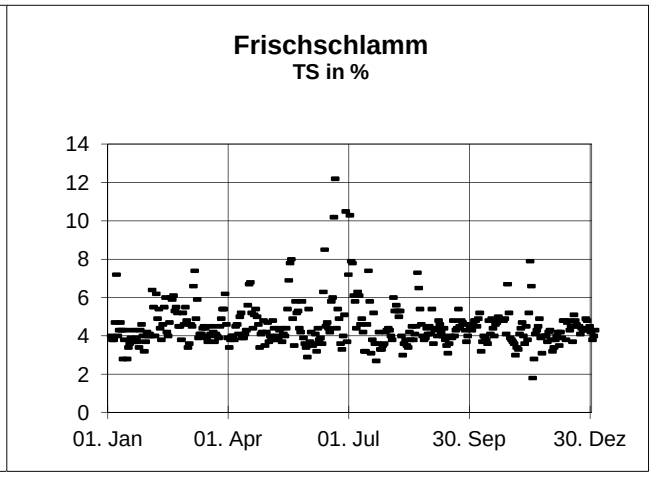
N-Elimination	
153	kg / Tag
50%	
30%	

Nitrifikation	
127	kg / Tag
93%	
90%	



P-Elimination	
31	kg / Tag
77%	
80%	



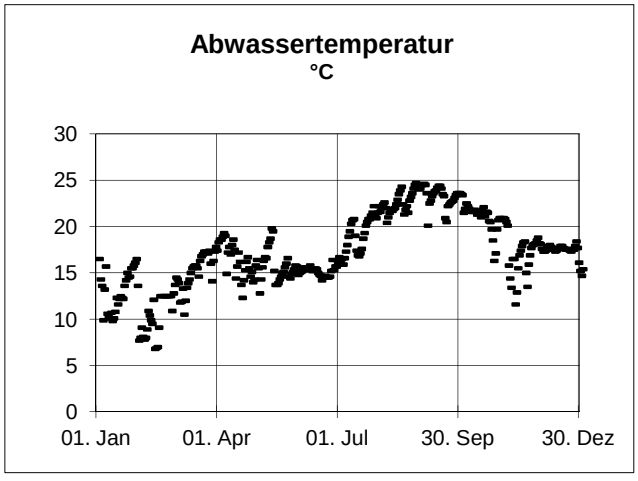


Frischschlammanfall: Mittelwerte

Frischschl. nass	58.1	m3/Tag
TS-Anteil	4.5	%
Frischschl. in TS	2'633	kg/Tag

Jahresanfall

Frischschl. in TS	961	t / Jahr



Abwassertemperatur:

Mittelwert	17.3	°C
20%-Wert	14.3	°C
50%-Wert	17.1	°C
80%-Wert	21.5	°C

Bemerkungen zur Datenauswertung: