

Analyse van hoogwaterafvoeren



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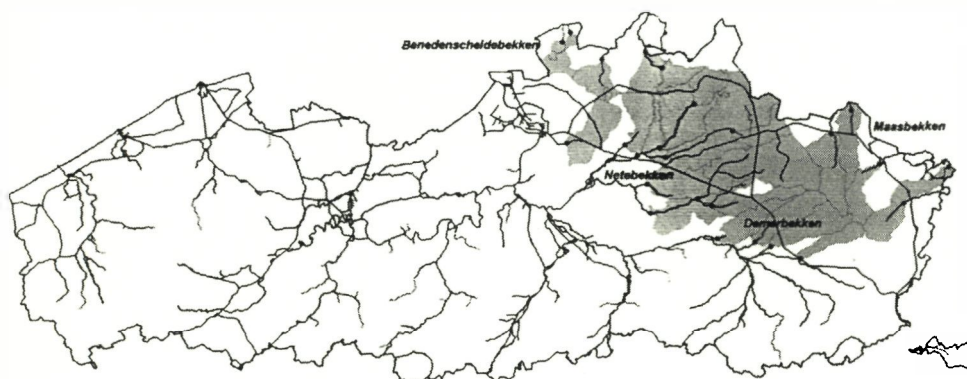
De stroomgebieden van de Kempen

**Analyse van
hoogwaterafvoeren
De stroomgebieden
van de Kempen**

Analyse van hoogwaterafvoeren

De stroomgebieden van de Kempen

Gegevens van de stations / Deel 2



door
ir. Marcel Voet, ir. Jan Swings, ir. Bram Huyghebaert
Werkgroep voor Wetenschappelijk Onderzoek inzake Landinrichting



Ministerie van de
Vlaamse Gemeenschap
afdeling Water

De analyse van hoogwaterafvoeren is een uitgave van de afdeling Water in samenwerking met de Werkgroep voor Wetenschappelijk Onderzoek inzake Landinrichting te Merelbeke

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Achtergrondfoto cover: Impressie van een overstortende waterlaag over de klepstuw op de Dijle te Rotselaar. Insert-foto: peilschaal in de meetgoot op de Voer, zijrivier van de Dijle, te Leuven / Heverlee

Cover gedrukt en binnenwerk gecopieerd op Bioset papier,
milieuvriendelijk en gerecycleerd. Offset zonder optische vezels.

Inhoud

12. Station 063	De Aa te Poederlee
13. Station 064	De Aa te Turnhout
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15. Station 076	De Grote Nete te Geel-Zammel
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18. Station 147	De Hulpe te Molenstede
19. Station 148	De Zwartebeek te Lummen
20. Station 161	De Mangelbeek te Lummen
21. Station 513	De Aabeek te Bree
22. Station 517	De Witbeek te Kessenich
23. Station 518	De Bosbeek te Opoeteren

Bijlagen 1b en 1c:

Per station zijn gegeven:

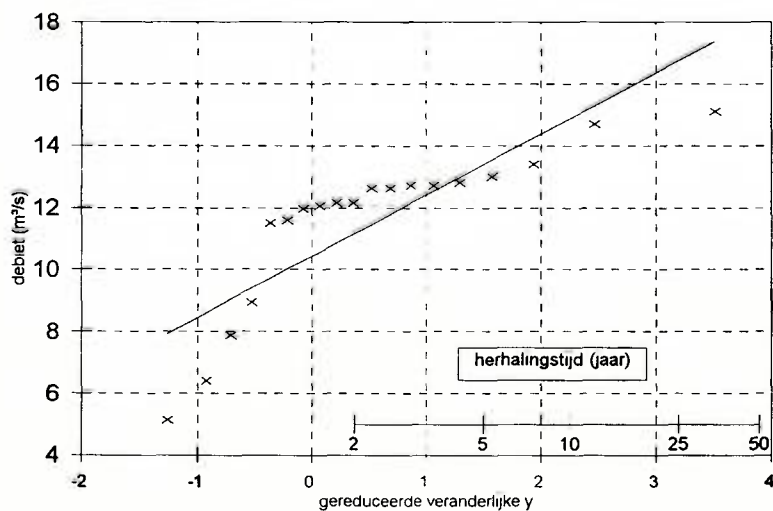
- een lijst van jaarmaxima van hoogwaterdebiet.
- grafieken van neerslagen en debiet van de meest markante hoogwaterperiodes
- een lijst van de grootste runoffhoeveelheden
- grafieken van de runoffcoëfficiënt en de runoffhoeveelheid in functie van de gebiedsneerslag over het stroomgebied.
- grafieken met de jaarmaxima, het 5-jaargemiddelde en het doorlopend gemiddelde van hoogwaterdebiet en runoffhoeveelheden
- een lijst van jaarmaxima van bergingen boven bepaald drempeldebiet.
- grafieken met de jaarmaxima, het 5-jaargemiddelde en het doorlopend gemiddelde van bergingen boven bepaald drempeldebiet
- grafieken van bergingshoeveelheden en -duren in functie van hun voorgekomen frequentie.

12. Station 063

**De Aa
te Poederlee**

Station nr. 063 : De Aa te Poederlee

Nr.	Waterjaar	Datum	Hoogte (cm)	Debiet (m³/s)
1	'89 - '90	13/09/89	116	5 142
2	'76 - '77	23/08/77	135-0 6	6 413
3	'90 - '91	3/01/91	153	7 871
4	'88 - '89	8/03/89	186	8 935
5	'83 - '84	7/02/84	192+3	11 498
6	'95 - '96	8/06/96	196	11 591
7	'82 - '83	1/02/83	197+3	11 965
8	'86 - '87	24/03/87	181+20	12 060
9	'85 - '86	30/03/86	199+3	12 154
10	'77 - '78	23/11/77	203-0 6	12 154
11	'78 - '79	15/03/79	208-0 6	12 632
12	'80 - '81	15/01/81	208-0 6	12 632
13	'91 - '92	10/08/92	208	12 728
14	'84 - '85	13/04/85	205+3	12 728
15	'87 - '88	26/01/88	189+19 8	12 825
16	'79 - '80	6/02/80	212-0 6	13 019
17	'93 - '94	14/10/93	215	13 411
18	'94 - '95	30/01/95	228	14 716
19	'92 - '93	12/12/92	232	15 127



Herhalingstijd (jaar)	Debiet (m³/s)	Spec. afvoer (l/s.ha)
2	11.141	0.55
5	13.385	0.67
10	14.871	0.74
25	16.748	0.83
50	18.140	0.90

Station 063 : Aa te Poederlee

Runoffhoeveelheden

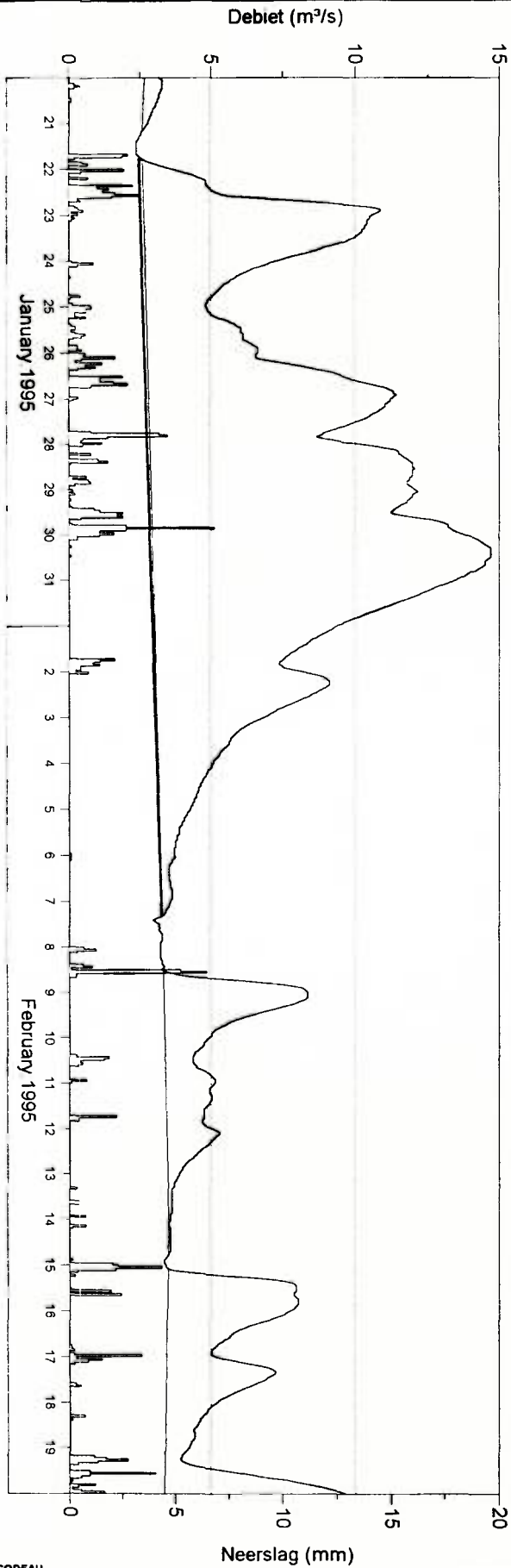
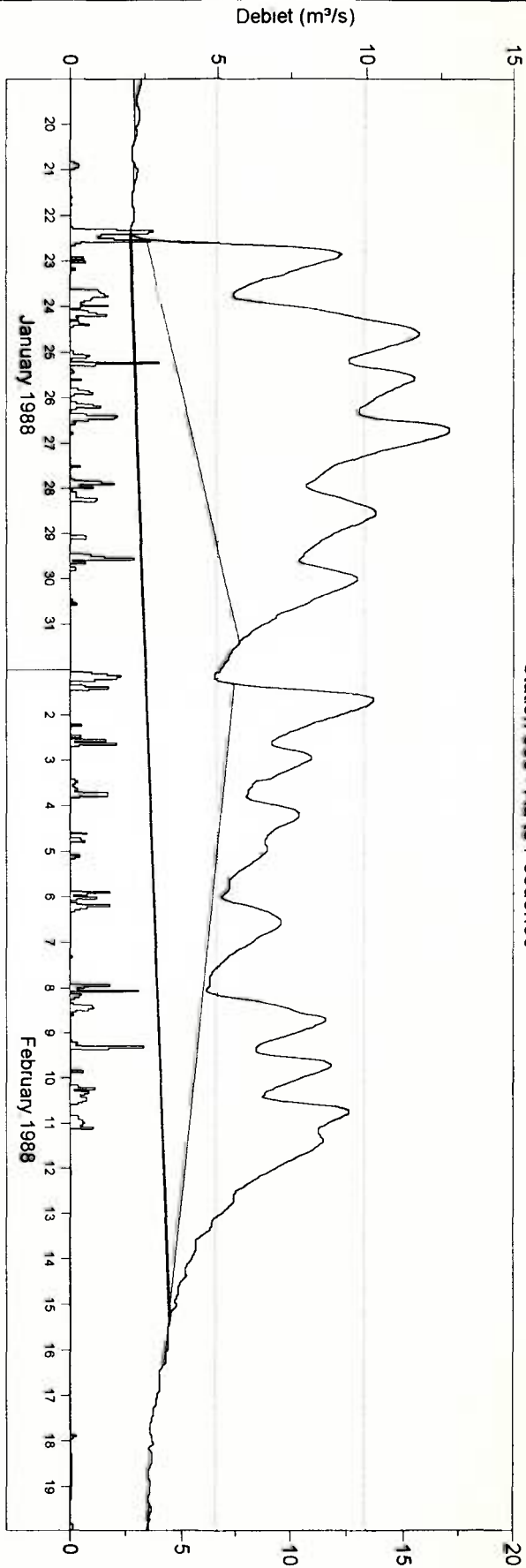
Stroomgebied = 20100 ha

Tijdreeks : 1976 - '96

Nr	Was van (datum Q_{max})	q_{max} (l/s ha)	q_{begin} (l/s ha)	q_{eind} (l/s ha)	Neerslag som (mm)	Neerslag duur (uur)	Concentratie tijd (uur)	Runoff (mm)	Runoff- Coeff (-)	Runoff duur (uur)
1	26/01/88	0.64	0.10	0.16	135.3	563	39	49.2	0.36	597
2	30/01/95	0.73	0.12	0.16	123.4	273	50	37.0	0.30	400
3	21/12/93	0.57	0.09	0.20	151.7	460	54	33.8	0.22	522
4	10/03/81	0.62	0.13	0.17	84.7	296	61	27.0	0.32	352
5	06/02/80	0.65	0.13	0.17	90.8	206	62	26.6	0.29	347
6	24/03/87	0.60	0.08	0.11	77.6	340	63	24.2	0.31	438
7	15/10/82	0.49	0.05	0.11	143.9	411	61	24.2	0.17	432
8	31/03/86	0.60	0.09	0.14	90.9	339	60	23.6	0.26	360
9	19/01/86	0.60	0.18	0.18	68.0	261	48	23.4	0.34	332
10	26/01/85	0.60	0.07	0.14	40.9	293	24	18.9	0.46	357
11	28/12/94	0.56	0.08	0.11	85.2	272	38	18.9	0.22	308
12	06/02/83	0.67	0.16	0.17	66.8	256	52	18.9	0.28	288
13	12/04/85	0.63	0.14	0.14	64.9	136	47	18.6	0.29	224
14	30/12/93	0.66	0.19	0.21	75.6	238	35	17.7	0.23	245
15	15/01/81	0.63	0.15	0.19	48.7	237	47	17.4	0.36	243
16	23/08/77	0.32	0.06	0.09	118.8	269	66	16.6	0.14	424
17	24/03/83	0.47	0.11	0.17	79.7	361	52	16.4	0.21	417
18	04/01/80	0.44	0.13	0.13	62.8	258	74	15.6	0.25	386
19	15/03/79	0.63	0.18	0.23	66.0	232	45	15.4	0.23	288
20	26/03/78	0.35	0.09	0.10	62.0	278	68	15.3	0.25	423
21	23/11/77	0.60	0.16	0.20	73.0	123	40	15.2	0.21	205
22	27/04/83	0.60	0.12	0.16	64.3	169	36	14.9	0.23	228
23	24/11/84	0.56	0.09	0.12	51.1	203	58	14.8	0.29	297
24	15/09/84	0.40	0.05	0.09	150.6	334	61	14.6	0.10	364
25	16/12/79	0.47	0.08	0.14	80.4	241	60	13.5	0.17	304
26	07/02/84	0.57	0.15	0.17	64.6	207	46	13.5	0.21	217
27	04/04/94	0.41	0.11	0.12	68.2	232	48	13.2	0.19	330
28	20/02/95	0.48	0.17	0.17	65.7	314	34	13.1	0.20	342
29	19/03/94	0.46	0.07	0.11	69.6	325	36	12.9	0.19	355
30	11/01/88	0.39	0.09	0.13	57.6	307	46	12.9	0.22	349

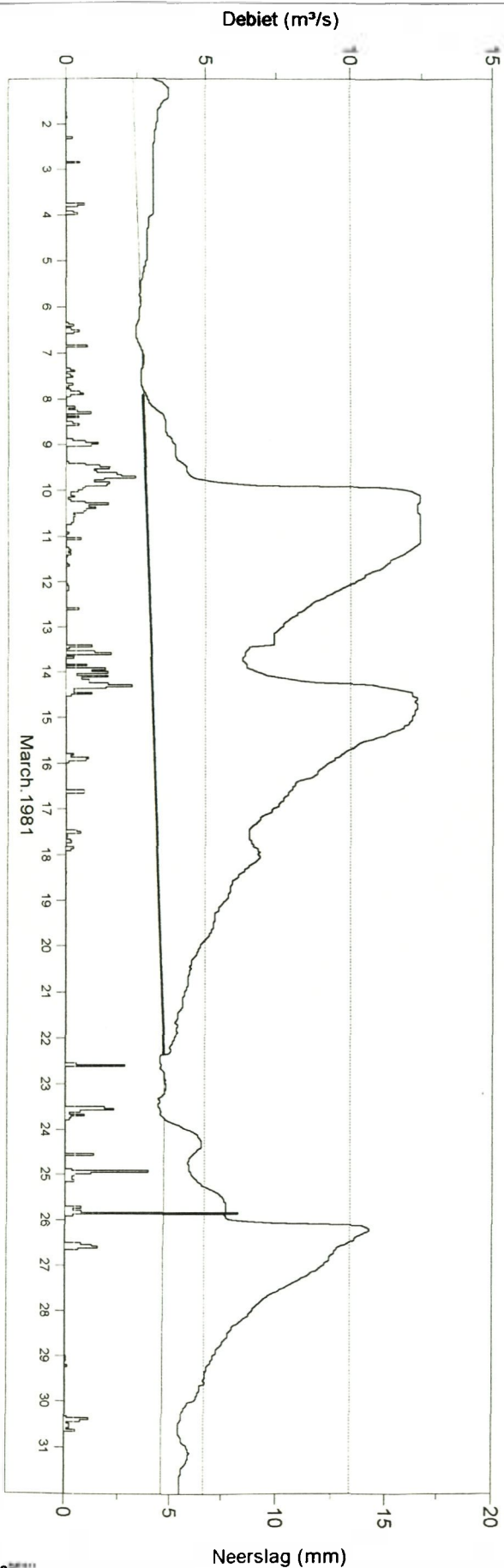
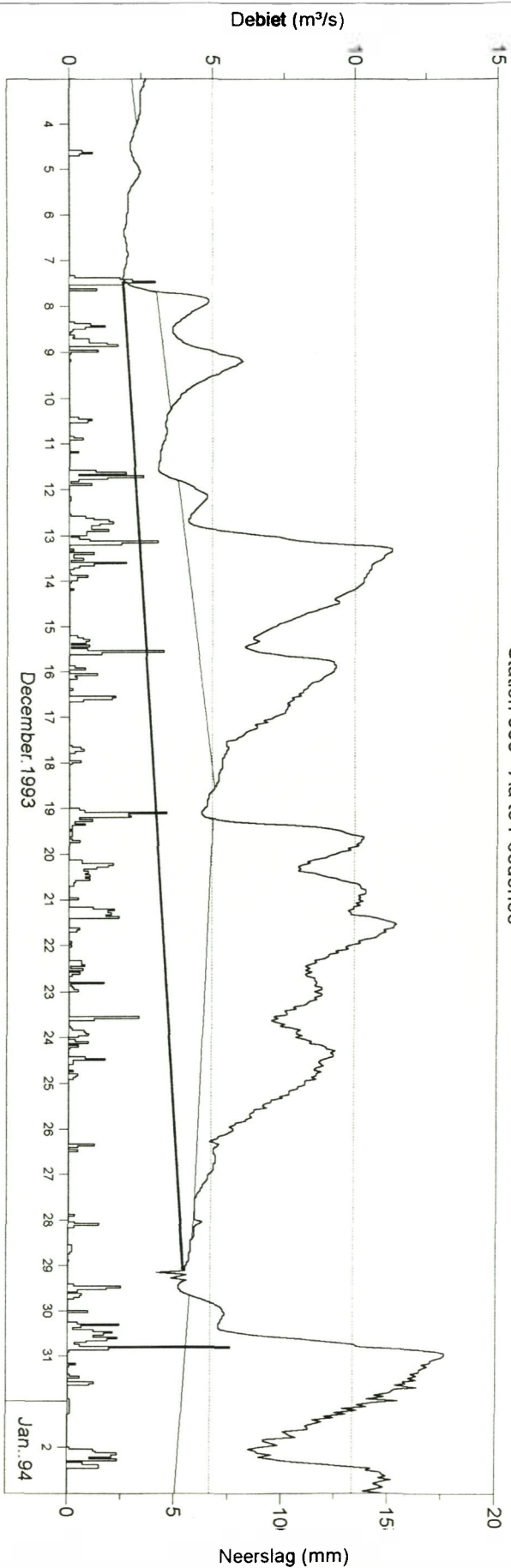
Uurwaarden van neerslag, debiet en basisafvoer

Station 063 - Aa te Poederlee



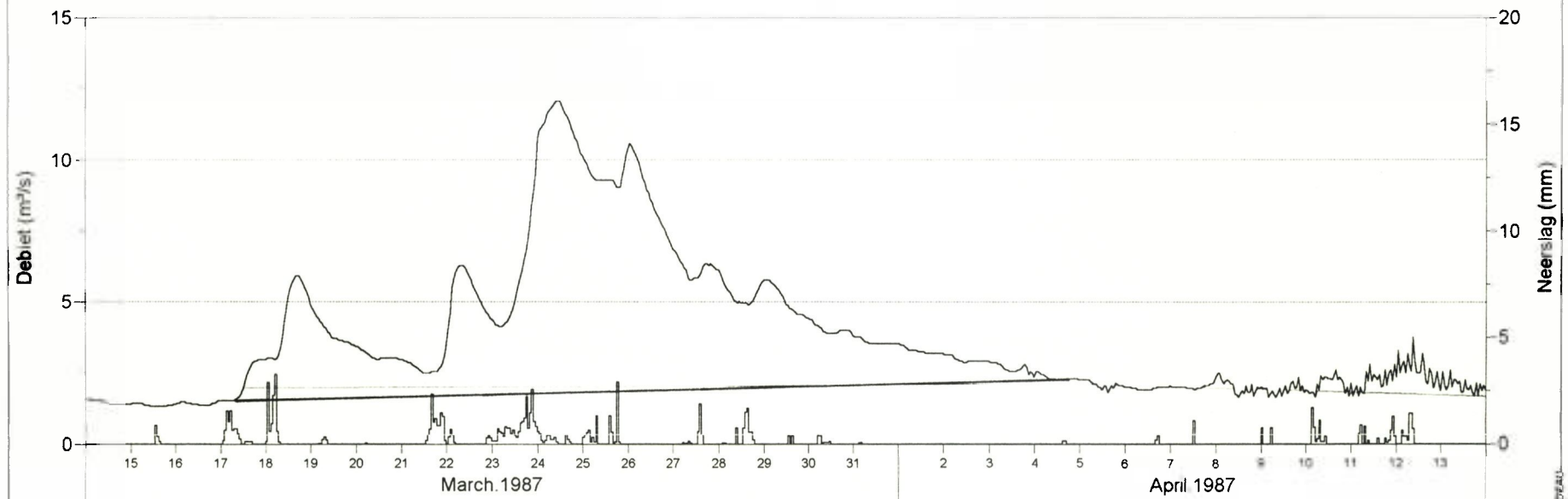
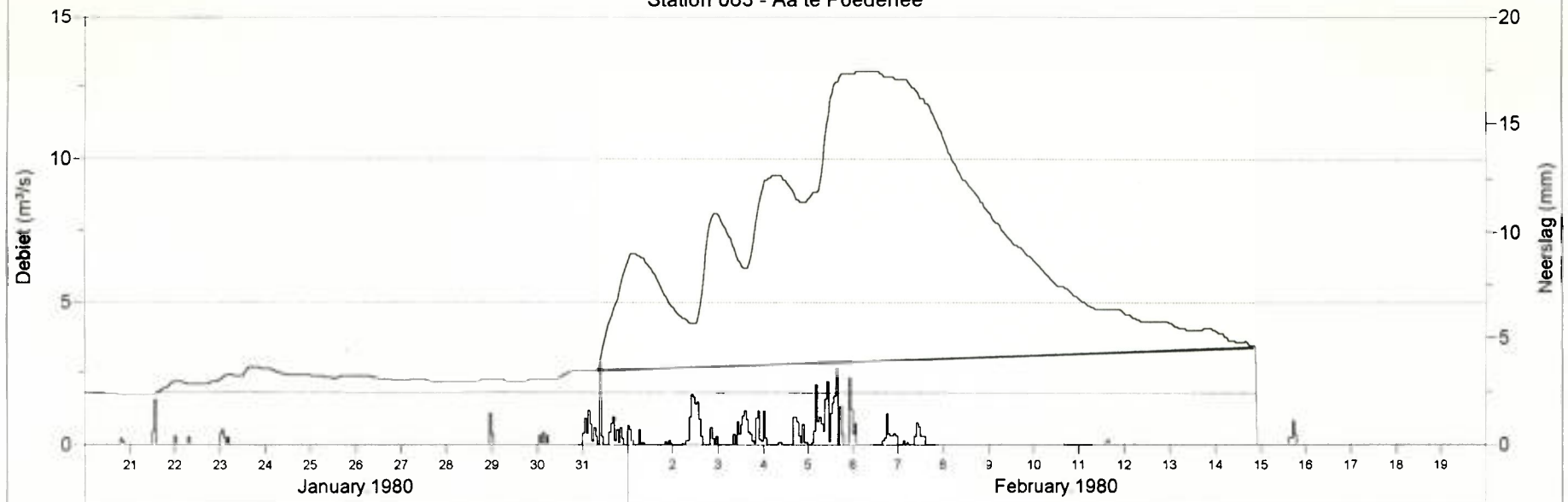
Uurwaarden van neerslag, debiet en basisafvoer

Station 063 - Aa te Poederlee



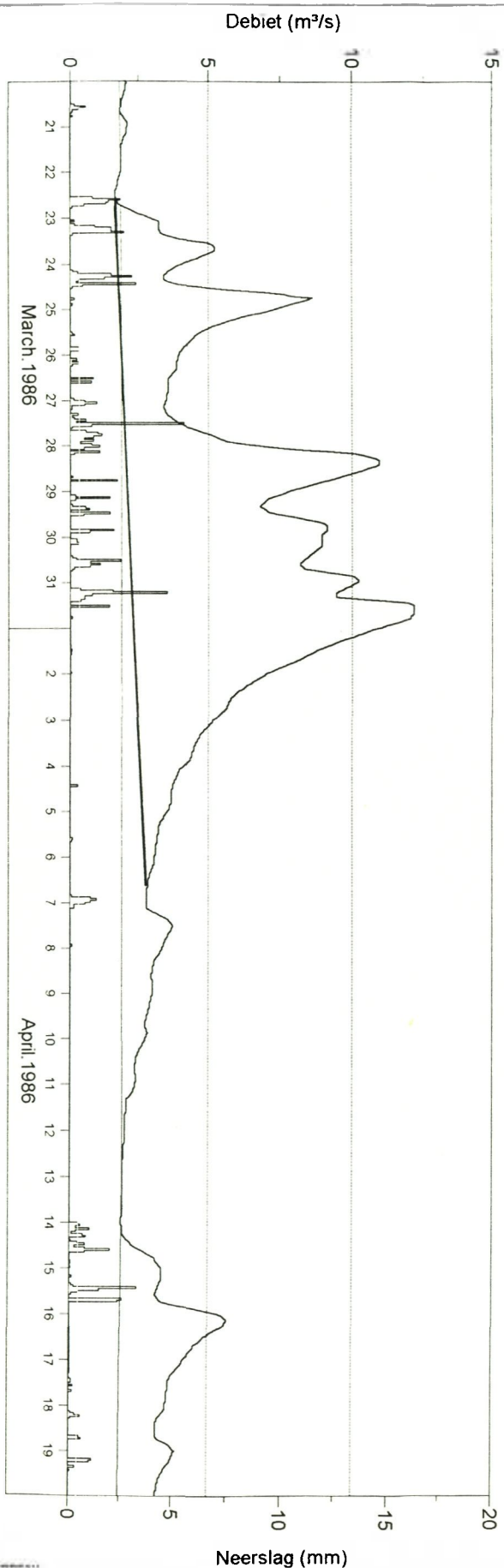
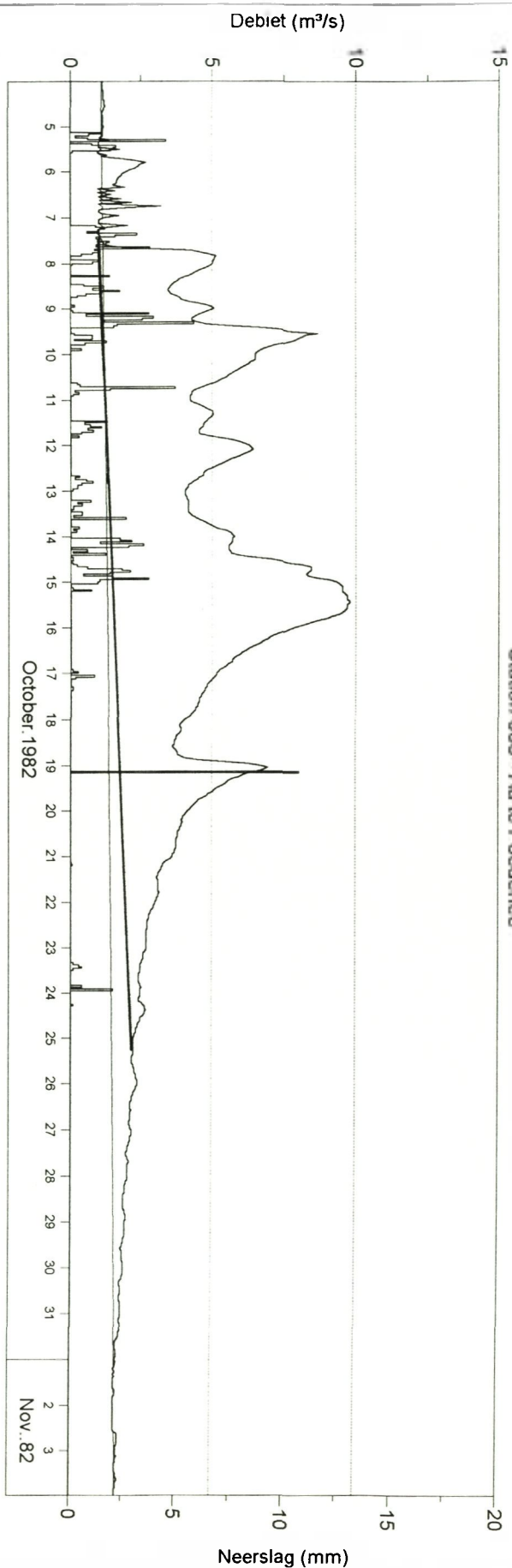
Uurwaarden van neerslag, debiet en basisafvoer

Station 063 - Aa te Poederlee



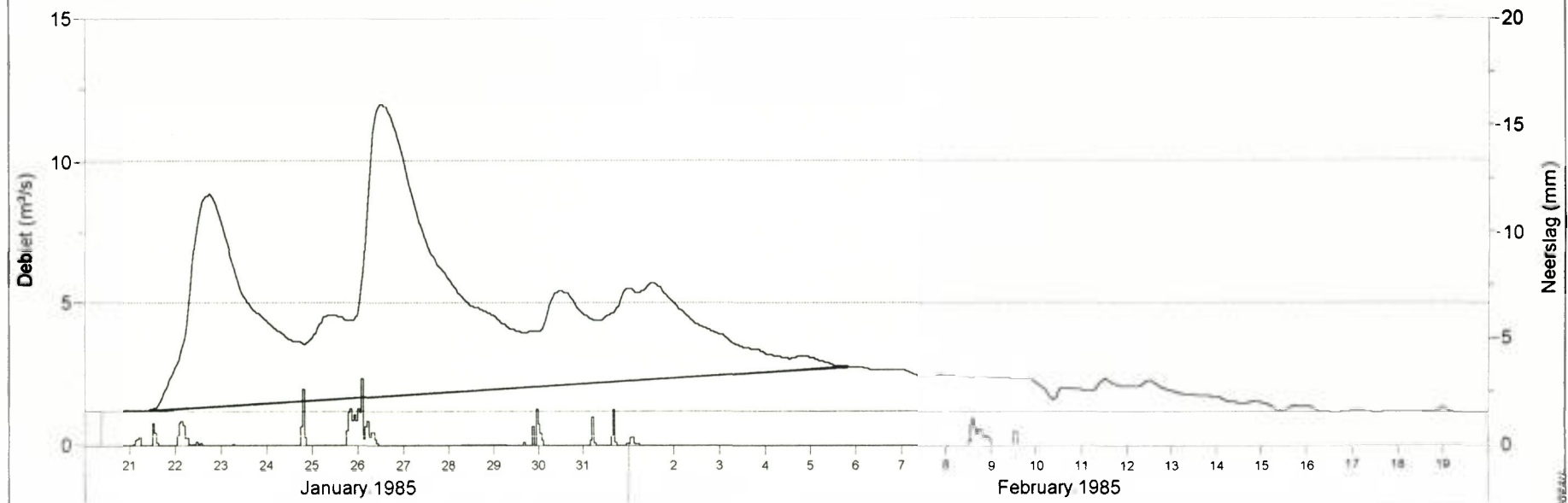
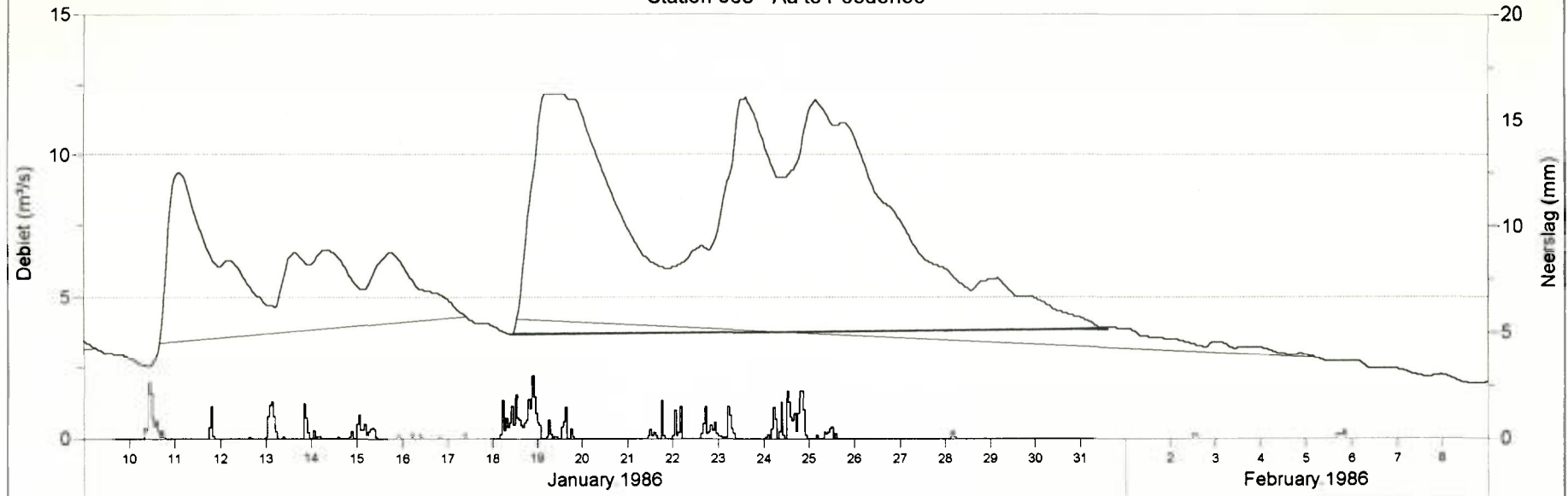
Uurwaarden van neerslag, debiet en basisafvoer

Station 063 - Aa te Poederlee



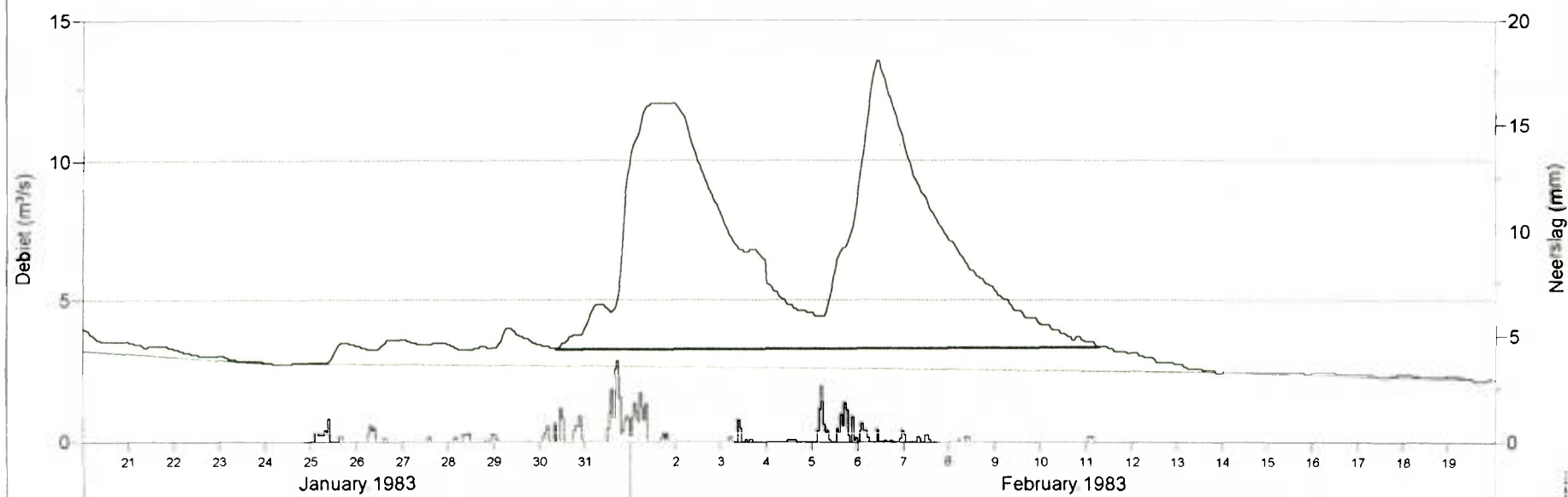
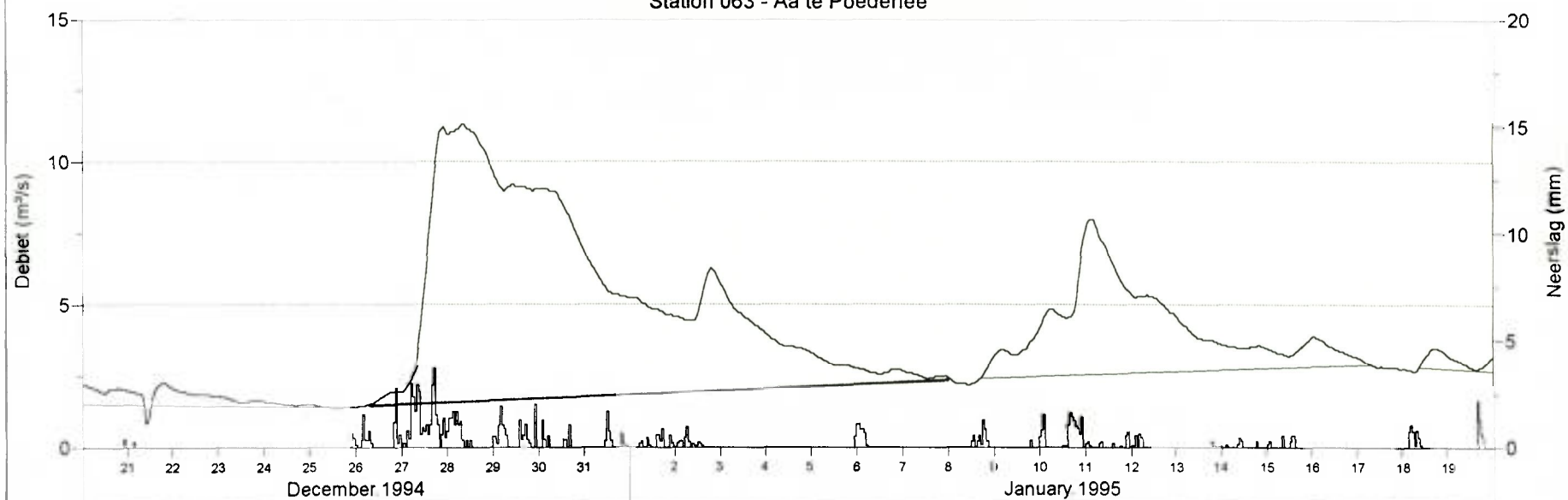
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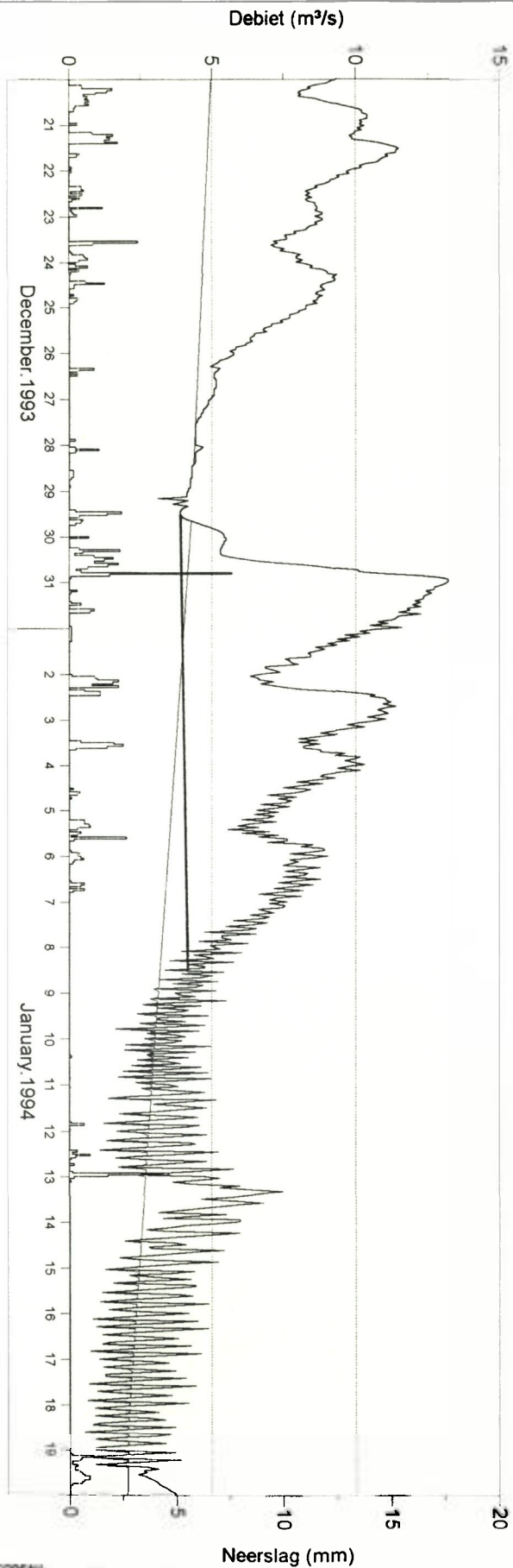
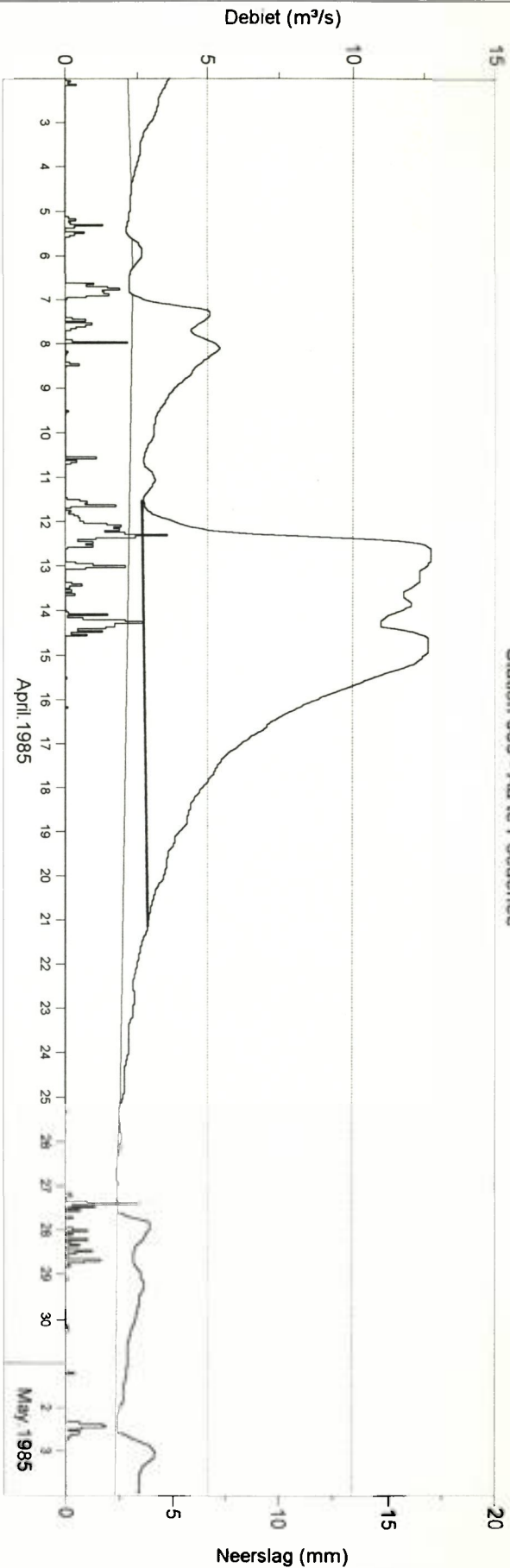
Uurwaarden van neerslag, debiet en basisafvoer

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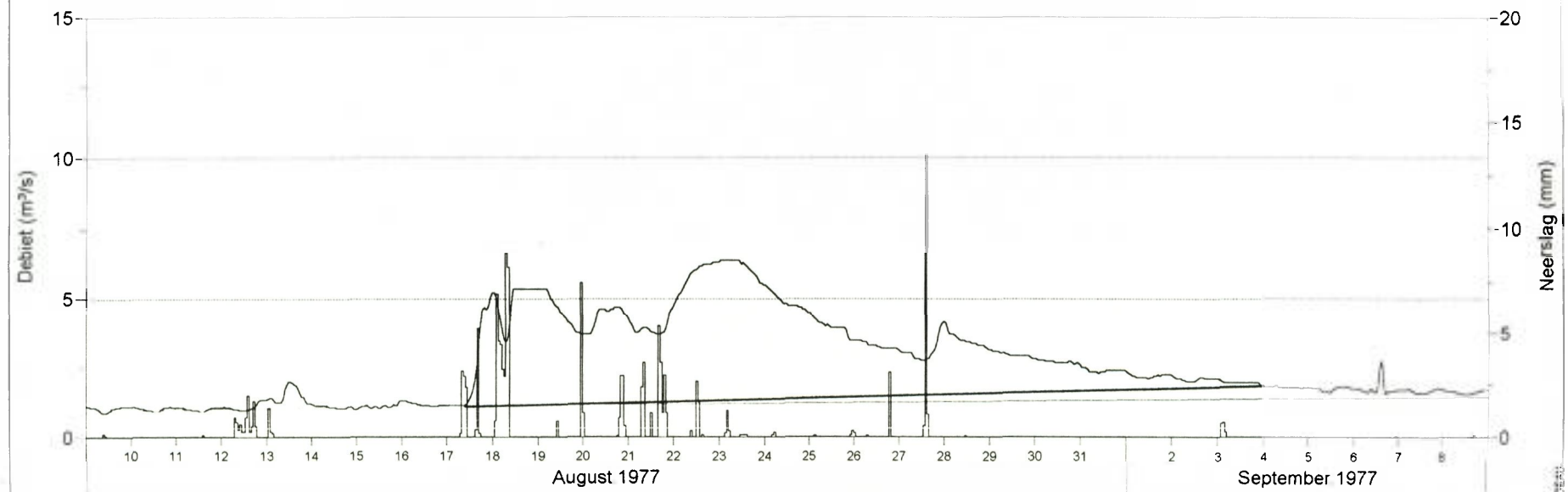
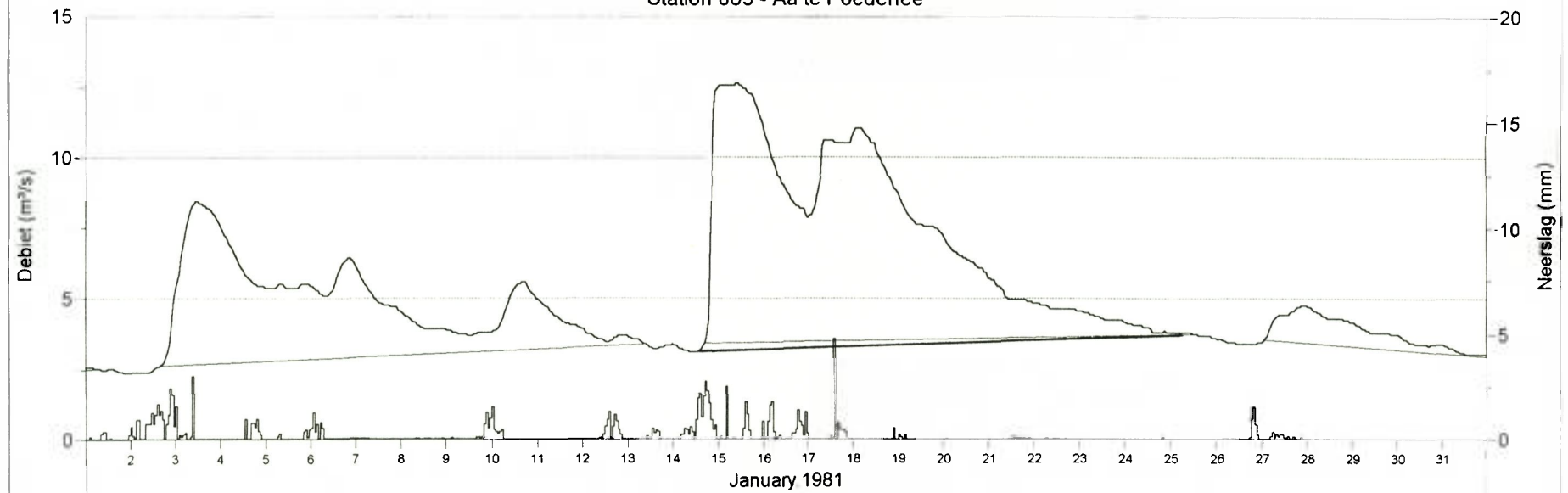
Uurwaarden van neerslag, debiet en basisafvoer

Station 063 - Aa te Poederlee



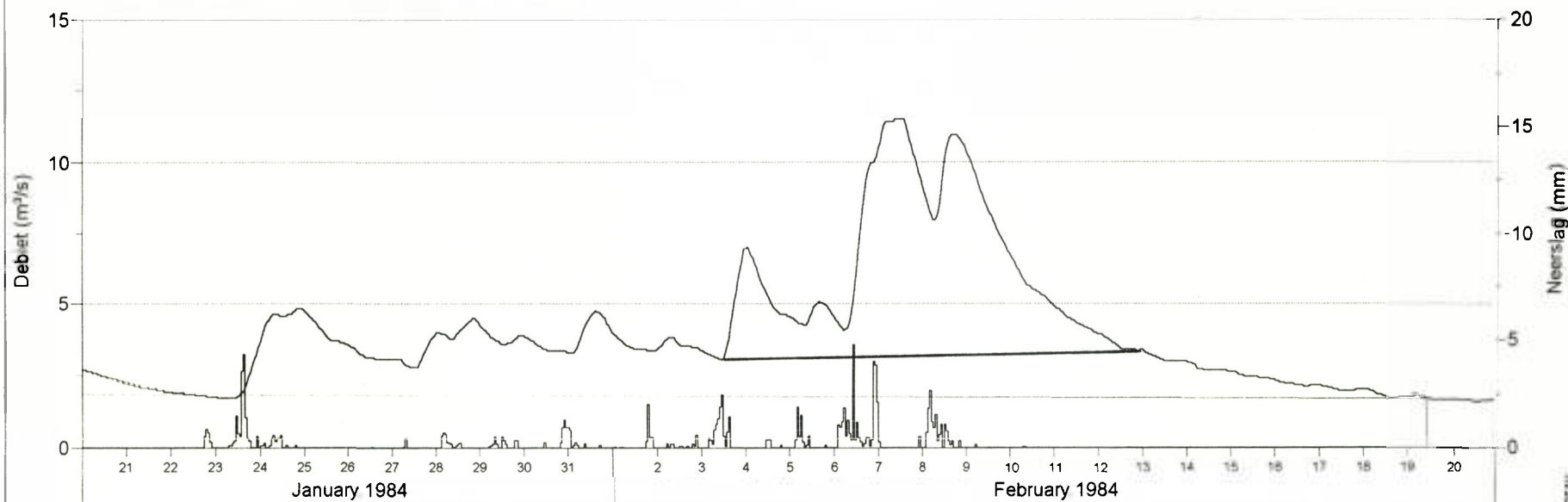
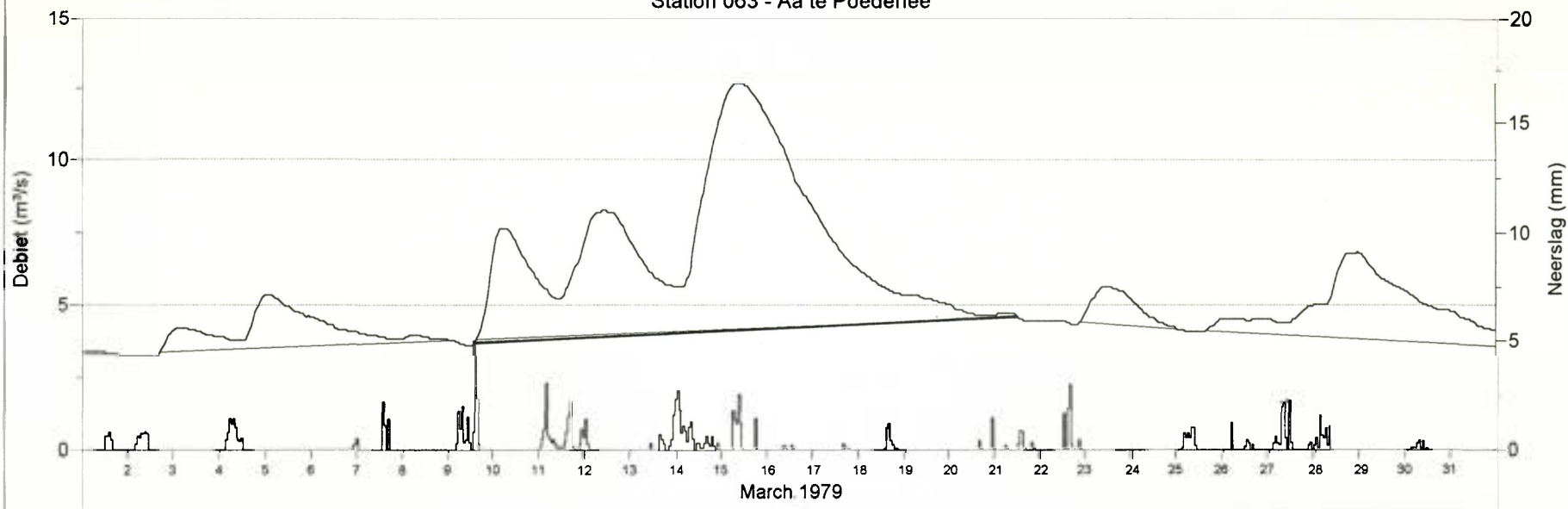
Uurwaarden van neerslag, debiet en basisafvoer

Station 063 - Aa te Poederlee



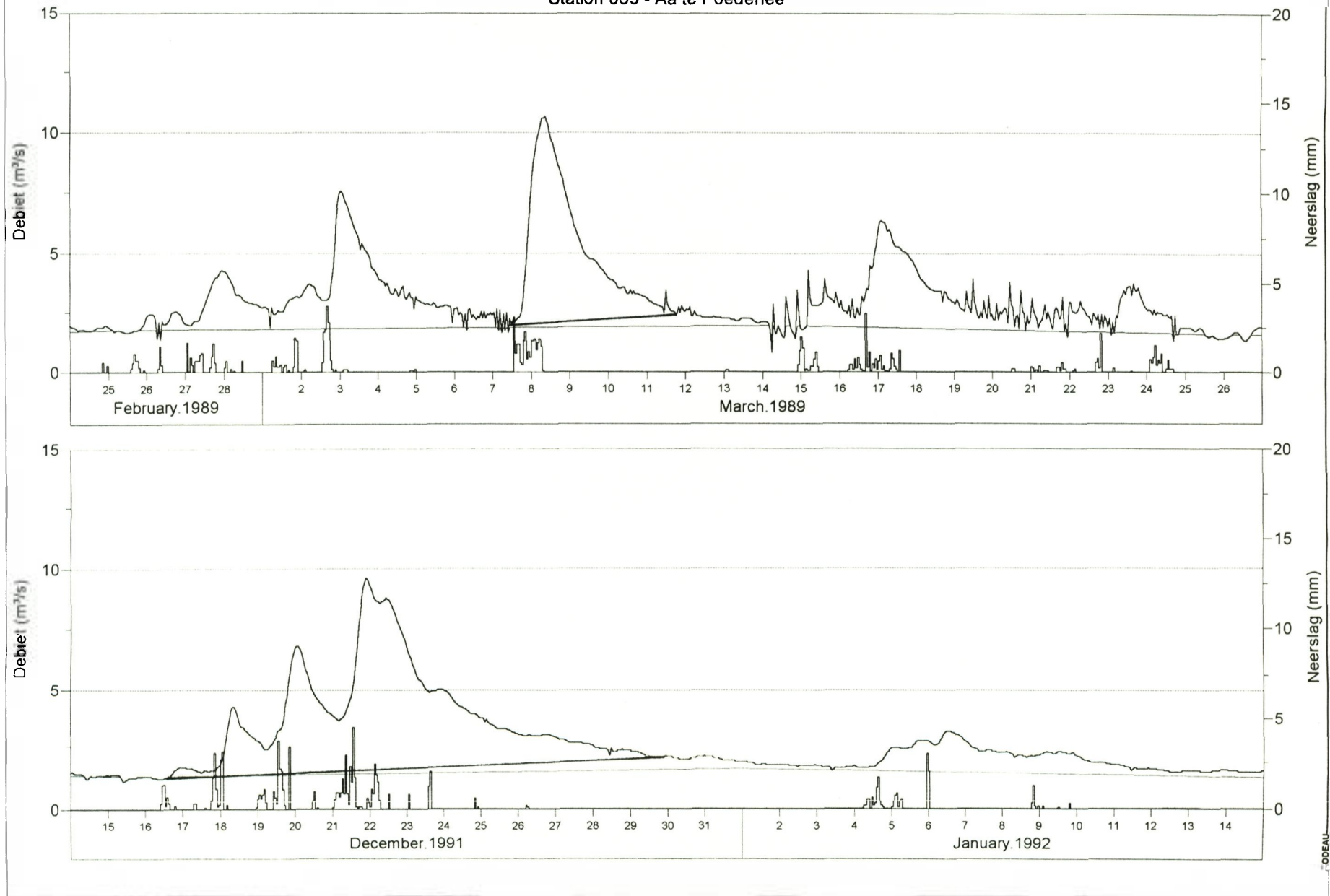
Uurwaarden van neerslag, debiet en basisafvoer

Station 063 - Aa te Poederlee

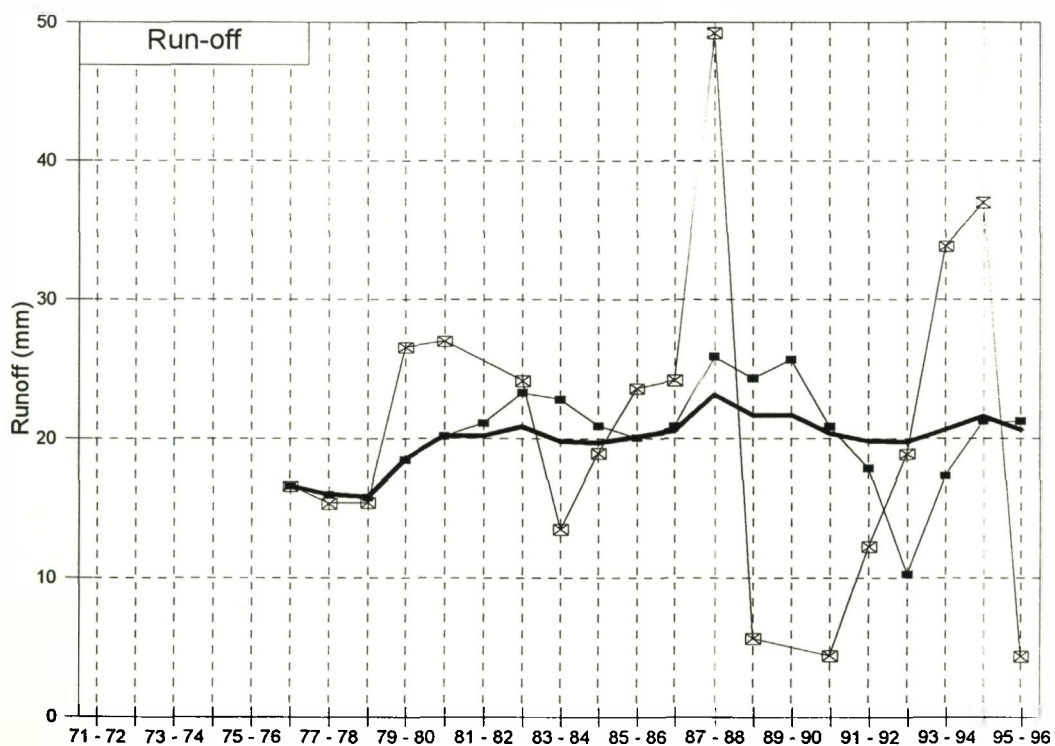
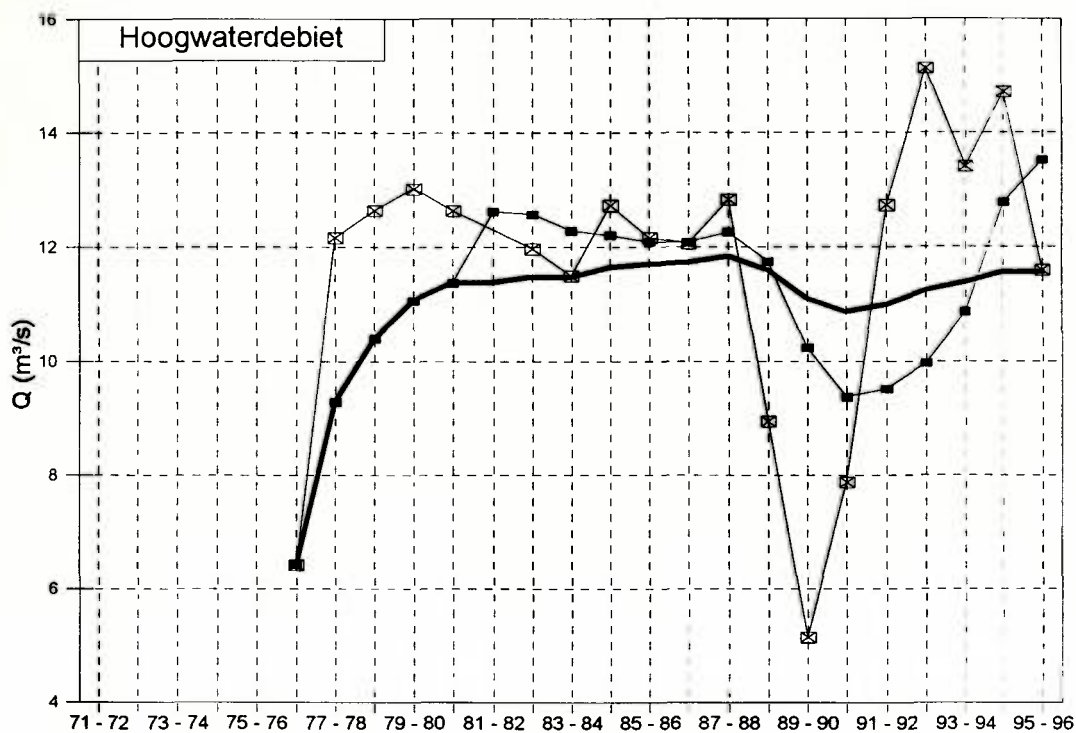


Uurwaarden van neerslag, debiet en basisafvoer

Station 063 - Aa te Poederlee

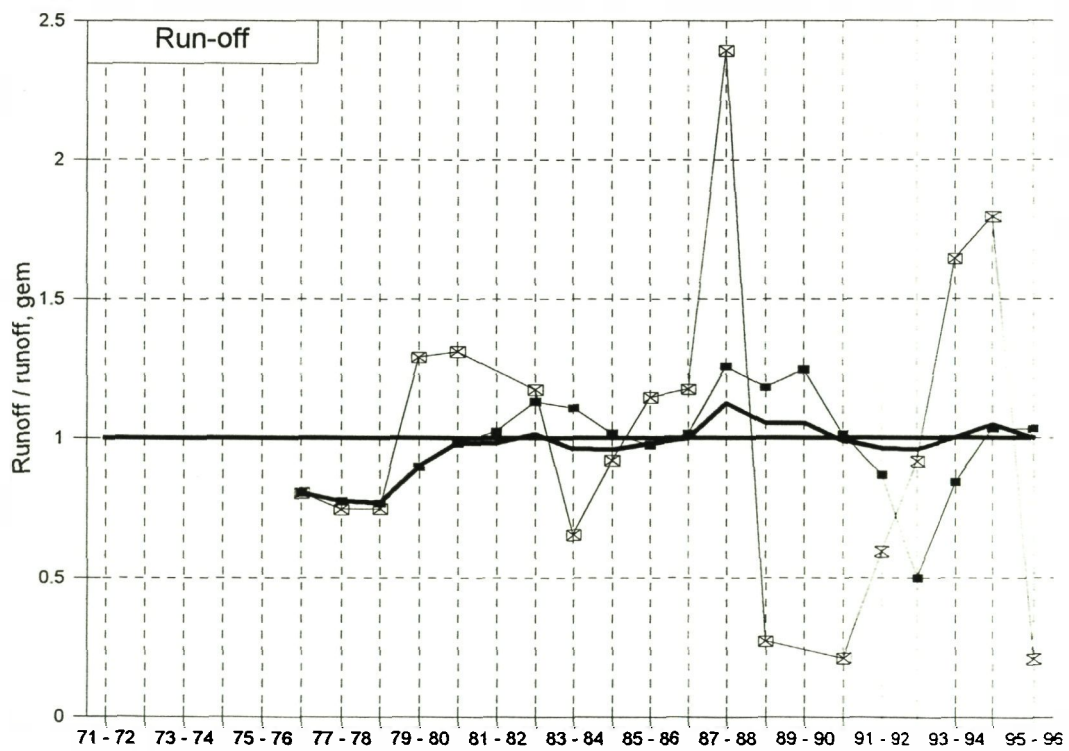
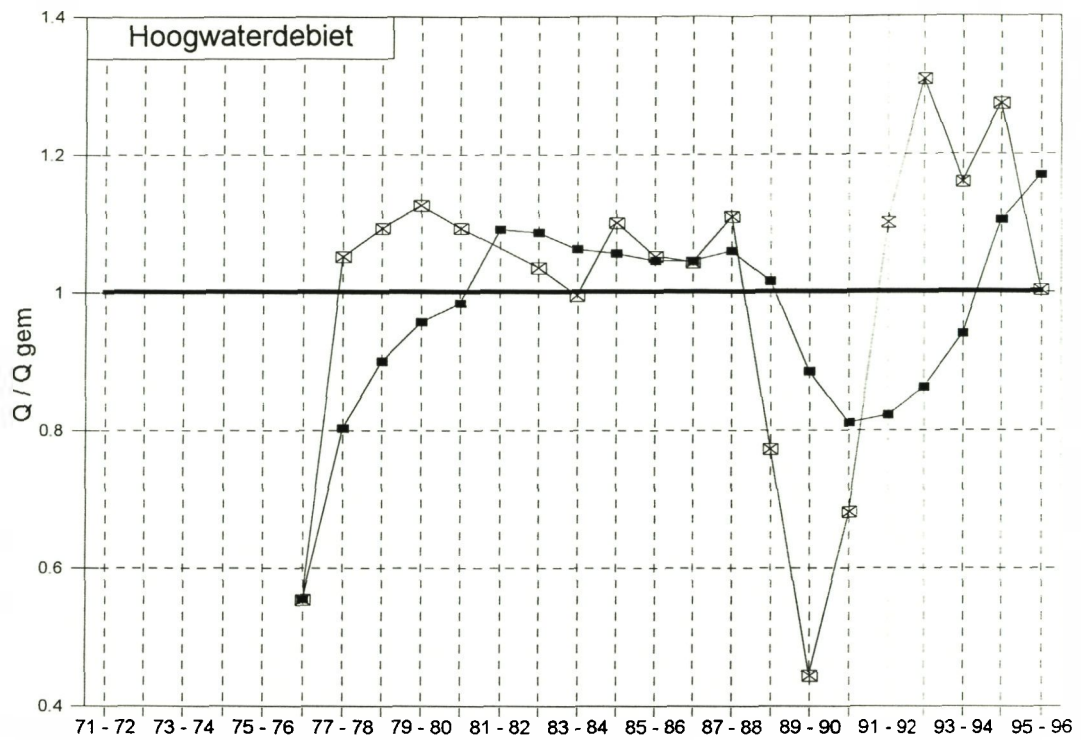


Station 063 : Aa /Poederlee



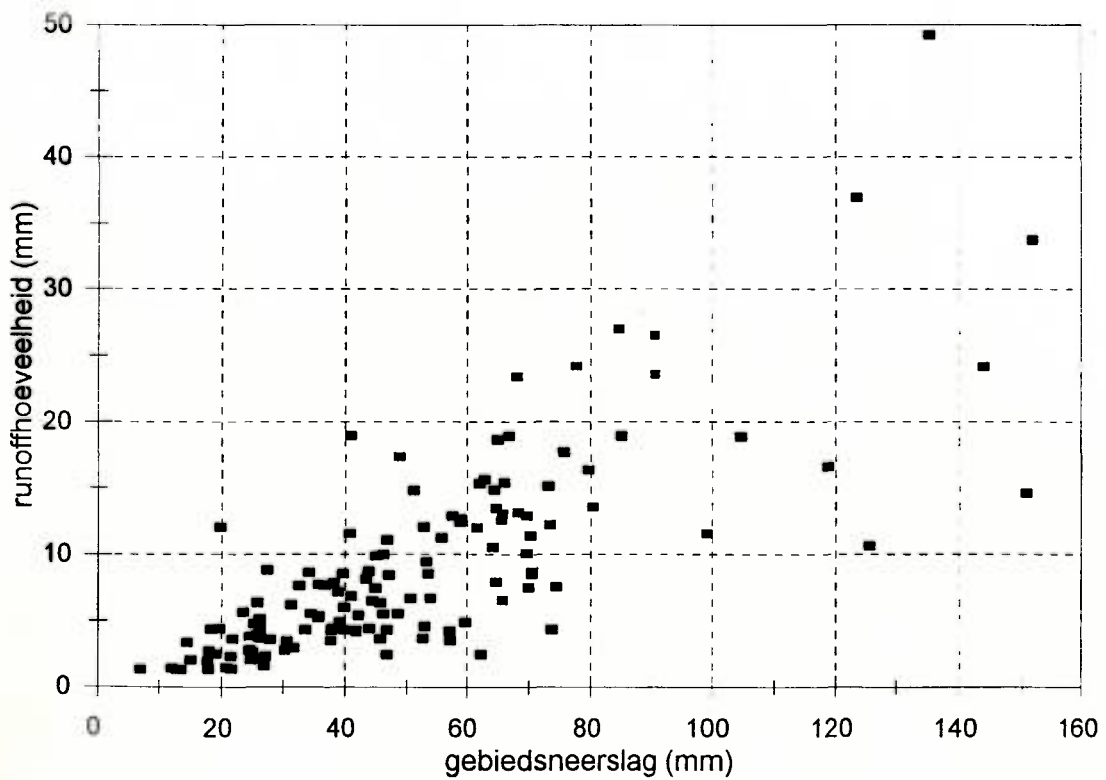
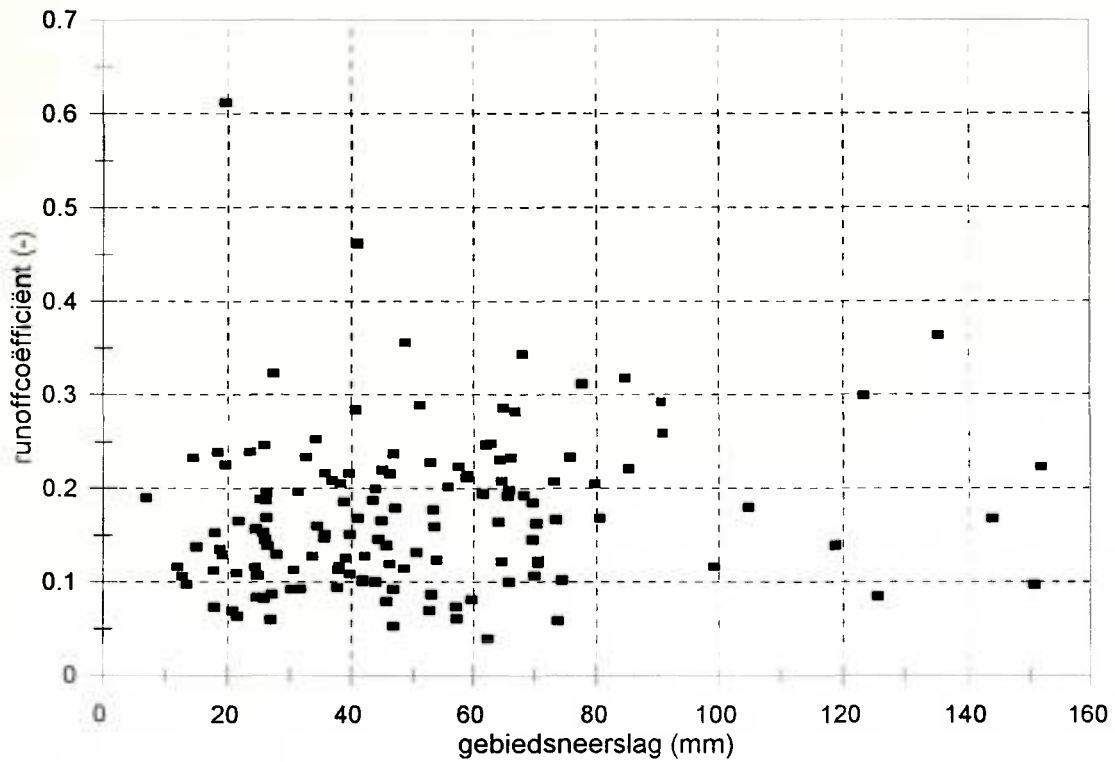
— doorlopend gemiddelde —x— Jaarmaxima —■— 5-jaargemiddelde

Station 063 : Aa /Poederlee



— doorlopend gemiddelde x Jaarmaxima ■ 5-jaargemiddelde

Station 063 : Aa / Poederlee



Jaarmaxima van bergingen					
Station 063 : Aa / Poederlee			Gemiddeld jaarmax. : 11.012 m ³ /s		
Waterjaar	piekdebiet (m ³ /s)	datum	(mm)	berging (uur)	datum
Bergingen boven 0,4 Qgem					
'76-'77	6 413	23/08/77	1 56	246	25/08/77
'77-'78	12 154	23/11/77	11 99	723	28/11/77
'78-'79	12 632	15/03/79	18 67	2018	31/03/79
'79-'80	13 019	06/02/80	18 28	341	12/02/80
'80-'81	12 440	11/03/81	23 02	715	30/03/81
'81-'82			0 00	0	
'82-'83	13 510	06/02/83	13 65	643	09/02/83
'83-'84	11 498	07/02/84	9 05	443	11/02/84
'84-'85	12 728	12/04/85	13 18	534	18/04/85
'85-'86	12 154	19/01/86	23 56	1052	30/01/86
'86-'87	12 060	24/03/87	9 28	476	30/03/87
'87-'88	12 825	26/01/88	39 49	2527	01/04/88
'88-'89	10 676	08/03/89	2 39	133	09/03/89
'90-'91	5 008	01/03/90	0 11	23	01/03/90
'90-'91	7 871	03/01/91	0 75	98	04/01/91
'91-'92	9 617	21/12/91	3 17	231	24/12/91
'92-'93	9 274	12/01/93	2 92	211	14/01/93
'93-'94	13 214	30/12/93	37 53	2251	08/01/94
'94-'95	14 716	30/01/95	34 90	2650	27/02/95
'95-'96	7 476	29/08/96	0 67	48	29/08/96
Bergingen boven 0,5 Qgem					
'76-'77	6 413	23/08/77	0 45	71	23/08/77
'77-'78	12 154	23/11/77	9 01	361	27/11/77
'78-'79	12 632	15/03/79	8 60	674	18/03/79
'79-'80	13 019	06/02/80	13 32	292	10/02/80
'80-'81	12 440	11/03/81	14 23	711	19/03/81
'81-'82			0 00	0	
'82-'83	13 510	06/02/83	9 59	413	08/02/83
'83-'84	11 498	07/02/84	6 19	252	10/02/84
'84-'85	12 728	12/04/85	10 53	348	17/04/85
'85-'86	12 154	19/01/86	14 65	768	28/01/86
'86-'87	12 060	24/03/87	6 17	294	28/03/87
'87-'88	12 825	26/01/88	20 91	1179	12/02/88
'88-'89	10 676	08/03/89	1 65	84	09/03/89
'89-'90			0 00	0	
'90-'91	7 871	03/01/91	0 30	34	03/01/91
'91-'92	9 617	21/12/91	1 75	108	23/12/91
'92-'93	10 947	17/11/92	1 67	120	19/11/92
'93-'94	13 214	31/12/93	24 68	1420	07/01/94
'94-'95	14 716	30/01/95	20 26	1323	03/02/95
'95-'96	7 476	29/08/96	0 35	26	29/08/96

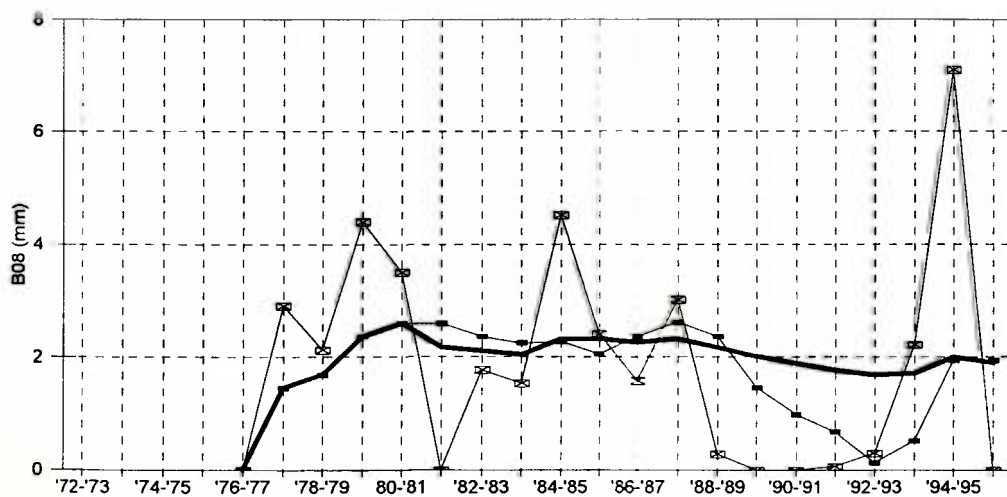
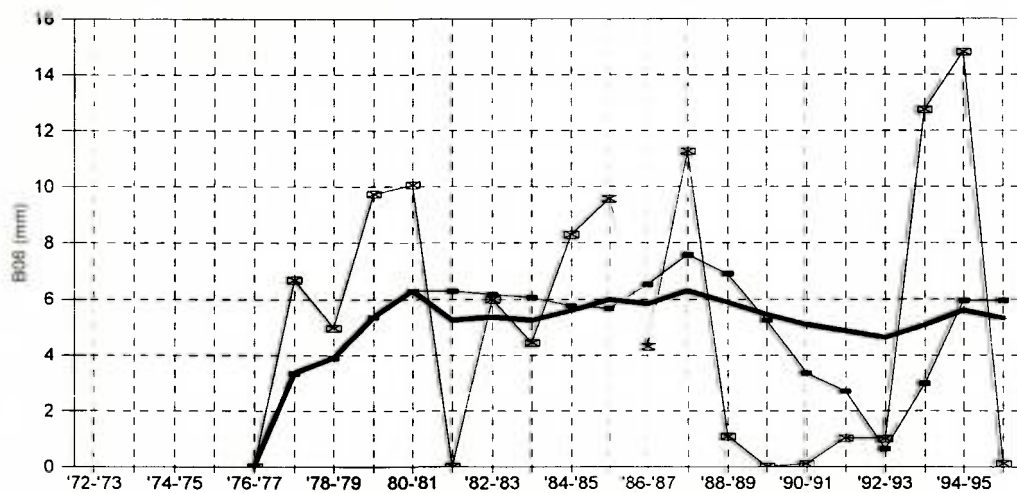
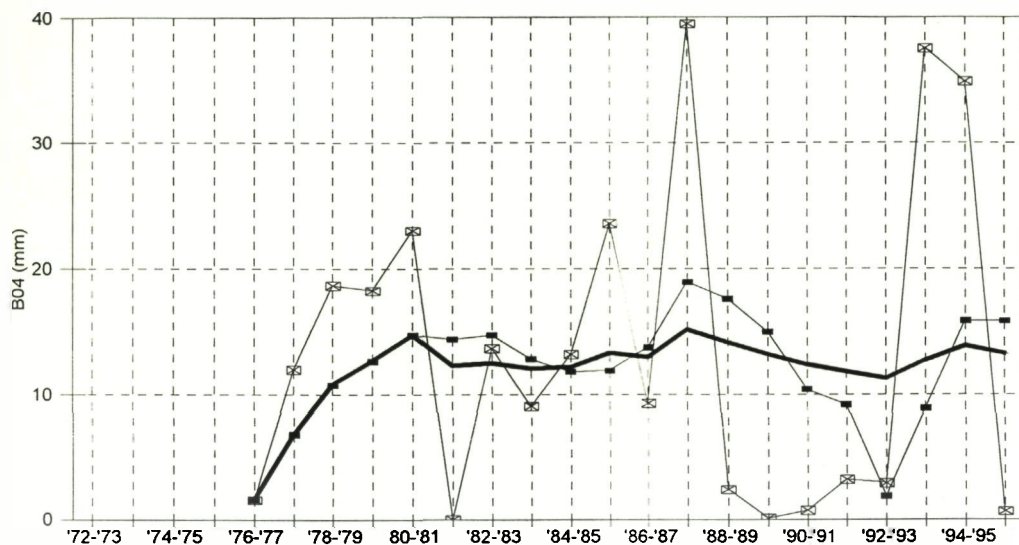
Jaarmaxima van bergingen**Station 063 : Aa / Poederlee****Gemiddeld jaarmax : 11.012 m³/s**

Waterjaar	piekdebiet		berging		
	(m ³ /s)	datum	(mm)	(uur)	datum
Bergingen boven 0,6 Qgem					
'76-'77			0 00	0	
'77-'78	12 154	23/11/77	6 68	256	26/11/77
'78-'79	12 632	15/03/79	4 98	306	17/03/79
'79-'80	13 019	06/02/80	9 74	291	09/02/80
'80-'81	12 440	11/03/81	10 05	562	18/03/81
'81-'82			0 00	0	
'82-'83	13 510	06/02/83	5 98	303	08/02/83
'83-'84	11 498	07/02/84	4 43	183	10/02/84
'84-'85	12 728	12/04/85	8 29	264	16/04/85
'85-'86	12 154	19/01/86	9 57	427	27/01/86
'86-'87	12 060	24/03/87	4 31	206	27/03/87
'87-'88	12 825	26/01/88	11 26	692	12/02/88
'88-'89	10 676	08/03/89	1 08	56	09/03/89
'89-'90			0 00	0	
'90-'91	7 871	03/01/91	0 09	13	03/01/91
'91-'92	9 617	21/12/91	1 02	69	23/12/91
'92-'93	10 947	17/11/92	1 00	71	18/11/92
'93-'94	13 214	31/12/93	12 74	852	07/01/94
'94-'95	14 716	30/01/95	14 81	844	03/02/95
'95-'96	7 476	29/08/96	0 11	14	29/08/96
Bergingen boven 0,7 Qgem					
'76-'77			0 00	0	
'77-'78	12 154	23/11/77	4 66	186	26/11/77
'78-'79	12 632	15/03/79	3 31	150	17/03/79
'79-'80	13 019	06/02/80	6 80	260	09/02/80
'80-'81	12 440	11/03/81	6 61	307	16/03/81
'81-'82			0 00	0	
'82-'83	11 965	28/04/83	3 34	146	29/04/83
'83-'84	11 498	07/02/84	2 89	136	09/02/84
'84-'85	12 728	12/04/85	6 30	207	16/04/85
'85-'86	12 154	19/01/86	5 63	320	27/01/86
'86-'87	12 060	24/03/87	2 84	147	26/03/87
'87-'88	12 825	26/01/88	5 95	501	30/01/88
'88-'89	10 676	08/03/89	0 63	37	08/03/89
'89-'90			0 00	0	
'90-'91			0 00	0	
'91-'92	9 617	21/12/91	0 45	41	22/12/91
'92-'93	10 947	17/11/92	0 60	40	18/11/92
'93-'94	13 214	31/12/93	4 46	255	04/01/94
'94-'95	14 716	30/01/95	10 22	372	02/02/95
'95-'96			0 00	0	

Jaarmaxima van bergingen**Station 063 : Aa / Poederlee**Gemiddeld jaarmax. : 11.012 m³/s

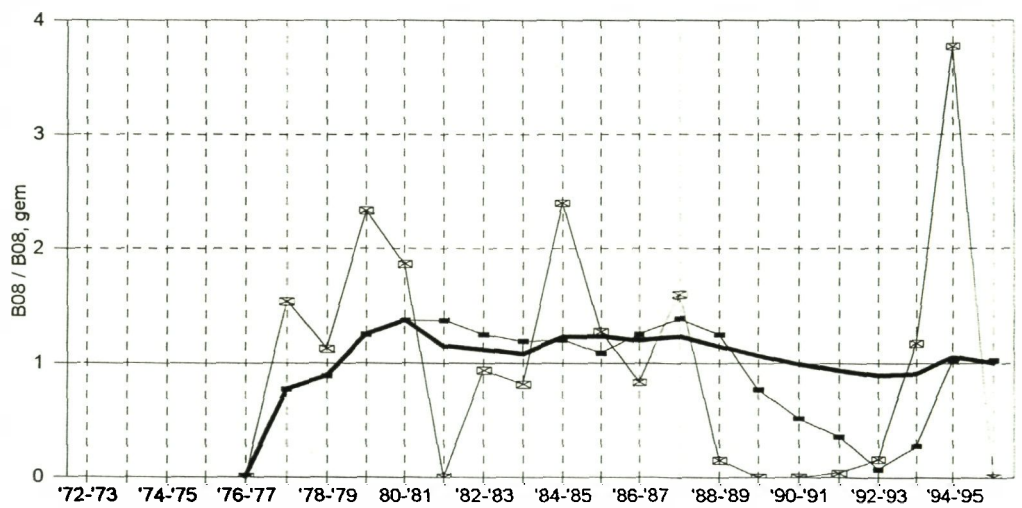
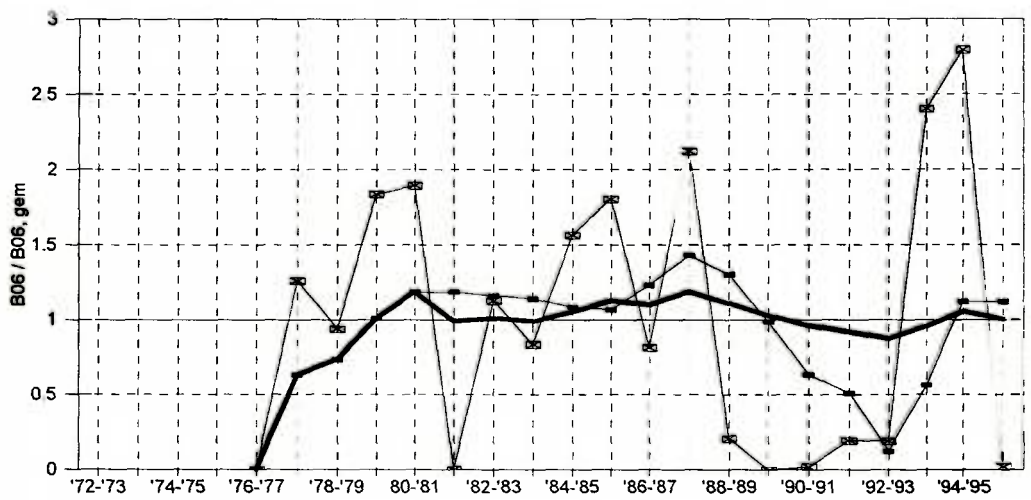
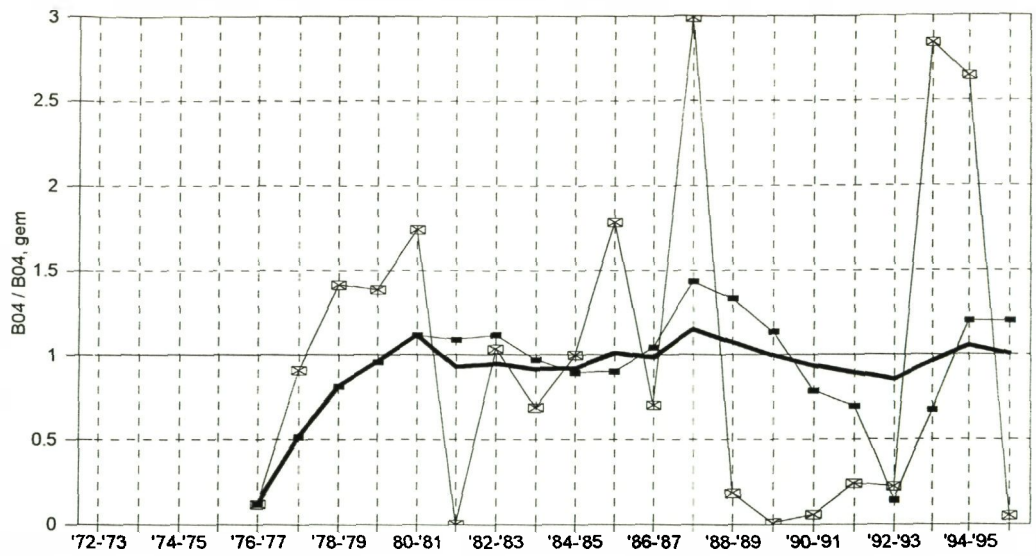
Waterjaar	piekdebiet		berging		
	(m ³ /s)	datum	(mm)	(uur)	datum
Bergingen boven 0,8 . Qgem					
'76 -'77			0.00	0	
'77 -'78	12.154	23/11/77	2.90	139	25/11/77
'78 -'79	12.632	15/03/79	2.12	103	16/03/79
'79 -'80	13.019	06/02/80	4.39	198	08/02/80
'80 -'81	12.440	11/03/81	3.51	235	16/03/81
'81 -'82			0.00	0	
'82 -'83	11.965	02/02/83	1.77	88	02/02/83
'83 -'84	11.498	07/02/84	1.53	101	09/02/84
'84 -'85	12.728	12/04/85	4.52	165	16/04/85
'85 -'86	12.060	23/01/86	2.40	137	26/01/86
'86 -'87	12.060	24/03/87	1.57	101	26/03/87
'87 -'88	12.825	26/01/88	3.01	250	29/01/88
'88 -'89	10.676	08/03/89	0.28	25	08/03/89
'89 -'90			0.00	0	
'90 -'91			0.00	0	
'91 -'92	9.617	21/12/91	0.06	20	22/12/91
'92 -'93	10.947	17/11/92	0.30	23	18/11/92
'93 -'94	13.214	31/12/93	2.21	194	04/01/94
'94 -'95	14.716	30/01/95	7.10	269	01/02/95
'95 -'96			0.00	0	

Station 063 : Aa / Poederlee



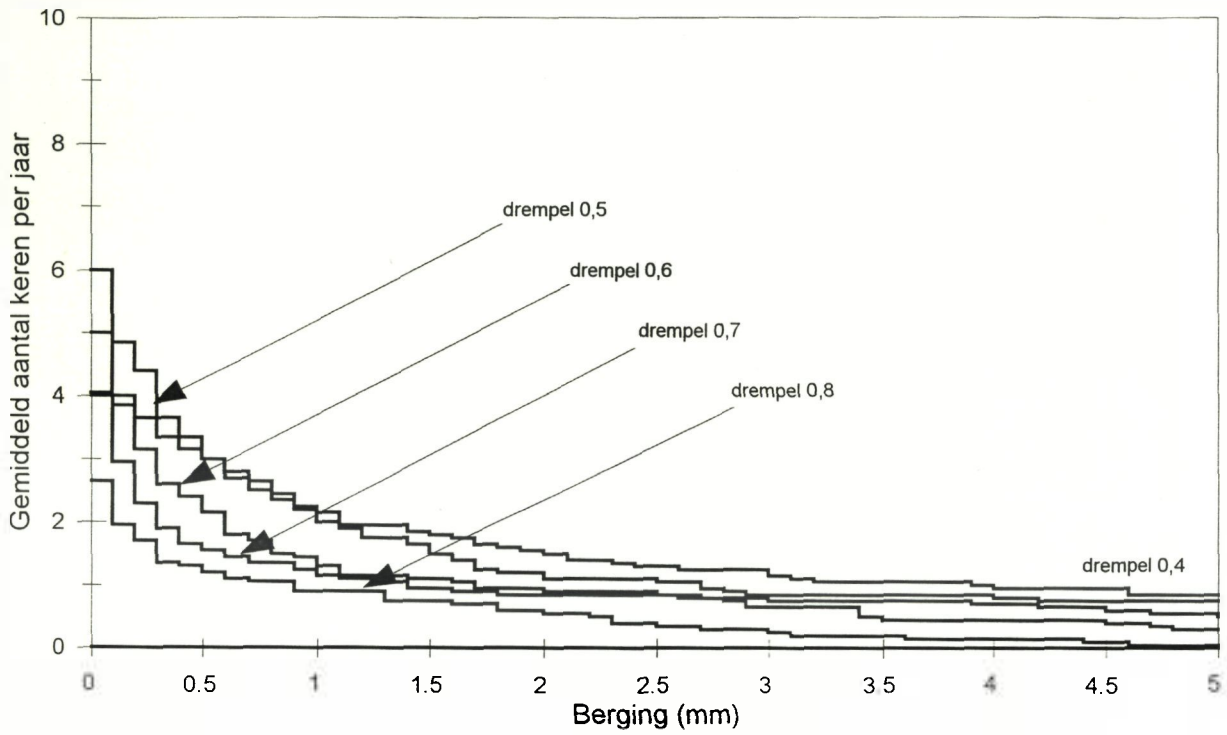
— doorlopend gemiddelde —■— Jaarmaxima —■— 5-jaargemiddelde

Station 063 : Aa / Poederlee

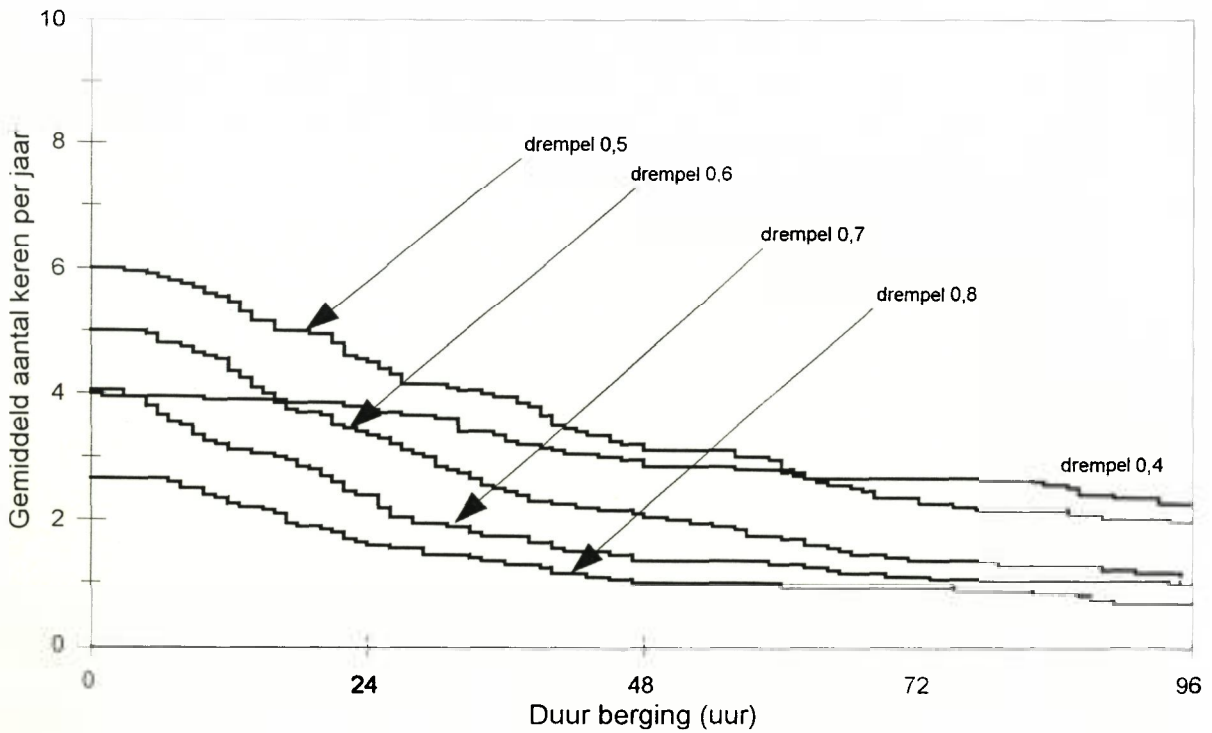


— doorlopend gemiddelde — Jaarmaxima — 5-jaargemiddelde

Station 063 - Aa te Poederlee



Station 063 - Aa te Poederlee

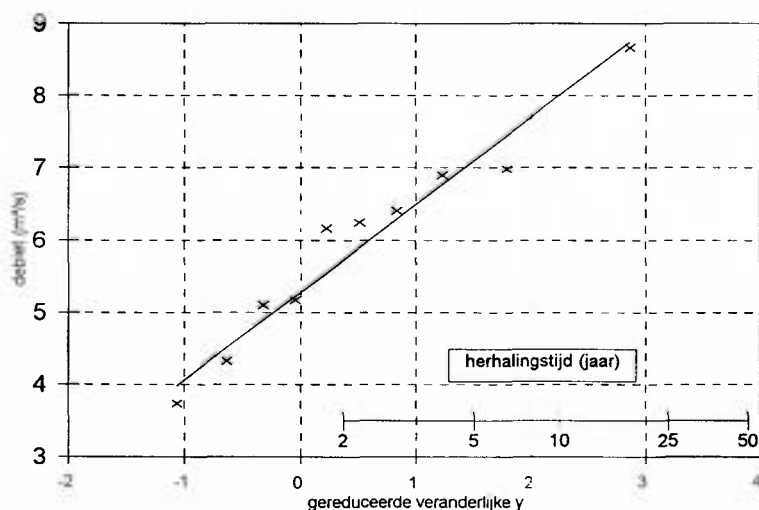


13. Station 064

**De Aa
te Turnhout**

Station nr. 064 : De Aa te Turnhout

Nr.	Waterjaar	Datum	Hoogte (cm)	Debiet (m³/s)
1	'88 - '89	8/03/89	112	3.737
2	'90 - '91	27/06/91	121	4.326
3	'86 - '87	2/01/87	132	5.097
4	'92 - '93	17/11/92	133	5.170
5	'87 - '88	16/07/88	146	6.163
6	'93 - '94	12/10/93	147	6.243
7	'89 - '90	15/09/89	149	6.404
8	'91 - '92	10/08/92	155	6.899
9	'95 - '96	13/08/96	156	6.983
10	'94 - '95	29/01/95	175	8.672



Herhalingstijd (jaar)	Debiet (m³/s)	Spec. afvoer (l/s.ha)
2	5.713	0.99
5	7.091	1.23
10	8.002	1.39
25	9.155	1.59
50	10.009	1.74

Station 064 : Aa te Turnhout

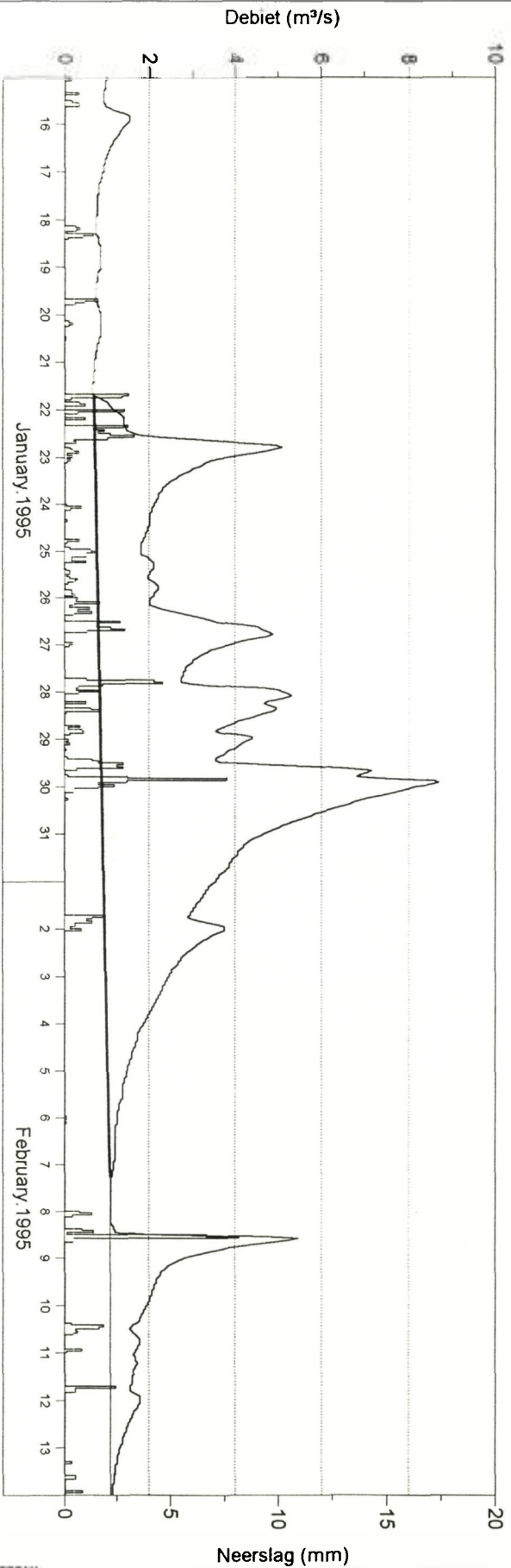
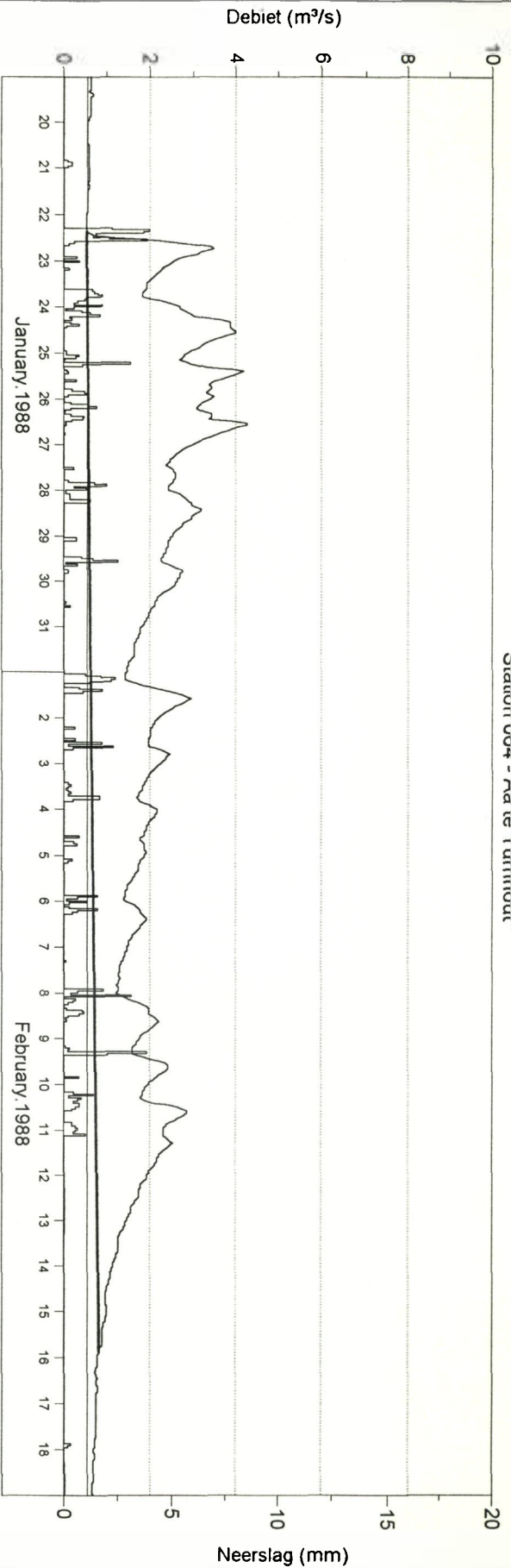
Runoffhoeveelheden

Stroomgebied = 5763 ha
Tijdreeks : 1986 - '96

Nr	Was van (datum Q _{max})	q _{max} (l/s ha)	q _{begin} (l/s ha)	q _{eind} (l/s ha)	Neerslag som (mm)	Neerslag duur (uur)	Concentratie tijd (uur)	Runoff (mm)	Runoff- Coeff. (-)	Runoff duur (uur)
1	26/01/88	0.74	0.09	0.14	130.9	563	28	52.7	0.40	586
2	29/01/95	1.50	0.12	0.19	126.1	273	55	52.0	0.41	399
3	02/01/87	0.88	0.11	0.14	96.1	315	46	32.8	0.34	396
4	02/01/91	0.66	0.06	0.08	127.5	440	93	27.2	0.21	557
5	23/03/87	0.80	0.09	0.14	74.0	340	42	25.7	0.35	381
6	30/12/93	1.01	0.19	0.21	74.0	222	32	23.2	0.31	259
7	27/12/94	0.95	0.07	0.12	85.3	272	32	20.8	0.24	282
8	04/04/94	0.52	0.11	0.16	72.0	232	35	16.4	0.23	275
9	12/01/93	0.59	0.06	0.11	59.0	291	48	15.1	0.26	309
10	23/01/94	0.72	0.13	0.17	61.2	253	29	13.9	0.23	281
11	02/03/87	0.72	0.13	0.14	40.8	97	39	12.7	0.31	224
12	21/12/91	0.62	0.04	0.11	73.0	237	50	12.0	0.16	240
13	12/10/93	1.08	0.04	0.09	63.2	88	28	11.5	0.18	172
14	07/03/88	0.52	0.10	0.17	48.4	195	32	11.5	0.24	255
15	25/03/88	0.63	0.18	0.18	52.5	281	28	11.3	0.22	305
16	14/11/93	0.87	0.09	0.09	49.3	70	37	11.0	0.22	182
17	15/12/93	0.53	0.11	0.15	62.1	150	41	10.8	0.17	178
18	19/03/94	0.79	0.08	0.16	51.7	96	33	9.9	0.19	174
19	17/11/92	0.90	0.07	0.15	70.4	244	47	9.4	0.13	247
20	05/09/92	0.80	0.04	0.07	94.1	283	47	9.0	0.10	297
21	12/11/91	0.52	0.03	0.08	118.7	345	69	8.4	0.07	343
22	03/03/89	0.51	0.11	0.15	41.9	196	61	6.9	0.16	228
23	08/02/95	0.95	0.19	0.20	30.1	92	16	6.4	0.21	133
24	08/03/89	0.65	0.14	0.15	26.5	22	34	5.9	0.22	107
25	22/01/93	0.63	0.11	0.14	36.8	171	22	5.6	0.15	188
26	14/04/89	0.55	0.14	0.14	25.4	82	31	5.5	0.22	125
27	09/12/94	0.97	0.05	0.08	36.7	78	23	5.2	0.14	119
28	19/02/95	0.56	0.22	0.24	24.2	62	18	4.7	0.20	90
29	29/08/96	0.96	0.02	0.04	75.8	136	21	4.7	0.06	135
30	16/07/88	1.07	0.04	0.06	52.5	93	36	4.6	0.09	164

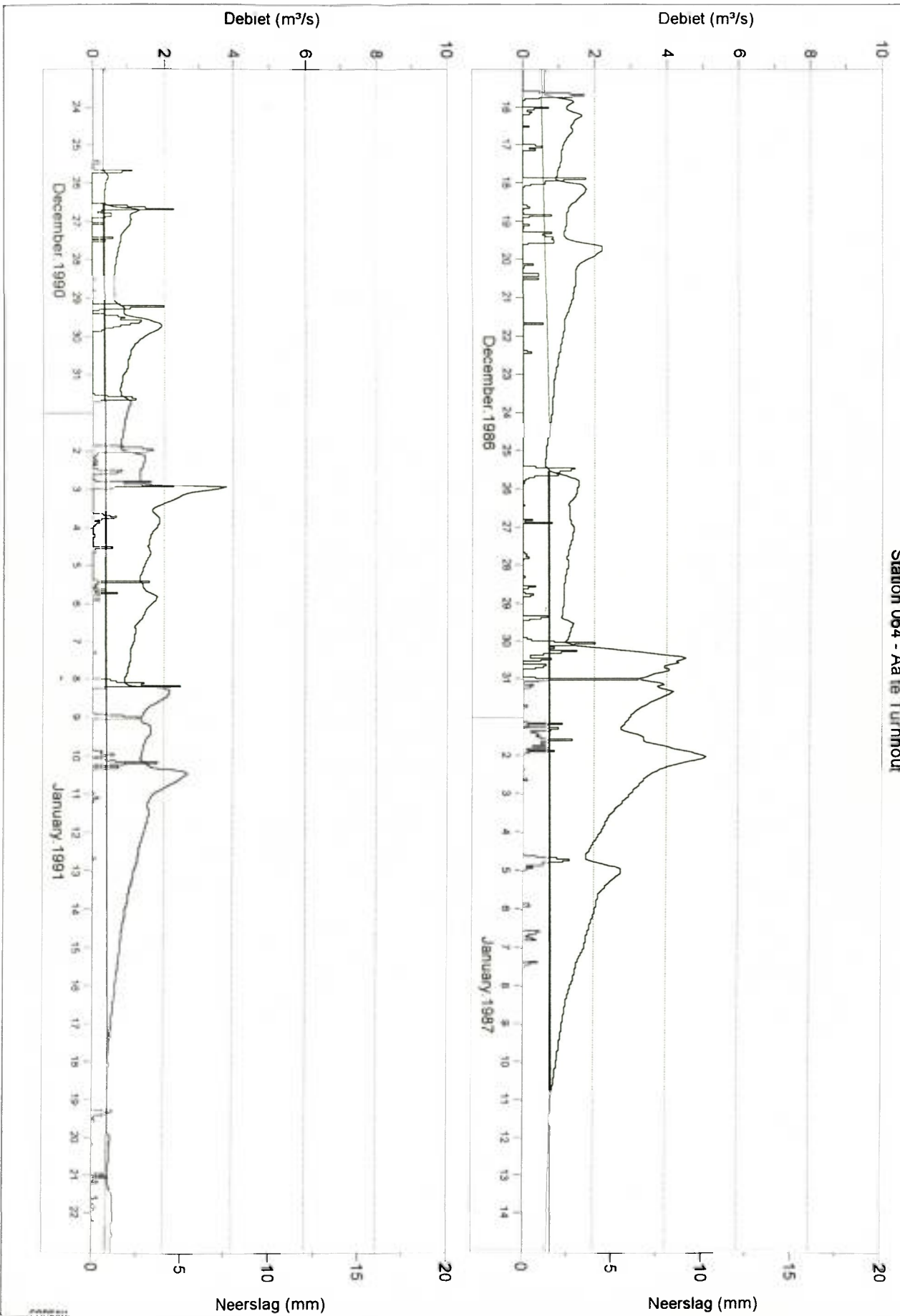
Uurwaarden van neerslag, debiet en basisafvoer

Station 064 - Aa te Turnhout



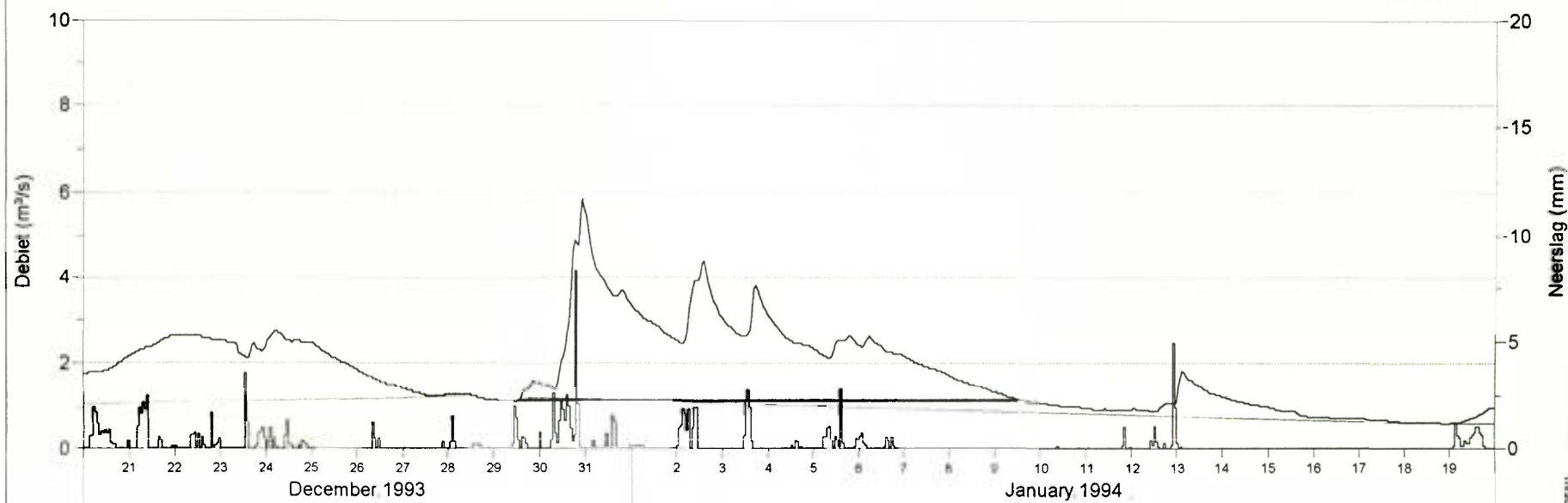
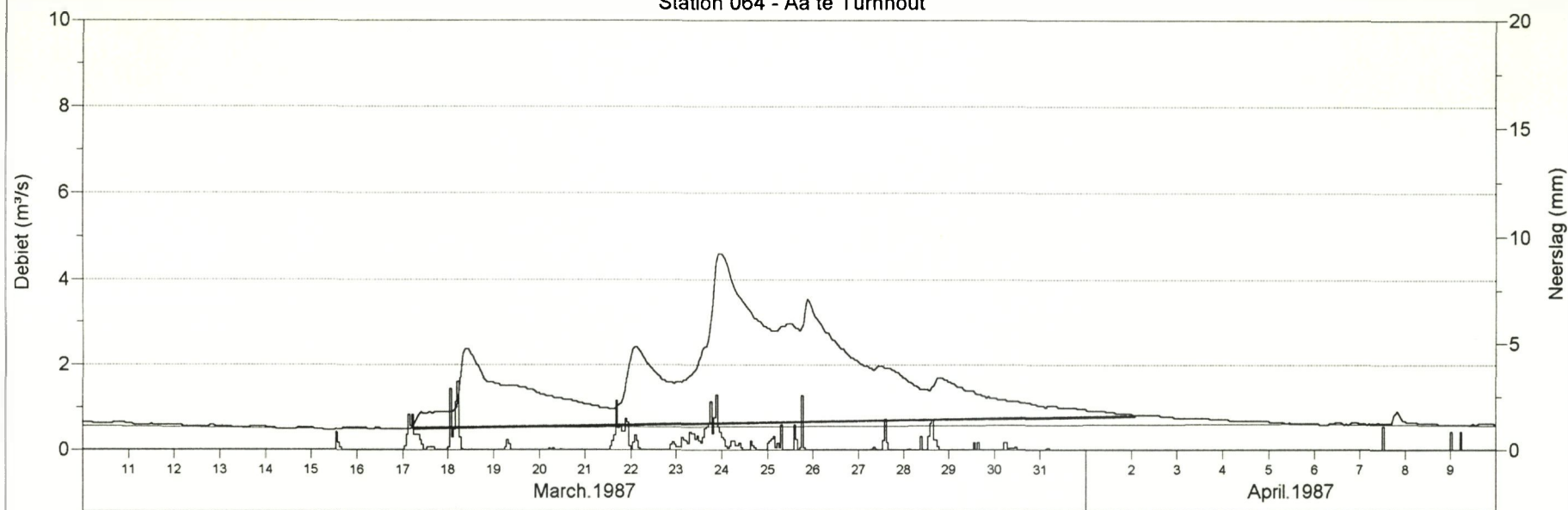
Uurwaarden van neerslag, debiet en basisafvoer

Station 064 - Aa ter Turnhout



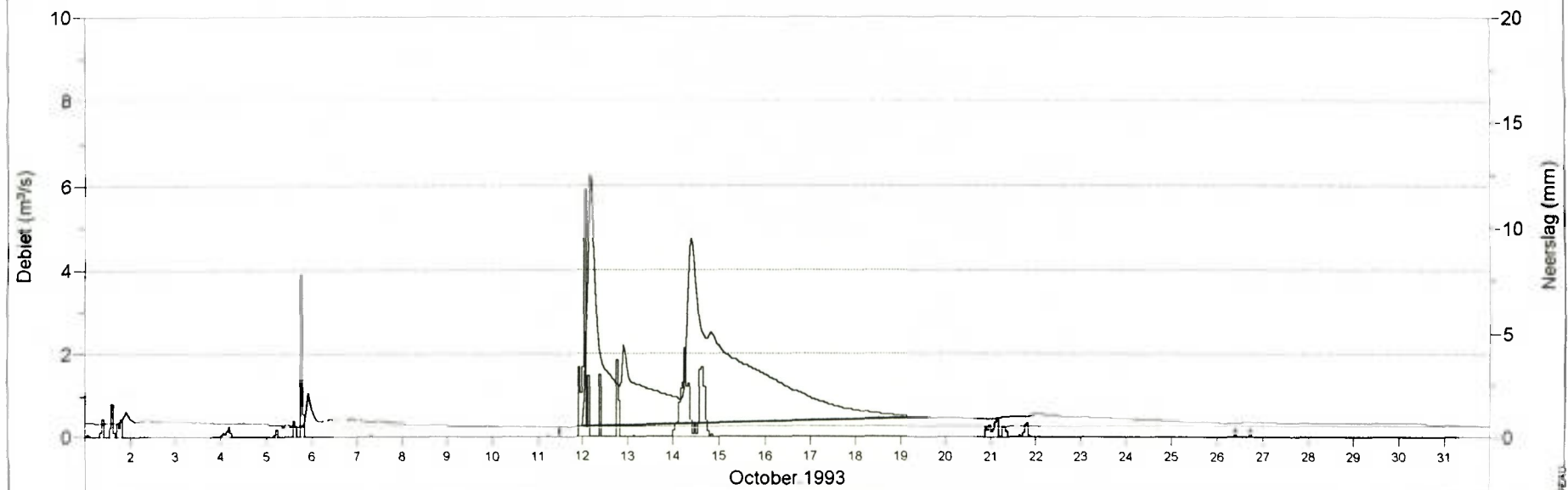
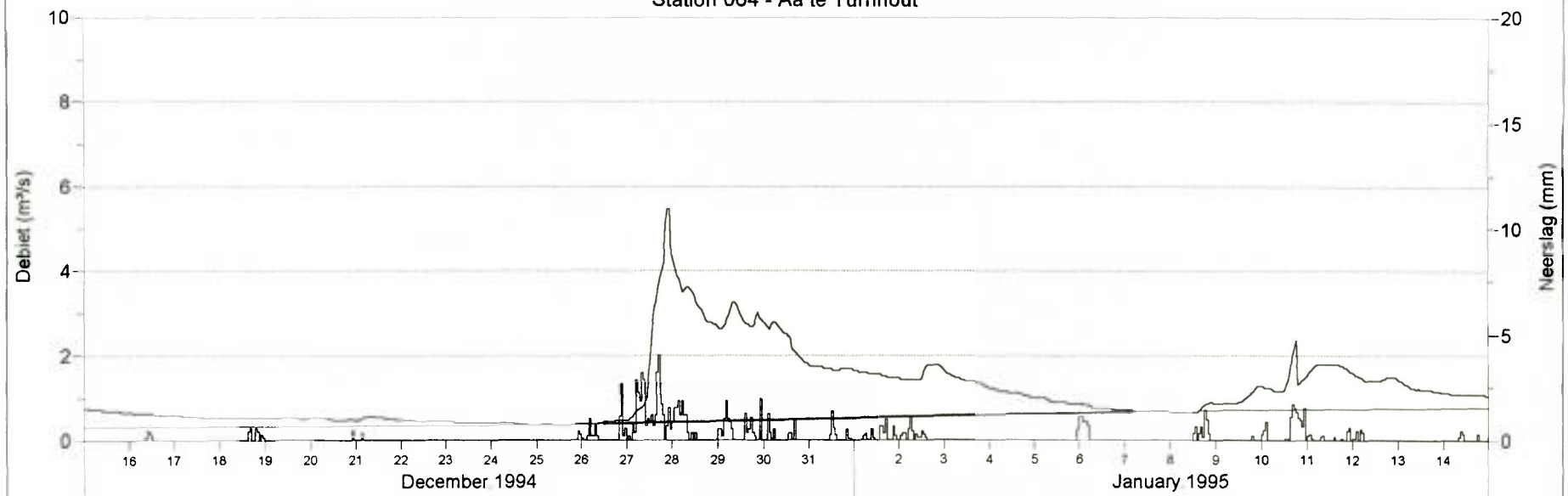
Uurwaarden van neerslag, debiet en basisafvoer

Station 064 - Aa te Turnhout



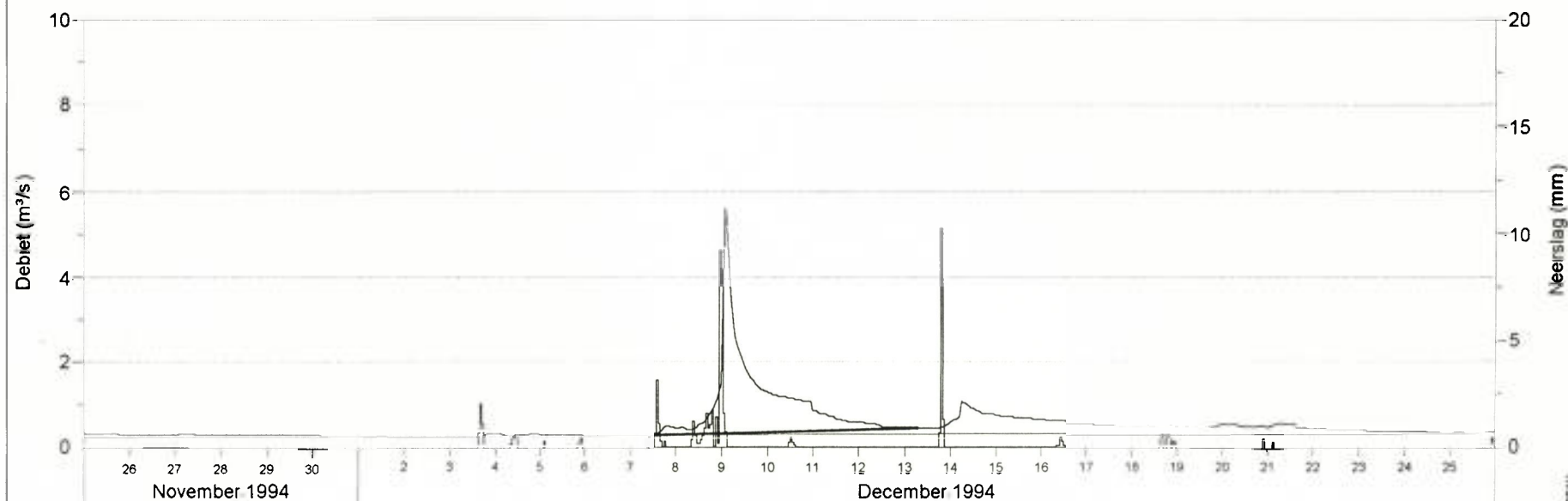
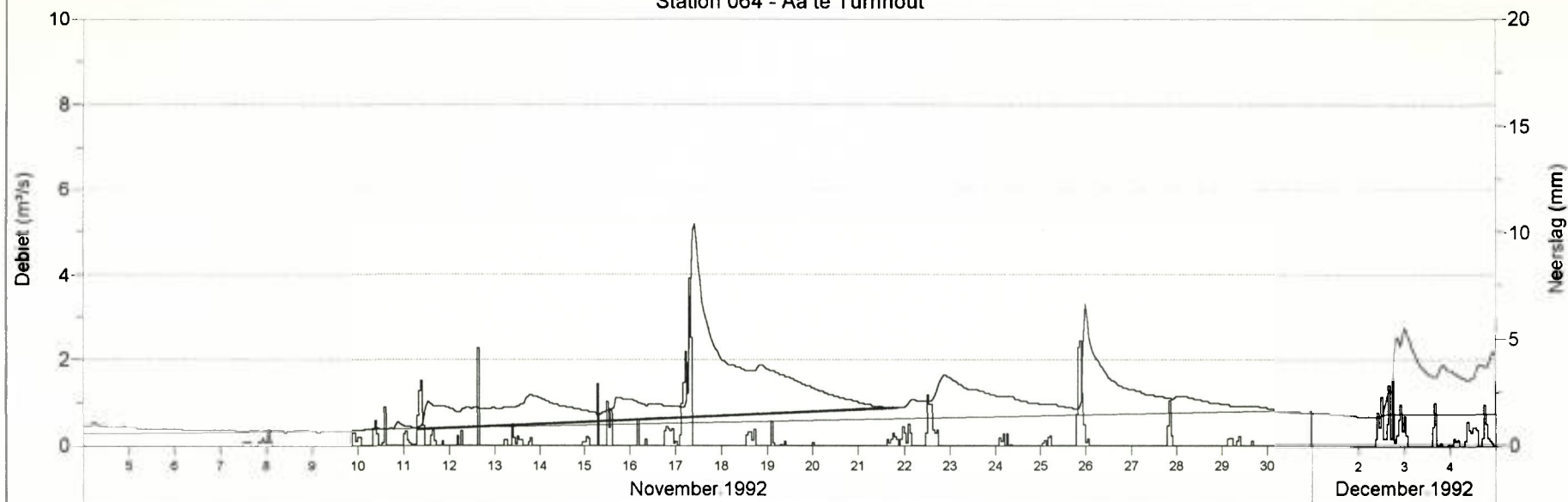
Uurwaarden van neerslag, debiet en basisafvoer

Station 064 - Aa te Turnhout



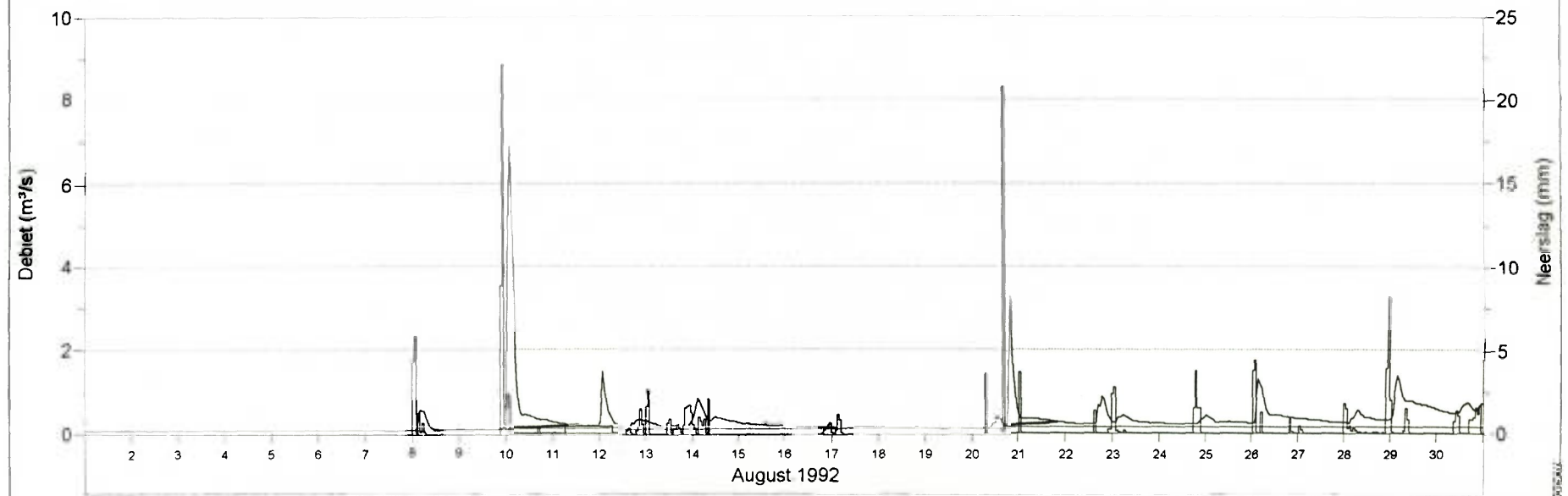
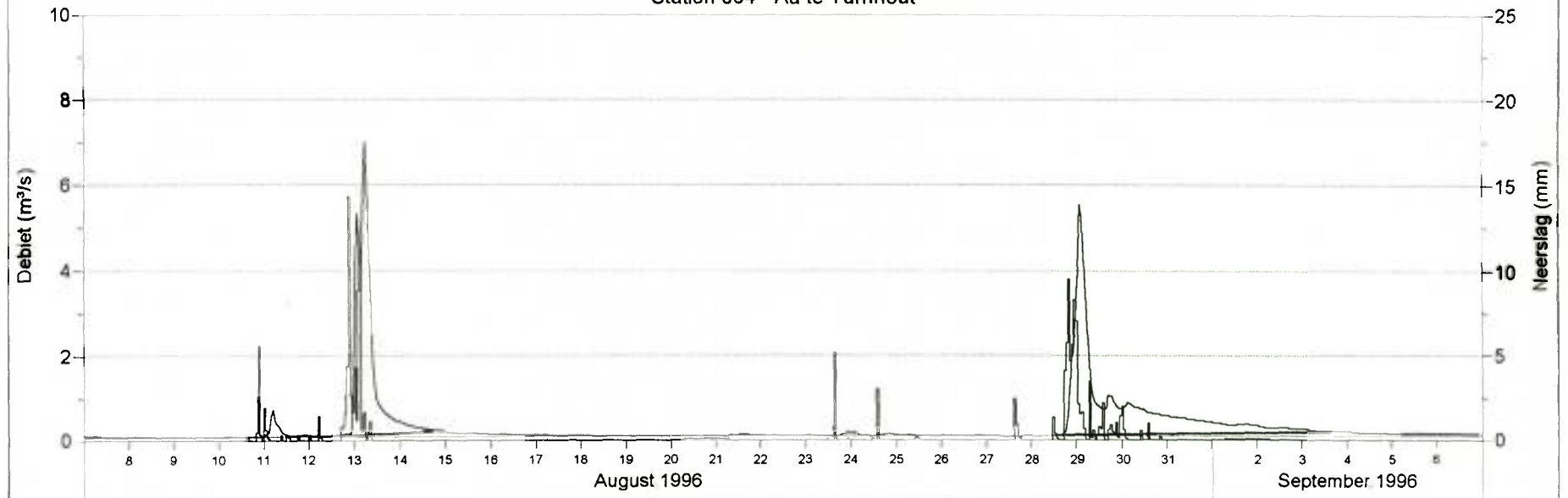
Uurwaarden van neerslag, debiet en basisafvoer

Station 064 - Aa te Turnhout

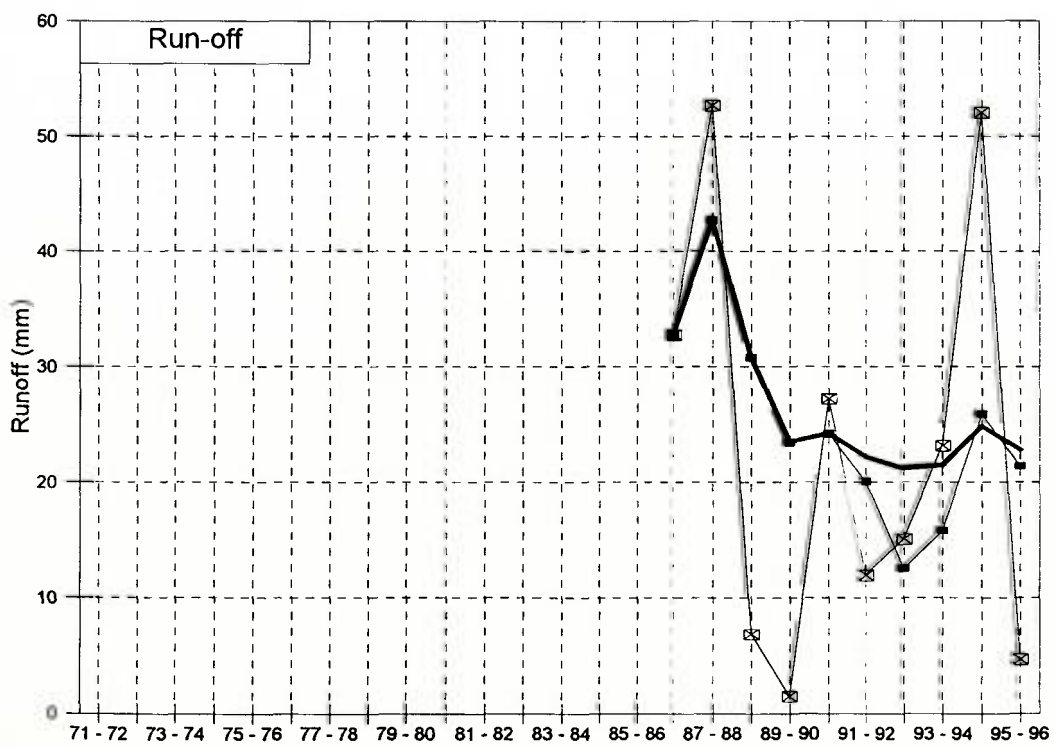
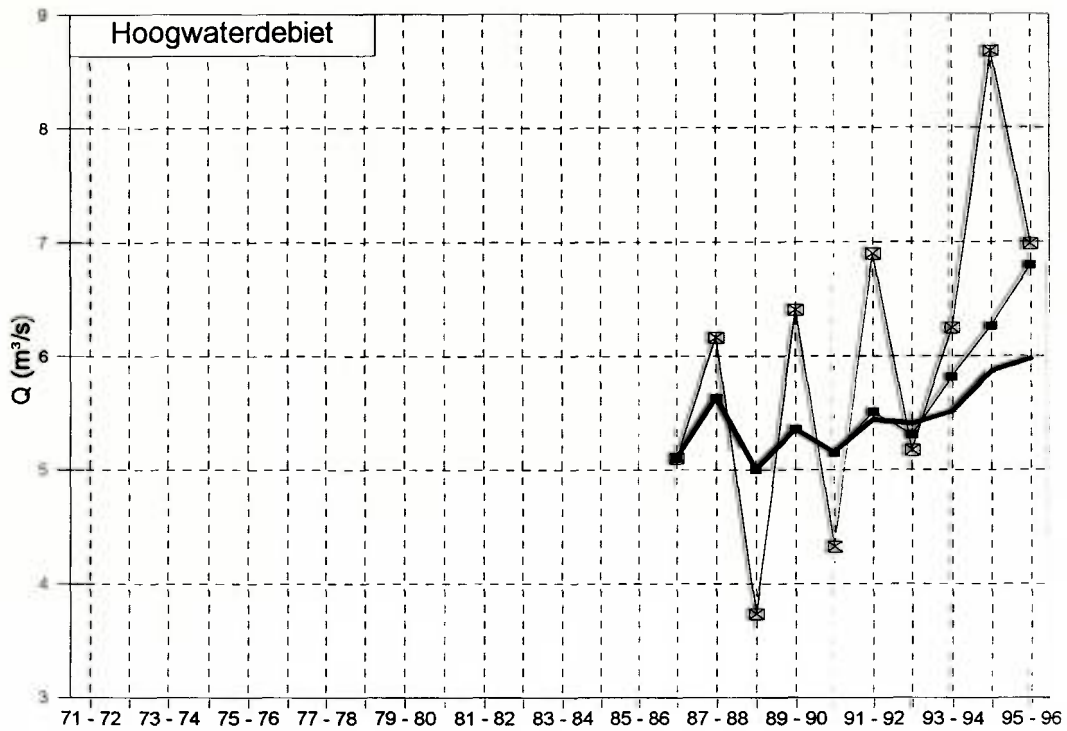


Uurwaarden van neerslag, debiet en basisafvoer

Station 064 - Aa te Turnhout



Station 064 : Aa / Turnhout

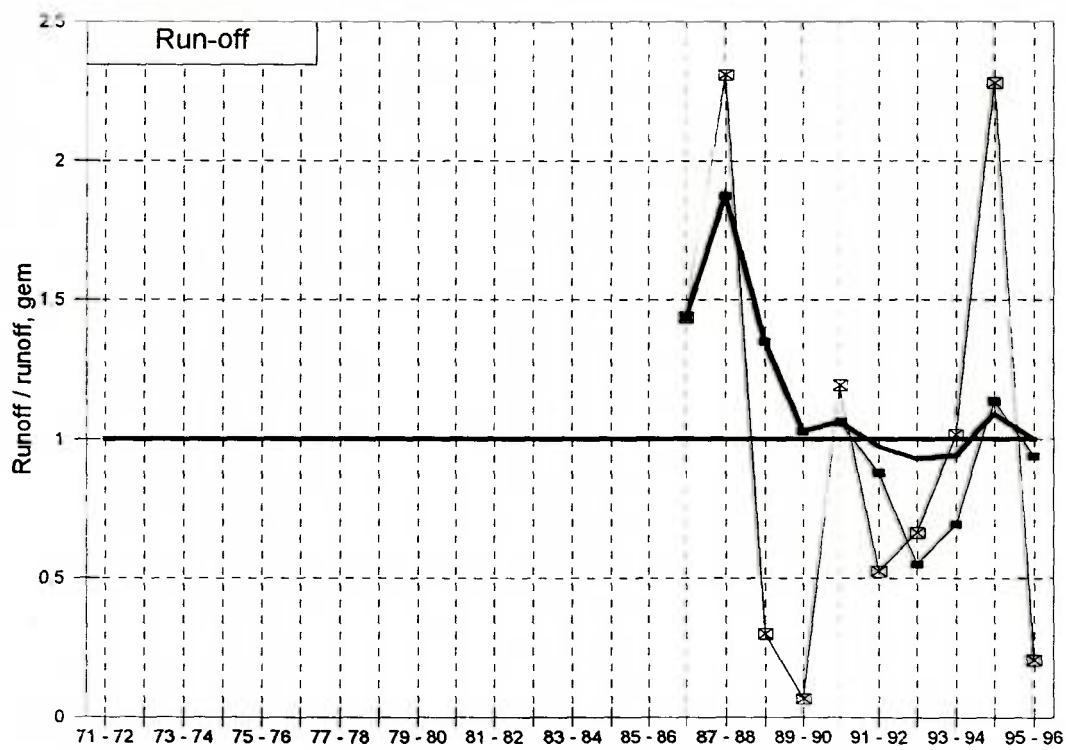
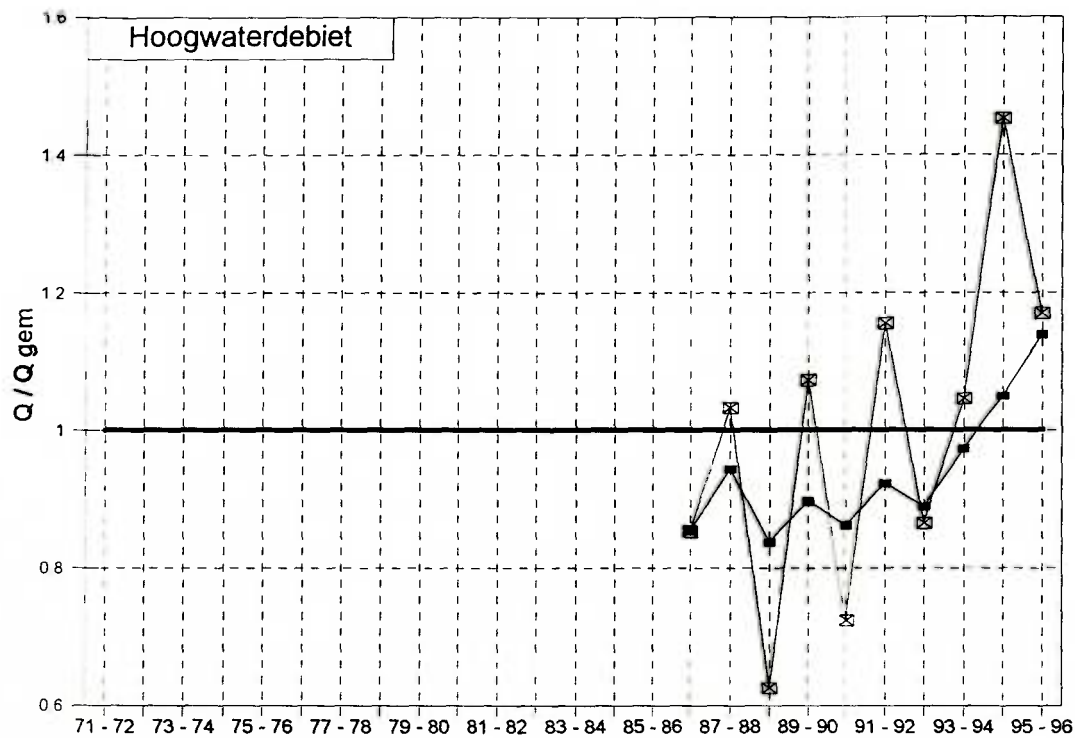


— doorlopend gemiddelde

—x— Jaarmaxima

—■— 5-jaargemiddelde

Station 064 : Aa / Turnhout

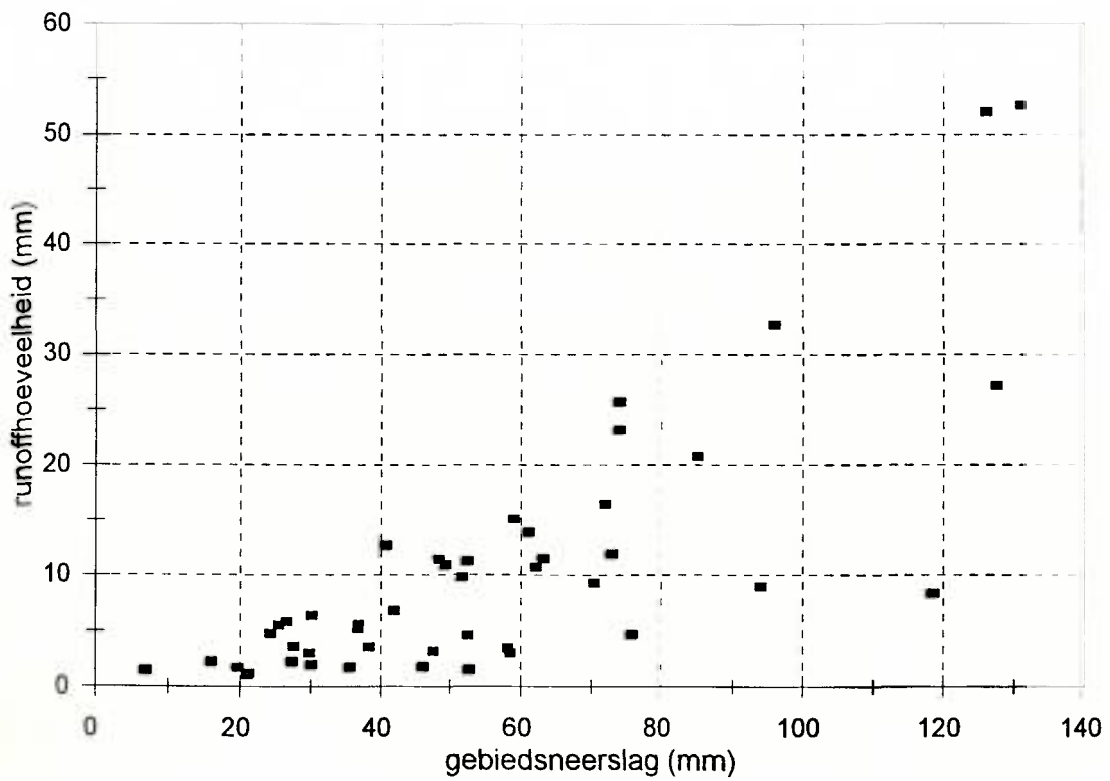
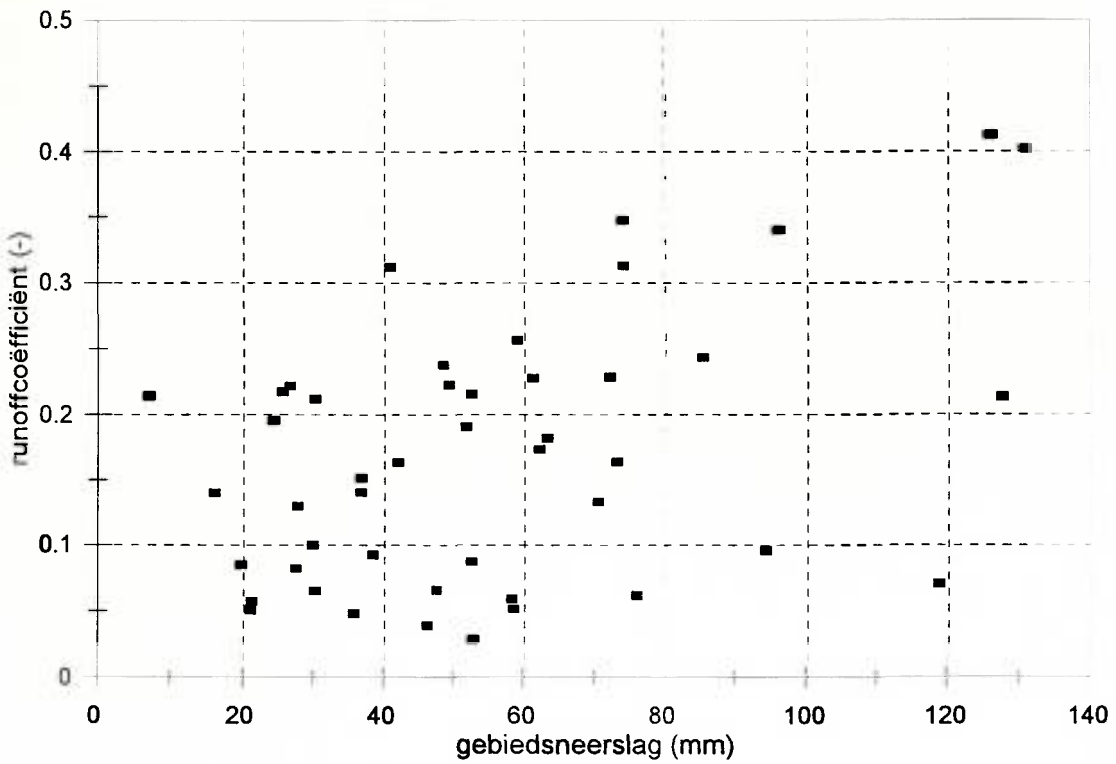


— doorlopend gemiddelde

—x— Jaarmaxima

—■— 5-jaargemiddelde

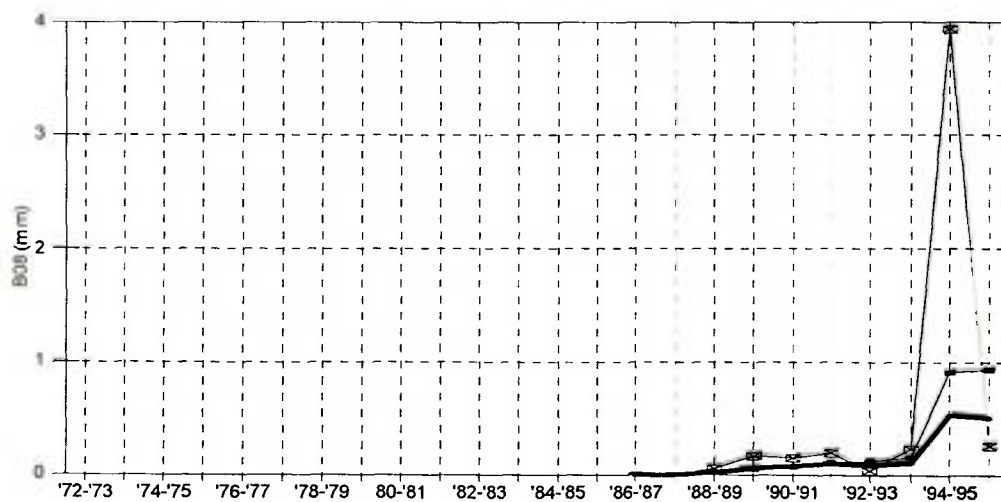
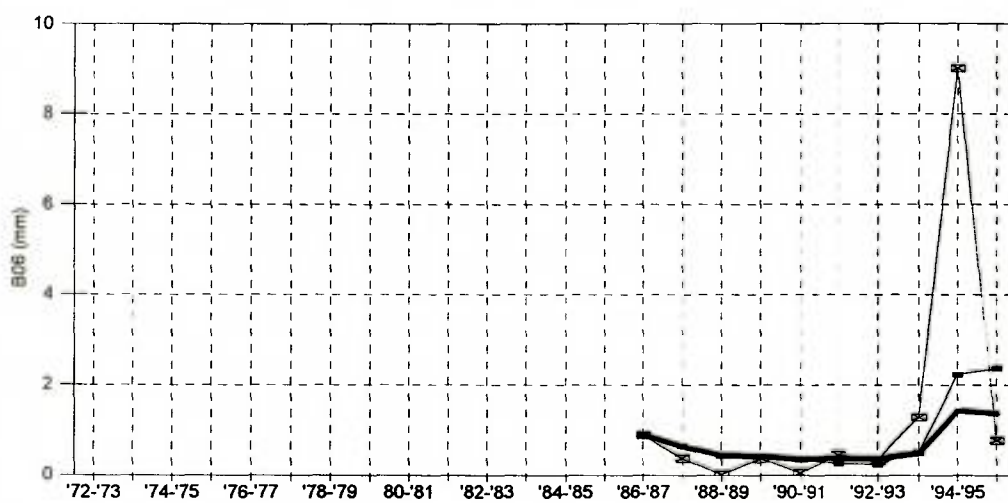
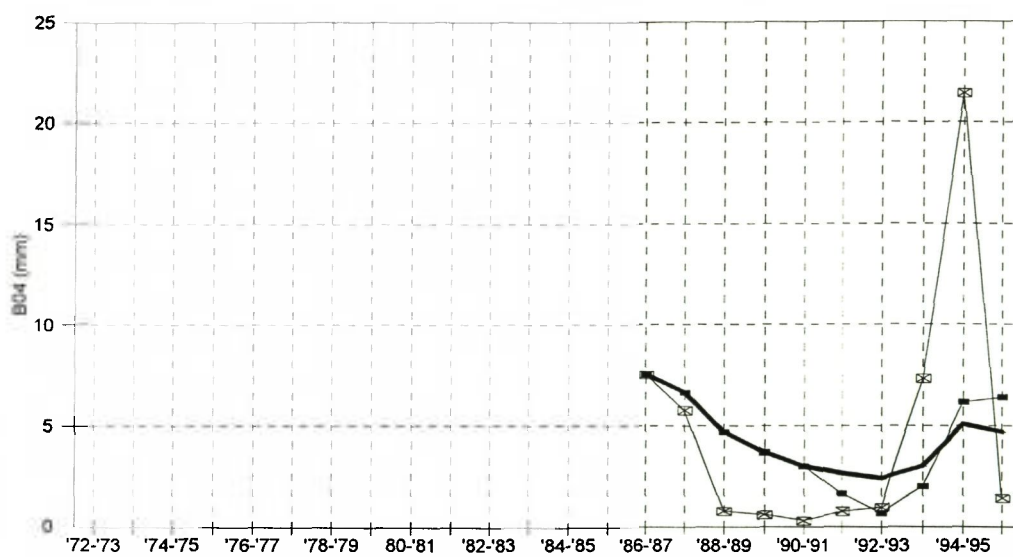
Station 064 : Aa / Turnhout



Jaarmaxima van bergingen					
Station 064 : Aa / Turnhout			Gemidd. jaarmax. : 5.969 m³/s		
Waterjaar	piekdebiet (m³/s)	datum	(mm)	berging (uur)	datum
Bergingen boven 0,3 . Qgem					
'86 -'87	5.097	02/01/87	13.06	430	06/01/87
'87 -'88	4.258	26/01/88	14.92	746	12/02/88
'88 -'89	3.737	08/03/89	1.84	95	09/03/89
'89 -'90	6.404	15/09/89	0.74	13	15/09/89
'90 -'91	3.801	02/01/91	0.71	76	04/01/91
'91 -'92	3.550	21/12/91	1.43	88	23/12/91
'92 -'93	3.428	12/01/93	1.82	112	13/01/93
'93 -'94	5.849	30/12/93	16.41	932	07/01/94
'94 -'95	8.672	29/01/95	32.24	1408	04/02/95
'95 -'96	6.983	13/08/96	1.78	32	13/08/96
Bergingen boven 0,4 . Qgem					
'86 -'87	5.097	02/01/87	7.50	268	03/01/87
'87 -'88	4.258	26/01/88	5.74	368	30/01/88
'88 -'89	3.737	08/03/89	0.77	45	09/03/89
'89 -'90	6.404	15/09/89	0.59	9	15/09/89
'90 -'91	3.801	02/01/91	0.30	17	03/01/91
'91 -'92	6.899	10/08/92	0.76	10	10/08/92
'92 -'93	5.170	17/11/92	0.95	41	17/11/92
'93 -'94	5.849	30/12/93	7.30	287	06/01/94
'94 -'95	8.672	29/01/95	21.44	798	03/02/95
'95 -'96	6.983	13/08/96	1.41	21	13/08/96
Bergingen boven 0,5 . Qgem					
'86 -'87	5.097	02/01/87	3.84	172	03/01/87
'87 -'88	4.258	26/01/88	2.00	148	27/01/88
'88 -'89	3.737	08/03/89	0.24	17	08/03/89
'89 -'90	6.404	15/09/89	0.47	6	15/09/89
'90 -'91	4.326	27/06/91	0.13	3	27/06/91
'91 -'92	6.899	10/08/92	0.59	8	10/08/92
'92 -'93	5.170	17/11/92	0.57	19	17/11/92
'93 -'94	5.849	30/12/93	3.00	184	04/01/94
'94 -'95	8.672	29/01/95	14.50	368	02/02/95
'95 -'96	6.983	13/08/96	1.07	16	13/08/96
Bergingen boven 0,6 . Qgem					
'86 -'87	5.097	02/01/87	0.88	42	02/01/87
'87 -'88	6.163	16/07/88	0.38	5	16/07/88
'88 -'89	3.737	08/03/89	0.02	3	08/03/89
'89 -'90	6.404	15/09/89	0.36	4	15/09/89
'90 -'91	4.326	27/06/91	0.06	2	27/06/91
'91 -'92	6.899	10/08/92	0.45	6	10/08/92
'92 -'93	5.170	17/11/92	0.31	11	17/11/92
'93 -'94	5.849	30/12/93	1.29	58	31/12/93
'94 -'95	8.672	29/01/95	9.00	212	31/01/95
'95 -'96	6.983	13/08/96	0.77	12	13/08/96
'86 -'87	5.097	02/01/87	0.34	19	02/01/87

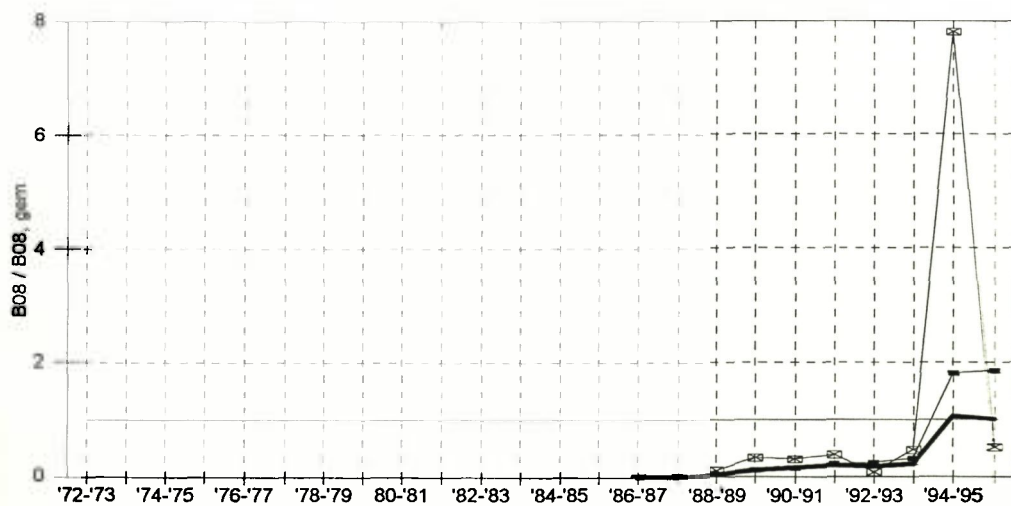
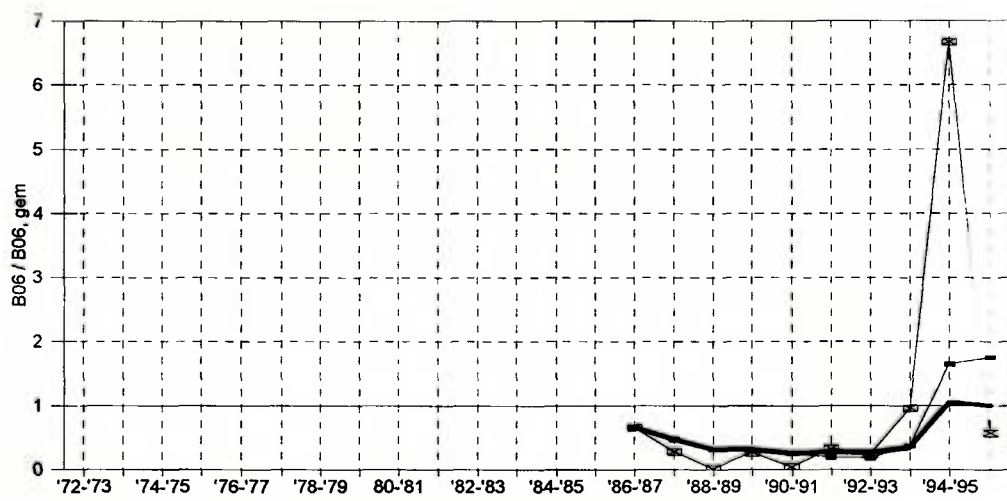
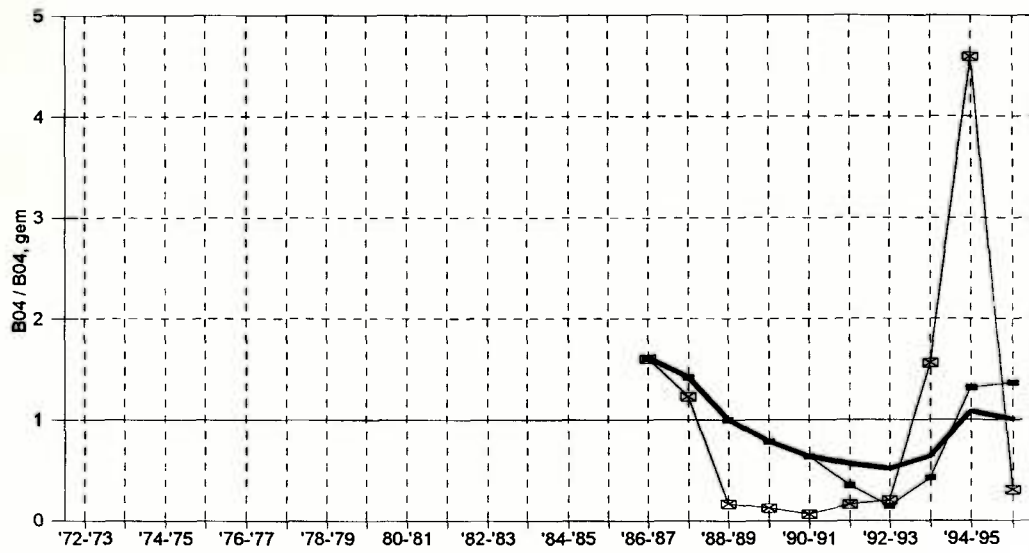
Jaarmaxima van bergingen					
Station 064 : Aa / Turnhout			Gemidd. jaarmax. : 5.969 m³/s		
Waterjaar	piekdebiet (m³/s)	datum	(mm)	berging (uur)	datum
Bergingen boven 0,7 . Qgem					
'87 -'88	6.163	16/07/88	0.27	4	16/07/88
'88 -'89			0.00	0	
'89 -'90	6.404	15/09/89	0.25	3	15/09/89
'90 -'91			0.00	0	
'91 -'92	6.899	10/08/92	0.31	5	10/08/92
'92 -'93	5.170	17/11/92	0.15	6	17/11/92
'93 -'94	5.849	30/12/93	0.63	31	31/12/93
'94 -'95	8.672	29/01/95	5.66	162	31/01/95
'95 -'96	6.983	13/08/96	0.47	10	13/08/96
Bergingen boven 0,8 . Qgem					
'86 -'87	5.097	02/01/87	0.06	6	02/01/87
'87 -'88	6.163	16/07/88	0.17	3	16/07/88
'88 -'89			0.00	0	
'89 -'90	6.404	15/09/89	0.15	2	15/09/89
'90 -'91			0.00	0	
'91 -'92	6.899	10/08/92	0.20	4	10/08/92
'92 -'93	5.170	17/11/92	0.04	2	17/11/92
'93 -'94	5.849	30/12/93	0.23	14	31/12/93
'94 -'95	8.672	29/01/95	3.94	87	30/01/95
'95 -'96	6.983	13/08/96	0.26	4	13/08/96

Station 064 : Aa / Turnhout



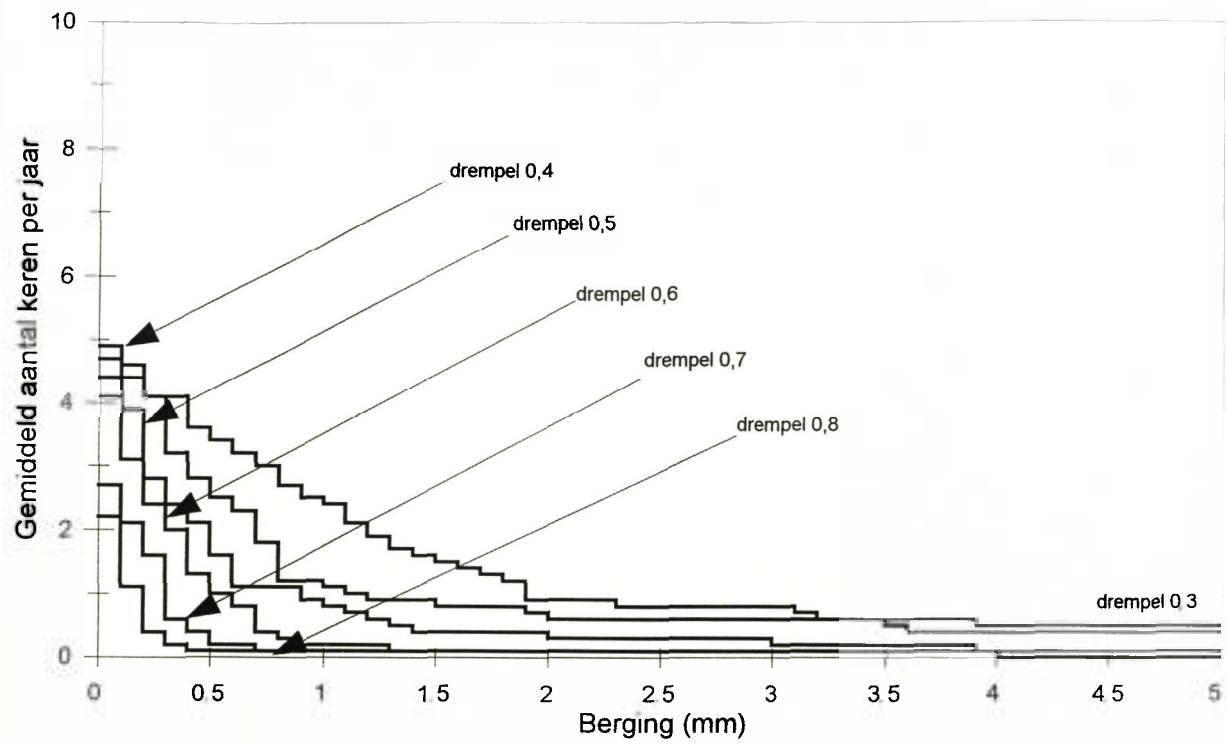
— doorlopend gemiddelde ○ Jaarmaxima ■ 5-jaargemiddelde

Station 064 : Aa / Turnhout

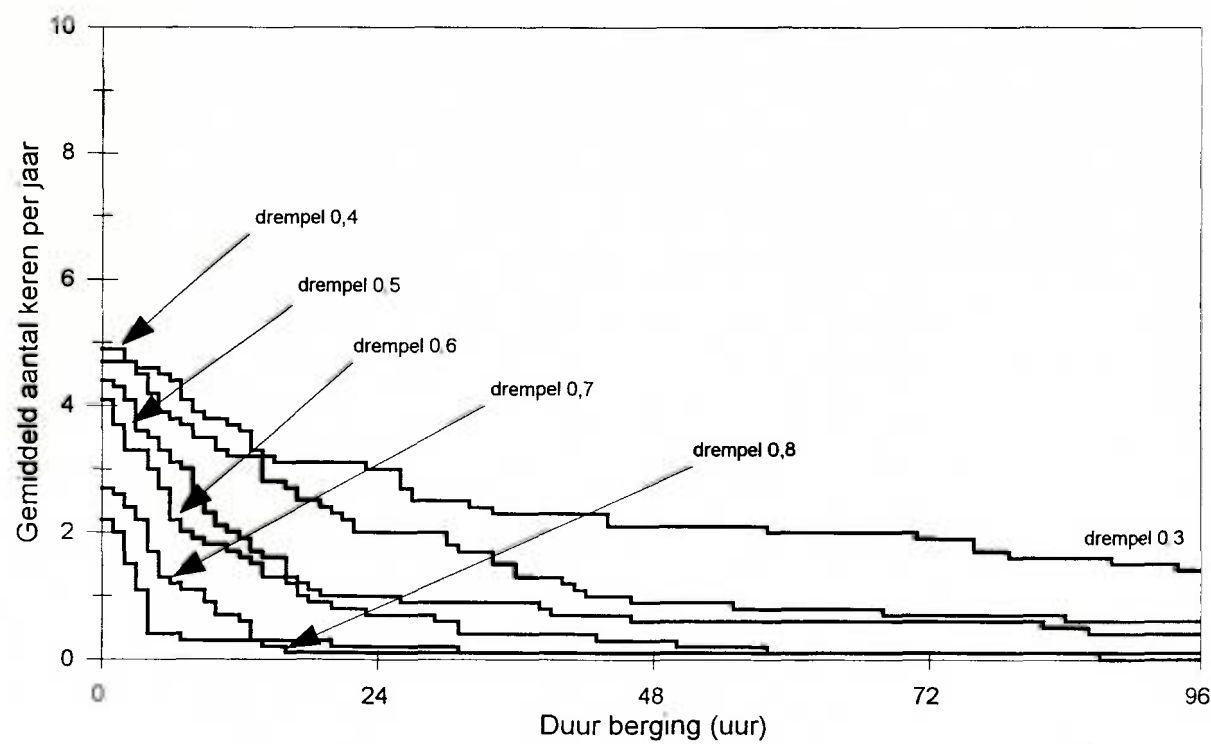


— doorlopend gemiddelde —■— Jaarmaxima —+— 5-jaargemiddelde

Station 064 - Aa te Turnhout



Station 064 - Aa te Turnhout



14. Station 073

**De Grote Nete
te Hulshout**

Station 073 : Grote Nete te Hulshout

Runoffhoeveelheden

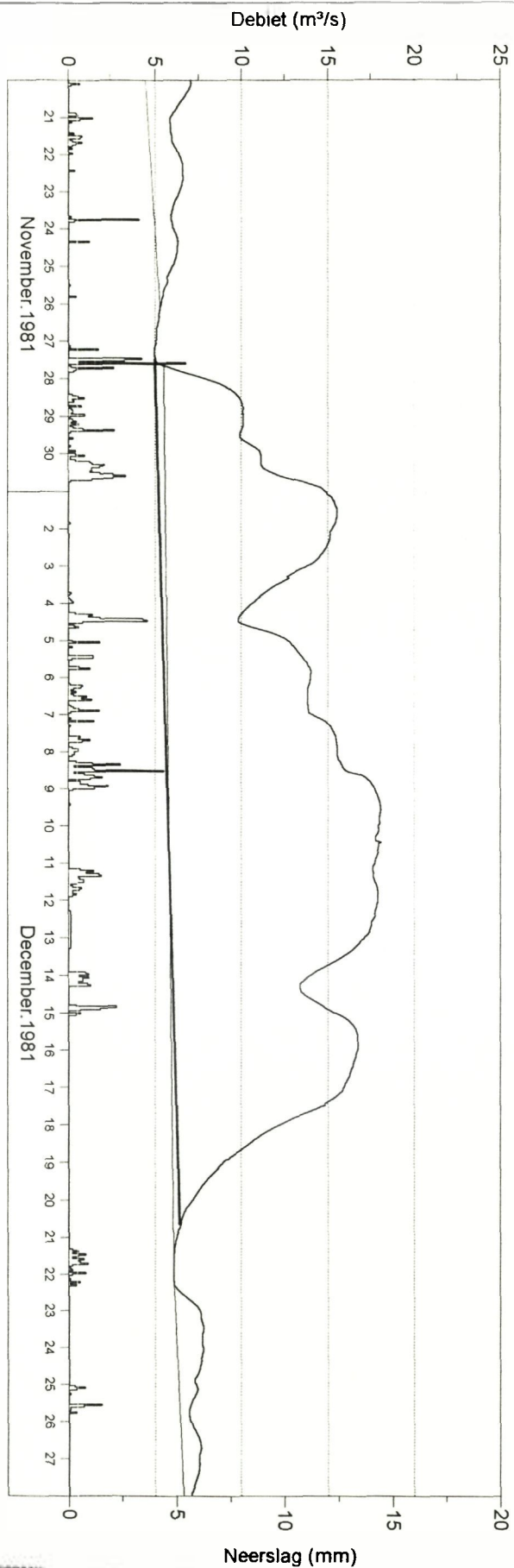
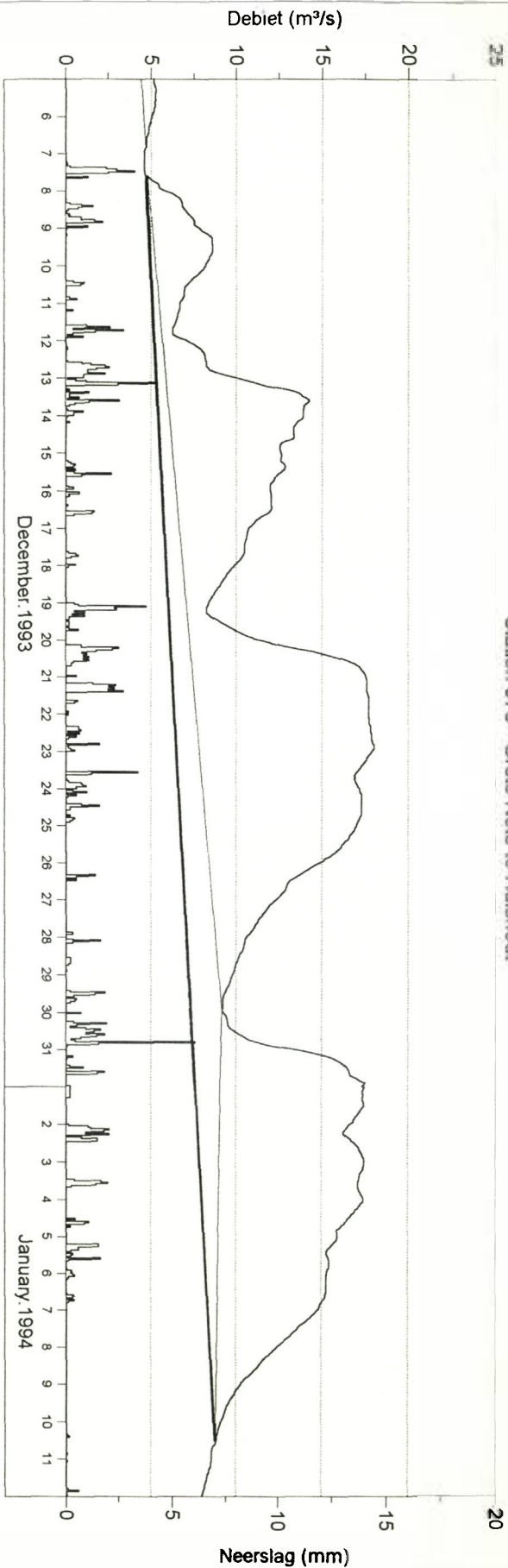
Stroomgebied = 44355 ha

Tijdreeks : 1976 - '96

Nr	Was van (datum Q _{max})	q _{max} (l/s ha)	q _{begin} (l/s ha)	q _{eind} (l/s ha)	Neerslag som (mm)	Neerslag duur (uur)	Concentratie tijd (uur)	Runoff (mm)	Runoff- Coeff. (-)	Runoff duur (uur)
1	22/12/93	0.41	0.10	0.19	202.7	734	90	40.3	0.20	824
2	10/12/81	0.41	0.11	0.15	125.0	431	92	35.9	0.29	551
3	28/01/88	0.43	0.12	0.15	133.8	563	56	33.5	0.25	612
4	25/01/86	0.36	0.11	0.15	126.6	642	97	32.1	0.25	776
5	30/01/95	0.55	0.16	0.21	111.8	371	77	29.1	0.26	409
6	16/03/88	0.44	0.18	0.18	119.8	511	44	28.8	0.24	544
7	26/03/87	0.44	0.12	0.12	82.9	552	85	27.5	0.33	579
8	10/02/84	0.42	0.11	0.14	109.5	447	118	25.6	0.23	639
9	31/05/84	0.33	0.07	0.11	140.7	452	99	24.3	0.17	572
10	16/04/85	0.43	0.13	0.14	94.9	290	90	24.0	0.25	397
11	16/10/82	0.37	0.10	0.13	138.2	337	93	23.3	0.17	396
12	16/09/84	0.30	0.05	0.12	169.8	501	106	22.6	0.13	541
13	26/03/83	0.28	0.10	0.14	114.8	714	59	21.7	0.19	759
14	27/01/85	0.39	0.12	0.15	43.4	293	46	21.6	0.50	423
15	02/01/87	0.39	0.14	0.14	87.3	343	74	21.5	0.25	429
16	01/04/86	0.39	0.12	0.12	95.8	394	80	21.4	0.22	508
17	07/02/80	0.41	0.11	0.14	75.6	206	85	20.1	0.27	385
18	04/12/96	0.34	0.11	0.14	97.7	441	91	20.1	0.21	593
19	21/02/95	0.47	0.20	0.20	79.3	350	50	18.3	0.23	367
20	23/11/87	0.30	0.08	0.13	96.7	455	83	16.6	0.17	497
21	26/11/84	0.40	0.13	0.16	52.4	218	90	16.2	0.31	337
22	11/03/81	0.36	0.13	0.14	64.8	272	63	15.5	0.24	349
23	04/01/91	0.27	0.08	0.11	102.7	440	64	15.4	0.15	509
24	13/11/91	0.24	0.05	0.09	137.3	460	79	15.3	0.11	533
25	03/03/87	0.43	0.15	0.17	41.1	97	54	14.5	0.35	254
26	03/02/83	0.33	0.12	0.13	56.9	337	72	14.4	0.25	366
27	02/04/80	0.39	0.10	0.15	71.8	210	68	14.4	0.20	292
28	16/03/79	0.37	0.15	0.18	78.7	330	43	14.4	0.18	385
29	05/01/82	0.36	0.15	0.16	42.4	191	40	13.2	0.31	301
30	28/12/94	0.37	0.10	0.13	72.9	272	44	12.9	0.18	319

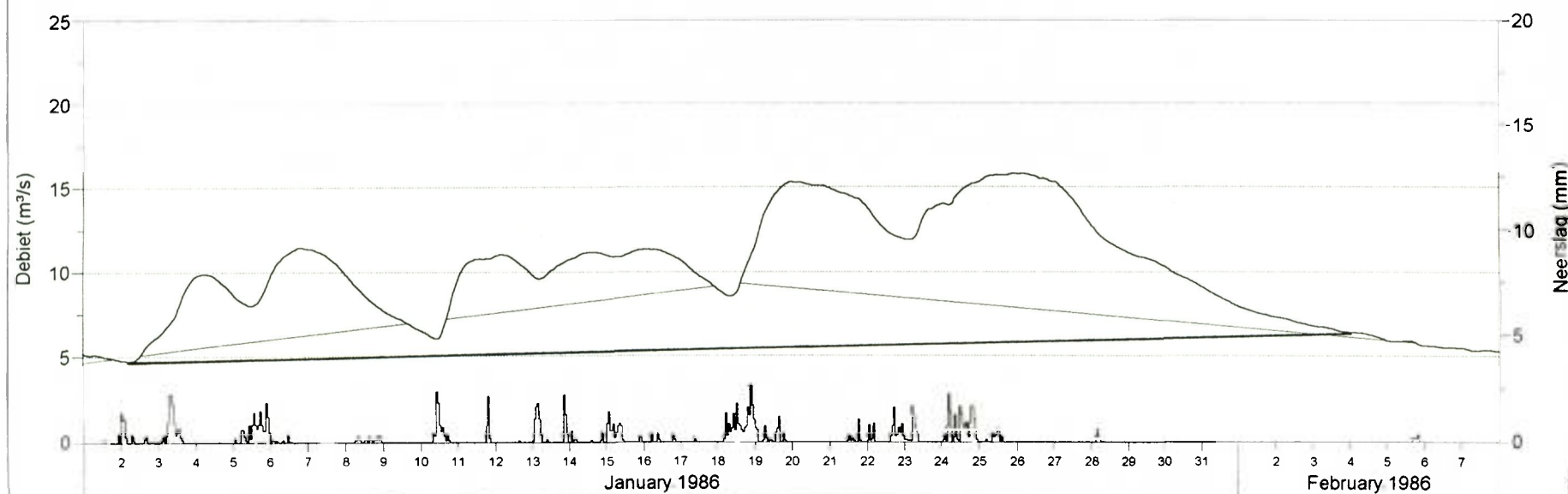
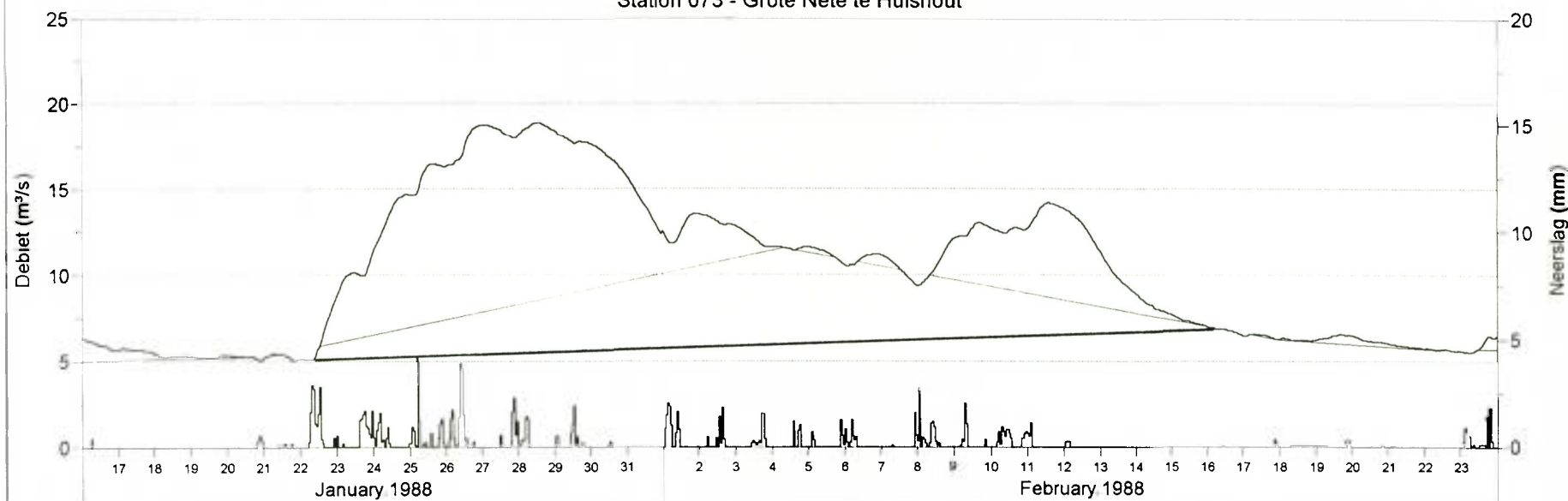
Uurwaarden van neerslag, debiet en basisafvoer

Station 073 - Grote Nete te Hulshout



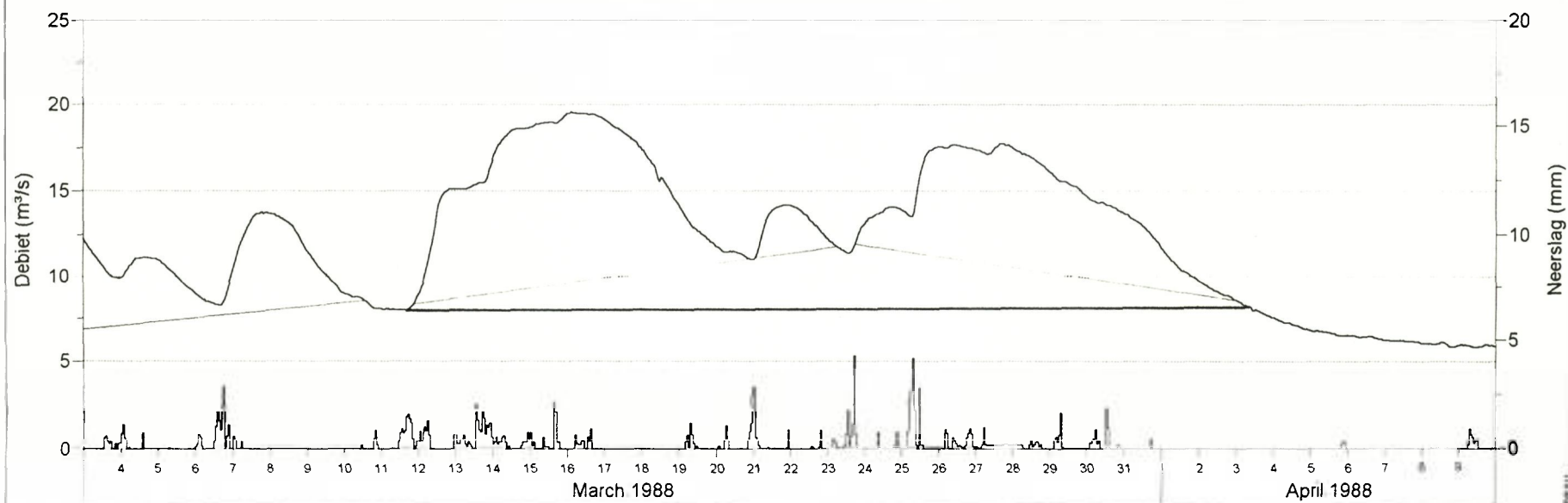
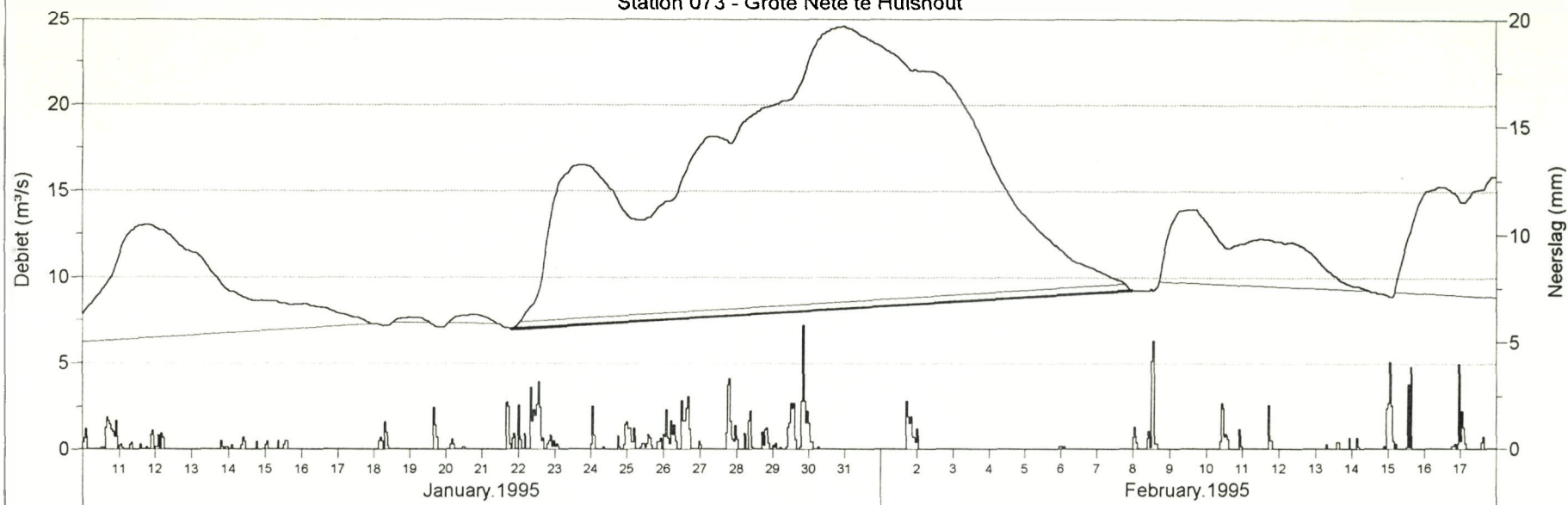
Uurwaarden van neerslag, debiet en basisafvoer

Station 073 - Grote Nete te Hulshout



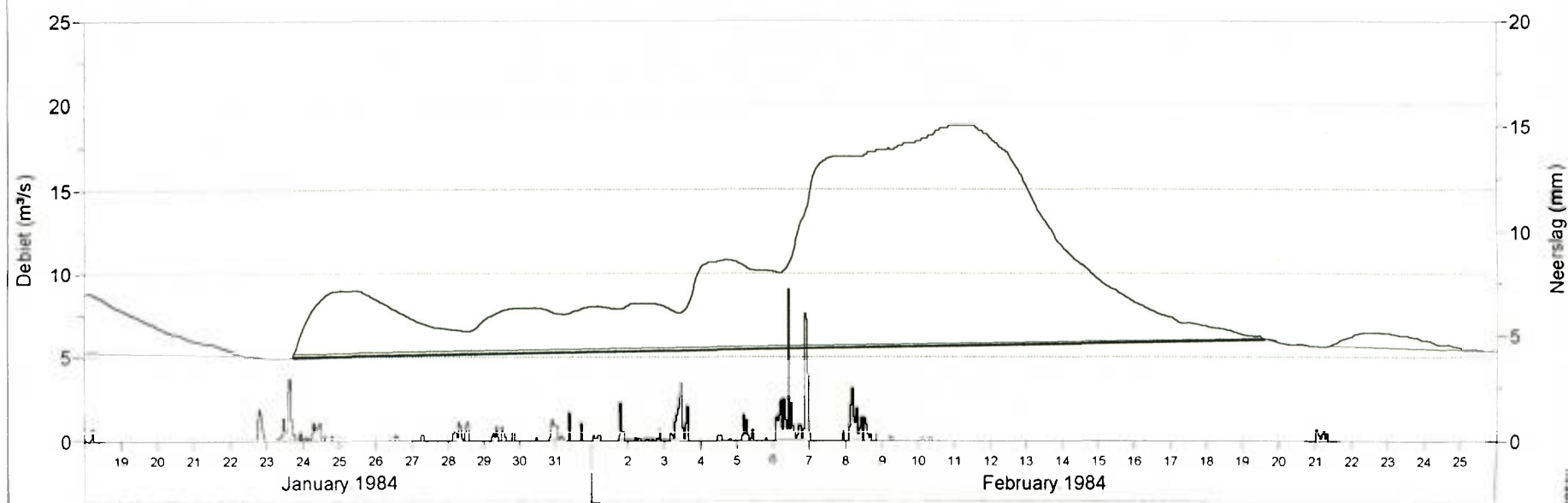
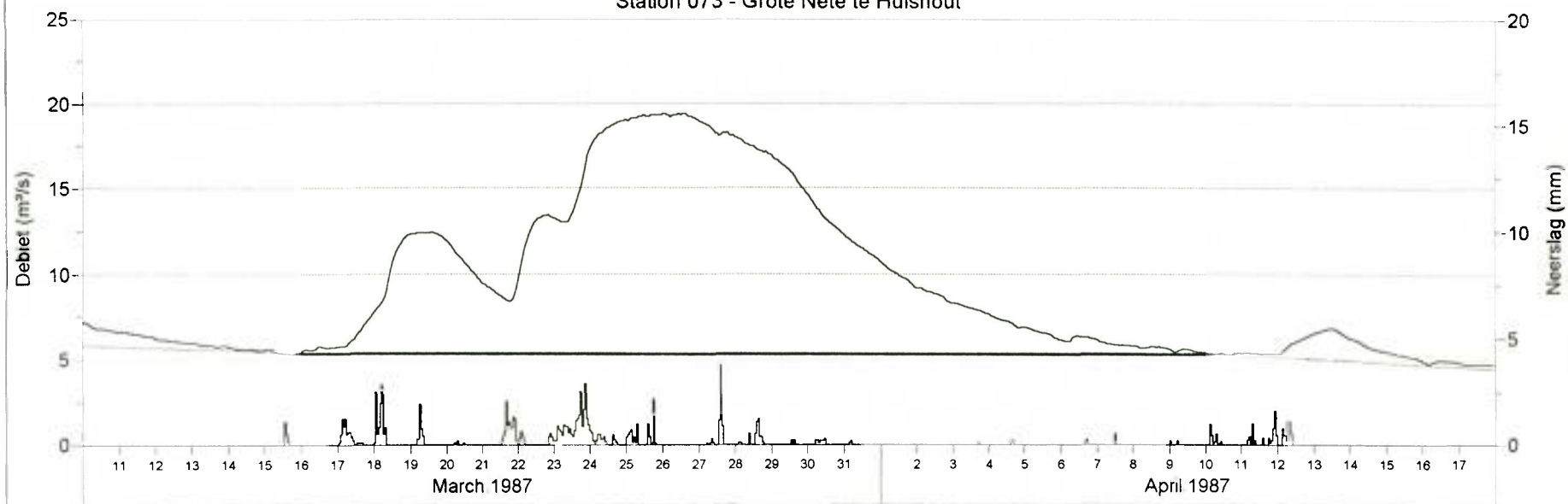
Uurwaarden van neerslag, debiet en basisafvoer

Station 073 - Grote Nete te Hulshout



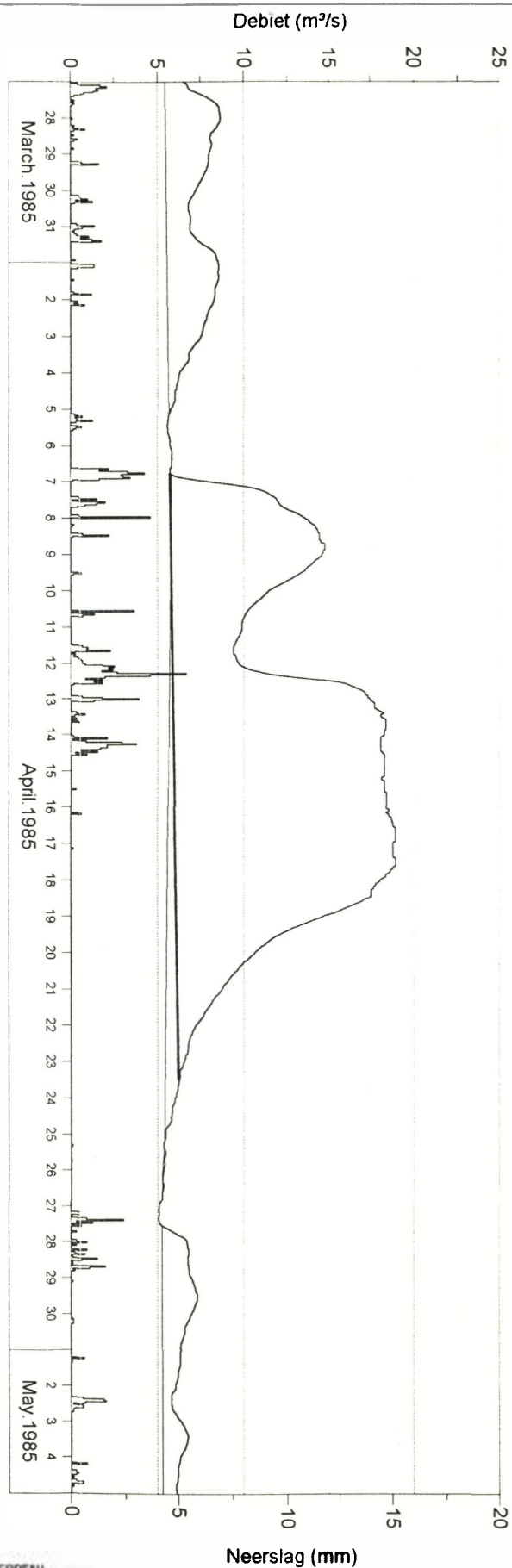
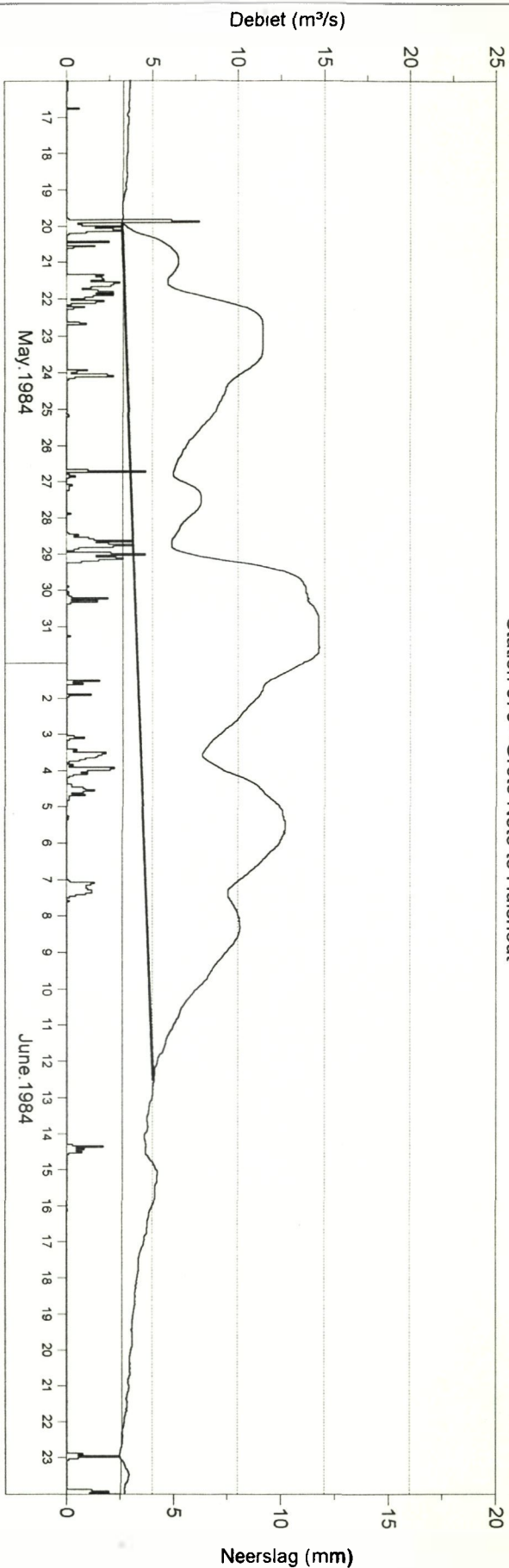
Uurwaarden van neerslag, debiet en basisafvoer

Station 073 - Grote Nete te Hulshout



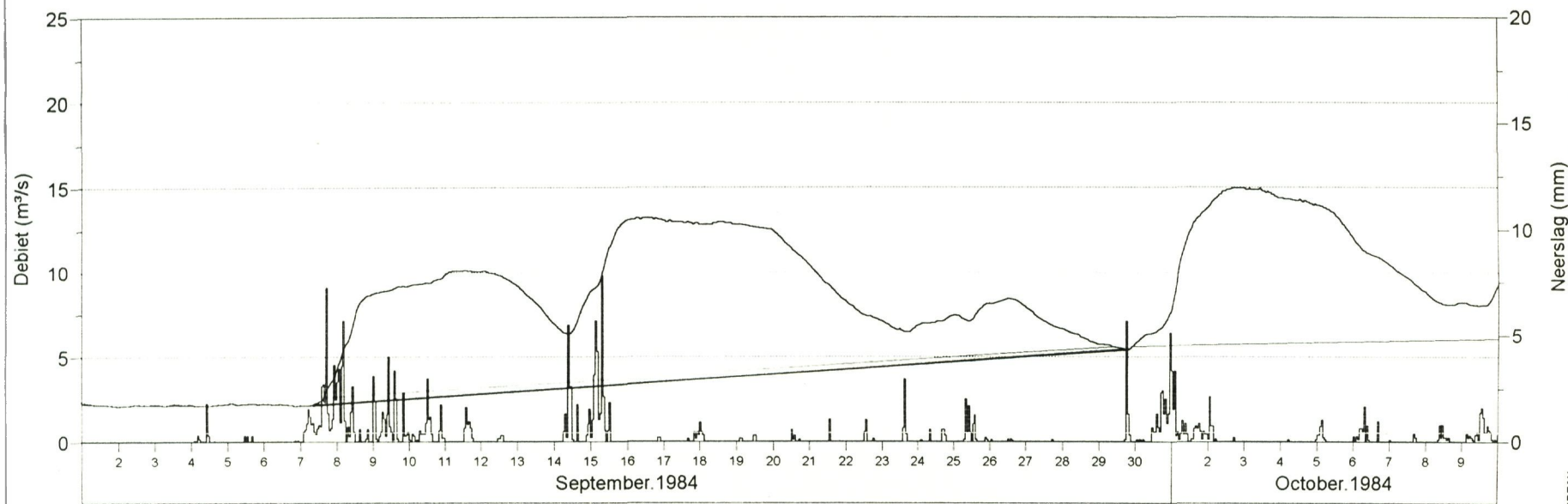
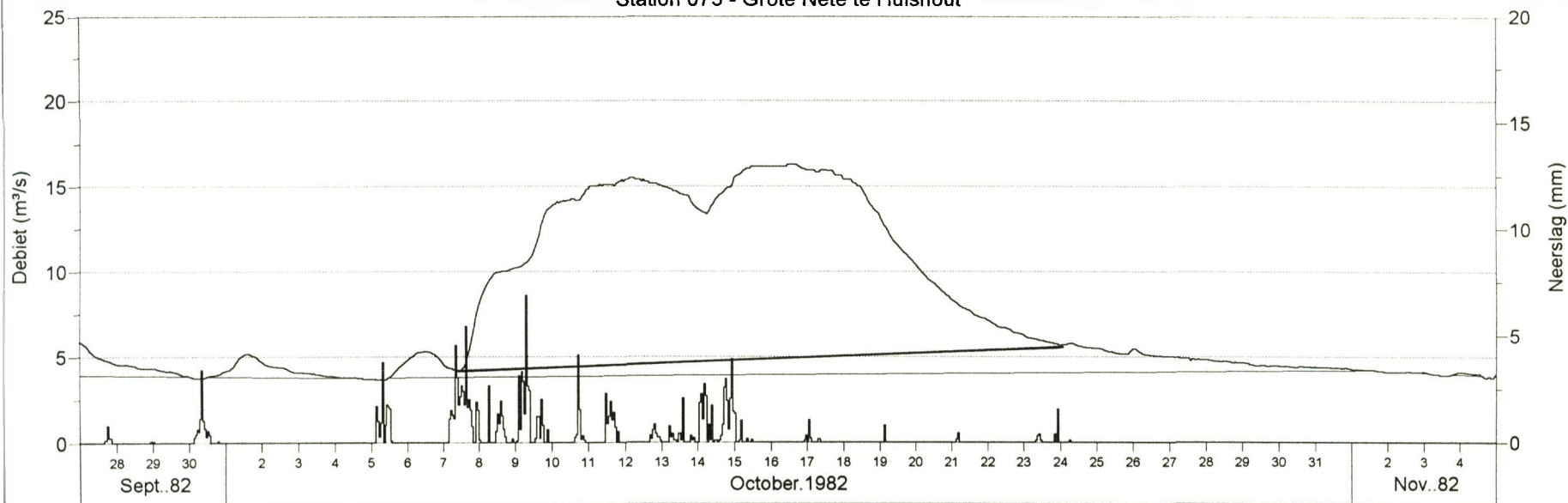
Uurwaarden van neerslag, debiet en basisafvoer

Station 073 - Grote Nete te Huishout



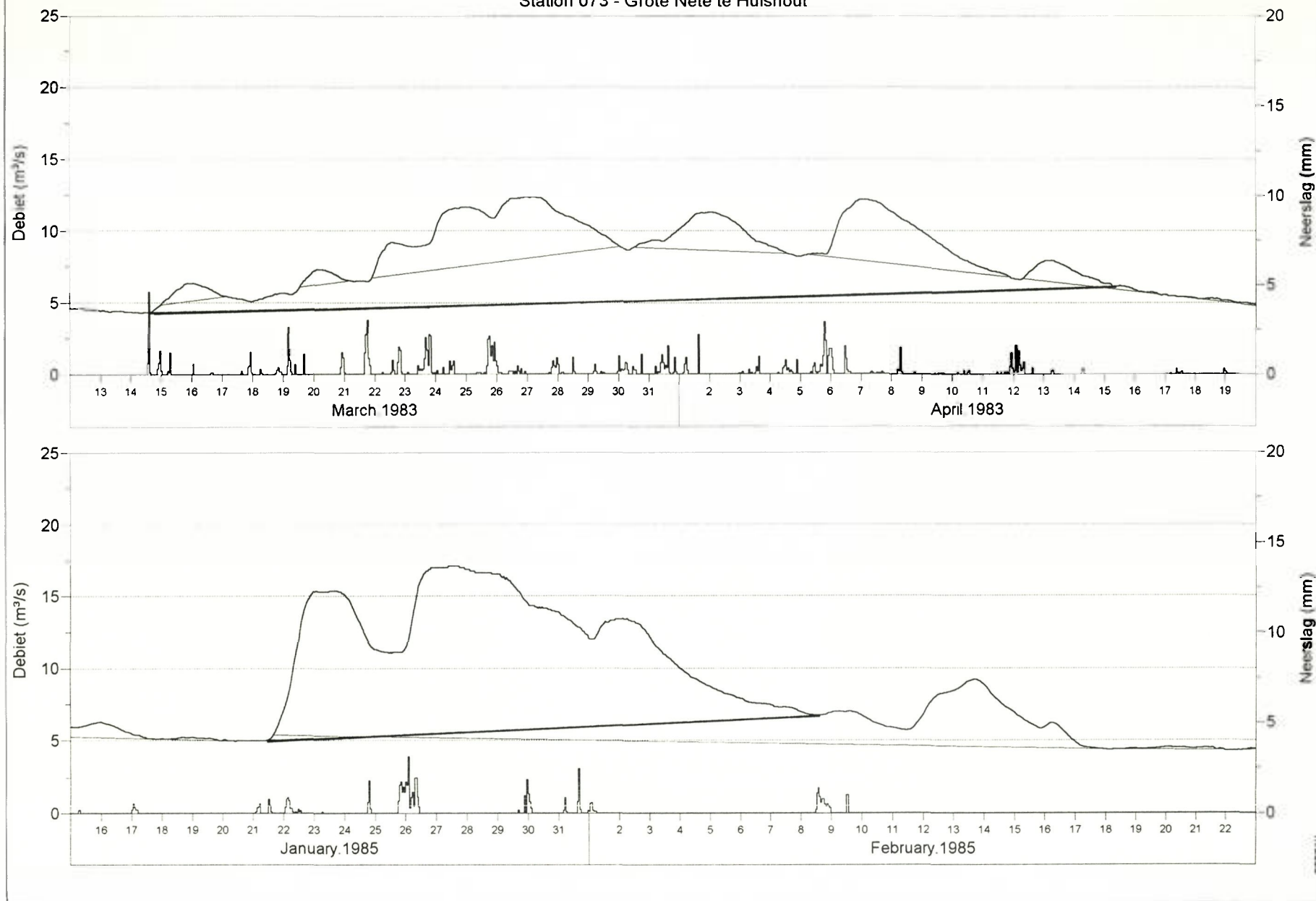
Uurwaarden van neerslag, debiet en basisafvoer

Station 073 - Grote Nete te Hulshout



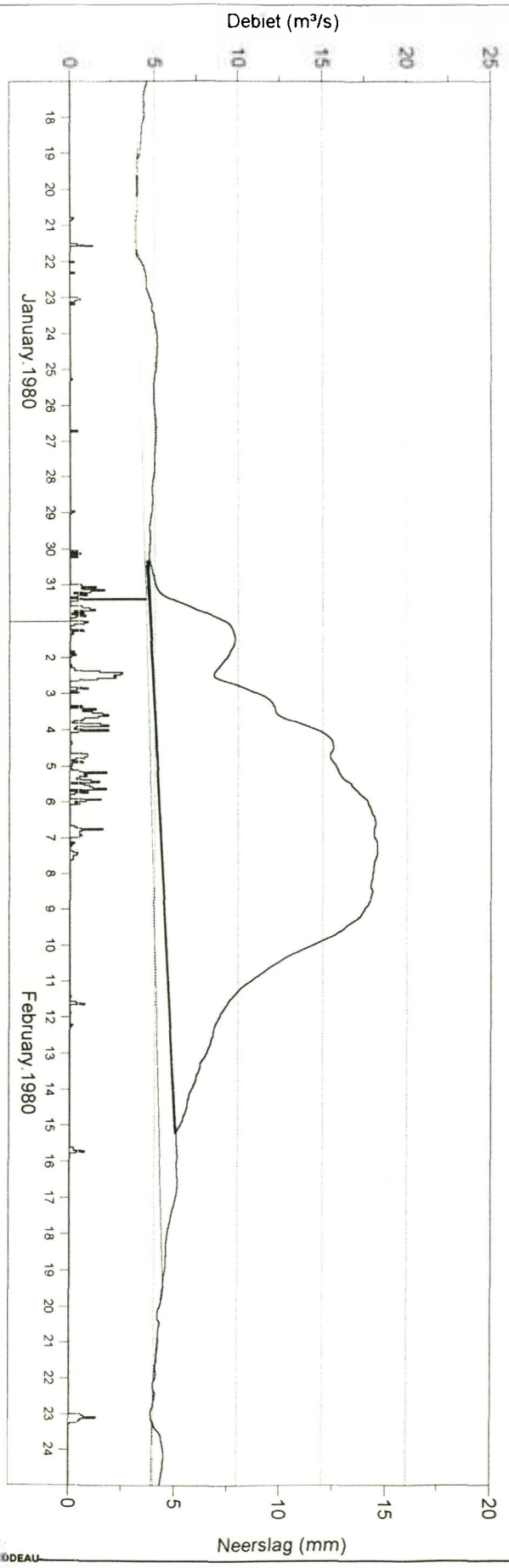
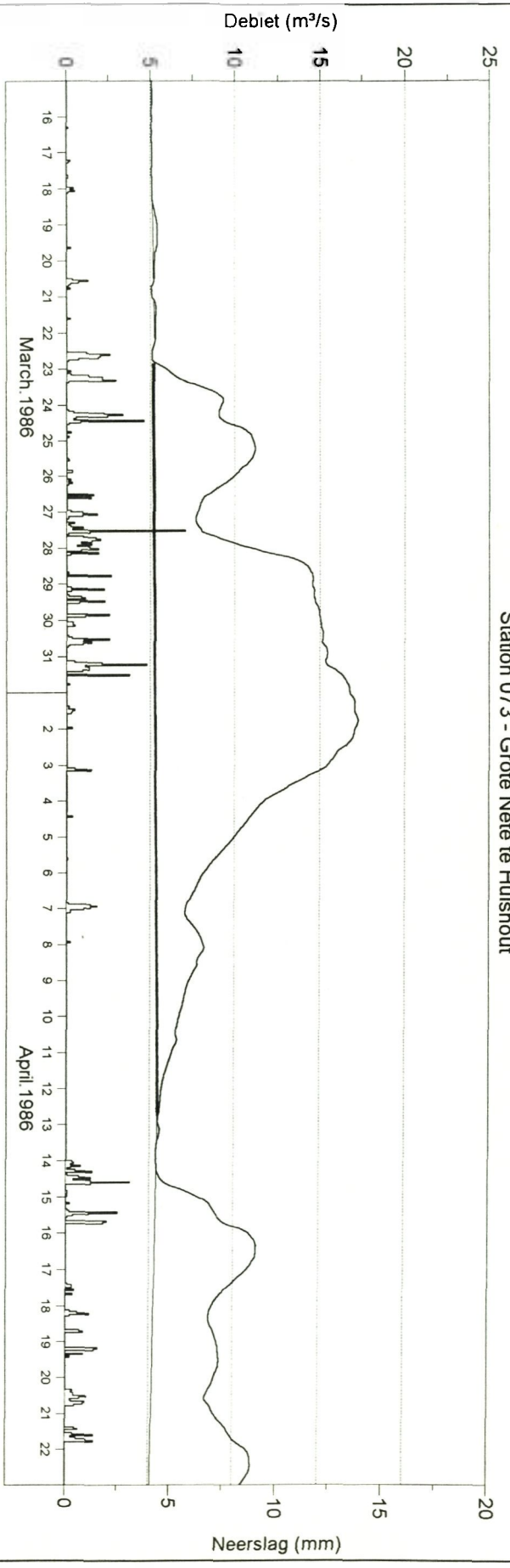
Uurwaarden van neerslag, debiet en basisafvoer

Station 073 - Grote Nete te Hulshout



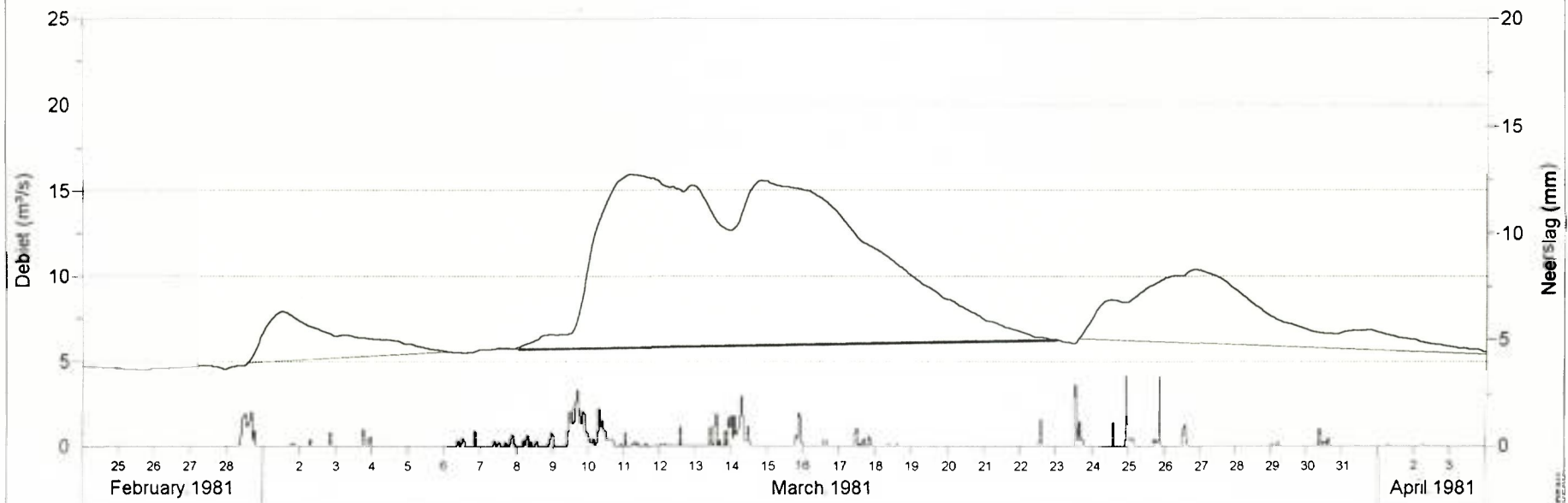
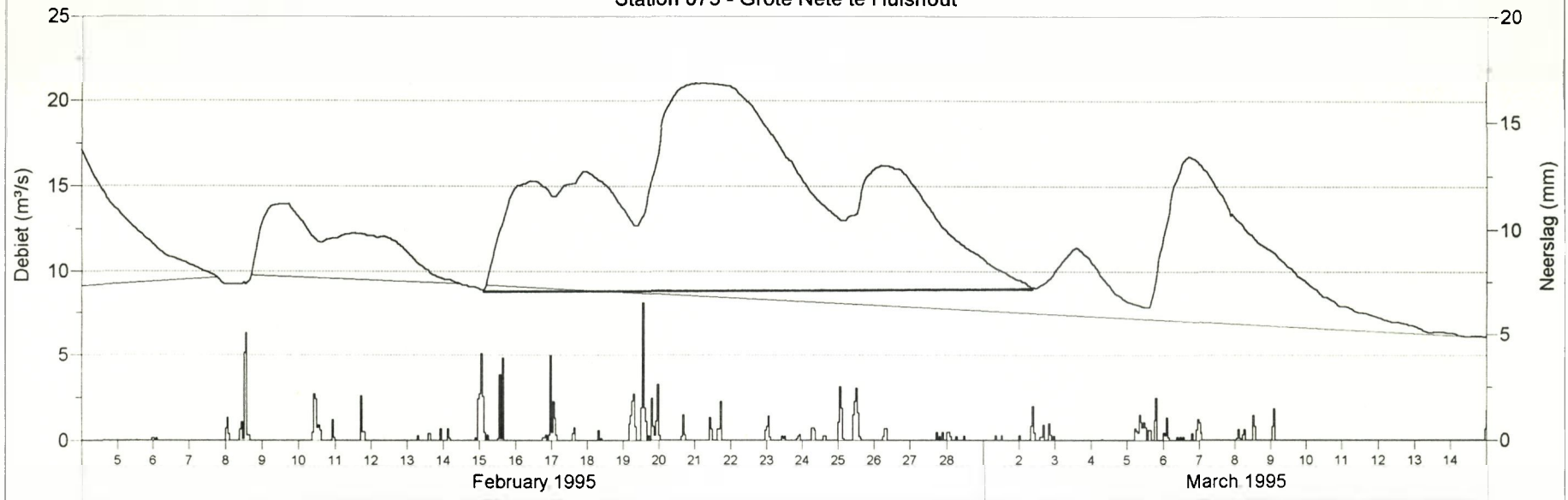
Uurwaarden van neerslag, debiet en basisafvoer

Station 073 - Grote Nete te Hulshout



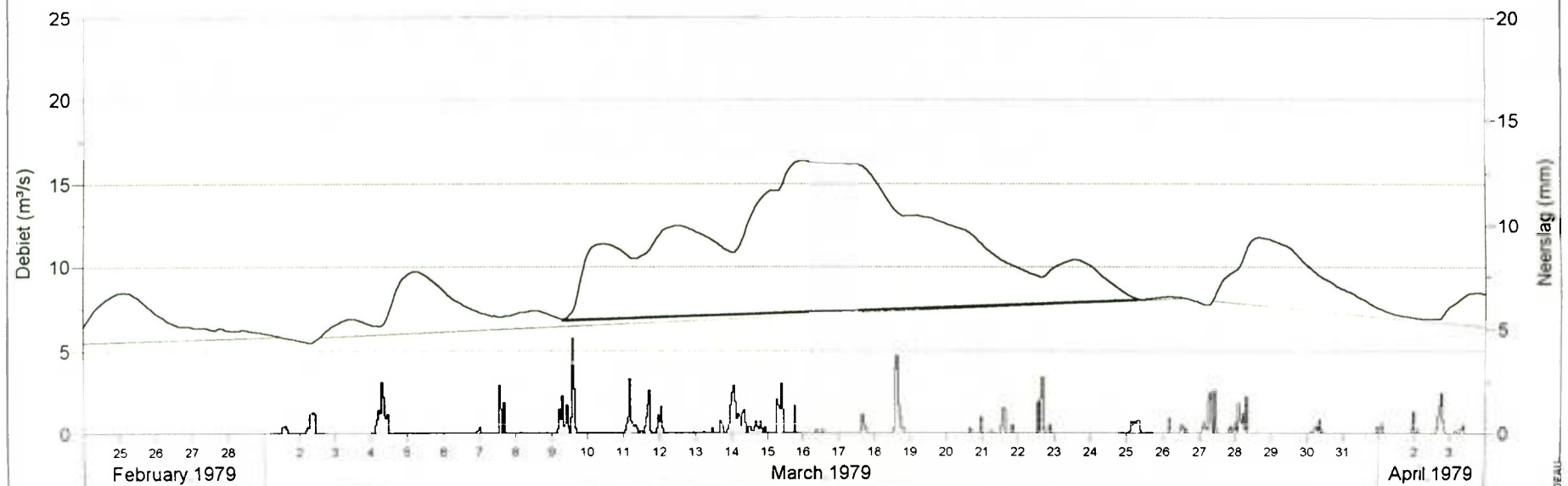
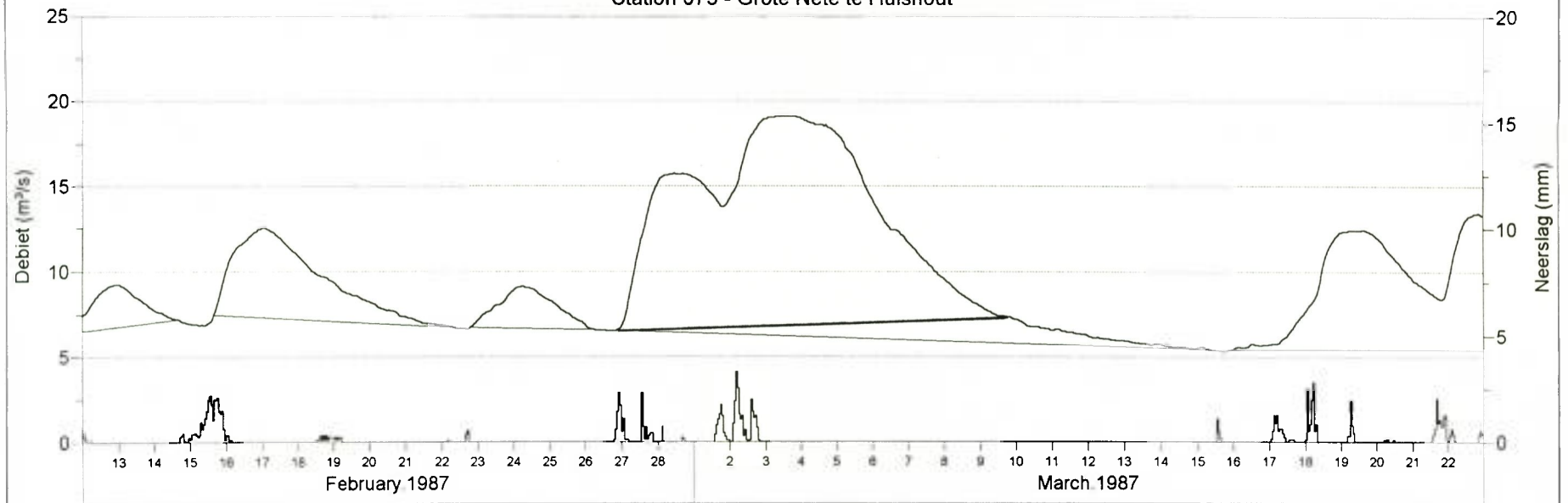
Uurwaarden van neerslag, debiet en basisafvoer

Station 073 - Grote Nete te Hulshout



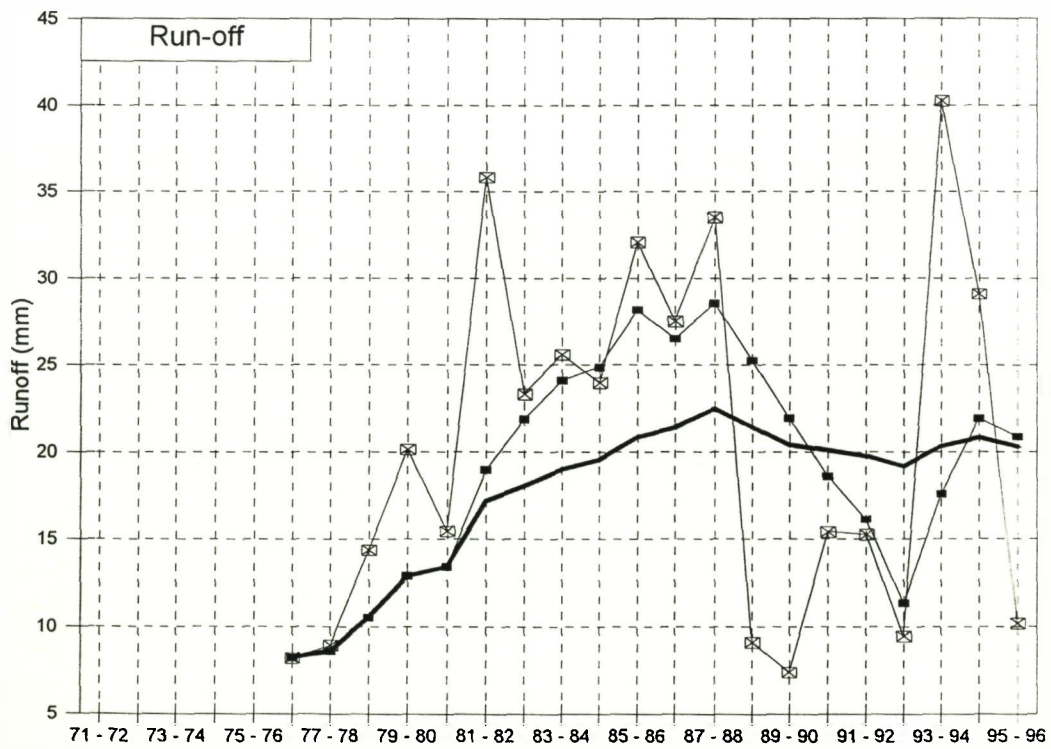
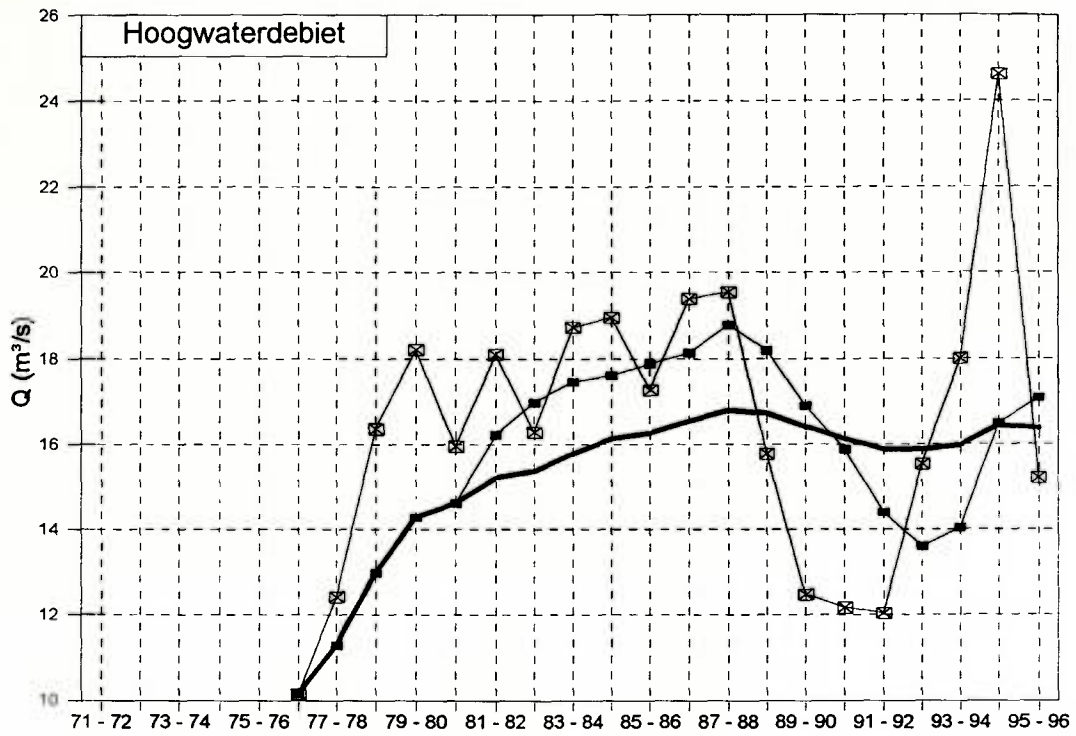
Uurwaarden van neerslag, debiet en basisafvoer

Station 073 - Grote Nete te Hulshout



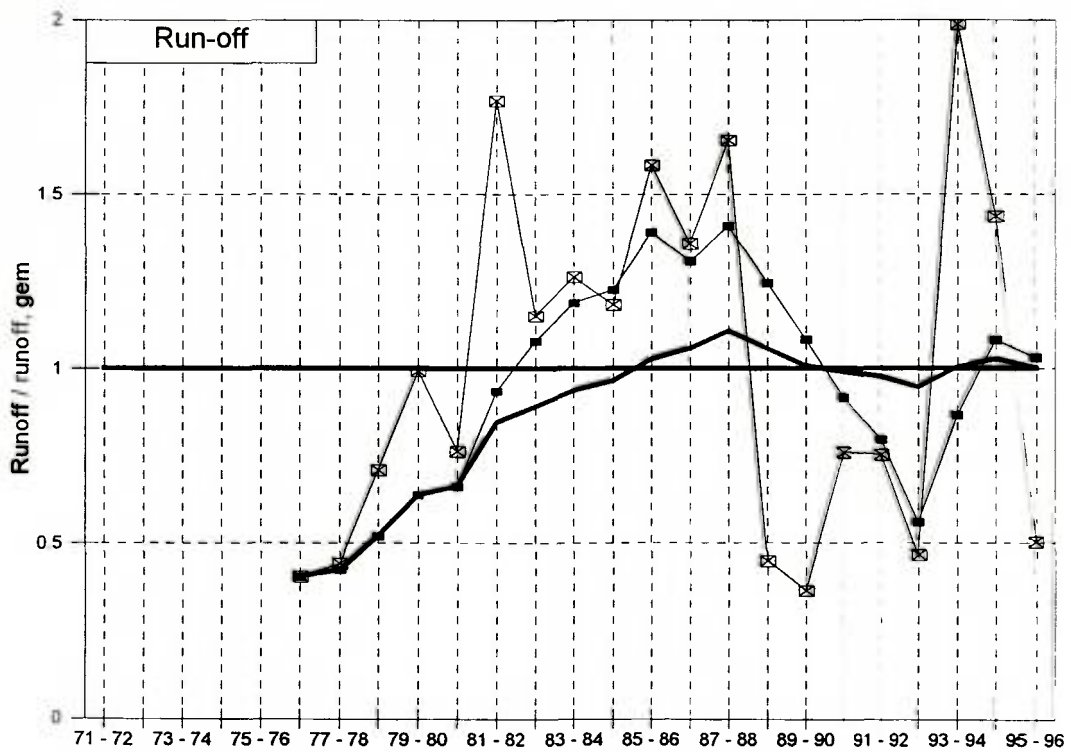
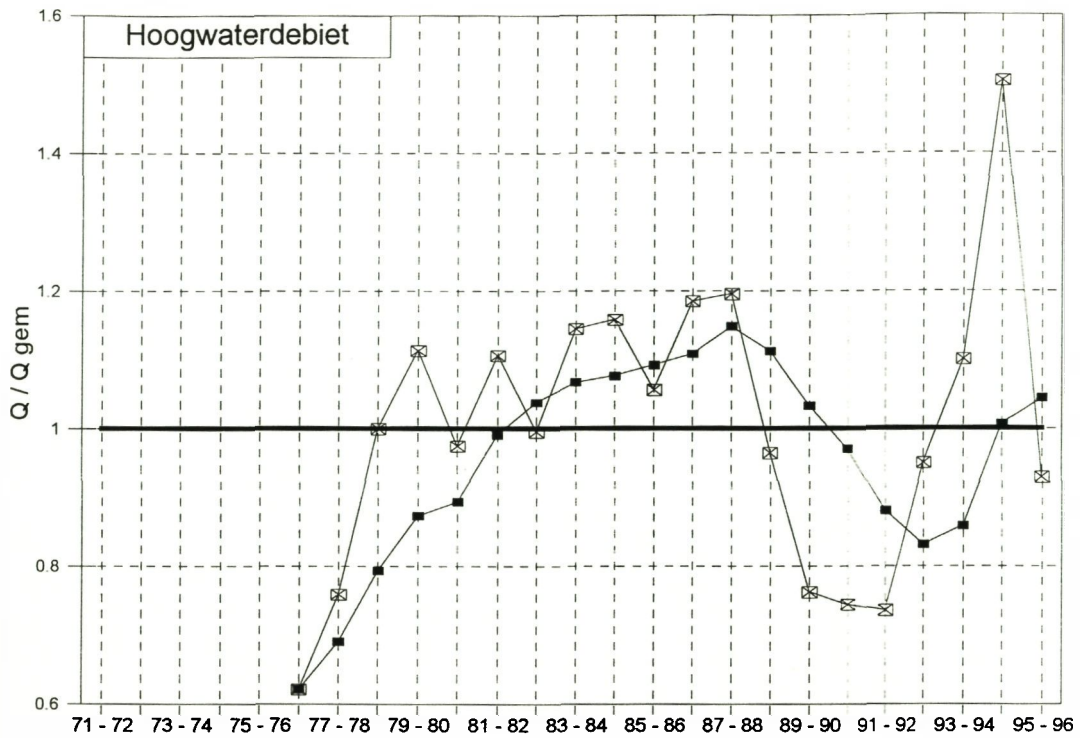
CODEAL

Station 073 : Grote Nete / Hulshout



— doorlopend gemiddelde —x— Jaarmaxima —■— 5-jaargemiddelde

Station 073 : Grote Nete / Hulshout

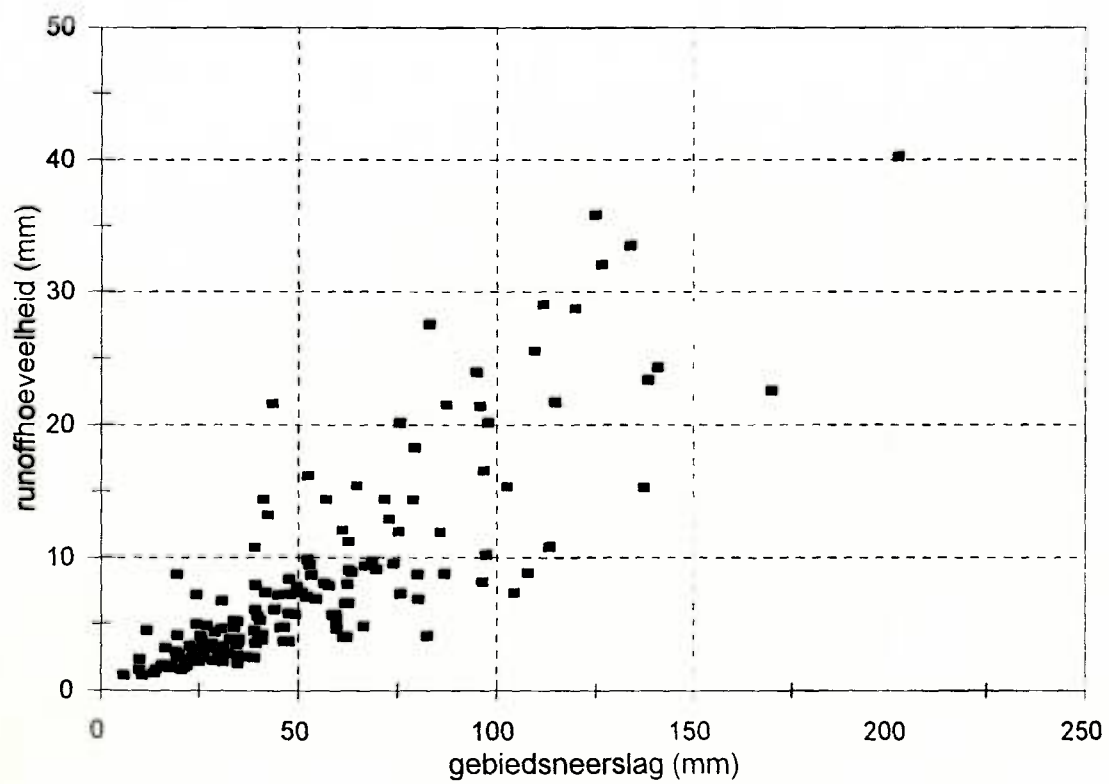
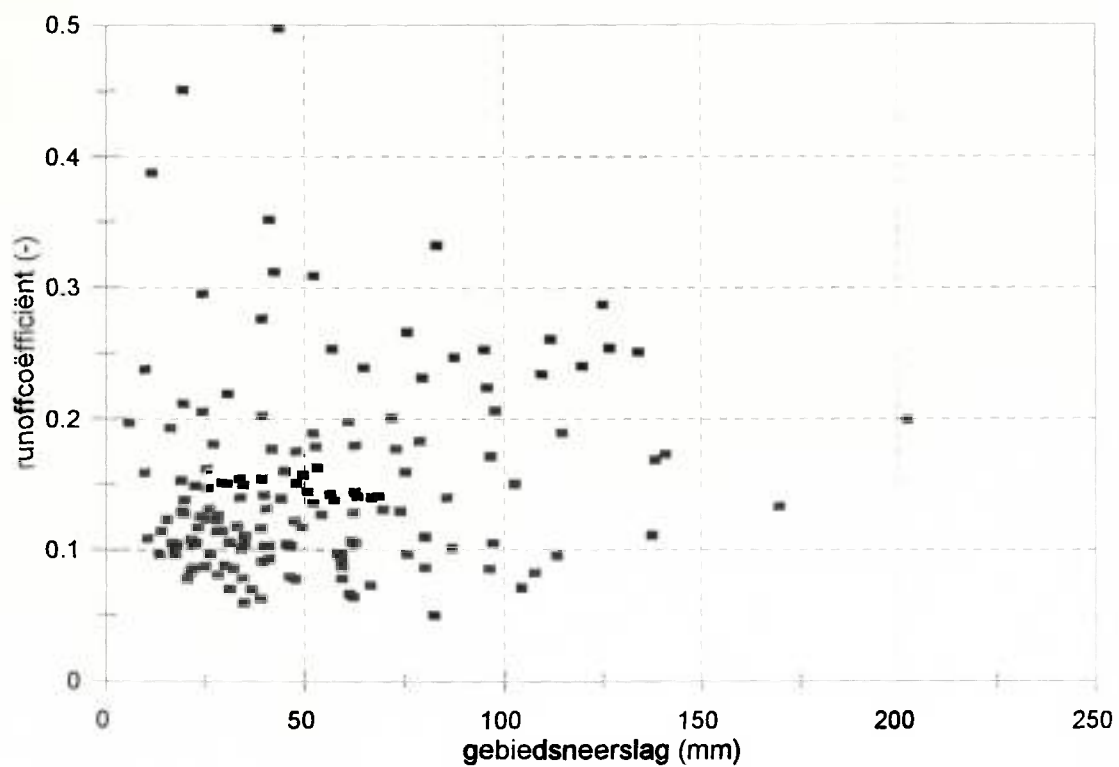


— doorlopend gemiddelde

— Jaarmaxima

— 5-jaargemiddelde

Station 073 : Grote Neet / Hulshout

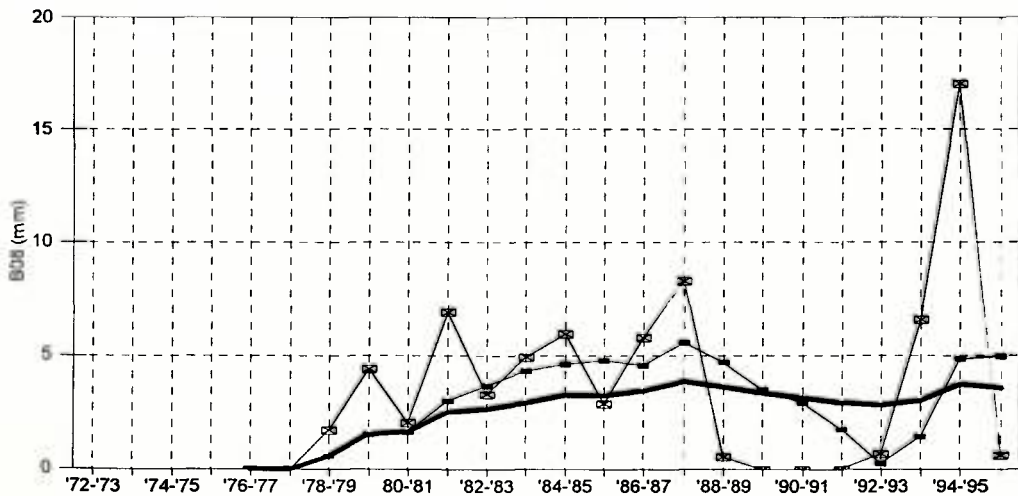
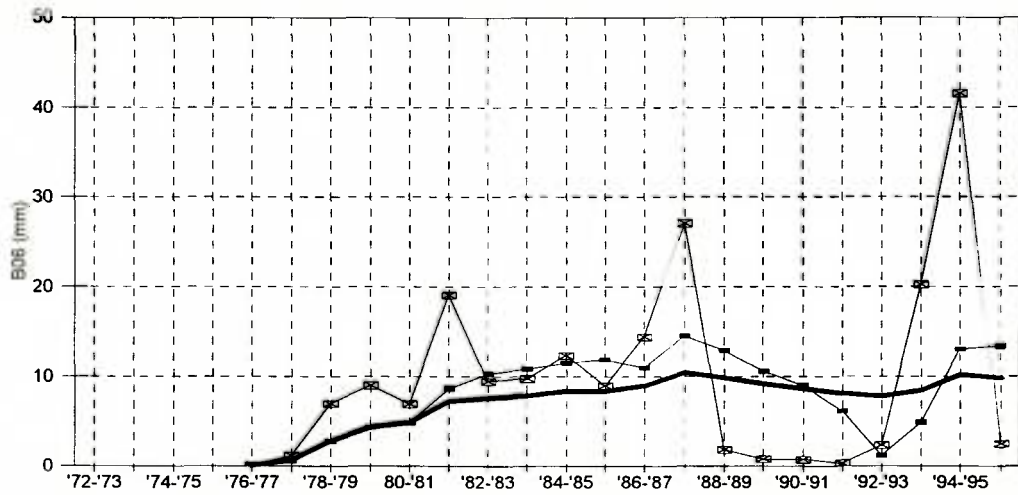
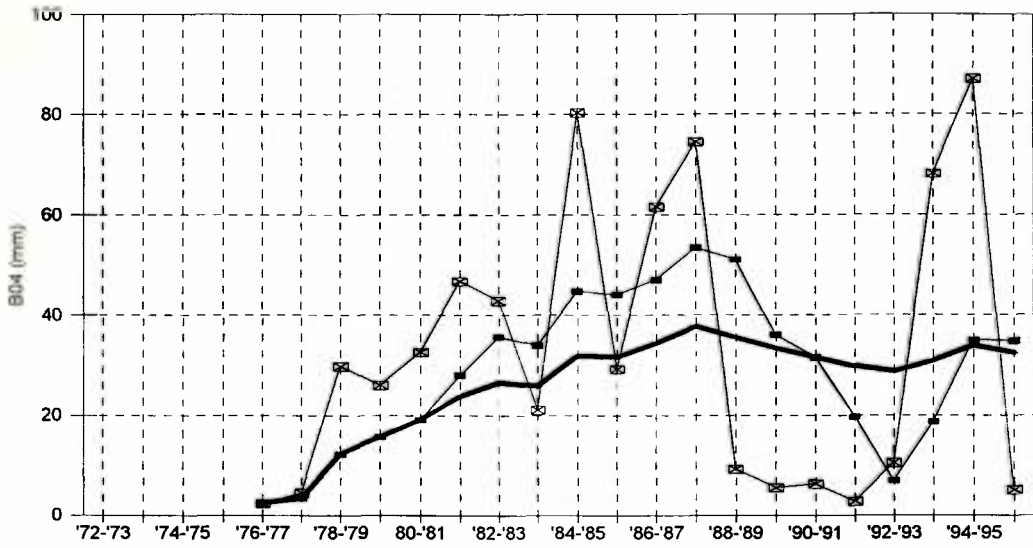


Jaarmaxima van bergingen					
Station 073 : Grote Nete / Hulshout			Gemidd. jaarmax. : 16 416m³/s		
Waterjaar	piekdebiet			berging	
	(m³/s)	datum	(mm)	(uur)	datum
Bergingen boven 0,4 Qgem					
'76 -'77	10 169	18/08/77	2 37	357	25/08/77
'77 -'78	12 414	25/11/77	4 46	712	28/11/77
'78 -'79	16 355	16/03/79	29 76	3889	05/04/79
'79 -'80	18 204	07/02/80	26 05	4194	09/04/80
'80 -'81	15 943	11/03/81	32 55	4430	01/04/81
'81 -'82	18 092	10/12/81	46 74	4504	03/02/82
'82 -'83	16 277	16/10/82	42 83	7424	03/06/83
'83 -'84	18 719	11/02/84	21 11	2650	18/02/84
'84 -'85	18 944	17/04/85	80 33	9987	23/04/85
'85 -'86	17 269	01/04/86	29 14	4662	25/04/86
'86 -'87	19 384	26/03/87	61 60	6836	05/04/87
'87 -'88	19 543	16/03/88	74 52	7523	05/04/88
'88 -'89	15 774	08/03/89	9 25	1732	26/03/89
'89 -'90	12 469	14/02/90	5 53	893	06/03/90
'90 -'91	12 173	04/01/91	6 31	765	13/01/91
'91 -'92	10 549	13/11/91	2 76	454	15/11/91
'92 -'93	15 536	23/01/93	10 48	1376	31/01/93
'93 -'94	17 994	22/12/93	68 17	6239	14/04/94
'94 -'95	24 607	31/01/95	87 08	6453	04/04/95
'95 -'96	15 202	30/08/96	5 05	328	03/09/96
Bergingen boven 0,5 Qgem					
'76 -'77	10 169	18/08/77	0 54	179	20/08/77
'77 -'78	12 414	25/11/77	2 51	274	27/11/77
'78 -'79	16 355	16/03/79	12 79	1127	31/03/79
'79 -'80	18 204	07/02/80	12 18	844	12/02/80
'80 -'81	15 943	11/03/81	9 90	908	28/03/81
'81 -'82	18 092	10/12/81	31 74	2943	09/01/82
'82 -'83	16 277	16/10/82	13 20	803	21/10/82
'83 -'84	18 719	11/02/84	13 26	1023	16/02/84
'84 -'85	17 628	27/11/84	17 12	4656	05/02/85
'85 -'86	15 783	25/01/86	16 03	1270	31/01/86
'86 -'87	19 384	26/03/87	28 48	3694	03/04/87
'87 -'88	19 543	16/03/88	48 41	3403	03/04/88
'88 -'89	15 774	08/03/89	3 52	554	20/03/89
'89 -'90	12 469	14/02/90	1 72	222	17/02/90
'90 -'91	12 173	04/01/91	2 13	435	11/01/91
'91 -'92	10 247	09/06/92	0 68	94	11/06/92
'92 -'93	15 536	23/01/93	4 18	662	28/01/93
'93 -'94	17 994	22/12/93	35 08	4005	06/02/94
'94 -'95	24 607	31/01/95	62 55	4550	10/03/95
'95 -'96	15 202	30/08/96	3 64	230	02/09/96

Jaarmaxima van bergingen					
Station 073 : Grote Nete / Hulshout			Gemidd. jaarmax. : 16.416m³/s		
Waterjaar	piekdebiet (m³/s)	datum	(mm)	berging (uur)	datum
Bergingen boven 0,6 - Qgem					
'76 -'77	10.169	18/08/77	0.01	14	18/08/77
'77 -'78	12.414	25/11/77	1.16	149	26/11/77
'78 -'79	16.355	16/03/79	6.98	770	24/03/79
'79 -'80	18.204	07/02/80	9.01	530	11/02/80
'80 -'81	15.943	11/03/81	6.91	610	19/03/81
'81 -'82	18.092	10/12/81	19.03	1804	08/01/82
'82 -'83	16.277	16/10/82	9.42	570	20/10/82
'83 -'84	18.719	11/02/84	9.73	616	14/02/84
'84 -'85	18.944	17/04/85	12.30	770	20/04/85
'85 -'86	15.783	25/01/86	8.96	772	30/01/86
'86 -'87	19.384	26/03/87	14.39	1270	01/04/87
'87 -'88	19.543	16/03/88	27.04	2478	01/04/88
'88 -'89	15.774	08/03/89	1.81	143	10/03/89
'89 -'90	12.469	14/02/90	0.77	116	16/02/90
'90 -'91	12.173	04/01/91	0.68	125	05/01/91
'91 -'92	12.037	24/03/92	0.27	45	24/03/92
'92 -'93	15.536	23/01/93	2.30	227	26/01/93
'93 -'94	17.994	22/12/93	20.20	2096	09/01/94
'94 -'95	24.607	31/01/95	41.54	2516	09/03/95
'95 -'96	15.202	30/08/96	2.46	170	01/09/96
Bergingen boven 0,7 - Qgem					
'76 -'77			0.00	0	
'77 -'78	12.414	25/11/77	0.27	75	26/11/77
'78 -'79	16.355	16/03/79	3.65	464	20/03/79
'79 -'80	18.204	07/02/80	6.55	384	10/02/80
'80 -'81	15.943	11/03/81	4.30	351	18/03/81
'81 -'82	18.092	10/12/81	12.15	1121	18/12/81
'82 -'83	16.277	16/10/82	6.21	412	19/10/82
'83 -'84	18.719	11/02/84	7.07	392	14/02/84
'84 -'85	18.944	17/04/85	8.43	527	19/04/85
'85 -'86	17.269	01/04/86	4.89	345	04/04/86
'86 -'87	19.384	26/03/87	8.41	473	31/03/87
'87 -'88	19.543	16/03/88	14.13	838	01/04/88
'88 -'89	15.774	08/03/89	1.11	95	10/03/89
'89 -'90	12.469	14/02/90	0.08	57	16/02/90
'90 -'91	12.173	04/01/91	0.09	37	05/01/91
'91 -'92	12.037	24/03/92	0.03	17	24/03/92
'92 -'93	15.536	23/01/93	1.39	133	25/01/93
'93 -'94	17.994	22/12/93	12.29	1218	08/01/94
'94 -'95	24.607	31/01/95	28.01	1866	28/02/95
'95 -'96	15.202	30/08/96	1.44	126	01/09/96

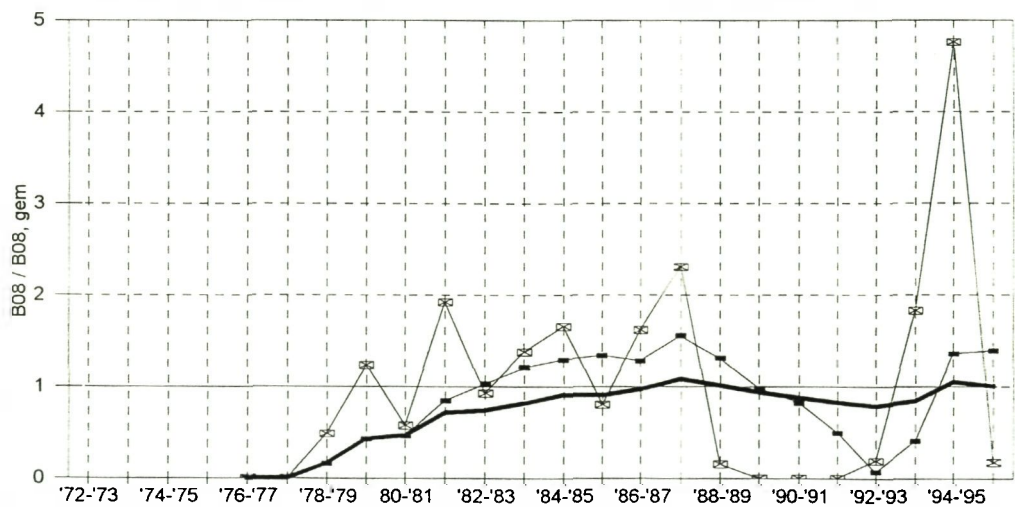
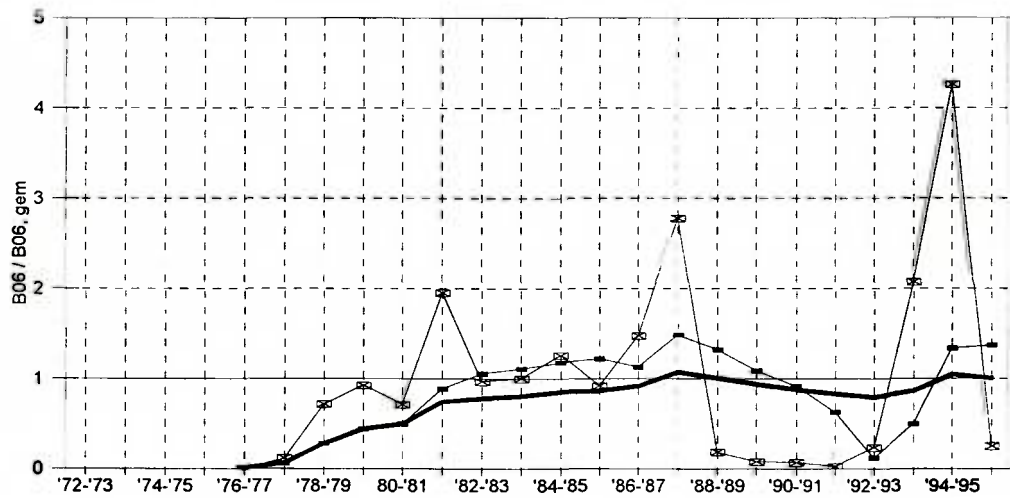
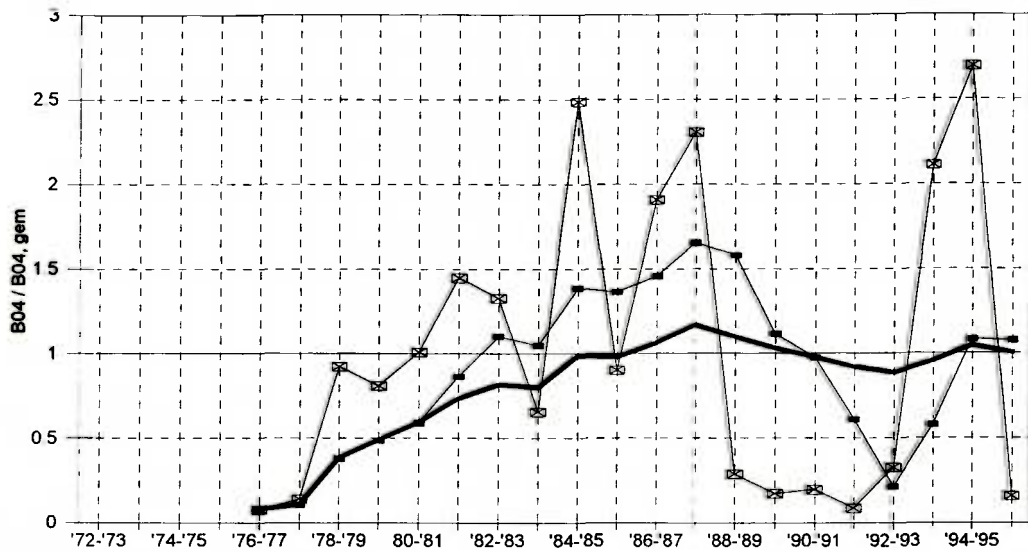
Jaarmaxima van bergingen					
Station 073 : Grote Nete / Hulshout			Gemidd. jaarmax. : 16.416m³/s		
Waterjaar	piekdebiet		berging		
	(m³/s)	datum	(mm)	(uur)	datum
Bergingen boven 0,8 · Qgem					
'76 -'77			0 00	0	
'77 -'78			0 00	0	
'78 -'79	16.355	16/03/79	1.73	219	18/03/79
'79 -'80	18.204	07/02/80	4 41	279	10/02/80
'80 -'81	15.943	11/03/81	2 06	252	17/03/81
'81 -'82	18 092	10/12/81	6 88	576	17/12/81
'82 -'83	16.277	16/10/82	3 31	318	19/10/82
'83 -'84	18.719	11/02/84	4 92	297	13/02/84
'84 -'85	18.944	17/04/85	5 94	307	19/04/85
'85 -'86	17.269	01/04/86	2 87	246	03/04/86
'86 -'87	19.384	26/03/87	5 79	361	30/03/87
'87 -'88	19.543	16/03/88	8 26	657	31/03/88
'88 -'89	15.774	08/03/89	0 55	65	09/03/89
'89 -'90			0 00	0	
'90 -'91			0 00	0	
'91 -'92			0 00	0	
'92 -'93	15.536	23/01/93	0 68	85	25/01/93
'93 -'94	17.994	22/12/93	6 56	665	07/01/94
'94 -'95	24.607	31/01/95	17 03	1400	27/02/95
'95 -'96	15.202	30/08/96	0 62	88	31/08/96

Station 073 : Grote Nete / Hulshout



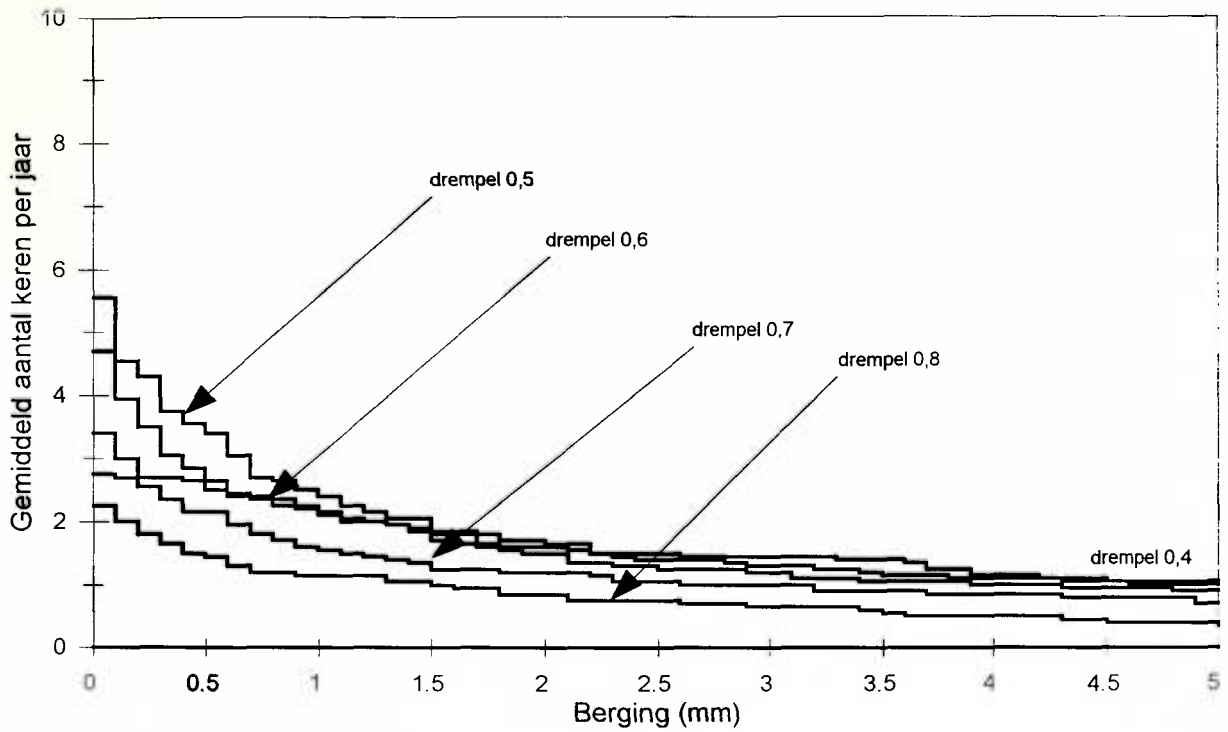
— doorlopend gemiddelde —■— Jaarmaxima —+— 5-jaargemiddelde

Station 073 : Grote Nete / Hulshout

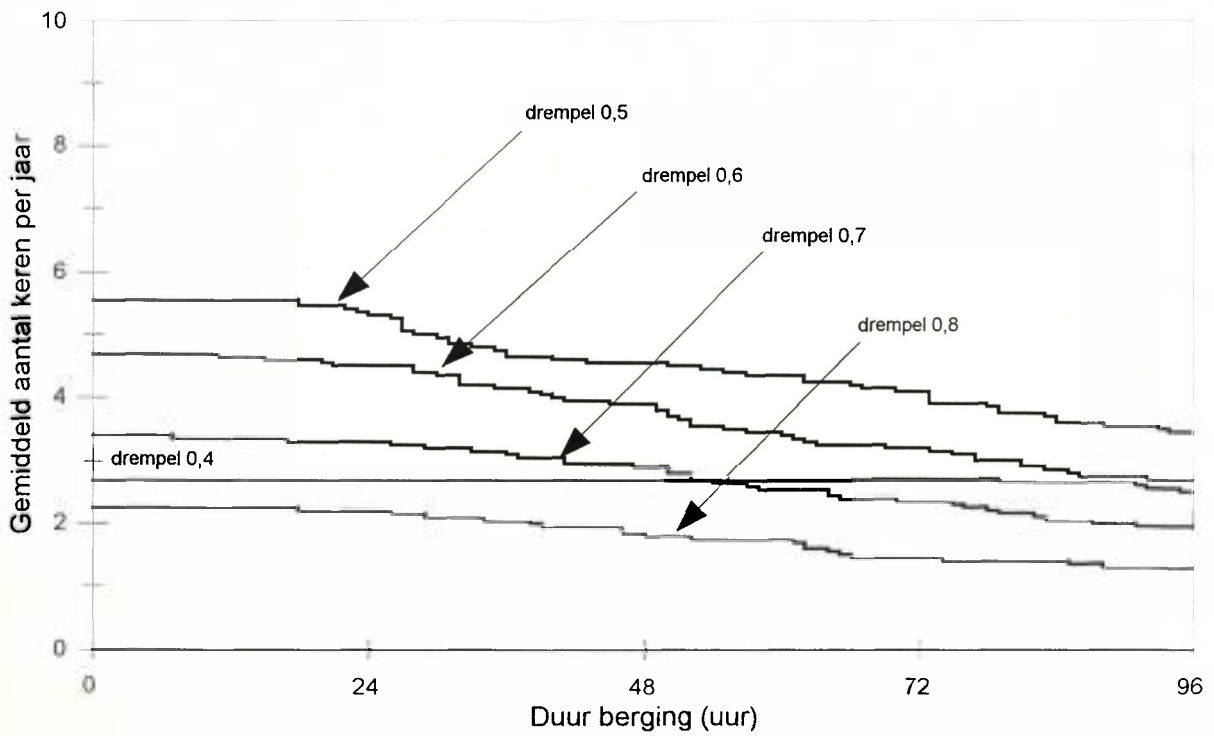


— doorlopend gemiddelde —■— 5-jaargemiddelde - - - □ - - - Jaarmaxima

Station 073 - Grote Nete te Hulshout



Station 073 - Grote Nete te Hulshout

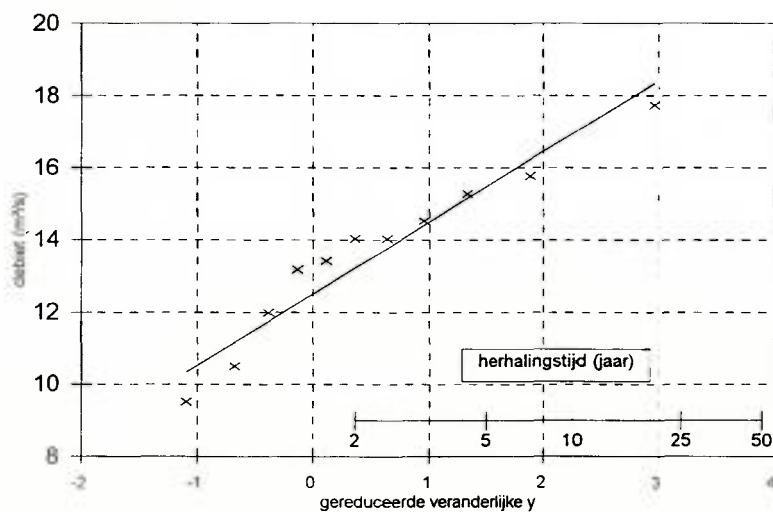


15. Station 076
De Grote Nete
te Geel-Zammel



Station nr. 076 : Grote Nete te Geel-Zammel

Nr.	Waterjaar	Datum	Hoogte (cm)	Debiet (m³/s)
1	'95 - '96	23/12/95	114	9.513
2	'90 - '91	4/01/91	123	10.507
3	'89 - '90	1/03/90	115	11.993
4	'91 - '92	22/12/91	146	13.178
5	'85 - '86	1/04/86	148	13.419
6	'86 - '87	26/03/87	153	14.029
7	'92 - '93	23/01/93	153	14.029
8	'87 - '88	27/01/88	157	14.523
9	'93 - '94	1/01/94	163	15.275
10	'88 - '89	8/03/89	167	15.784
11	'94 - '95	31/01/95	182	17.742



Herhalingstijd (jaar)	Debiet (m³/s)	Spec. afvoer (l/s.ha)
2	13.219	0.37
5	15.460	0.43
10	16.945	0.47
25	18.820	0.52
50	20.211	0.56

Station 076 : Grote Nete te Geel-Zammel

Runoffhoeveelheden

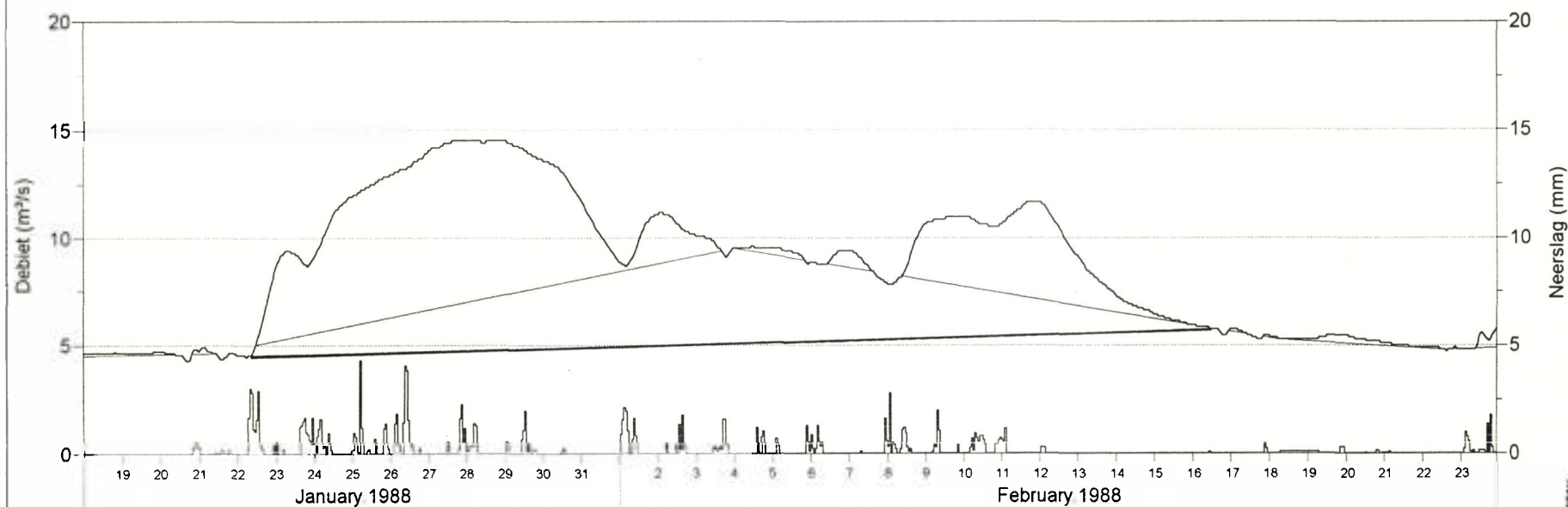
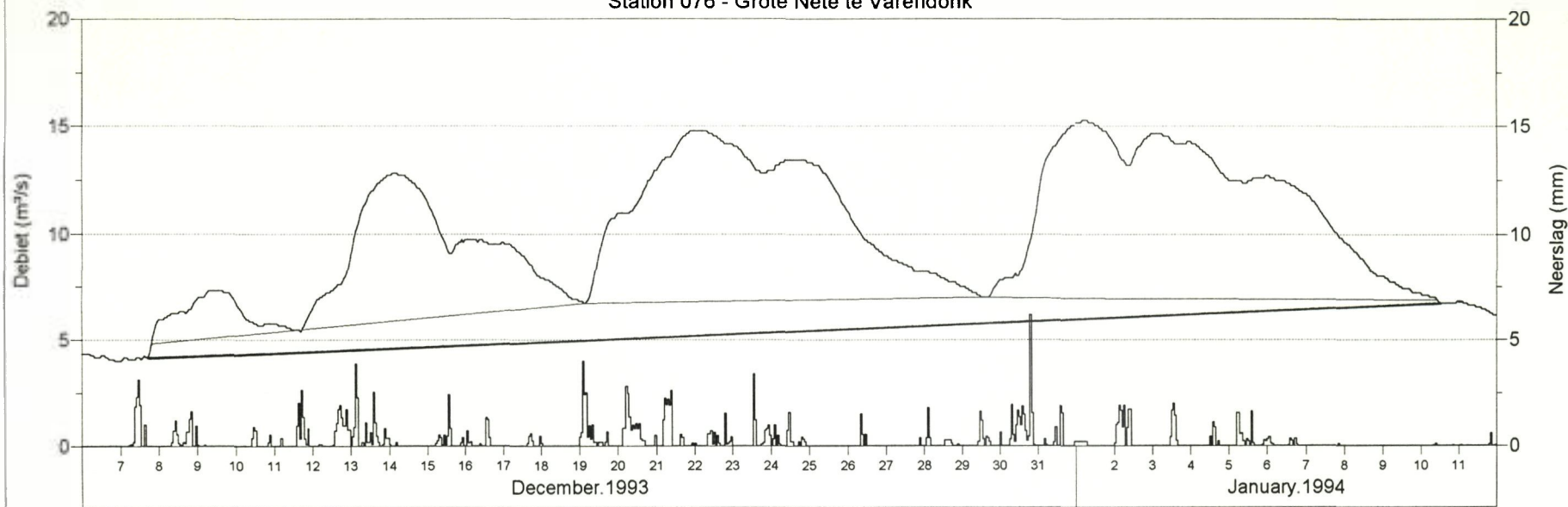
Stroomgebied = 35880 ha

Tijdreeks : 1985 - '96

Nr	Was van (datum $Q_{\max}$)	$q_{\max}$ (l/s ha)	q_{begin} (l/s ha)	q_{eind} (l/s ha)	Neerslag som (mm)	Neerslag duur (uur)	Concentratie tijd (uur)	Runoff (mm)	Runoff- Coëff. (-)	Runoff duur (uur)
1	01/01/94	0.43	0.12	0.19	202.9	761	86	43.6	0.21	813
2	27/01/88	0.40	0.13	0.16	137.0	563	59	34.0	0.25	604
3	20/01/86	0.37	0.12	0.16	128.2	642	74	30.0	0.23	719
4	31/01/95	0.49	0.16	0.19	113.6	327	68	28.0	0.25	404
5	15/03/88	0.40	0.20	0.20	122.1	518	47	26.1	0.21	542
6	01/04/86	0.37	0.12	0.12	101.4	394	71	22.4	0.22	499
7	26/03/87	0.39	0.13	0.14	79.7	340	74	21.8	0.27	477
8	02/01/87	0.39	0.15	0.15	89.2	343	66	21.3	0.24	410
9	15/04/85	0.39	0.13	0.13	92.3	253	70	20.3	0.22	375
10	27/01/85	0.36	0.11	0.14	43.7	292	40	20.0	0.46	424
11	04/01/91	0.29	0.09	0.11	108.1	440	77	17.9	0.17	562
12	20/02/95	0.43	0.20	0.20	78.7	365	45	17.5	0.22	368
13	13/11/91	0.24	0.06	0.10	134.5	432	69	14.7	0.11	531
14	22/12/91	0.37	0.07	0.11	78.0	260	62	13.7	0.18	355
15	27/07/87	0.22	0.07	0.10	113.6	557	70	13.1	0.12	553
16	03/03/87	0.38	0.14	0.16	42.6	97	46	12.2	0.29	247
17	28/12/94	0.35	0.09	0.13	68.7	185	46	11.8	0.17	277
18	12/01/93	0.37	0.11	0.16	53.5	291	51	11.4	0.21	318
19	23/10/86	0.31	0.07	0.11	107.8	335	55	11.3	0.11	368
20	24/01/94	0.31	0.16	0.16	51.1	331	42	11.2	0.22	376
21	19/03/94	0.34	0.12	0.15	60.1	325	49	10.8	0.18	362
22	23/11/87	0.31	0.13	0.14	55.4	265	52	10.8	0.19	305
23	01/12/88	0.29	0.09	0.13	72.0	335	47	10.6	0.15	381
24	01/09/92	0.28	0.11	0.12	94.5	295	62	10.5	0.11	316
25	20/12/89	0.26	0.06	0.12	100.6	317	61	10.0	0.10	369
26	10/06/92	0.29	0.07	0.07	90.9	298	82	10.0	0.11	377
27	20/11/86	0.27	0.10	0.12	52.6	334	29	9.7	0.18	367
28	10/06/85	0.26	0.06	0.10	82.2	248	67	9.5	0.12	331
29	25/06/85	0.25	0.10	0.12	79.3	293	49	8.4	0.11	331
30	06/01/88	0.26	0.13	0.14	54.6	307	50	8.3	0.15	349

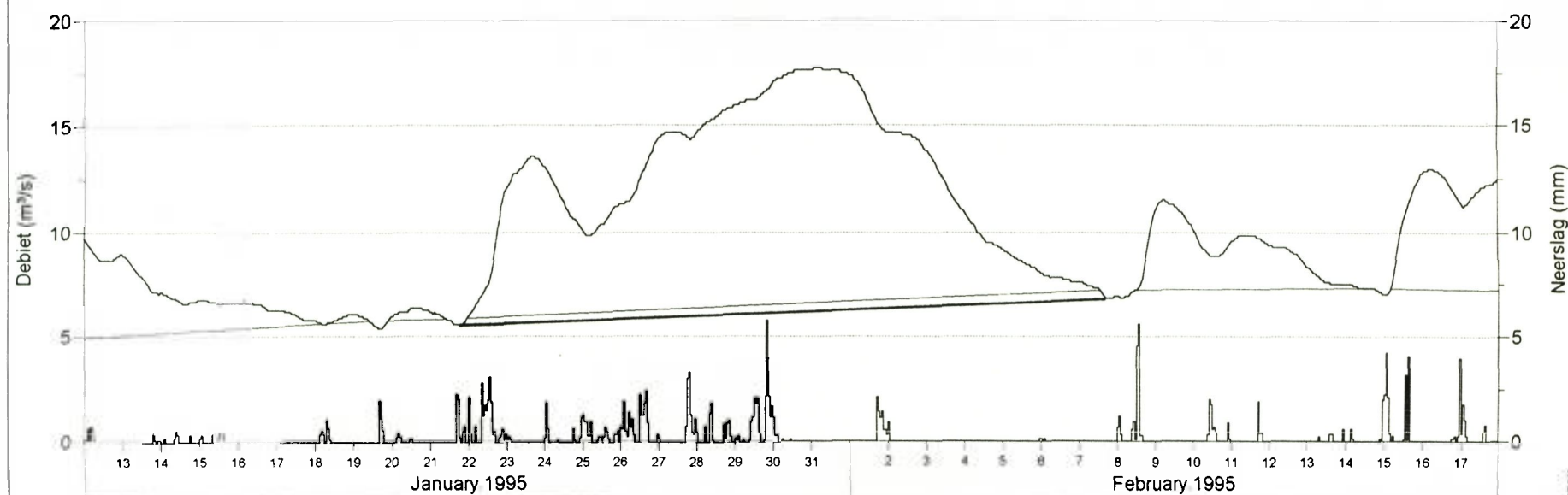
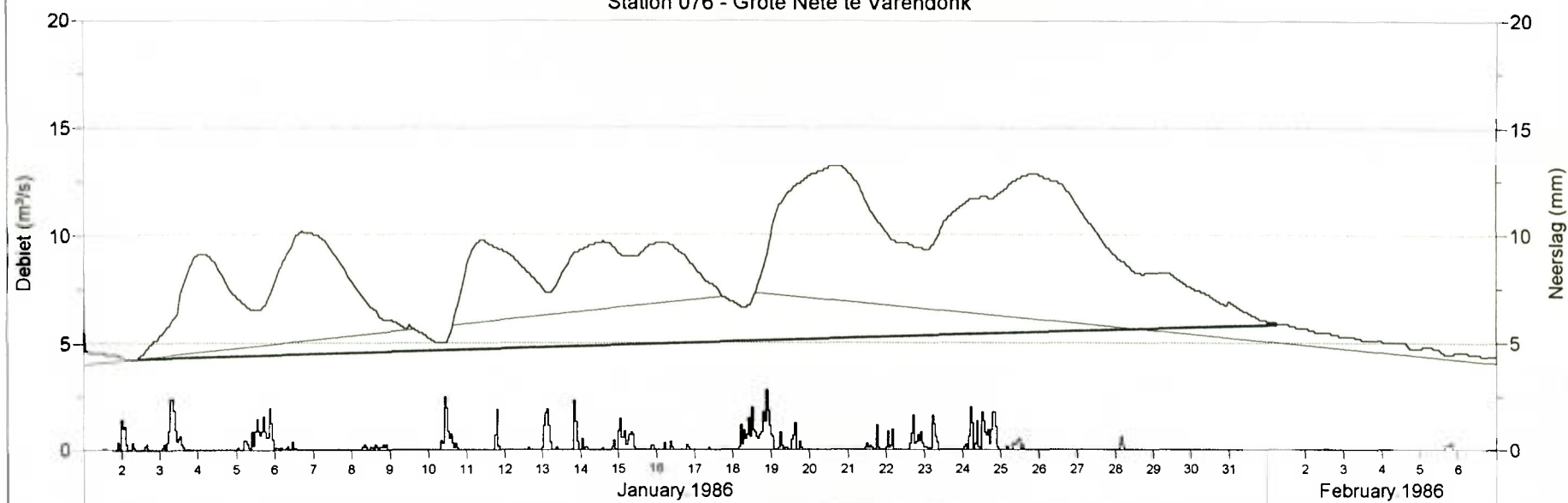
Uurwaarden van neerslag, debiet en basisafvoer

Station 076 - Grote Nete te Varendonk



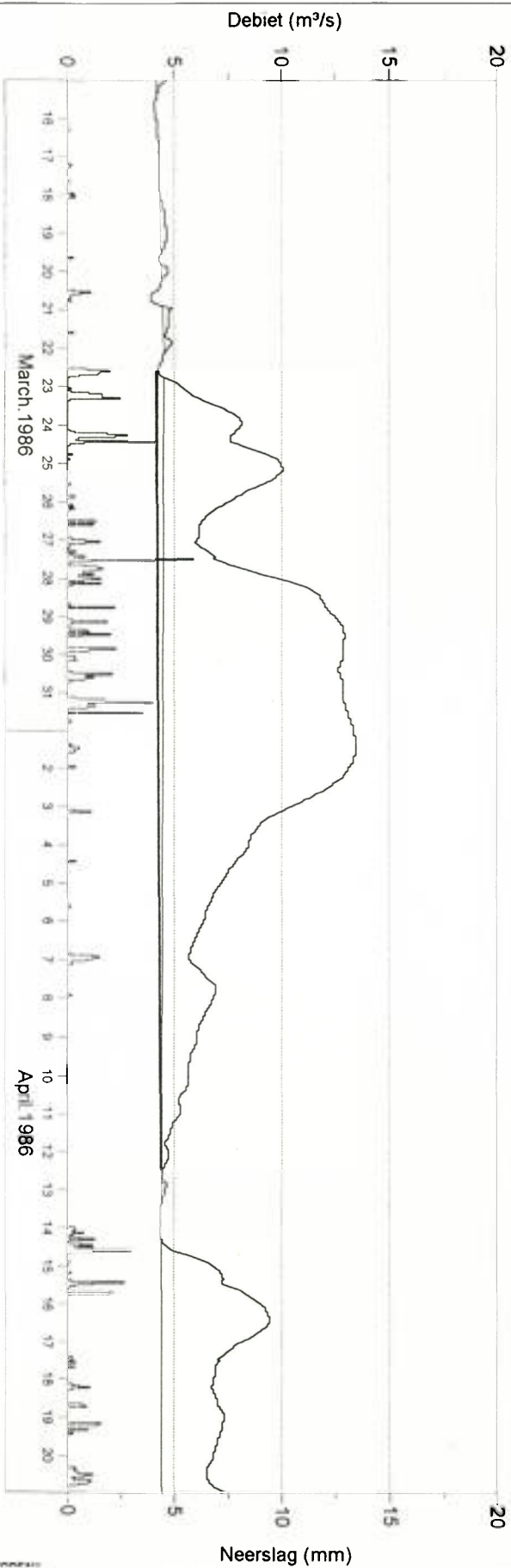
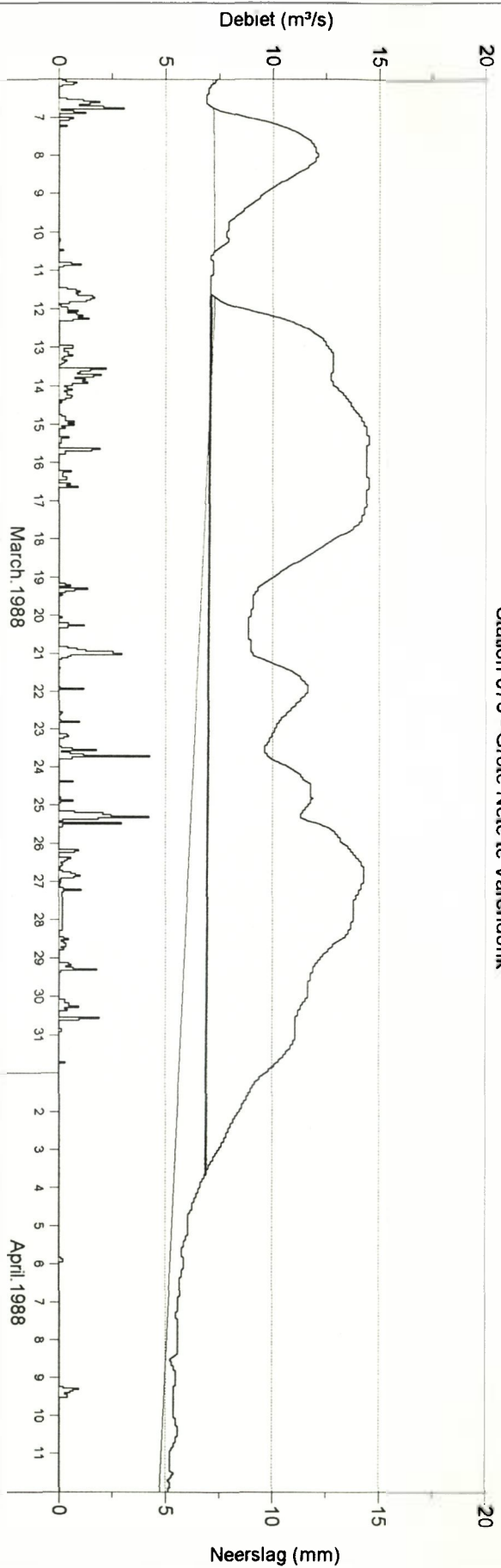
Uurwaarden van neerslag, debiet en basisafvoer

Station 076 - Grote Nete te Varendonk



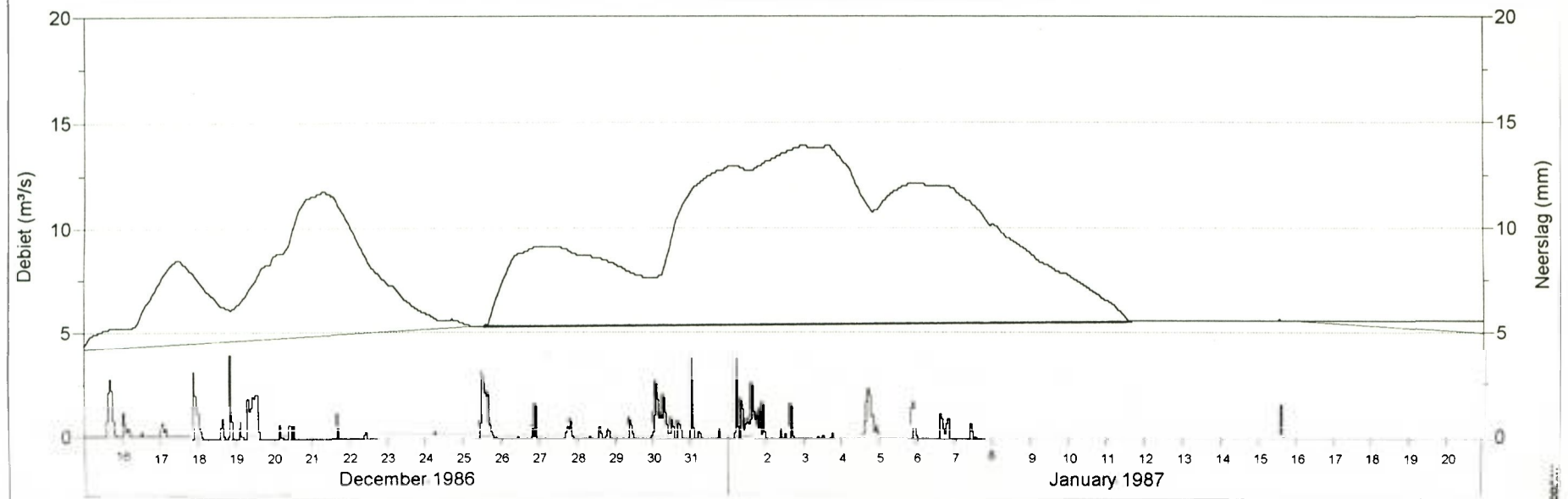
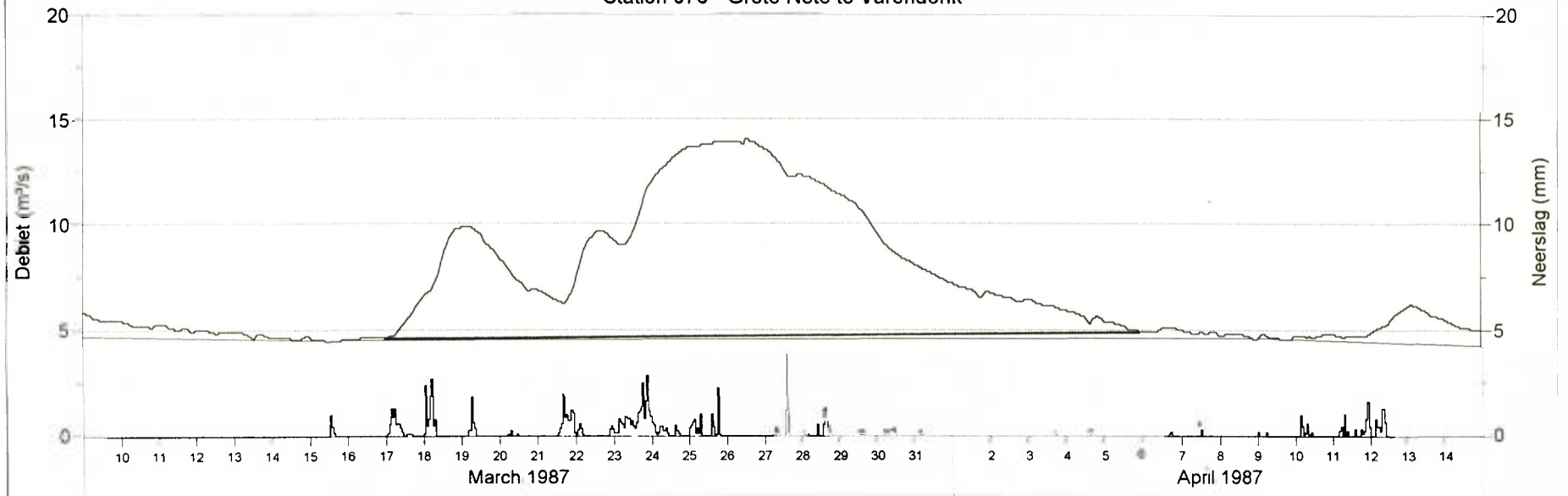
Uurwaarden van neerslag, debiet en basisafvoer

Station 076 - Grote Nete te Varendonk



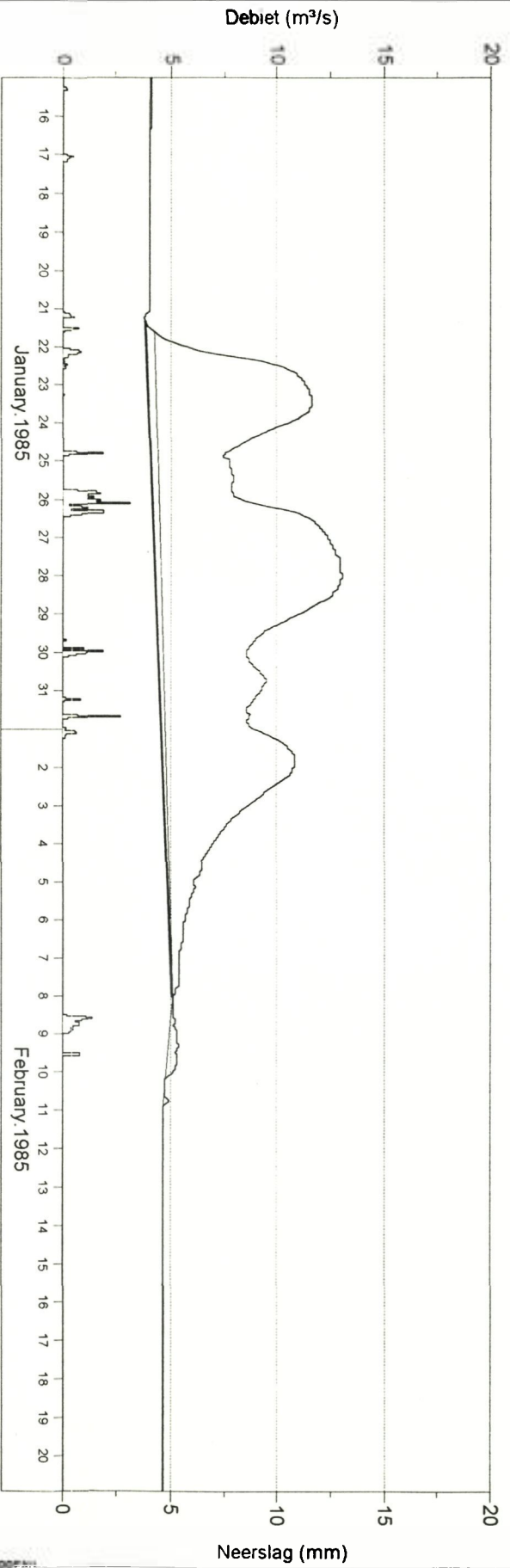
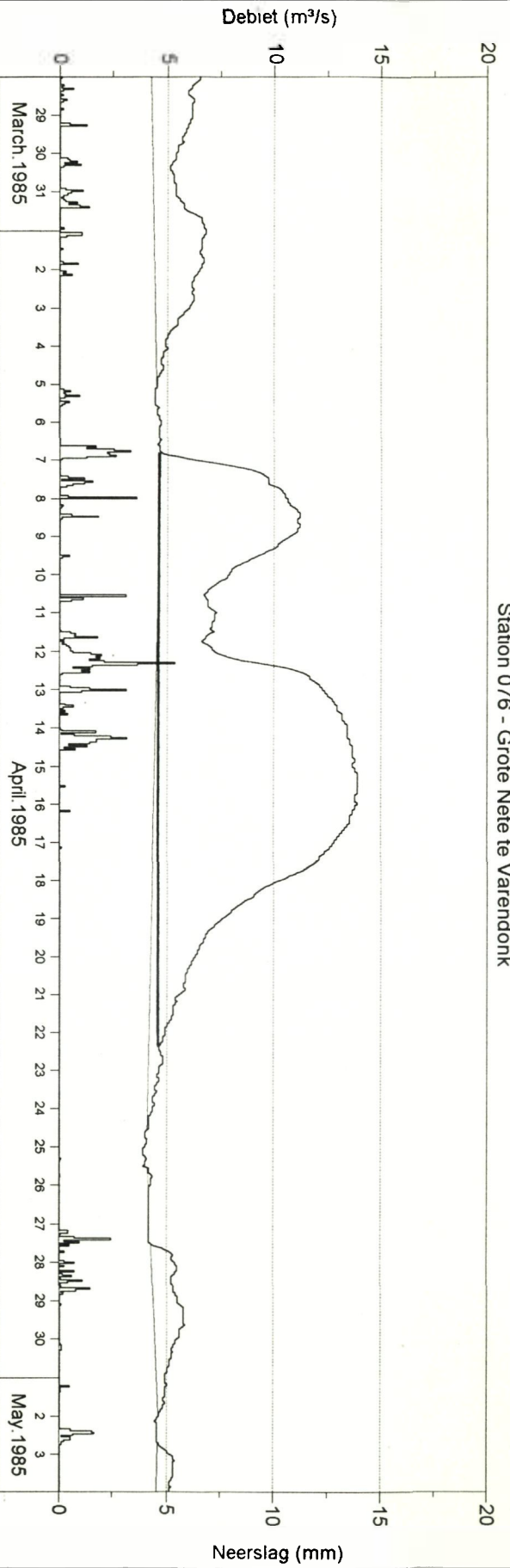
Uurwaarden van neerslag, debiet en basisafvoer

Station 076 - Grote Nete te Varendonk



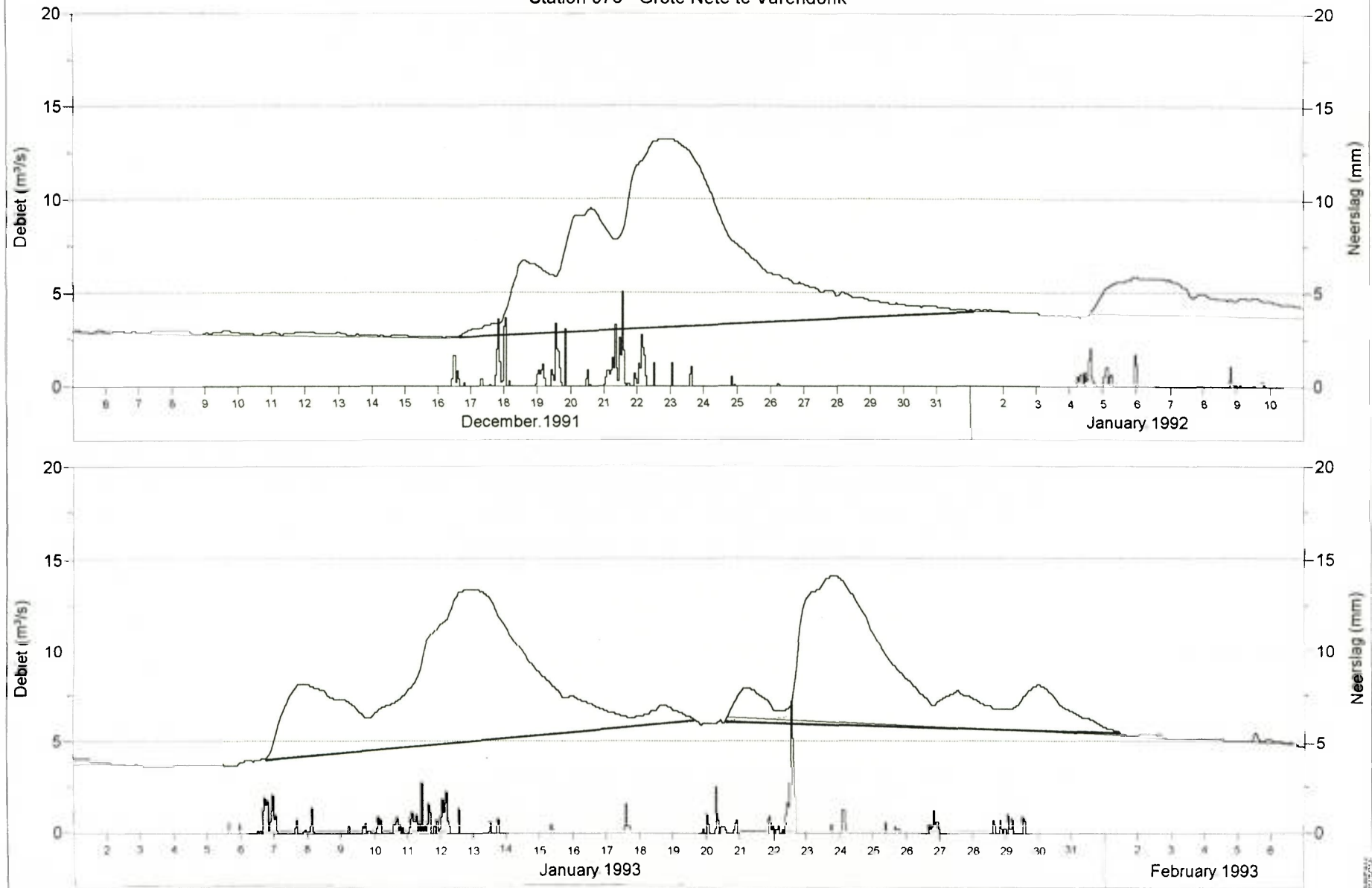
Uurwaarden van neerslag, debiet en basisafvoer

Station 076 - Grote Nete te Varendonk

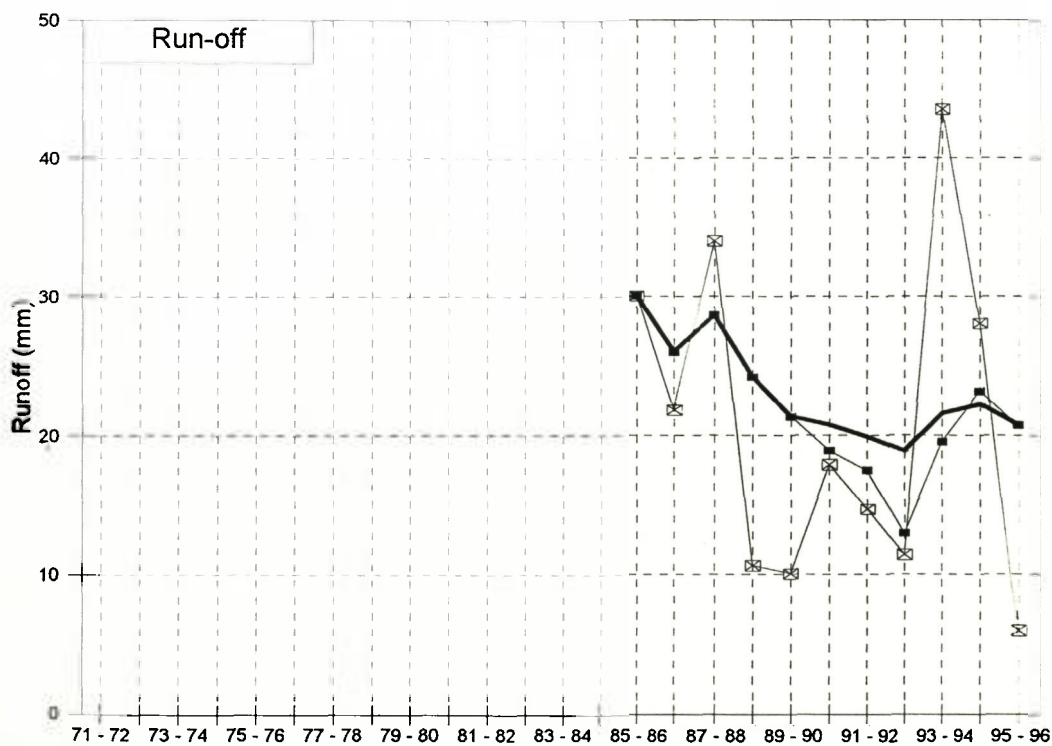
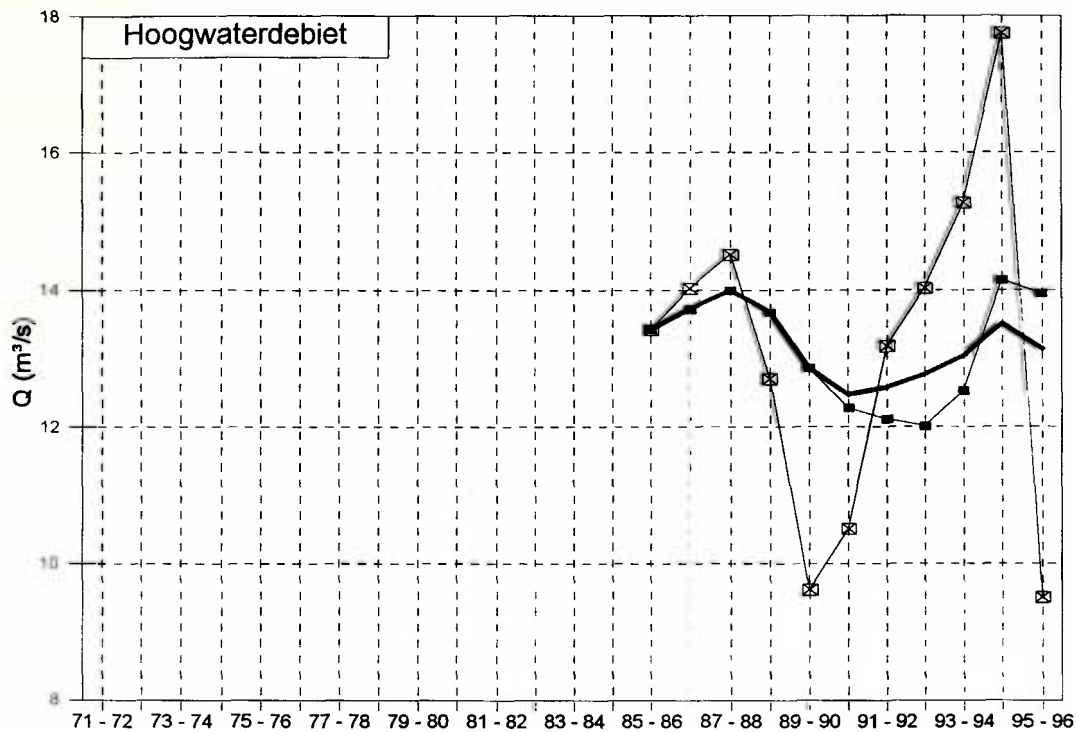


Uurwaarden van neerslag, debiet en basisafvoer

Station 076 - Grote Nete te Varendonk



Station 076 : Grote Nete / Geel

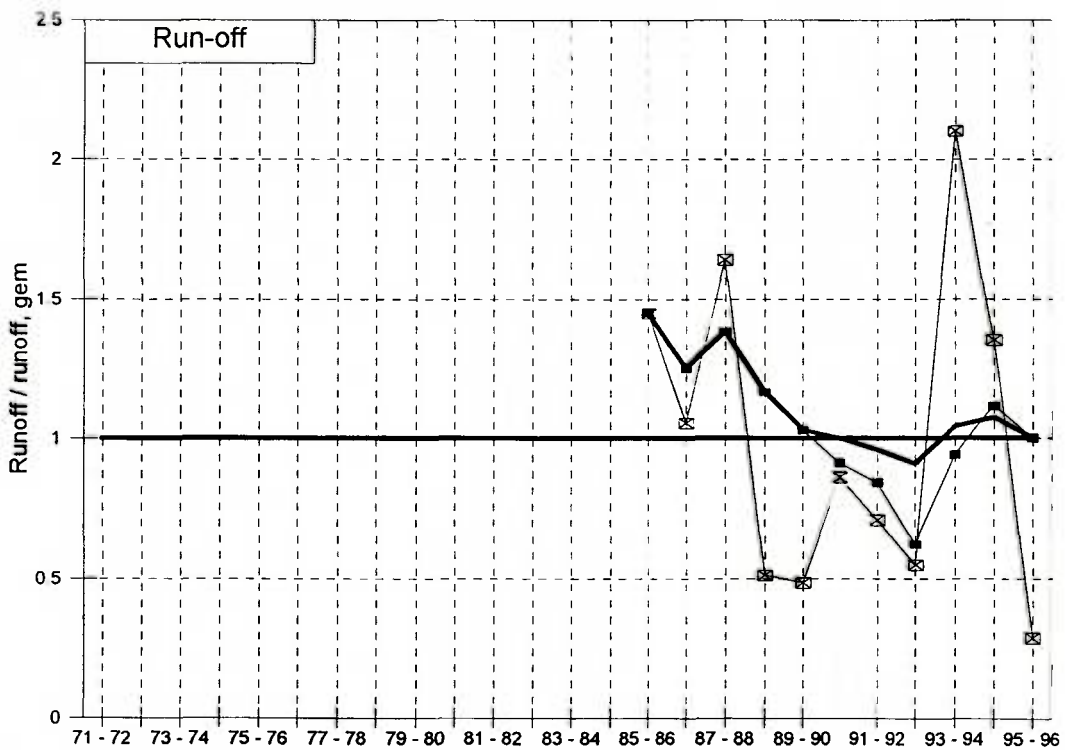
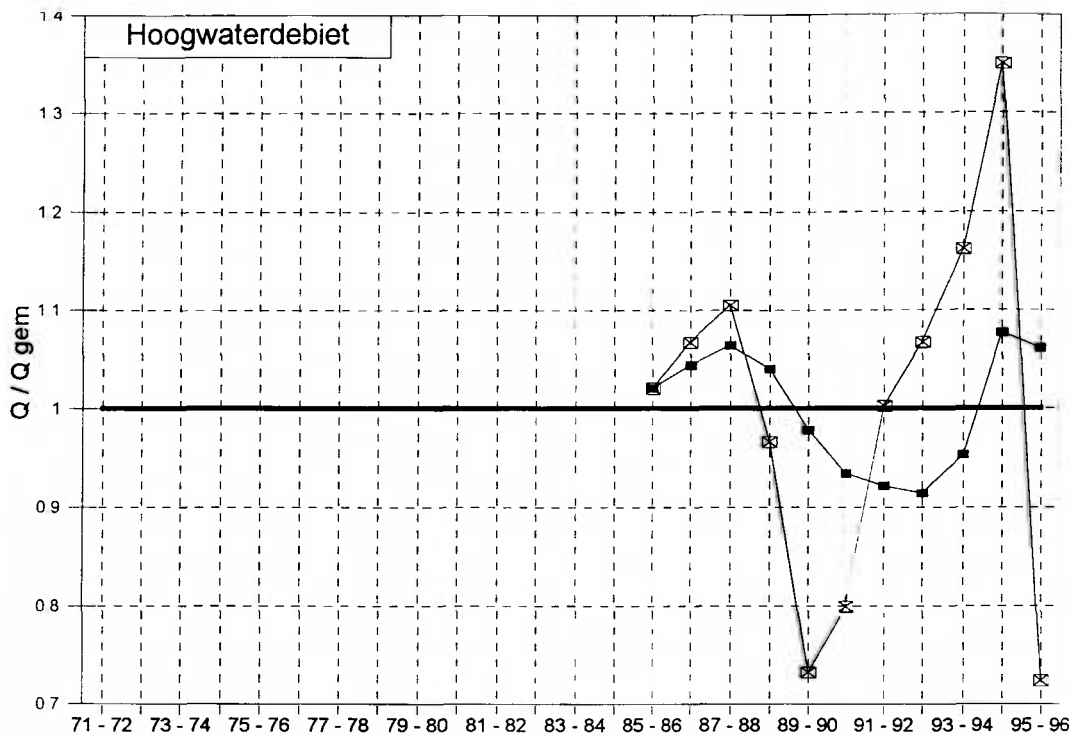


— doorlopend gemiddelde

—x— Jaarmaxima

—■— 5-jaargemiddelde

Station 076 : Grote Nete / Geel

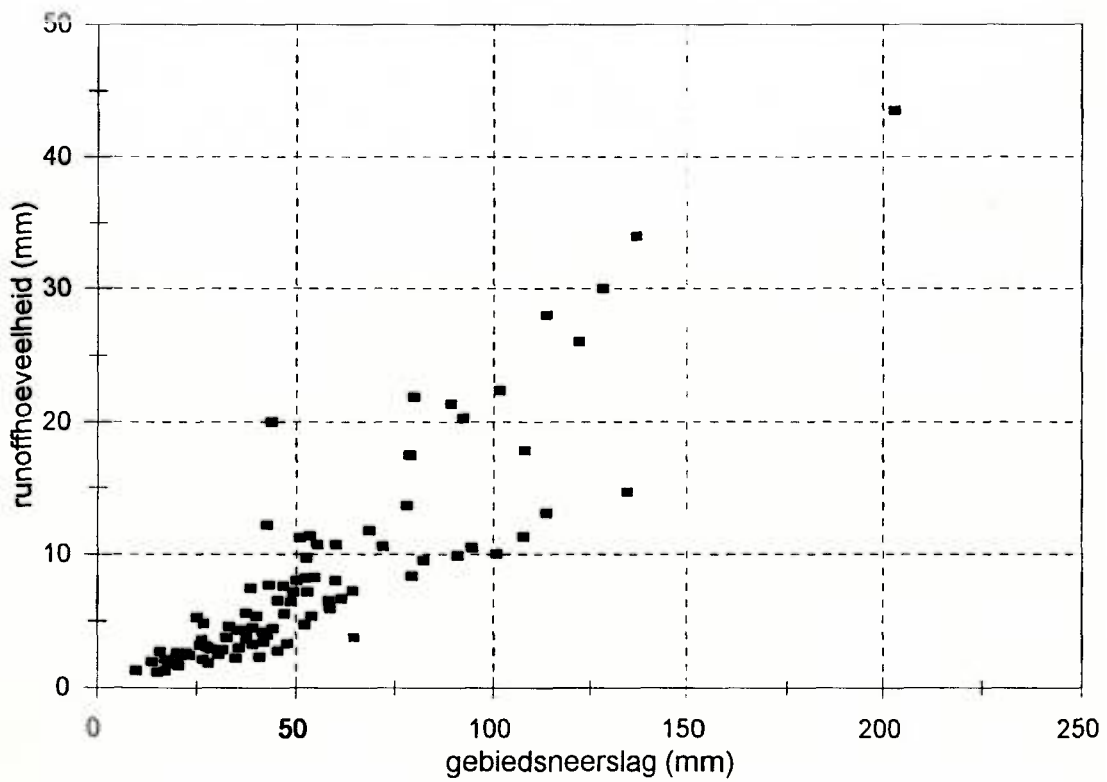
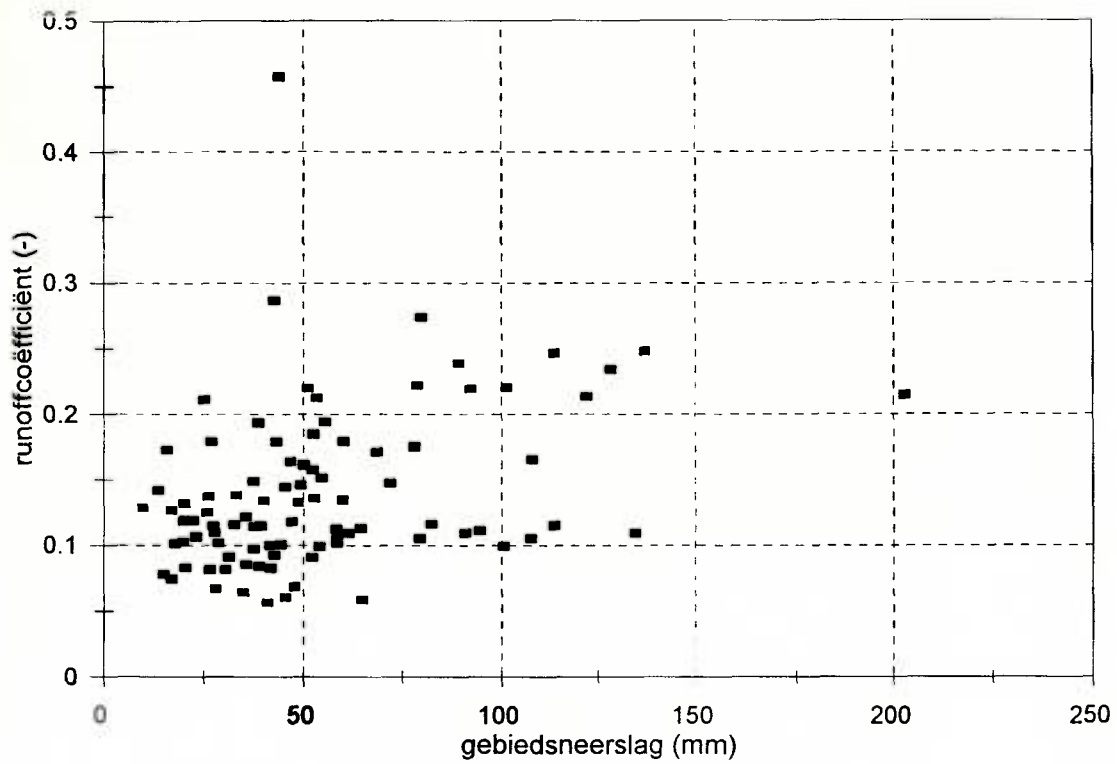


— doorlopend gemiddelde

—x— Jaarmaxima

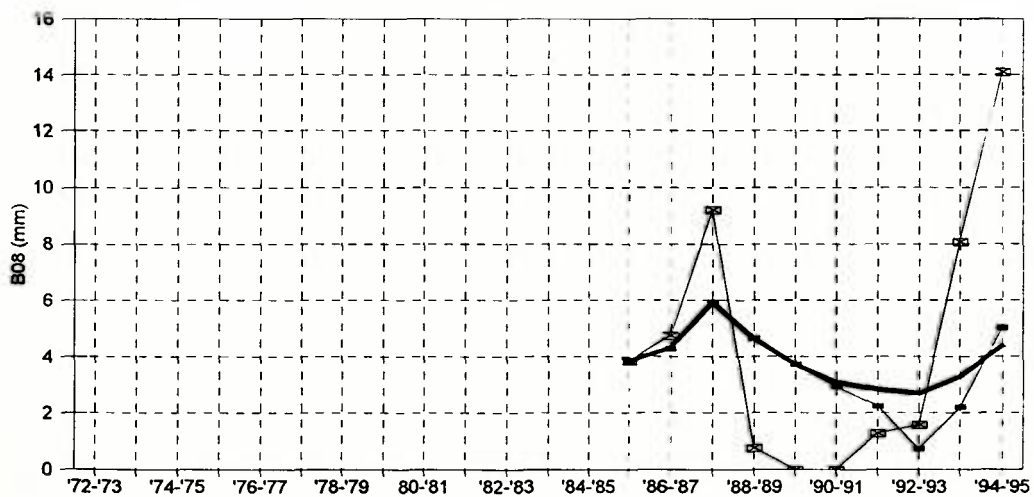
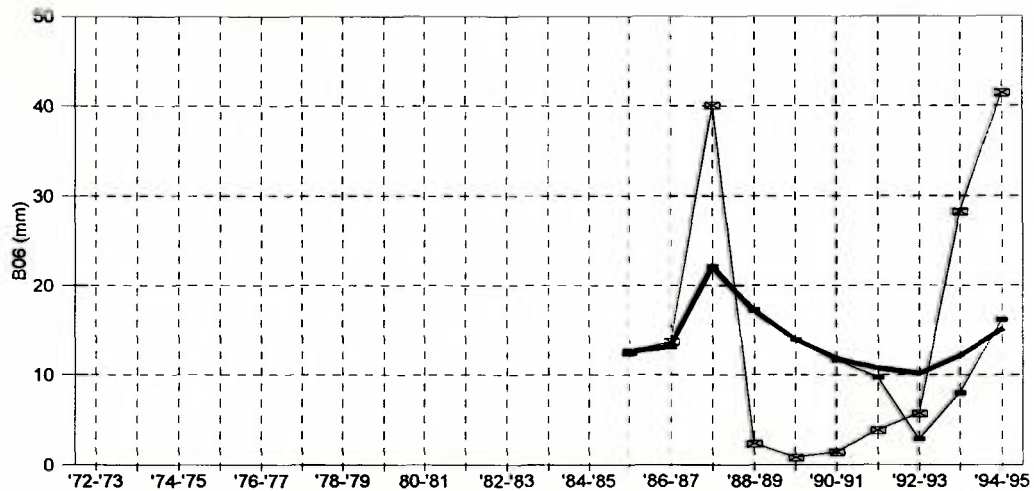
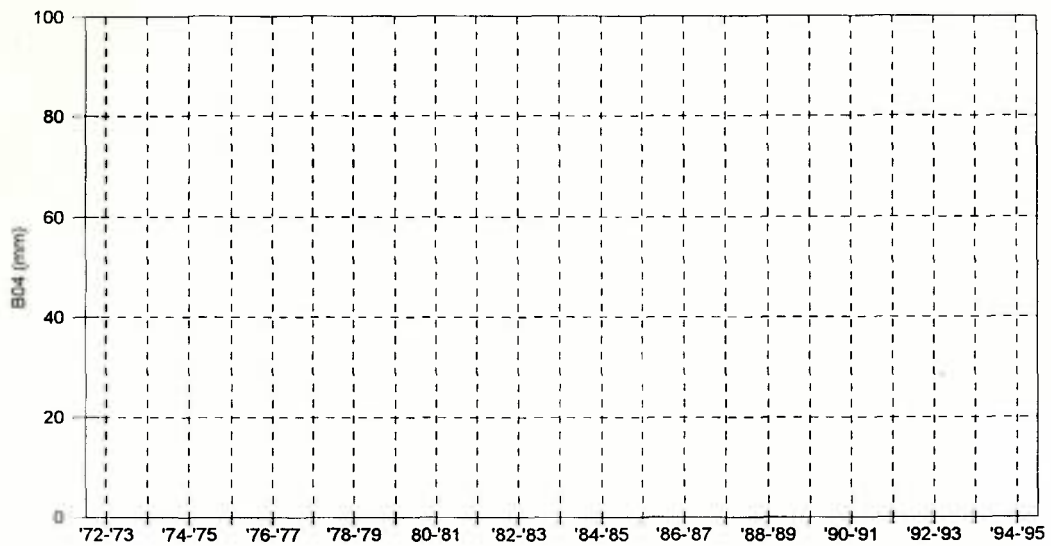
—■— 5-jaargemiddelde

Station 076 : Grote Neet / Geel-Zammel



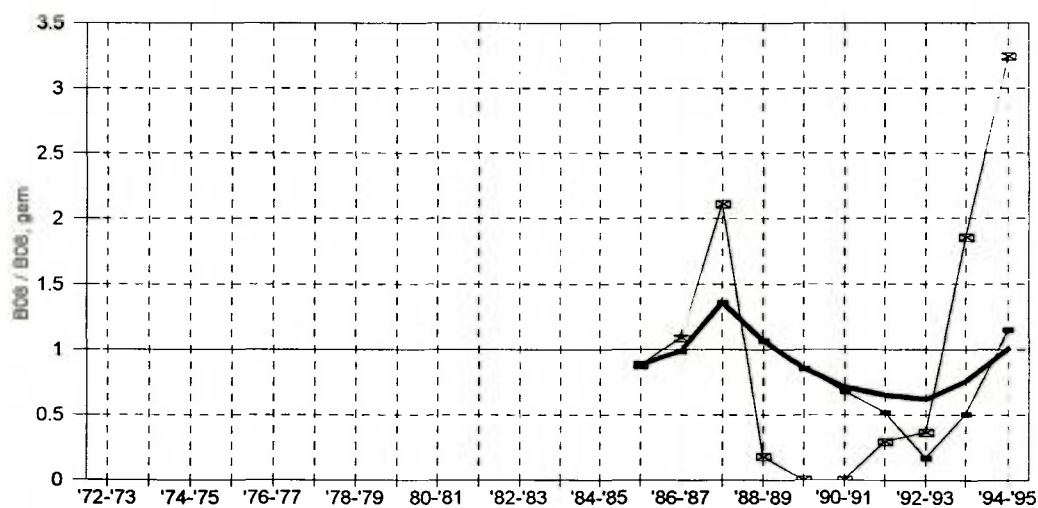
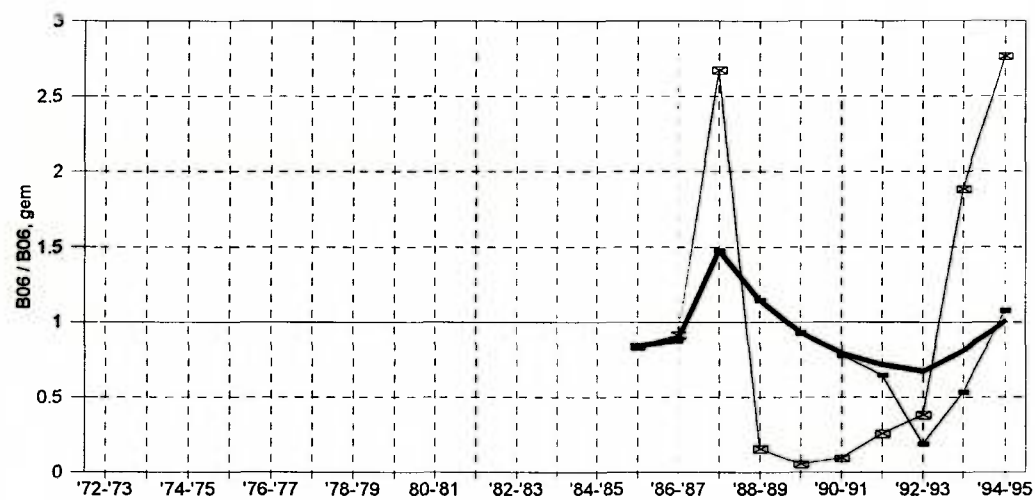
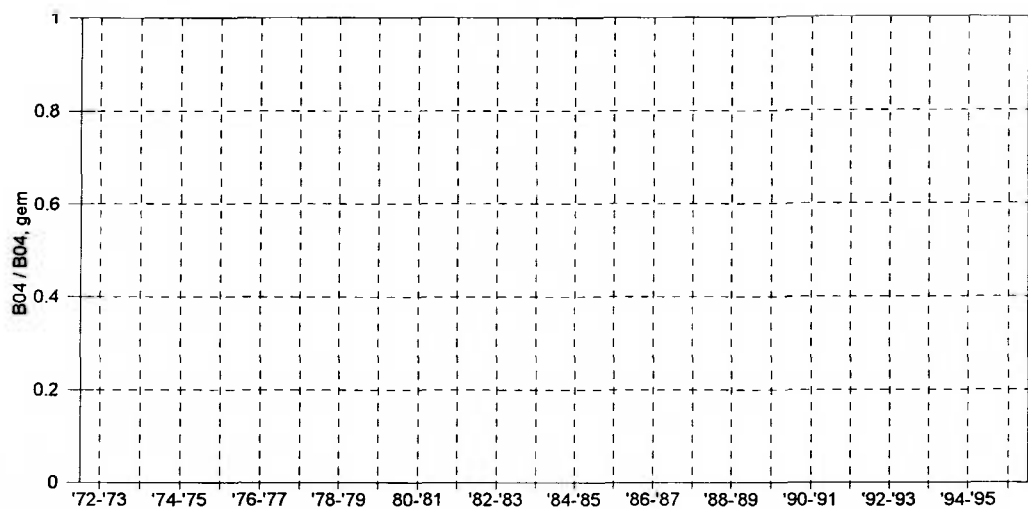
Jaarmaxima van bergingen					
Station 076 : Grote Nete / Geel-Zammel			Gemidd. jaarmax. : 13.14 m ³ /s		
Waterjaar	piekdebiet (m ³ /s)	datum	(mm)	berging (uur)	datum
Bergingen boven 0,5 Qgem					
'85-'86	13.178	20/01/86	23.35	1211	30/01/86
'86-'87	14.029	26/03/87	39.49	3384	02/04/87
'87-'88	14.523	16/03/88	71.64	3615	03/04/88
'88-'89	12.699	09/03/89	5.74	599	20/03/89
'89-'90	9.622	01/03/90	2.69	270	04/03/90
'90-'91	10.507	04/01/91	4.27	475	11/01/91
'91-'92	13.178	23/12/91	5.97	360	25/12/91
'92-'93	14.029	23/01/93	13.36	1079	30/01/93
'93-'94	15.275	01/01/94	50.08	4132	06/02/94
'94-'95	17.742	31/01/95	65.88	4411	10/03/95
Bergingen boven 0,6 Qgem					
'85-'86	13.178	20/01/86	12.53	712	29/01/86
'86-'87	13.906	03/01/87	13.67	705	09/01/87
'87-'88	14.523	16/03/88	40.04	2466	02/04/88
'88-'89	12.699	09/03/89	2.33	143	10/03/89
'89-'90	9.513	14/02/90	0.80	97	16/02/90
'90-'91	10.507	04/01/91	1.40	171	06/01/91
'91-'92	13.178	23/12/91	3.83	235	24/12/91
'92-'93	14.029	23/01/93	5.68	594	26/01/93
'93-'94	15.275	01/01/94	28.21	2110	09/01/94
'94-'95	17.742	31/01/95	41.38	2430	01/03/95
Bergingen boven 0,7 Qgem					
'85-'86	13.419	01/04/86	6.48	309	03/04/86
'86-'87	13.906	03/01/87	8.29	393	08/01/87
'87-'88	14.523	16/03/88	17.20	802	01/04/88
'88-'89	12.699	09/03/89	1.44	93	10/03/89
'89-'90	9.622	01/03/90	0.07	21	01/03/90
'90-'91	10.507	04/01/91	0.30	45	05/01/91
'91-'92	13.178	23/12/91	2.25	130	24/12/91
'92-'93	14.029	23/01/93	2.63	173	25/01/93
'93-'94	15.275	01/01/94	17.18	1368	08/01/94
'94-'95	17.742	31/01/95	26.76	1699	27/02/95
Bergingen boven 0,8 Qgem					
'85-'86	13.419	01/04/86	3.83	216	02/04/86
'86-'87	13.906	03/01/87	4.74	287	07/01/87
'87-'88	14.523	16/03/88	9.19	607	31/03/88
'88-'89	12.699	09/03/89	0.76	62	09/03/89
'89-'90			0.00	0	
'90-'91			0.00	0	
'91-'92	13.178	23/12/91	1.27	91	24/12/91
'92-'93	14.029	23/01/93	1.58	104	25/01/93
'93-'94	15.275	01/01/94	8.07	643	07/01/94
'94-'95	17.742	31/01/95	14.10	1170	04/02/95

Station 076 : Grote Nete / Geel-Zammel



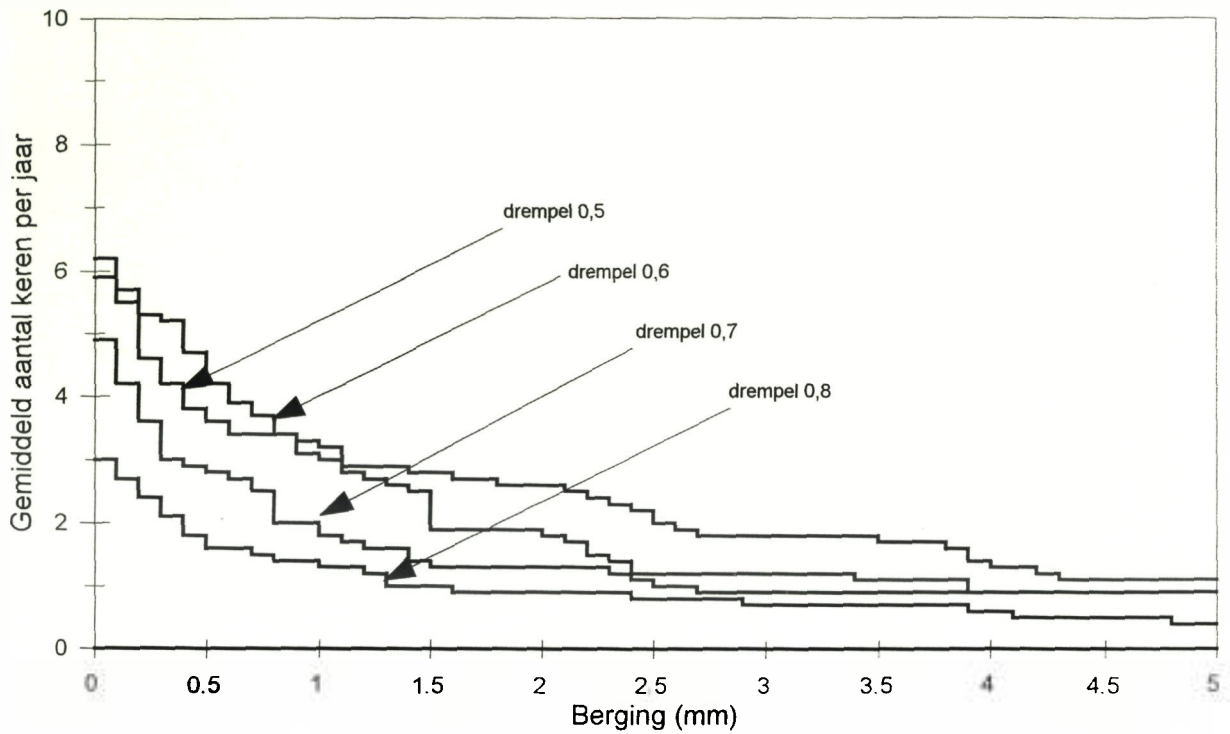
— doorlopend gemiddelde —■— Jaarmaxima —■— 5-jaargemiddelde

Station 076 : Grote Nete / Geel-Zammel

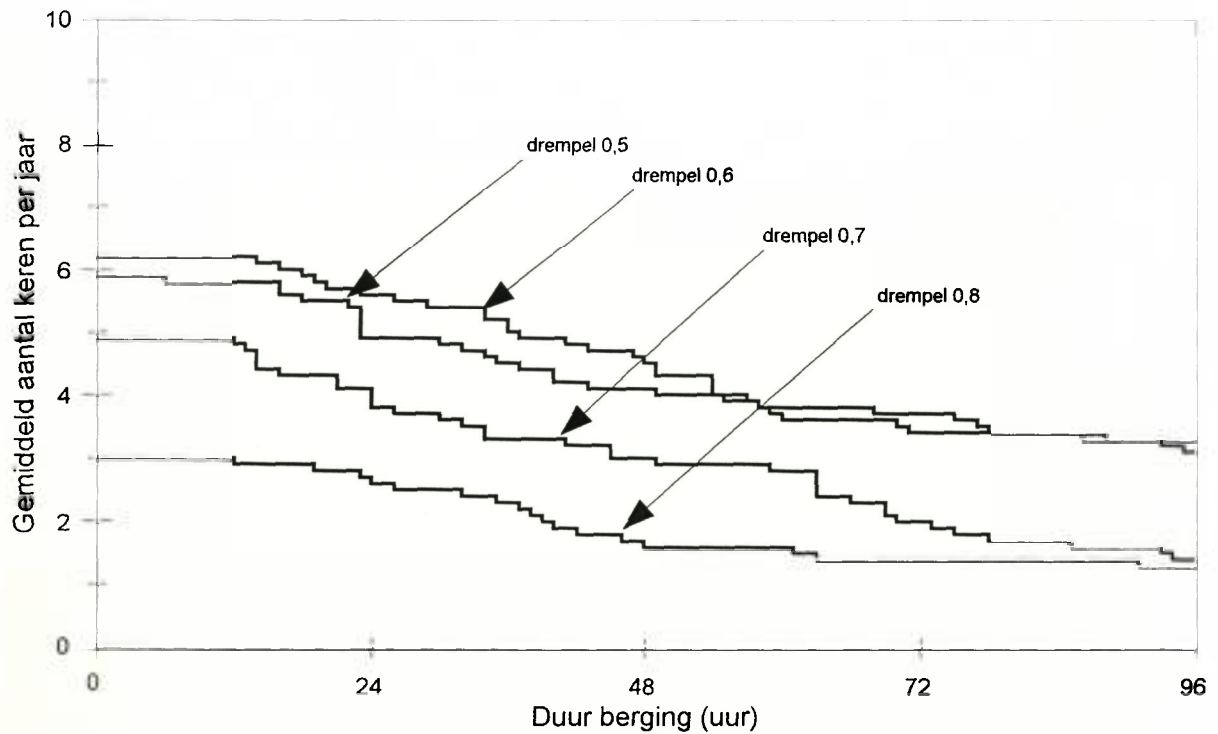


— doorlopend gemiddelde — Jaarmaxima — 5-jaargemiddelde

Station 076 - Grote Nete te Geel-Zammel



Station 076 - Grote Nete te Geel-Zammel

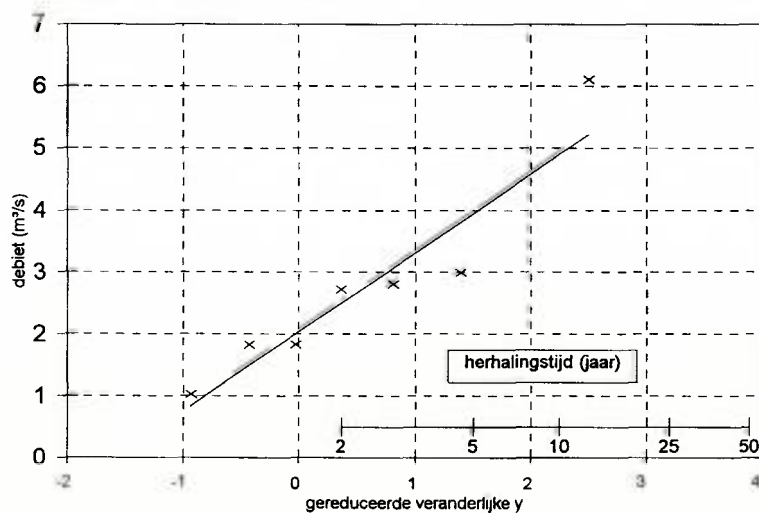


16. Station 082

**De Wimp
te Wiekevorst**

Station nr. 082 : Wimp te Wiekevorst

Nr.	Waterjaar	Datum	Hoogte (cm)	Debiet (m³/s)
1	'90 - '91	8/01/91	43	1.028
2	'89 - '90	14/02/90	44	1.823
3	'91 - '92	21/12/91	44	1.823
4	'95 - '96	29/08/96	55	2.720
5	'93 - '94	31/12/93	56	2.809
6	'92 - '93	22/01/93	58	2.992
7	'94 - '95	30/01/95	95	6.112



Herhalingstijd (jaar)	Debiet (m³/s)	Spec. afvoer (l/s.ha)
2	2.489	0.27
5	3.936	0.43
10	4.893	0.54
25	6.104	0.67
50	7.001	0.77

Station 082 : Wimp te Wiekevorst

Runoffhoeveelheden

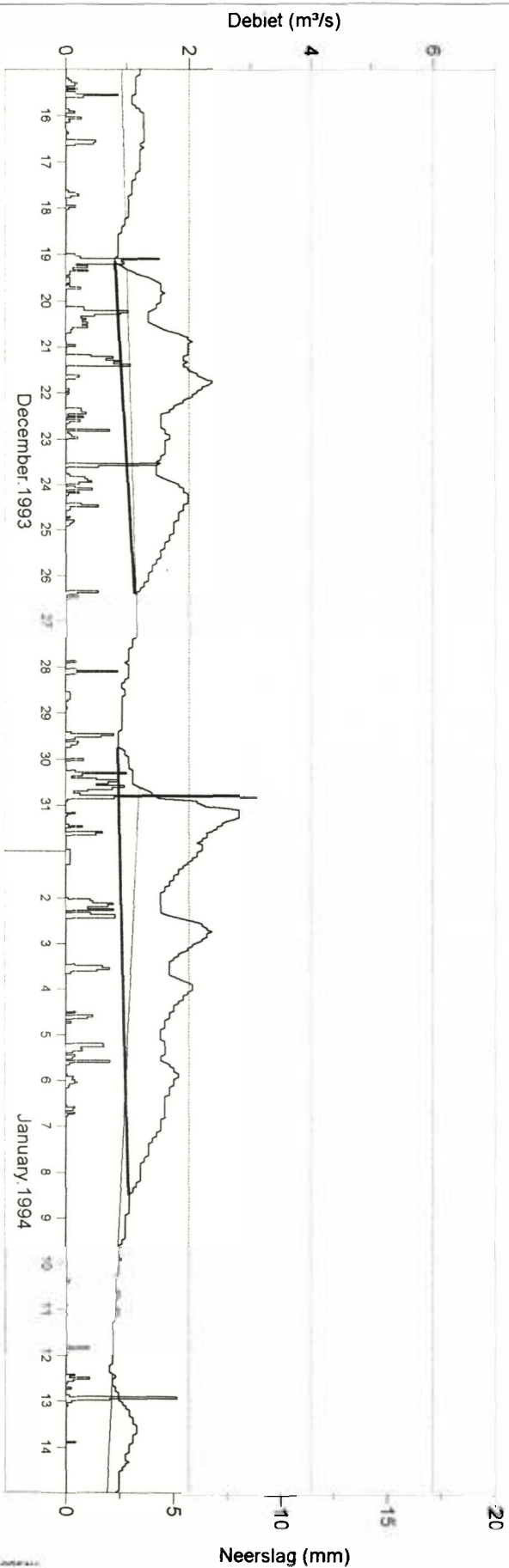
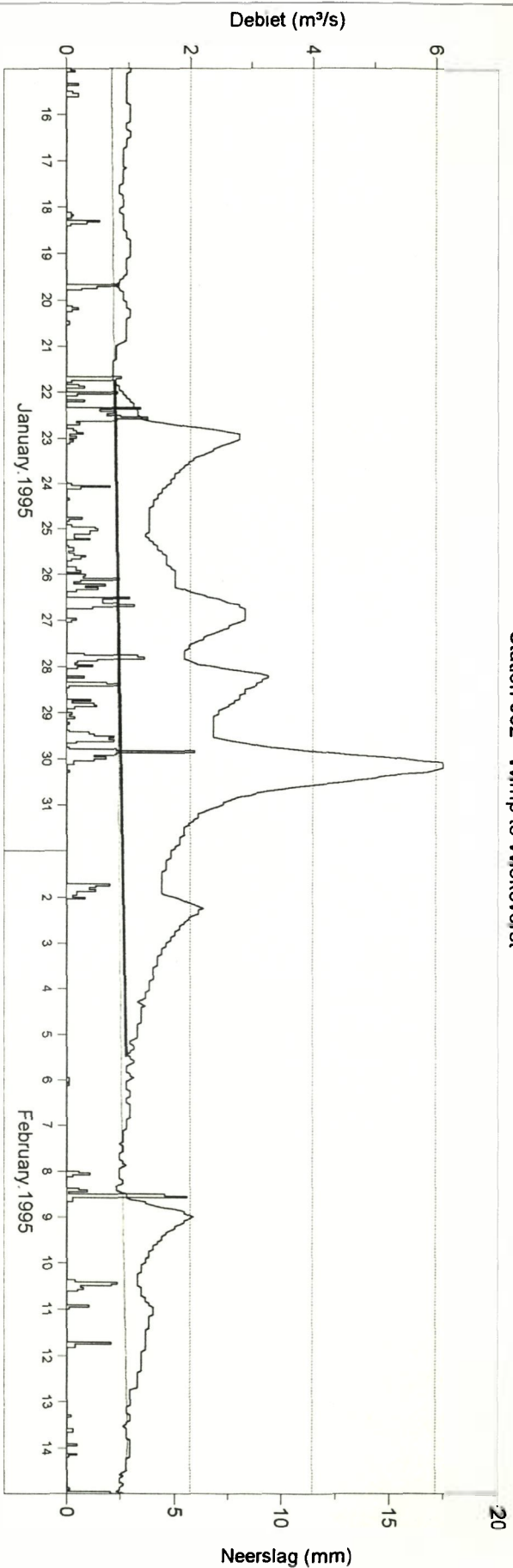
Stroomgebied = 9079 ha

Tijdreeks : 1989 - '96

Nr.	Was van (datum Q_{max})	q_{max} (l/s.ha)	q_{begin} (l/s.ha)	q_{eind} (l/s.ha)	Neerslag som (mm)	Neerslag duur (uur)	Concentratie tijd (uur)	Runoff (mm)	Runoff- Coëff. (-)	Runoff duur (uur)
1	30/01/95	0.67	0.08	0.11	127.2	331	51	16.7	0.13	359
2	31/12/93	0.31	0.09	0.11	78.6	201	36	10.4	0.13	234
3	21/12/93	0.26	0.09	0.13	68.1	142	26	7.0	0.10	173
4	29/08/96	0.30	0.03	0.04	89.4	72	26	6.8	0.08	116
5	28/12/94	0.23	0.05	0.09	80.4	187	41	6.5	0.08	244
6	26/01/94	0.19	0.07	0.09	50.6	197	24	6.3	0.12	225
7	01/03/90	0.18	0.03	0.06	41.7	139	34	5.0	0.12	192
8	20/02/95	0.44	0.13	0.15	33.0	62	16	4.3	0.13	86
9	29/05/95	0.47	0.07	0.11	28.5	27	15	4.0	0.14	60
10	14/02/90	0.20	0.03	0.06	35.8	97	24	3.5	0.10	132
11	12/01/93	0.22	0.06	0.08	40.1	90	28	3.4	0.08	111
12	02/06/92	0.31	0.08	0.11	49.0	118	10	3.1	0.06	137
13	08/06/92	0.45	0.11	0.17	30.6	32	15	3.0	0.10	56
14	15/02/95	0.22	0.09	0.13	29.2	85	18	3.0	0.10	96
15	22/01/93	0.33	0.08	0.11	24.3	57	18	2.9	0.12	73
16	11/01/95	0.20	0.07	0.11	19.5	90	22	2.9	0.15	136
17	15/11/93	0.18	0.03	0.07	43.1	41	20	2.7	0.06	78
18	09/02/95	0.23	0.09	0.11	25.1	92	14	2.5	0.10	104
19	09/12/94	0.19	0.04	0.06	31.0	78	25	2.5	0.08	111
20	01/03/94	0.16	0.06	0.07	21.5	79	17	2.4	0.11	110
21	04/04/94	0.17	0.06	0.08	22.9	61	24	2.4	0.10	101
22	21/12/91	0.20	0.06	0.08	39.1	64	13	2.3	0.06	65
23	29/11/96	0.15	0.05	0.08	27.8	78	17	2.3	0.08	92
24	04/12/96	0.21	0.08	0.08	22.3	70	19	2.2	0.10	89
25	13/12/93	0.22	0.09	0.13	30.2	40	17	2.1	0.07	65
26	05/06/94	0.24	0.05	0.07	37.2	55	17	2.0	0.05	53
27	23/03/92	0.26	0.03	0.08	26.4	56	22	2.0	0.08	76
28	19/03/94	0.22	0.07	0.08	23.7	19	21	1.9	0.08	61
29	13/08/96	0.21	0.01	0.02	46.4	15	14	1.8	0.04	48
30	08/06/96	0.28	0.02	0.04	19.3	7	11	1.5	0.08	29

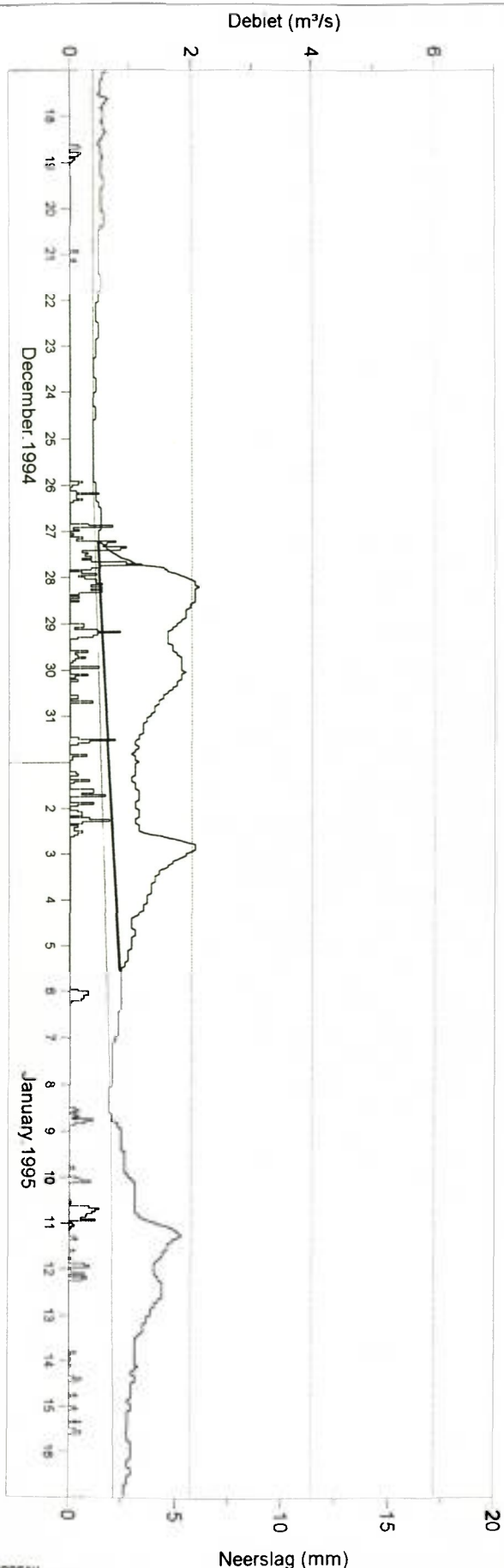
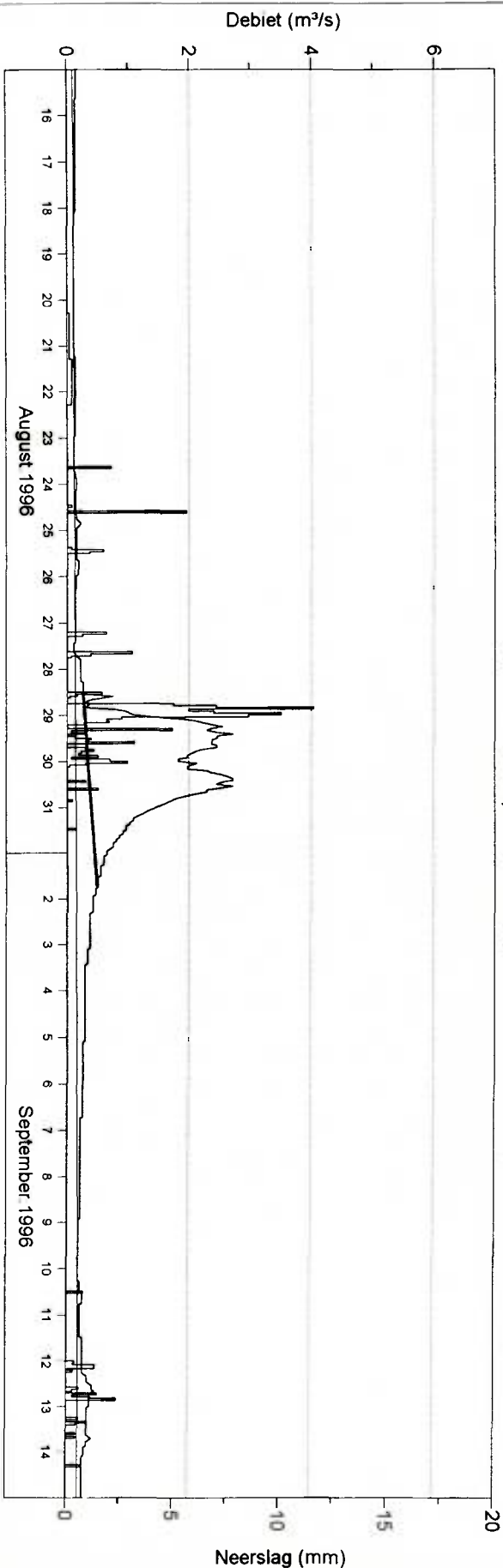
Uurwaarden van neerslag, debiet en basisafvoer

Station 082 - Wimp te Wikevorst



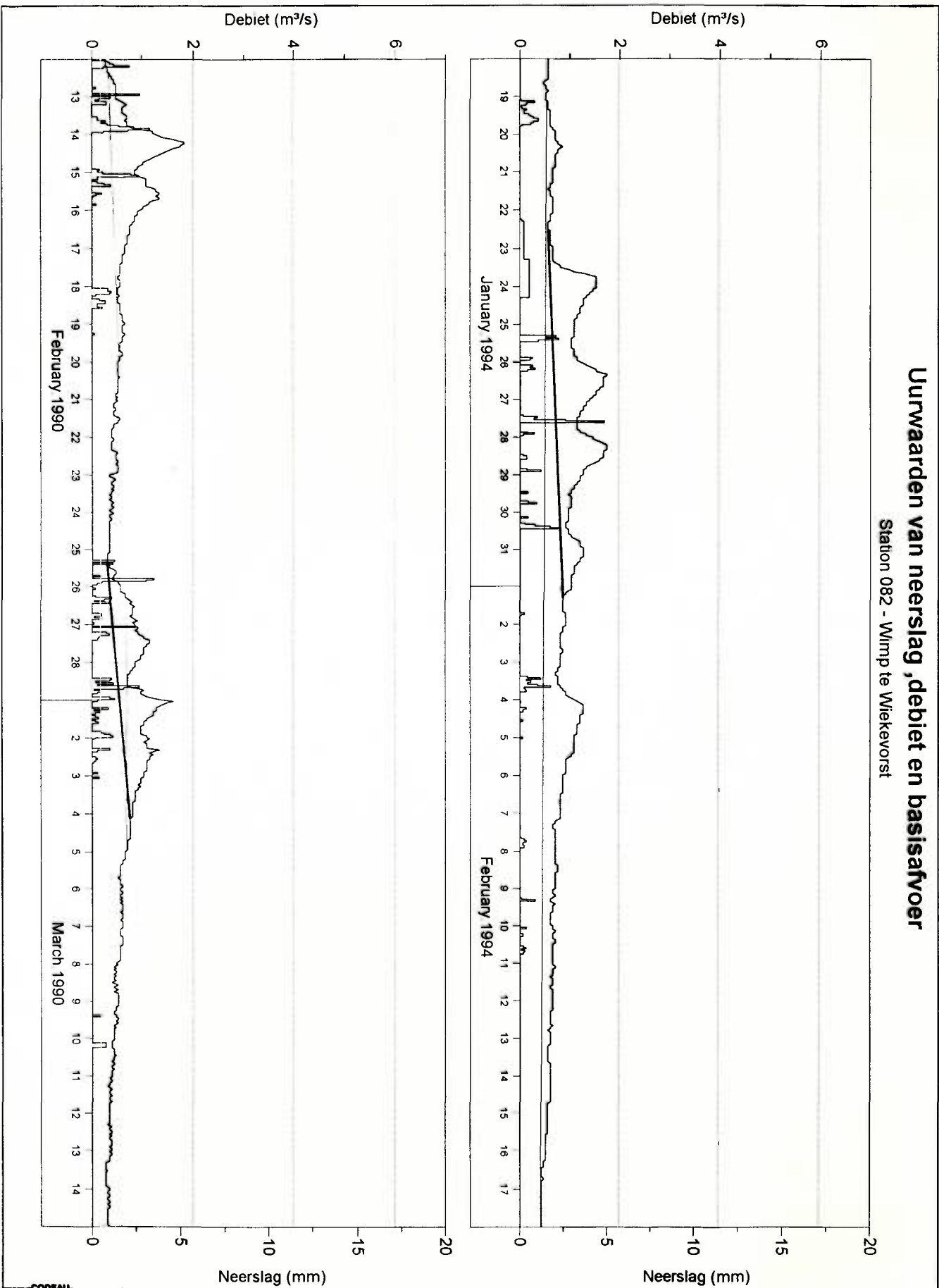
Uurwaarden van neerslag, debiet en basisafvoer

Station 082 - Wimp te Wiekevorst

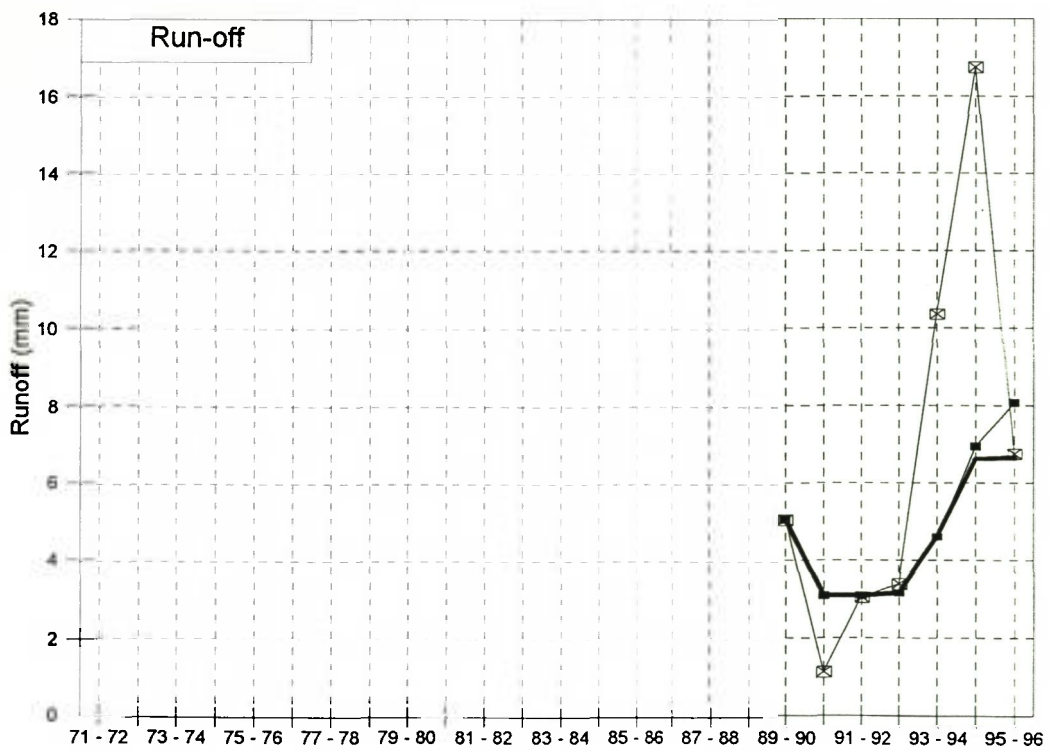
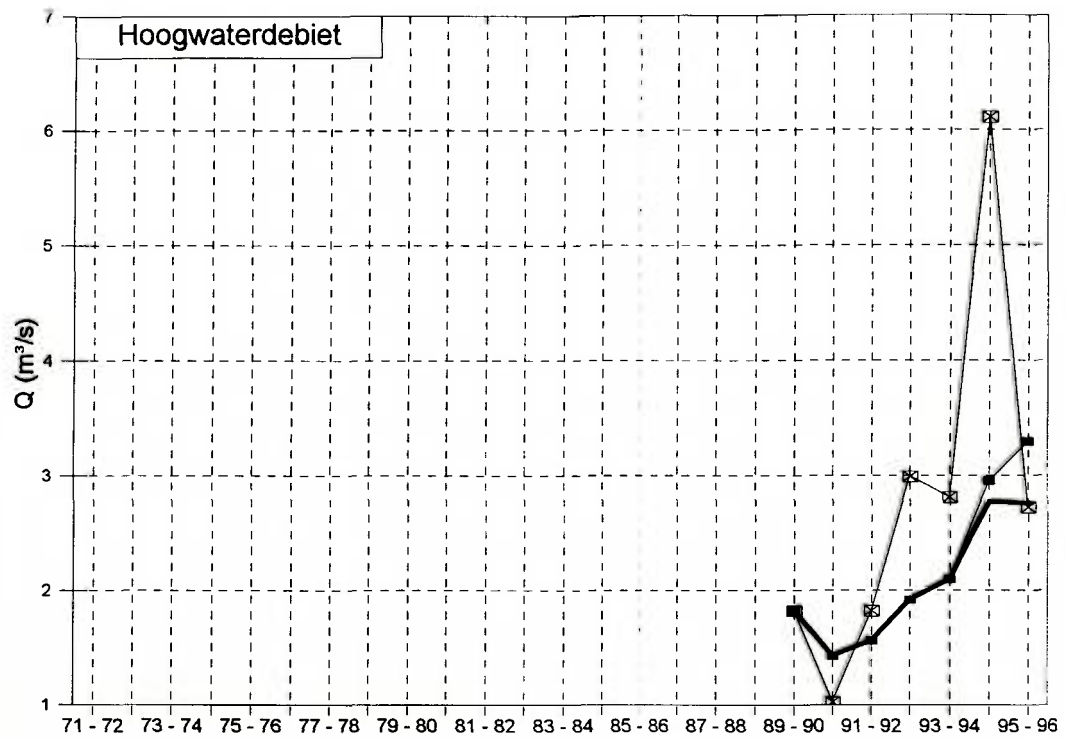


Uurwaarden van neerslag, debiet en basisafvoer

Station 082 - Wimp te Wiekevorst

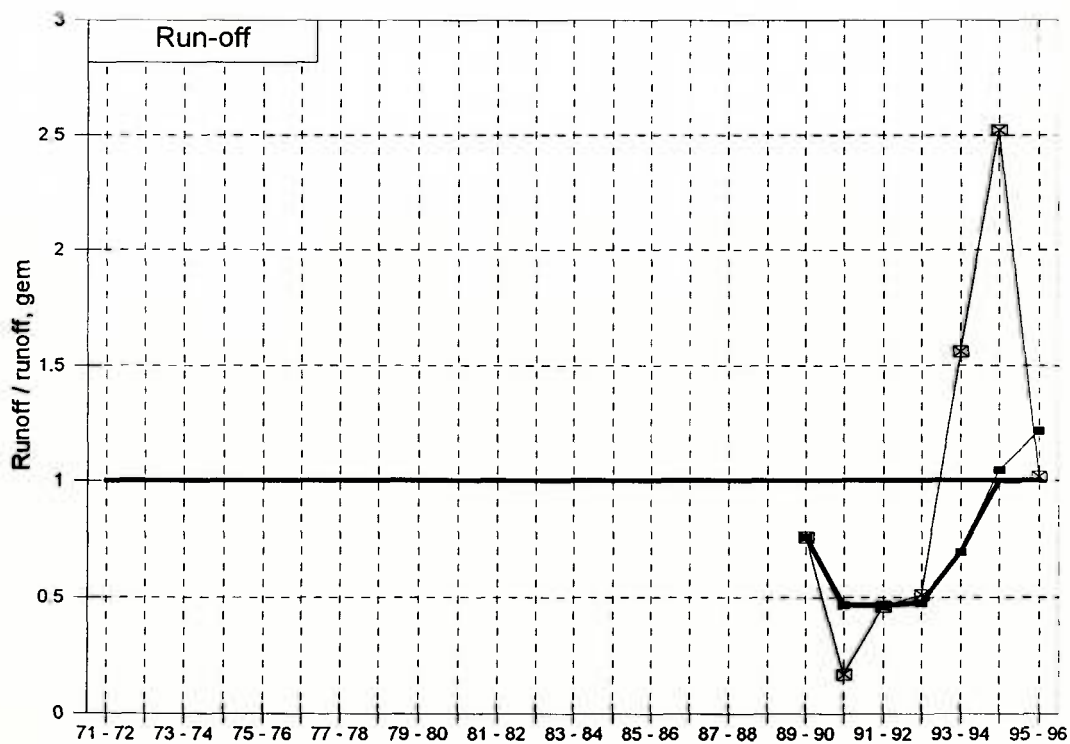
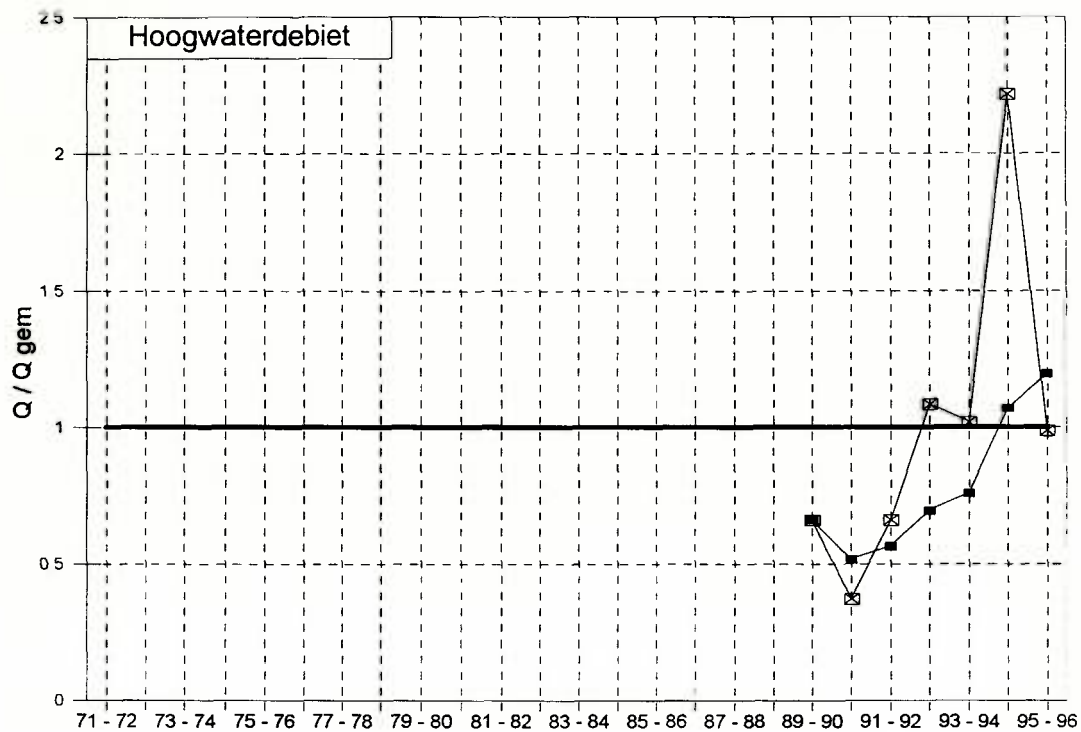


Station 082 : Wimp / Wiekevorst



— doorlopend gemiddelde —x— Jaarmaxima — 5-jaargemiddelde

Station 082 : Wimp / Wiekevorst

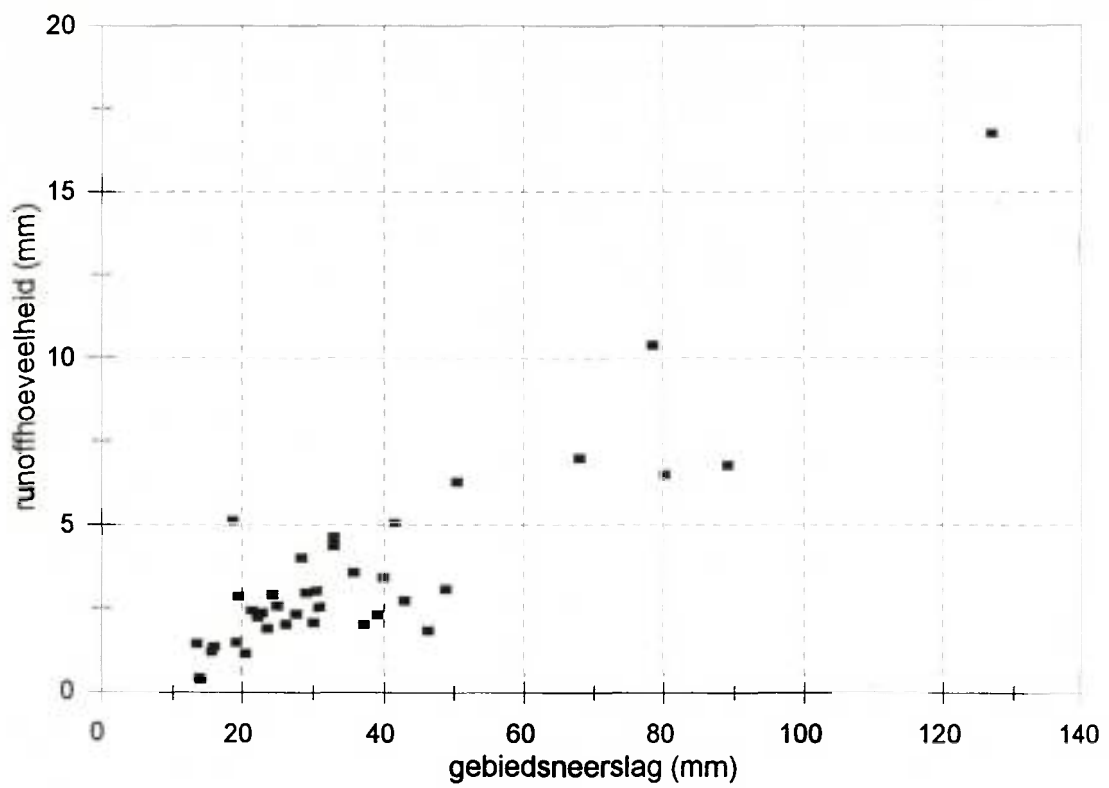
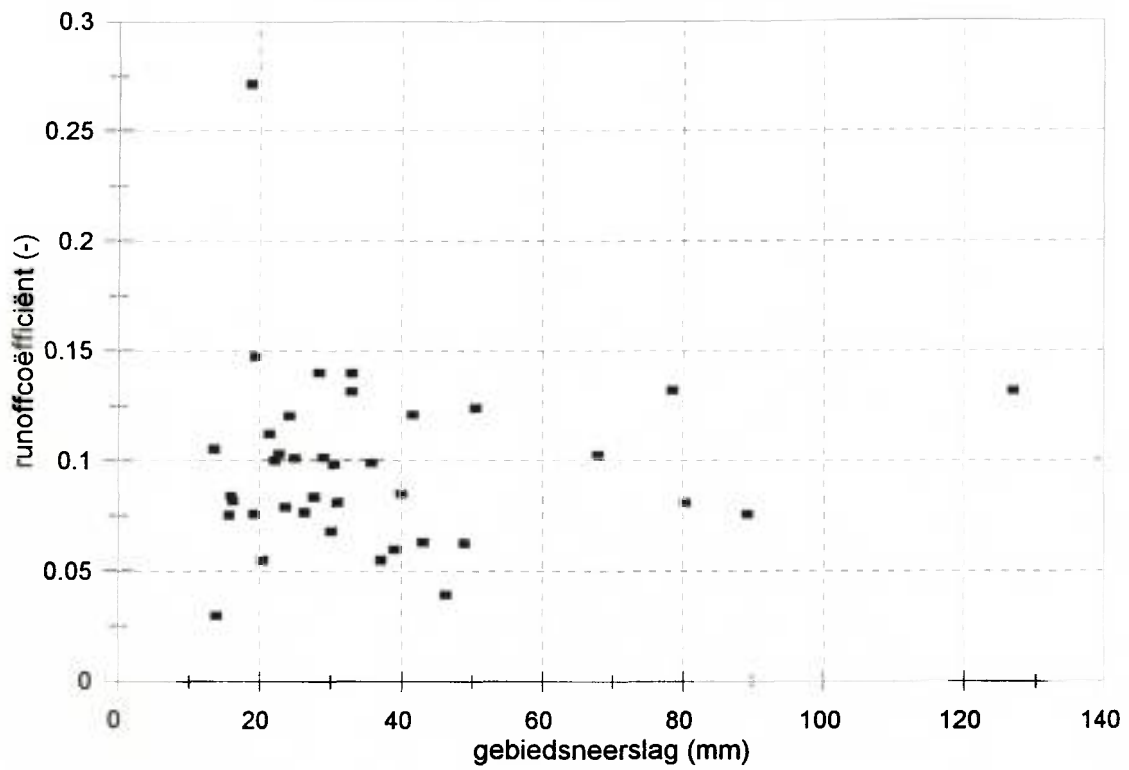


— doorlopend gemiddelde

—x— Jaarmaxima

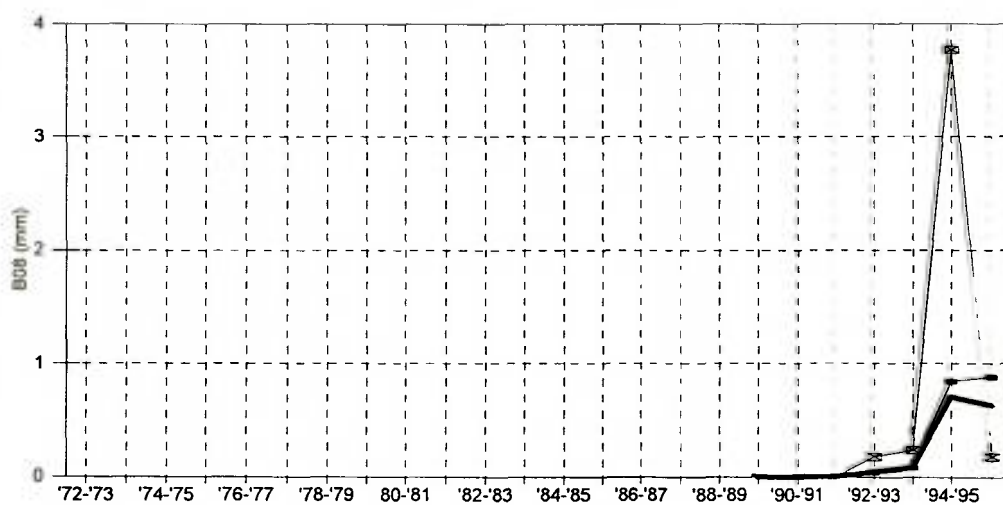
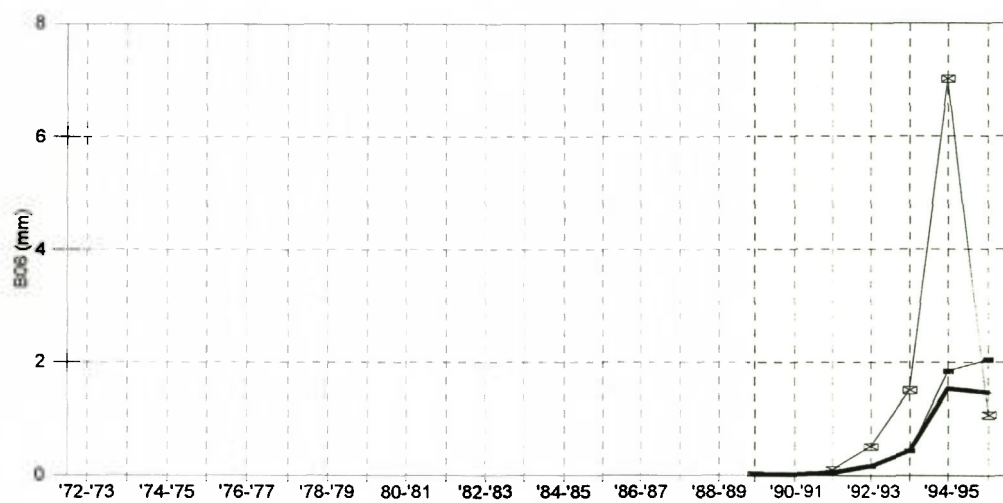
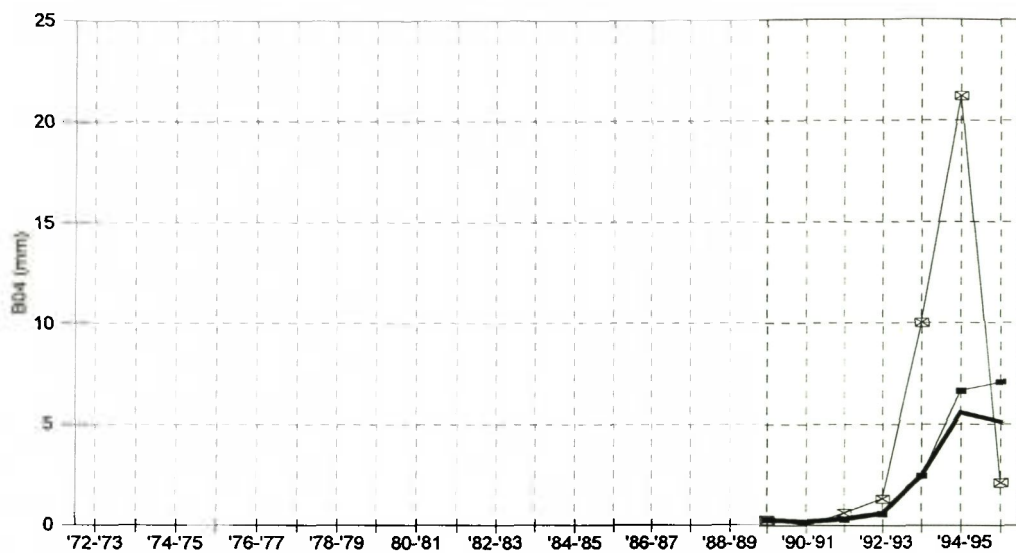
■ 5-jaargemiddelde

Station 082 : Wimp / Wiekevorst



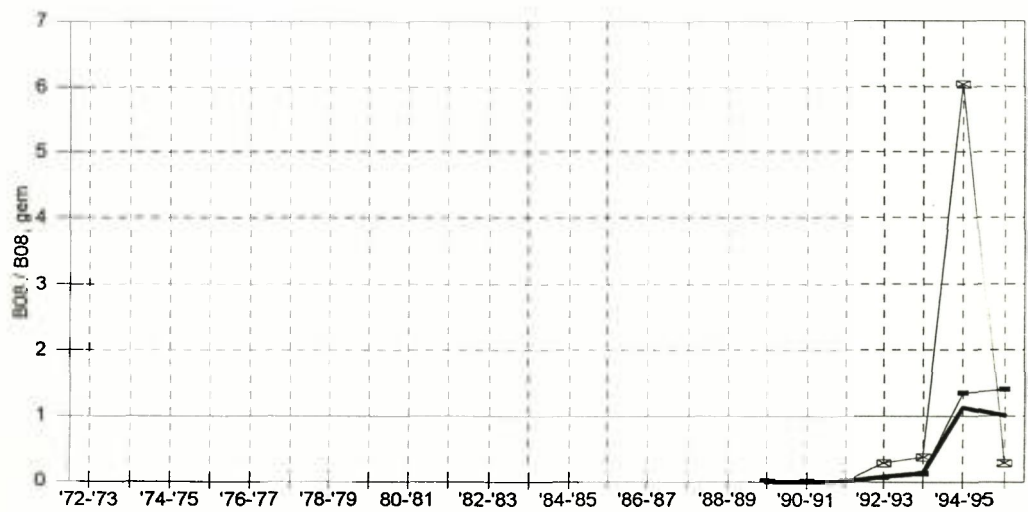
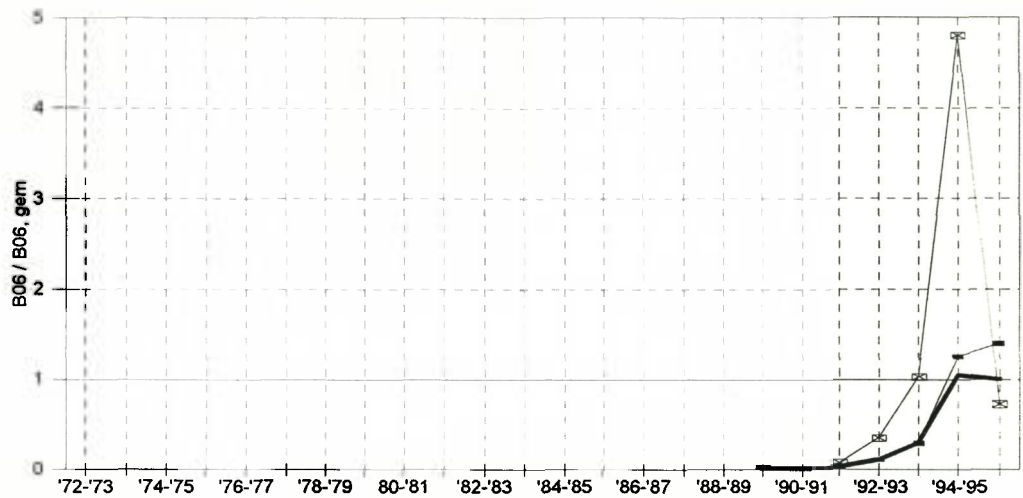
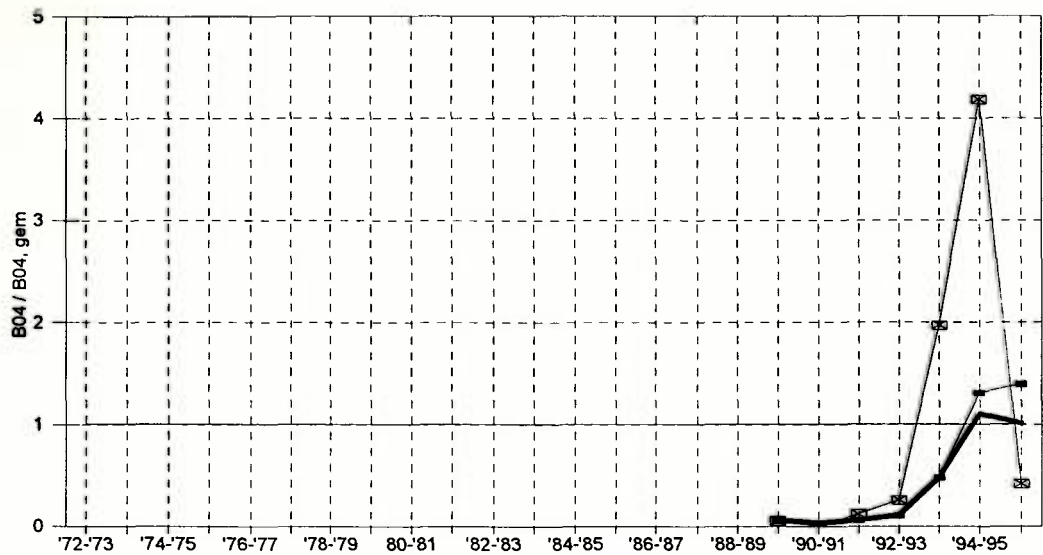
Jaarmaxima van bergingen					
Station 082 : Wimp / Wiekevorst			Gemidd. jaarmax : 2 758 m ³ /s		
Waterjaar	piekdebiet (m ³ /s)	datum	(mm)	berging (uur)	datum
Bergingen boven 0,3 Qgem					
'89 -'90	1 823	14/02/90	0 84	150	16/02/90
'90 -'91	1 005	04/01/91	2 57	89	05/01/91
'91 -'92	1 823	21/12/91	1 05	138	23/12/91
'92 -'93	2 992	22/01/93	3 26	755	30/01/93
'93 -'94	2 809	31/12/93	19 87	3884	06/02/94
'94 -'95	6 112	30/01/95	39 00	6225	10/03/95
'95 -'96	2 720	30/08/96	2 79	218	31/08/96
Bergingen boven 0,4 Qgem					
'89 -'90	1 823	14/02/90	0 27	70	14/02/90
'90 -'91	1 005	04/01/91	0 01	7	04/01/91
'91 -'92	1 823	21/12/91	0 60	78	23/12/91
'92 -'93	2 992	22/01/93	1 31	213	25/01/93
'93 -'94	2 809	31/12/93	10 01	1603	08/01/94
'94 -'95	6 112	30/01/95	21 24	2913	27/02/95
'95 -'96	2 720	30/08/96	2 12	142	31/08/96
Bergingen boven 0,5 Qgem					
'89 -'90	1 823	14/02/90	0 11	19	14/02/90
'90 -'91			0 00	0	
'91 -'92	1 823	21/12/91	0 25	44	22/12/91
'92 -'93	2 992	22/01/93	0 77	98	23/01/93
'93 -'94	2 809	31/12/93	3 92	664	07/01/94
'94 -'95	6 112	30/01/95	10 91	1366	26/02/95
'95 -'96	2 720	30/08/96	1 56	104	31/08/96
Bergingen boven 0,6 Qgem					
'89 -'90	1 823	14/02/90	0 02	7	14/02/90
'90 -'91			0 00	0	
'91 -'92	2 375	23/03/92	0 11	14	23/03/92
'92 -'93	2 992	22/01/93	0 52	57	23/01/93
'93 -'94	2 809	31/12/93	1 50	239	04/01/94
'94 -'95	6 112	30/01/95	7 01	915	02/02/95
'95 -'96	2 720	30/08/96	1 06	79	30/08/96
Bergingen boven 0,7 Qgem					
'89 -'90			0 00	0	
'90 -'91			0 00	0	
'91 -'92			0 00	0	
'92 -'93	2 992	22/01/93	0 32	31	23/01/93
'93 -'94	2 809	31/12/93	0 56	131	01/01/94
'94 -'95	6 112	30/01/95	5 06	338	31/01/95
'95 -'96	2 720	30/08/96	0 60	60	30/08/96
Bergingen boven 0,8 Qgem					
'89 -'90			0 00	0	
'90 -'91			0 00	0	
'91 -'92			0 00	0	
'92 -'93	2 992	22/01/93	0 18	20	23/01/93
'93 -'94	2 809	31/12/93	0 24	42	31/12/93
'94 -'95	6 112	30/01/95	3 77	250	31/01/95
'95 -'96	2 720	30/08/96	0 18	45	30/08/96

Station 082 : Wimp / Wiekevorst



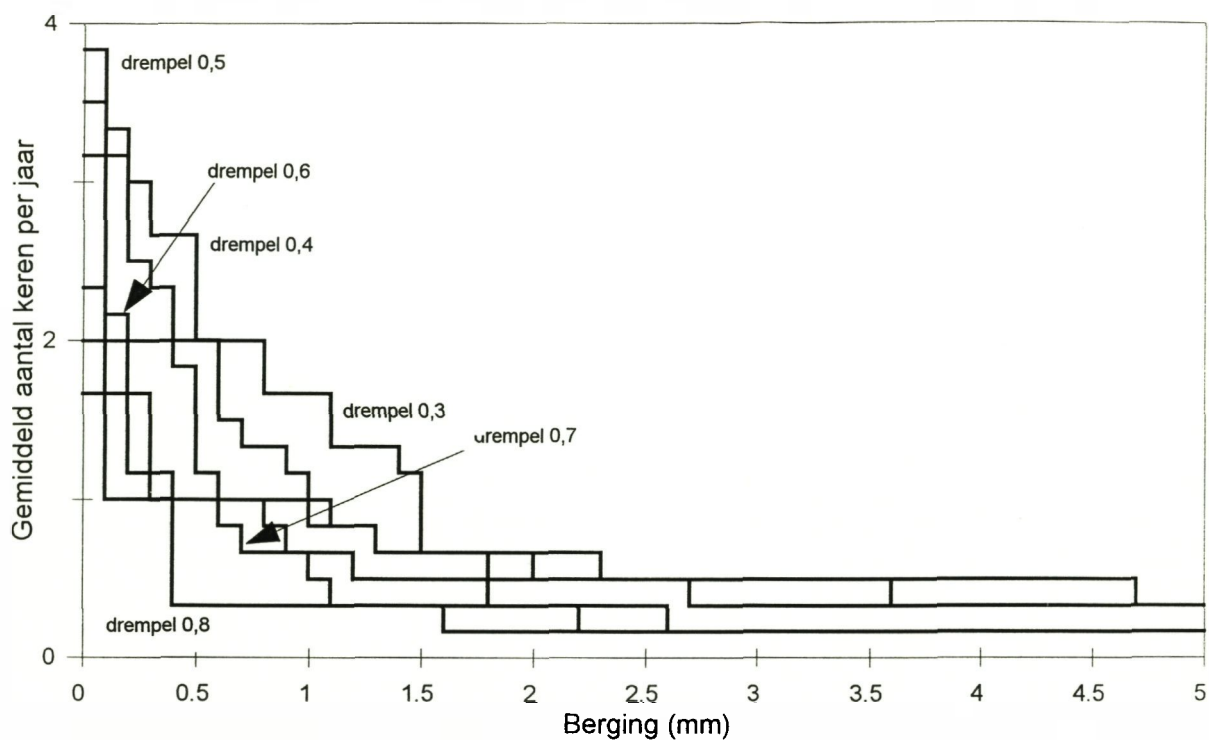
— doorlopend gemiddelde —□— Jaarmaxima —■— 5-jaargemiddelde

Station 082 : Wimp / Wiekevorst

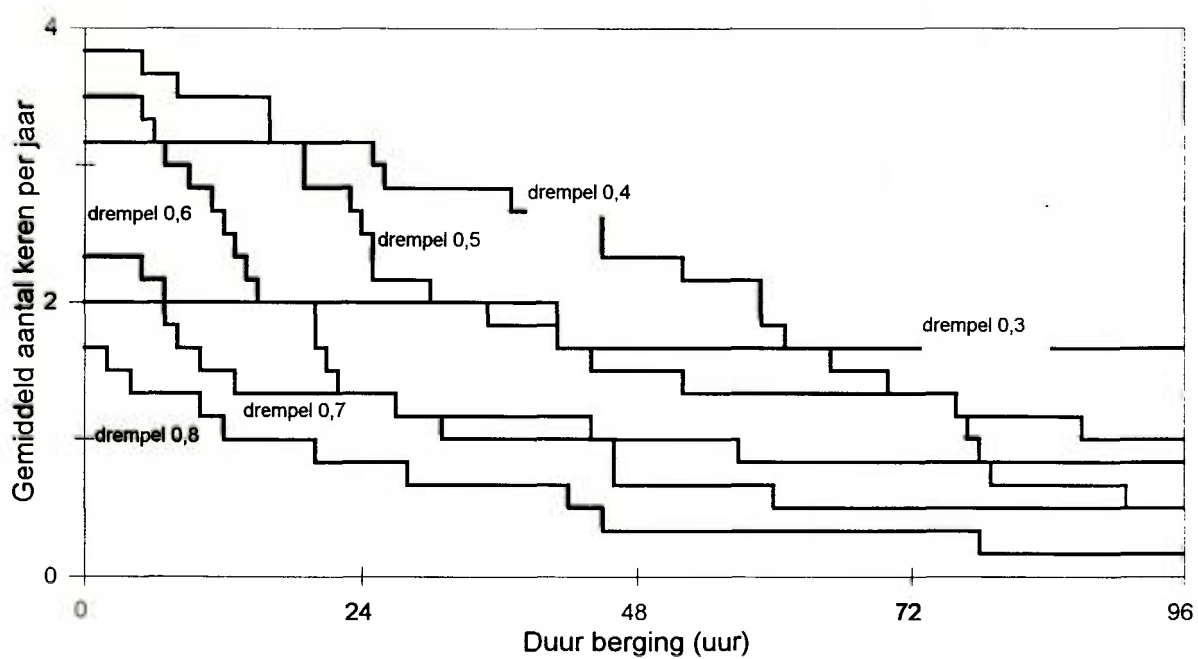


— doorlopend gemiddelde —○— Jaarmaxima —■— 5-jaargemiddelde

Station 082 - Wimp te Wiekevorst



Station 082 - Wimp te Wiekevorst

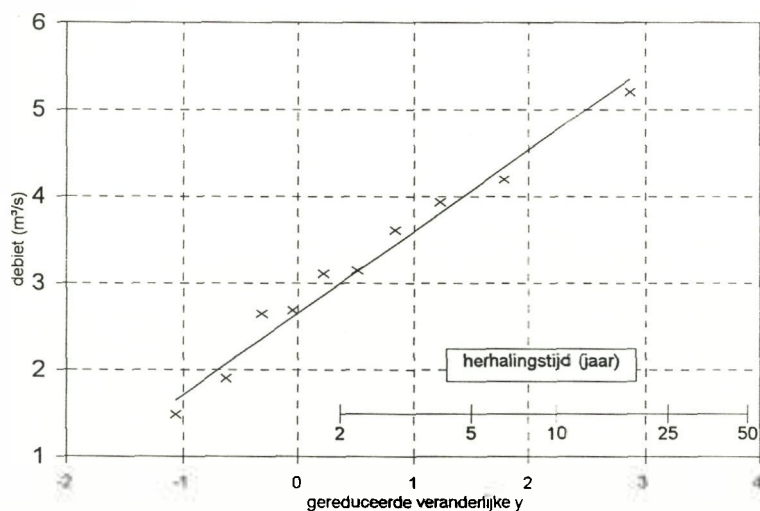


17. Station 086

**De Grote Laak
te Vorst**

Station nr. 086 : Grote Laak te Vorst

Nr.	Waterjaar	Datum	Hoogte (cm)	Debiet (m³/s)
1	'89 - '90	13/09/89	60	1 488
2	'90 - '91	29/12/90	42	1 906
3	'91 - '92	22/12/91	54	2 648
4	'88 - '89	19/03/89	93	2 687
5	'86 - '87	2/01/87	104	3 107
6	'87 - '88	14/03/88	105	3 146
7	'93 - '94	21/12/93	69	3 608
8	'92 - '93	23/01/93	74	3 934
9	'95 - '96	30/08/96	78	4 197
10	'94 - '95	20/02/95	93	5 199



Herhalingstijd (jaar)	Debiet (m³/s)	Spec. afvoer (l/s ha)
2	2 994	0.49
5	4 060	0.67
10	4 766	0.78
25	5 657	0.93
50	6.319	1.04

Station 086 : Grote Laak te Vorst

Runoffhoeveelheden

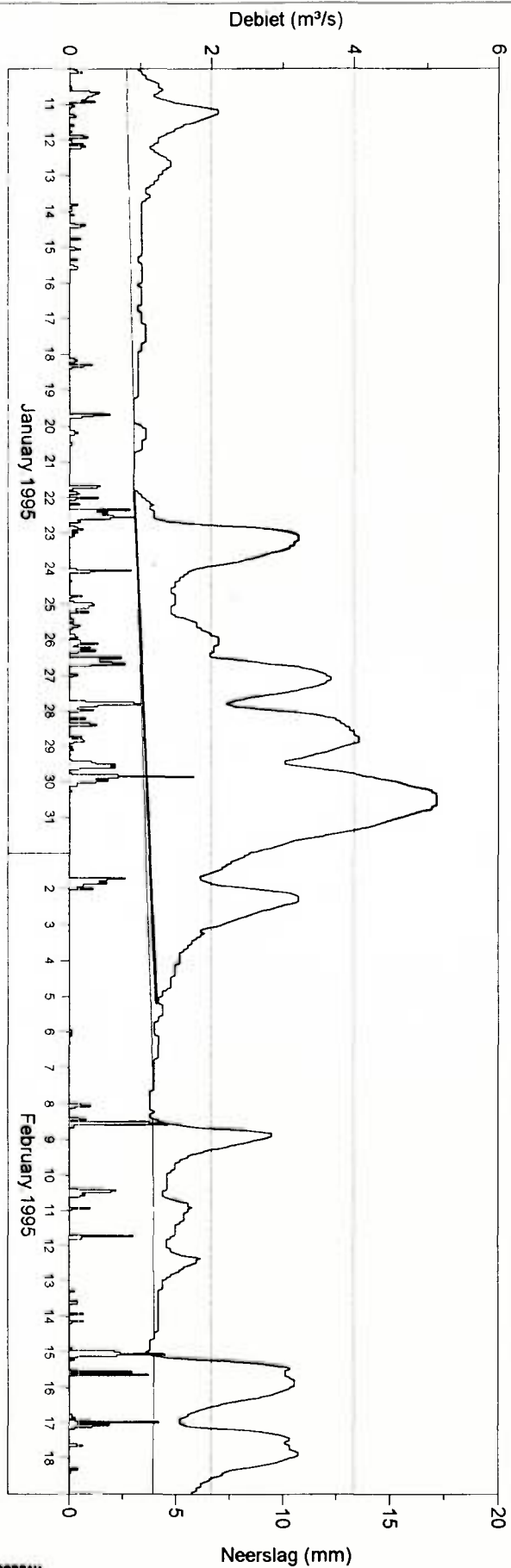
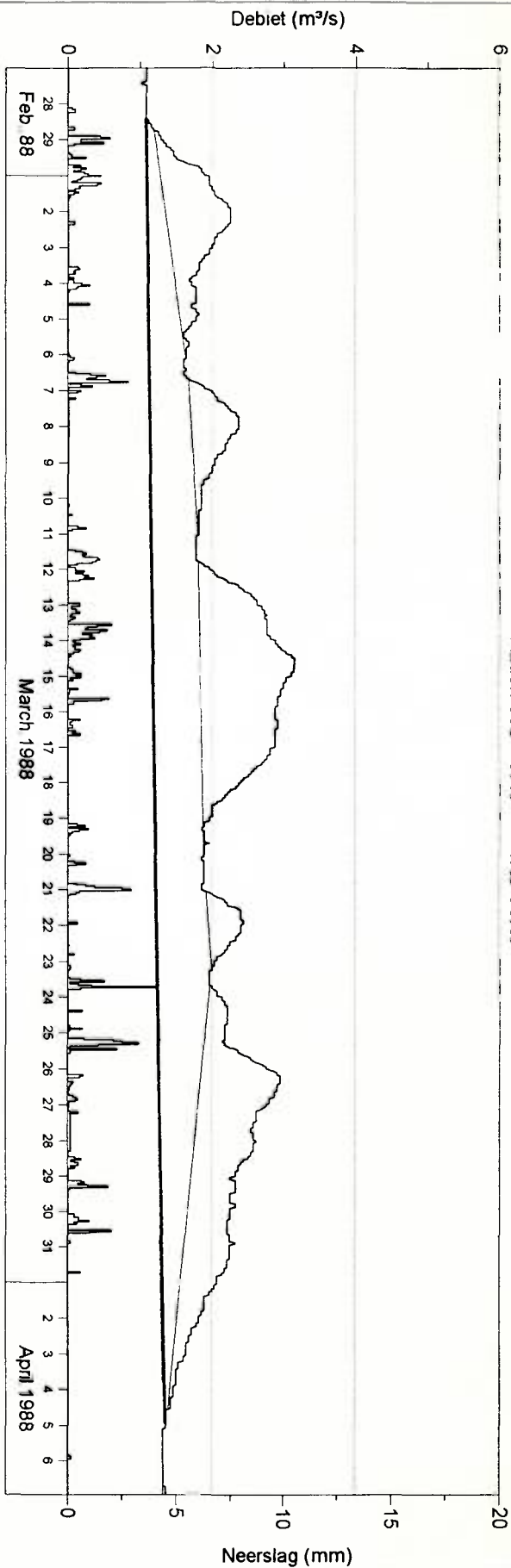
Stroomgebied = 6091 ha

Tijdreeks : 1986 - '96

Nr.	Was van (datum Q _{max})	q _{max} (l/s ha)	q _{begin} (l/s ha)	q _{eind} (l/s ha)	Neerslag som (mm)	Neerslag duur (uur)	Concentratie tijd (uur)	Runoff (mm)	Runoff- Coëff. (-)	Runoff duur (uur)
1	14/03/88	0.52	0.18	0.22	149.7	782	59	48.5	0.32	882
2	30/01/95	0.84	0.15	0.21	107.3	327	47	31.6	0.29	343
3	20/02/95	0.85	0.18	0.19	92.1	425	21	30.7	0.33	417
4	27/01/88	0.47	0.19	0.21	123.1	522	54	29.0	0.24	603
5	24/03/87	0.47	0.18	0.20	77.3	340	64	17.8	0.23	446
6	17/11/92	0.35	0.14	0.15	106.7	654	68	16.9	0.16	702
7	02/01/87	0.51	0.27	0.28	89.3	343	66	16.3	0.18	416
8	30/08/96	0.69	0.06	0.09	95.9	103	40	13.8	0.14	225
9	31/12/93	0.51	0.18	0.18	56.9	264	38	12.5	0.22	270
10	21/12/93	0.59	0.16	0.18	60.1	213	29	12.4	0.21	243
11	23/11/87	0.37	0.18	0.18	58.0	213	65	10.7	0.18	308
12	03/03/87	0.50	0.20	0.22	40.2	97	39	10.2	0.25	224
13	04/12/88	0.33	0.13	0.20	63.2	335	50	9.8	0.15	373
14	13/11/91	0.30	0.07	0.10	118.3	345	42	9.3	0.08	362
15	26/01/94	0.50	0.15	0.18	50.8	331	29	9.3	0.18	367
16	29/12/90	0.31	0.10	0.14	79.8	309	44	9.1	0.11	362
17	23/01/93	0.65	0.16	0.18	51.5	233	22	8.2	0.16	274
18	08/01/88	0.31	0.17	0.19	57.9	307	46	8.1	0.14	350
19	28/12/94	0.41	0.10	0.14	61.4	185	28	8.0	0.13	256
20	22/12/91	0.43	0.10	0.13	71.5	240	48	7.9	0.11	247
21	19/03/89	0.44	0.20	0.23	35.0	207	76	7.4	0.21	218
22	04/12/96	0.52	0.14	0.14	49.1	176	28	6.9	0.14	228
23	23/10/86	0.40	0.15	0.20	80.8	138	31	6.4	0.08	162
24	30/07/87	0.30	0.17	0.17	49.4	262	48	6.4	0.13	291
25	20/11/86	0.37	0.18	0.26	53.5	257	20	6.2	0.12	260
26	01/09/92	0.35	0.09	0.11	90.7	198	25	6.1	0.07	232
27	12/01/93	0.40	0.12	0.17	47.2	235	36	5.8	0.12	248
28	20/12/86	0.42	0.24	0.27	56.8	248	51	5.7	0.10	264
29	24/07/88	0.33	0.15	0.15	48.1	176	21	5.6	0.12	206
30	16/07/88	0.28	0.10	0.15	57.5	128	27	5.4	0.09	191

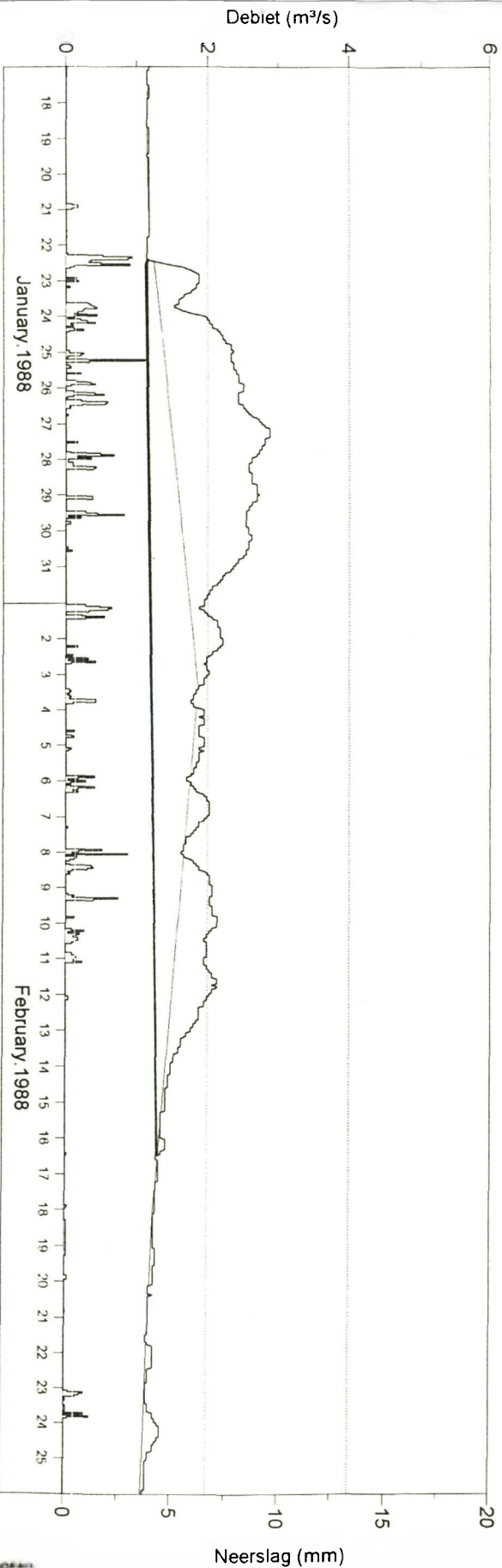
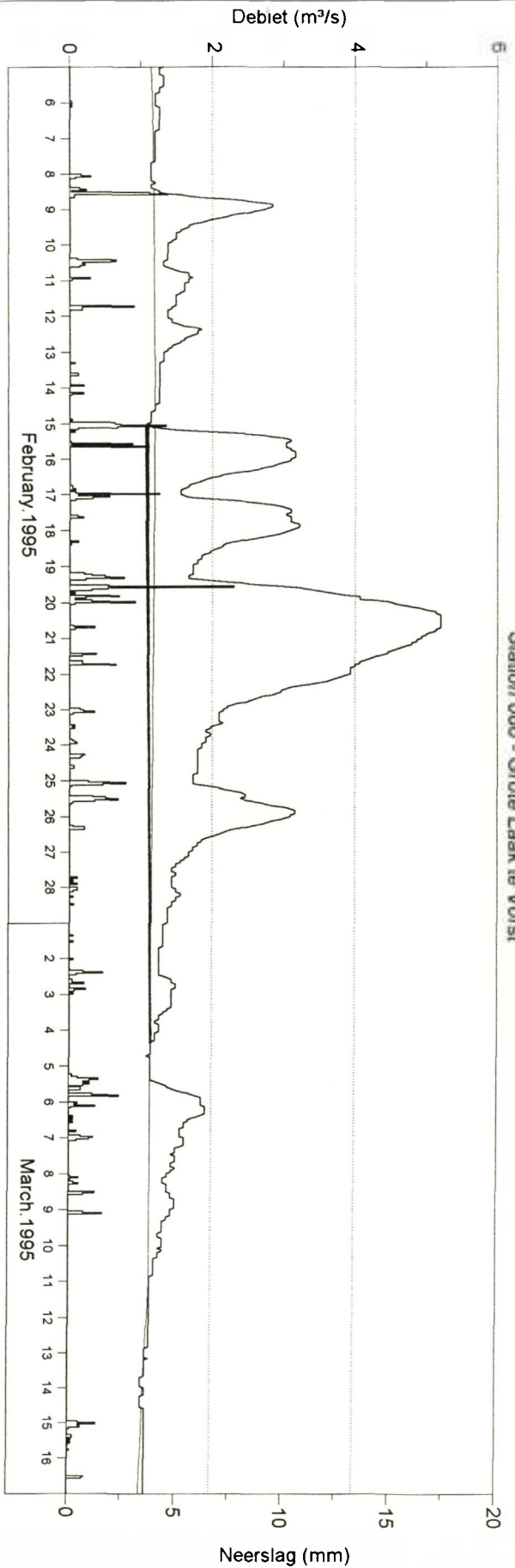
Uurwaarden van neerslag, debiet en basisafvoer

Station 086 - Grote Laak te Vorst



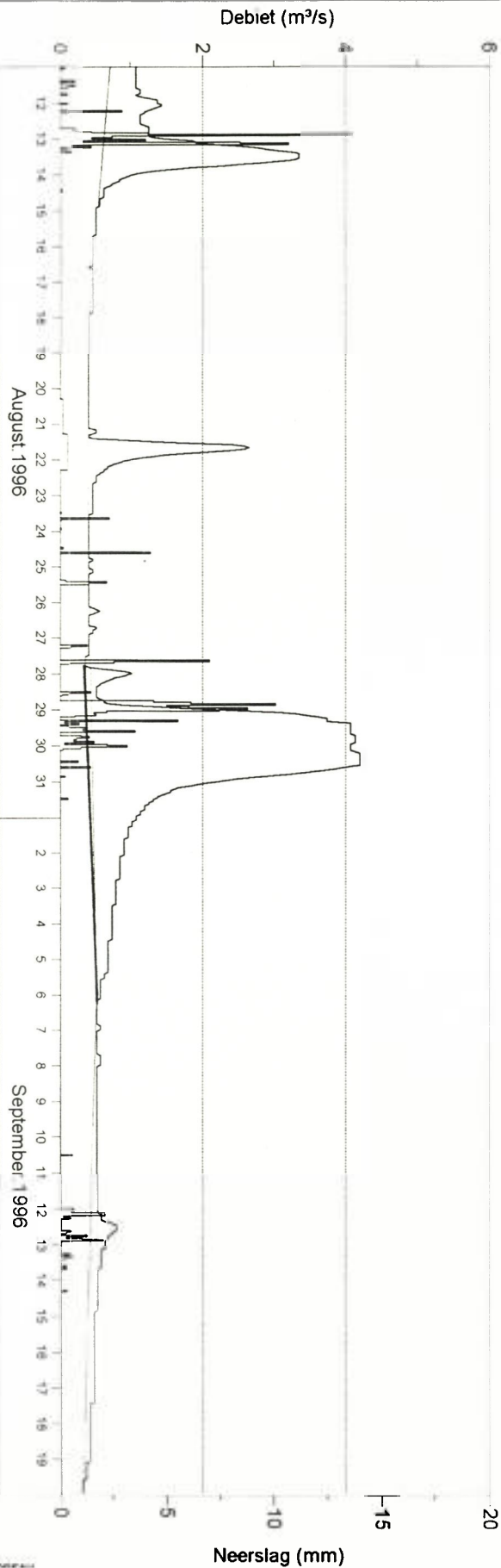
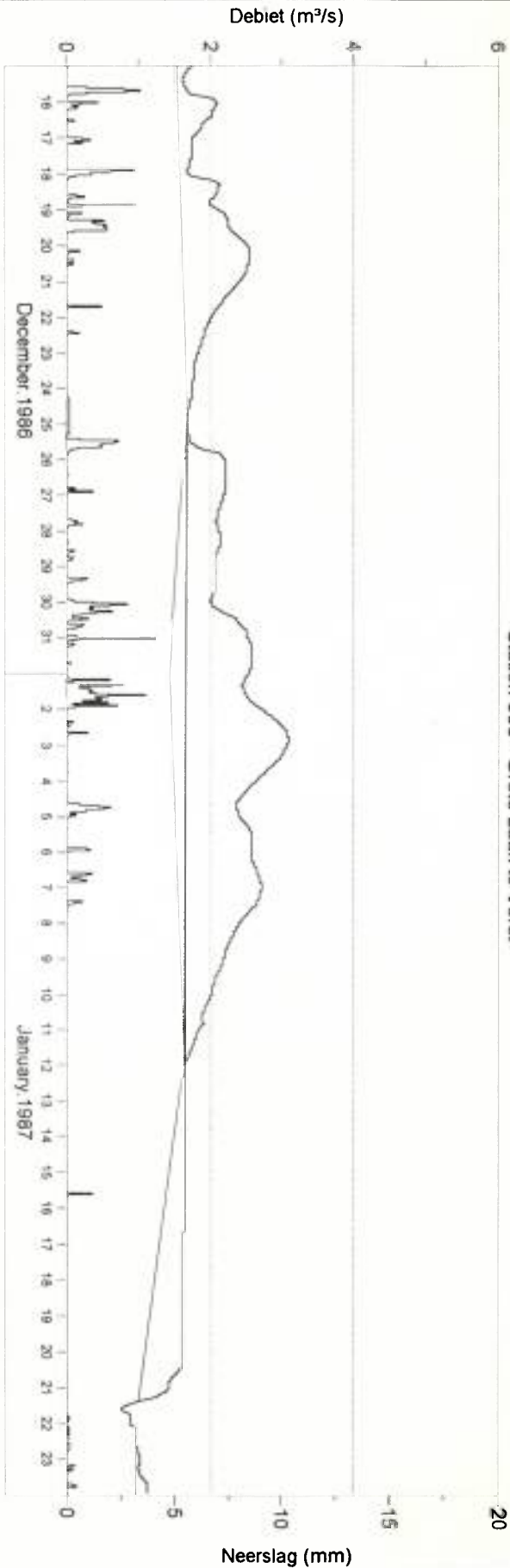
Uurwaarden van neerslag, debiet en basisafvoer

Station 086 - Grote Laak te Vorsl



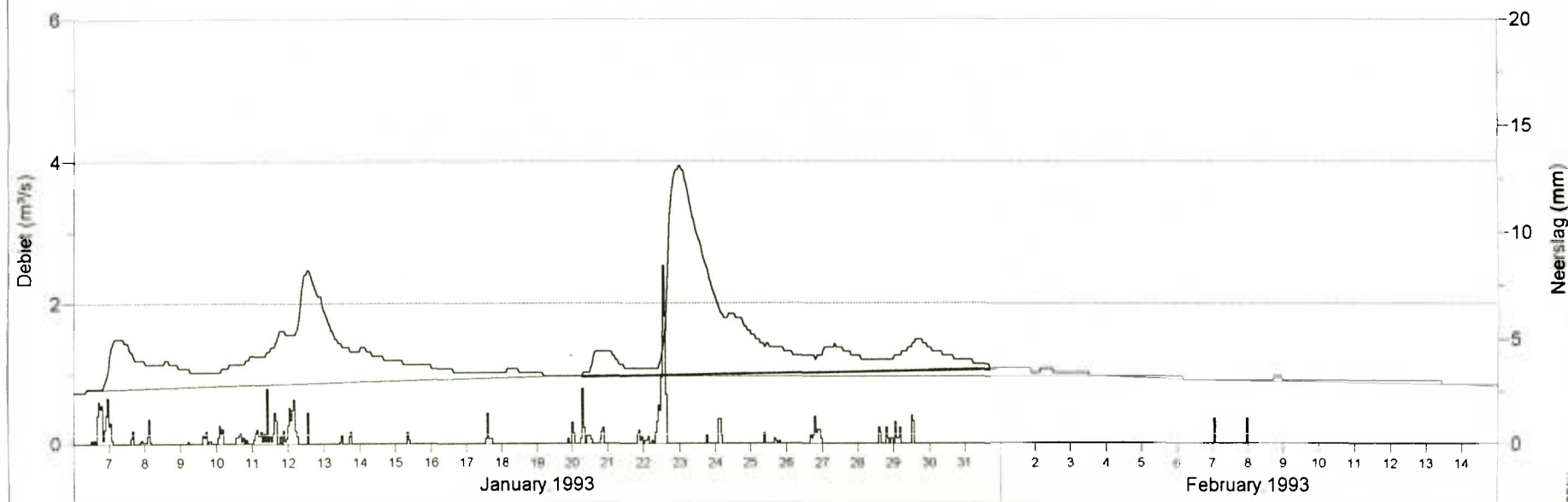
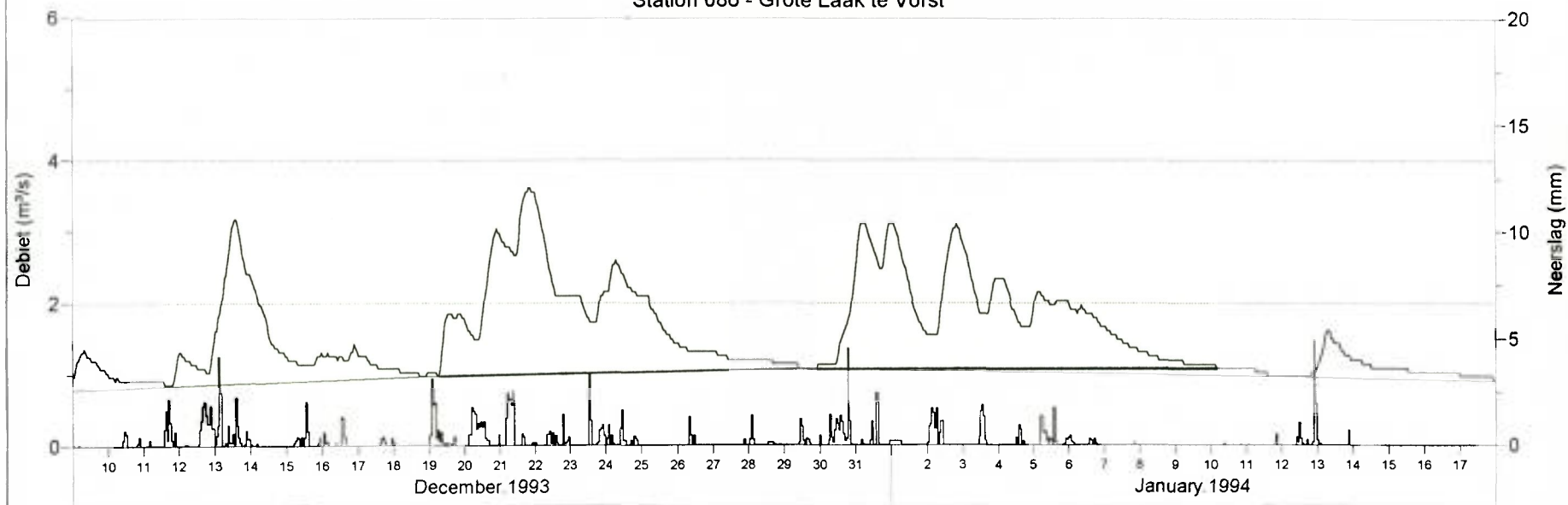
Uurwaarden van neerslag, debiet en basisafvoer

Station 086 - Grote Laak te Vorst

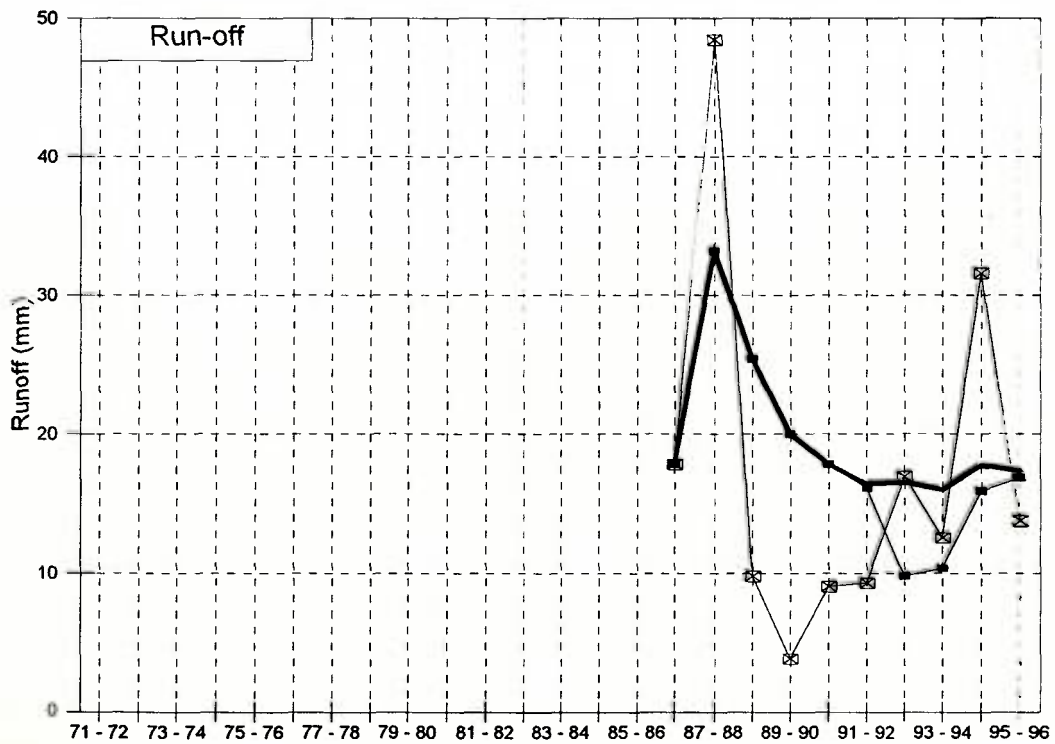
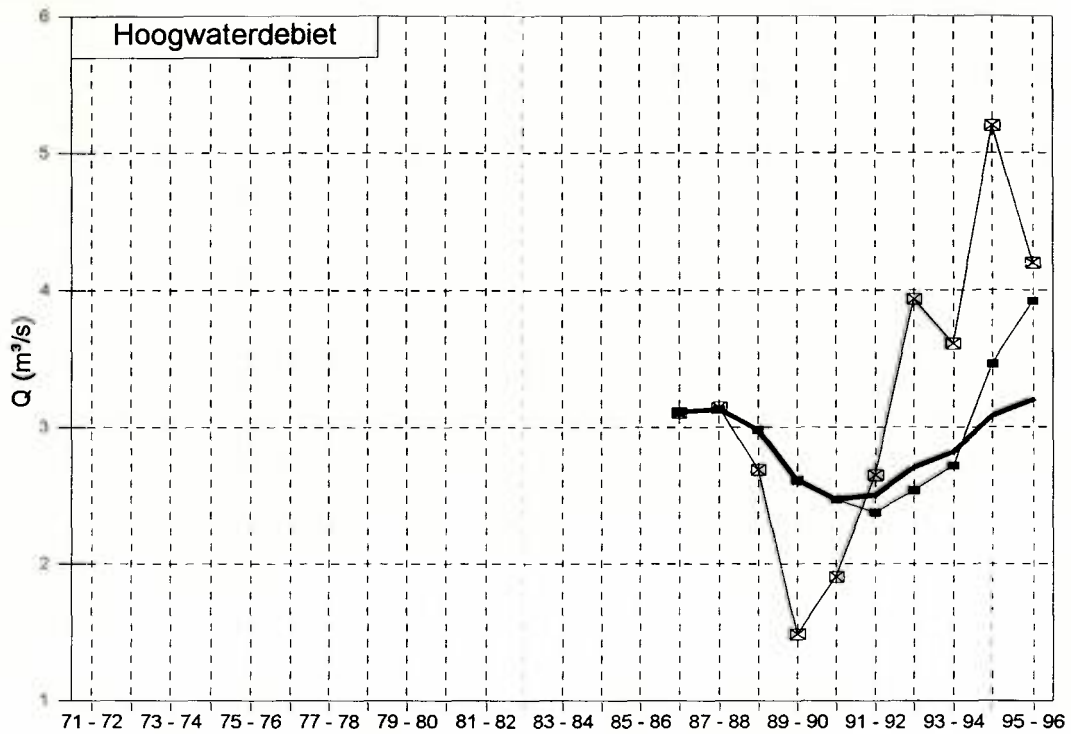


Uurwaarden van neerslag, debiet en basisafvoer

Station 086 - Grote Laak te Vorst

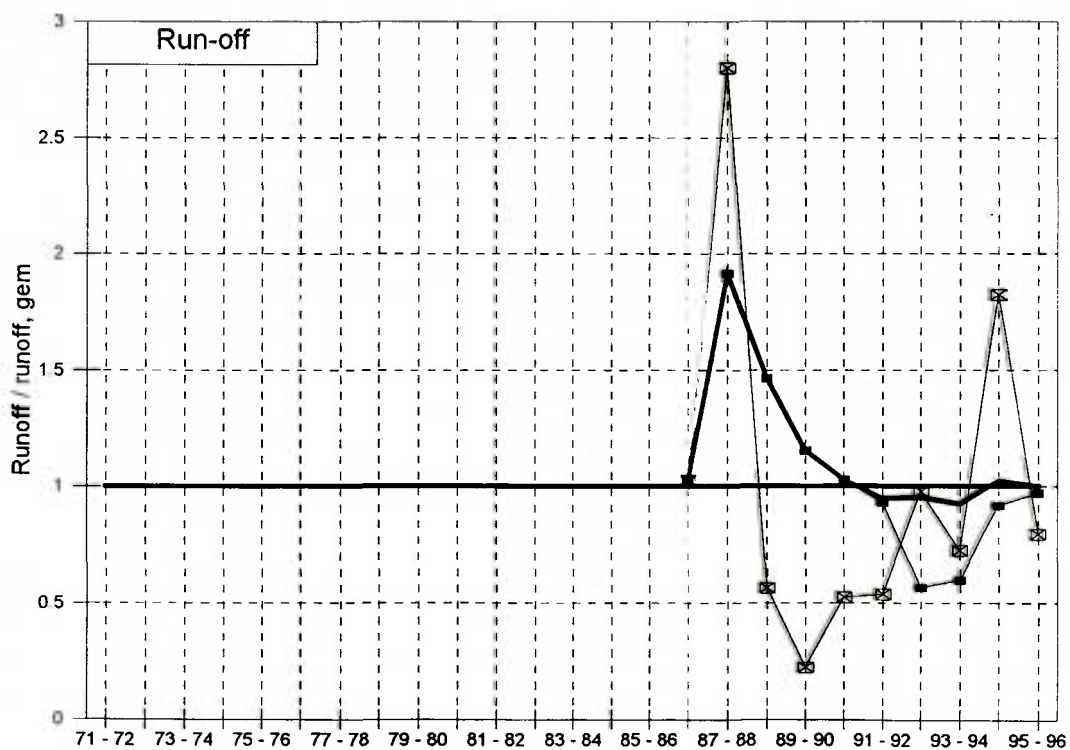
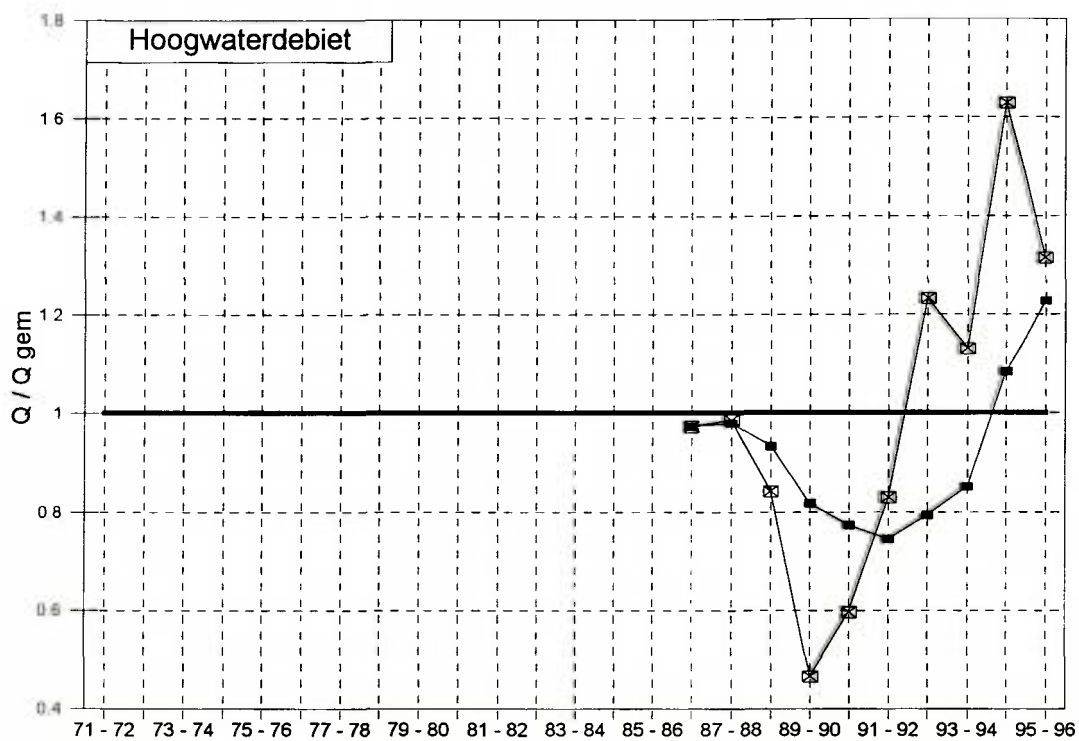


Station 086 : Grote Laak / Vorst



— doorlopend gemiddelde —x— Jaarmaxima —■— 5-jaargemiddelde

Station 086 : Grote Laak / Vorst

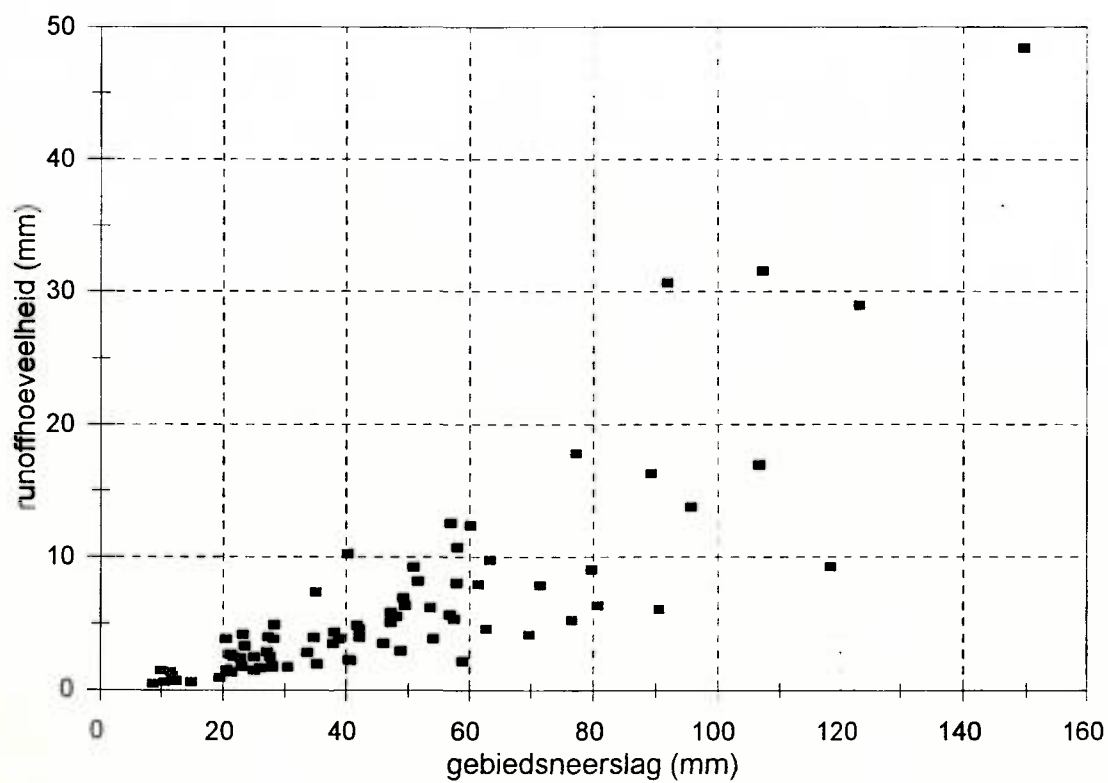
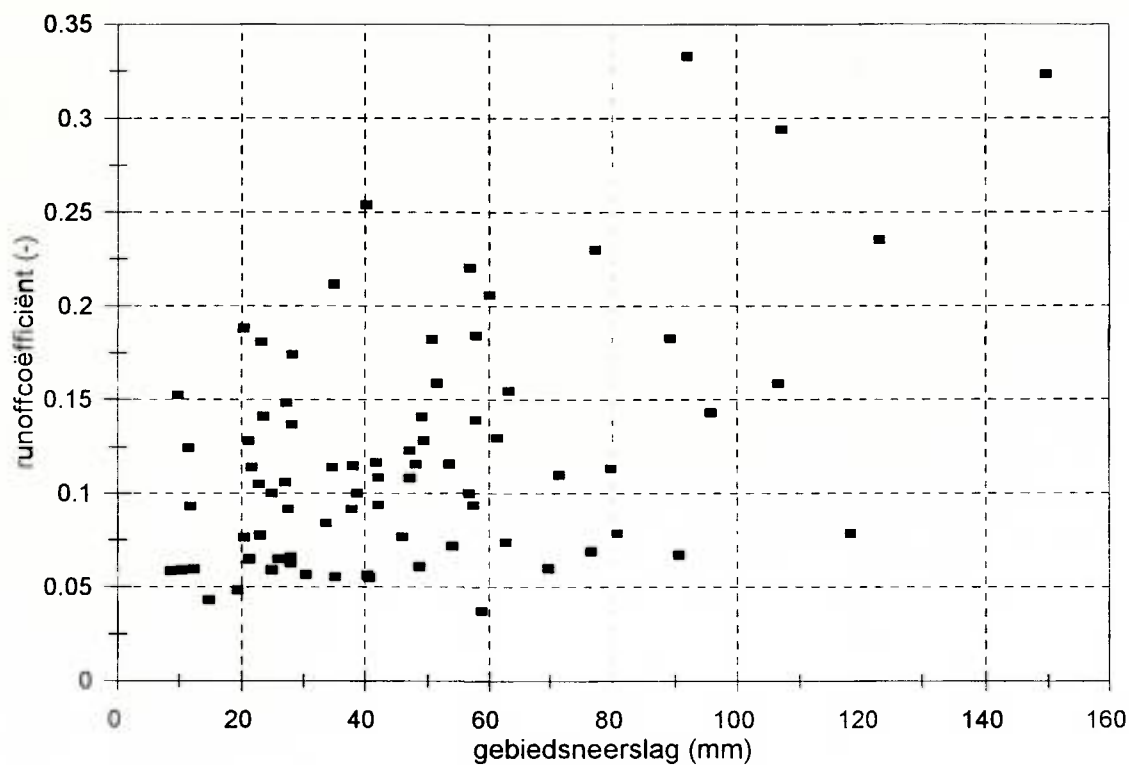


— doorlopend gemiddelde

—x— Jaarmaxima

—■— 5-jaargemiddelde

Station 086 : Grote Laak / Vorst

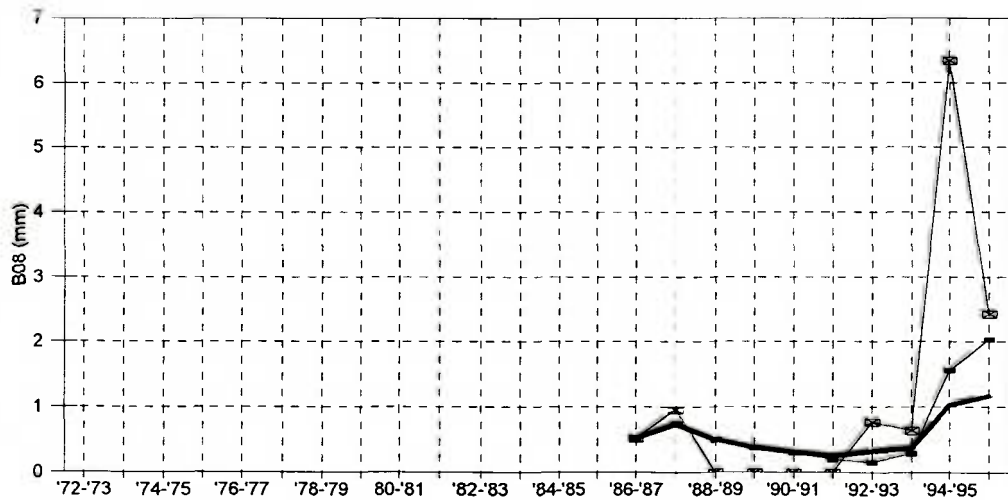
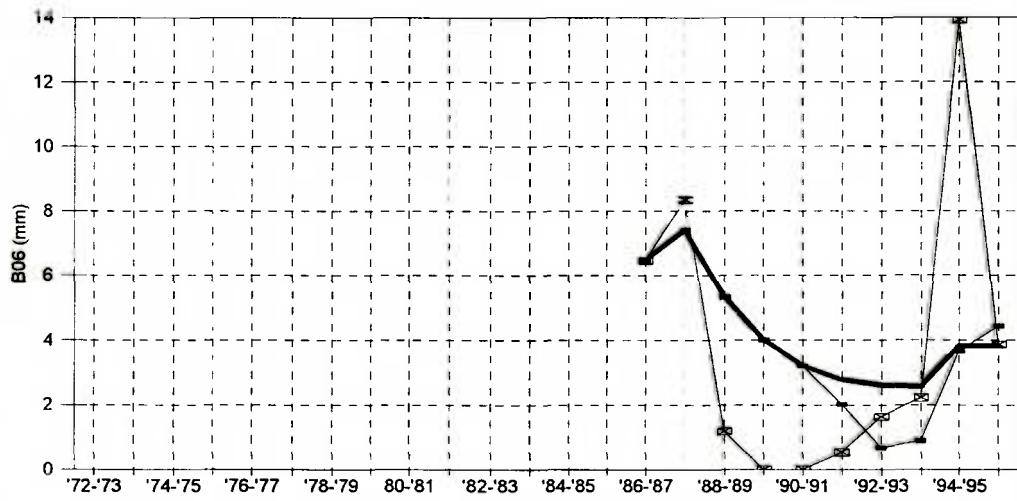
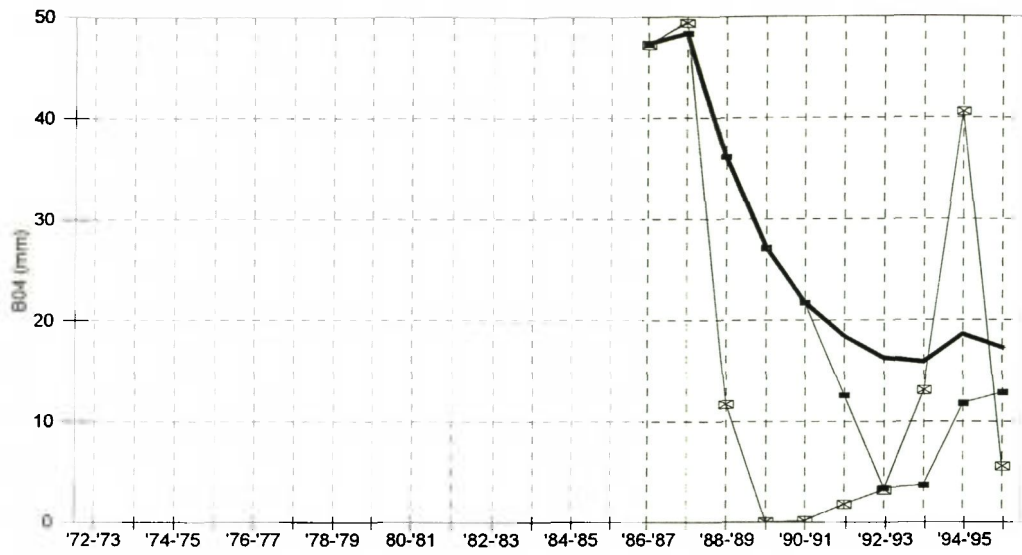


Jaarmaxima van bergingen					
Station 086 : Grote Laak / Vorst			Gemidd. jaarmax : 3.381 m³/s		
Waterjaar	piekdebiet (m³/s)	datum	(mm)	berging (uur)	datum
Bergingen boven 0,4 - Qgem					
'86 -'87	3 107	02/01/87	47.30	7305	03/04/87
'87 -'88	3 146	14/03/88	49.42	5179	10/04/88
'88 -'89	2 687	20/03/89	11.68	2201	30/04/89
'89 -'90	1 488	13/09/89	0.01	4	13/09/89
'90 -'91	1 724	10/01/91	0.14	28	10/01/91
'91 -'92	2 648	22/12/91	1.74	166	24/12/91
'92 -'93	3 934	23/01/93	3.22	380	25/01/93
'93 -'94	3 608	21/12/93	13.11	2013	07/01/94
'94 -'95	5 199	20/02/95	40.62	3132	09/03/95
'95 -'96	4 197	30/08/96	5.52	254	31/08/96
Bergingen boven 0,5 - Qgem					
'86 -'87	3 107	02/01/87	15.60	1483	11/01/87
'87 -'88	3 146	14/03/88	21.16	2564	02/04/88
'88 -'89	2 687	20/03/89	2.53	347	24/03/89
'89 -'90			0.00	0	
'90 -'91	1 724	10/01/91	0.00	3	10/01/91
'91 -'92	2 648	22/12/91	1.03	90	23/12/91
'92 -'93	3 934	23/01/93	2.27	187	24/01/93
'93 -'94	3 608	21/12/93	5.46	668	06/01/94
'94 -'95	5 199	20/02/95	26.90	1926	26/02/95
'95 -'96	4 197	30/08/96	4.65	177	31/08/96
Bergingen boven 0,6 - Qgem					
'86 -'87	3 107	02/01/87	6.46	666	09/01/87
'87 -'88	3 146	14/03/88	8.35	774	01/04/88
'88 -'89	2 687	20/03/89	1.17	157	21/03/89
'89 -'90			0.00	0	
'90 -'91			0.00	0	
'91 -'92	2 648	22/12/91	0.52	53	22/12/91
'92 -'93	3 934	23/01/93	1.63	99	24/01/93
'93 -'94	3 608	21/12/93	2.22	184	25/12/93
'94 -'95	5 199	20/02/95	13.92	1256	26/02/95
'95 -'96	4 197	30/08/96	3.86	131	31/08/96
Bergingen boven 0,7 - Qgem					
'86 -'87	3 107	02/01/87	2.50	323	08/01/87
'87 -'88	3 146	14/03/88	2.79	508	18/03/88
'88 -'89	2 687	20/03/89	0.36	66	20/03/89
'89 -'90			0.00	0	
'90 -'91			0.00	0	
'91 -'92	2 648	22/12/91	0.13	31	22/12/91
'92 -'93	3 934	23/01/93	1.16	66	23/01/93
'93 -'94	3 608	21/12/93	1.26	125	22/12/93
'94 -'95	5 131	30/01/95	8.61	388	02/02/95
'95 -'96	4 197	30/08/96	3.13	102	30/08/96

Jaarmaxima van bergingen**Station 086 : Grote Laak / Vorst**Gemidd. jaarmax. : 3.381 m³/s

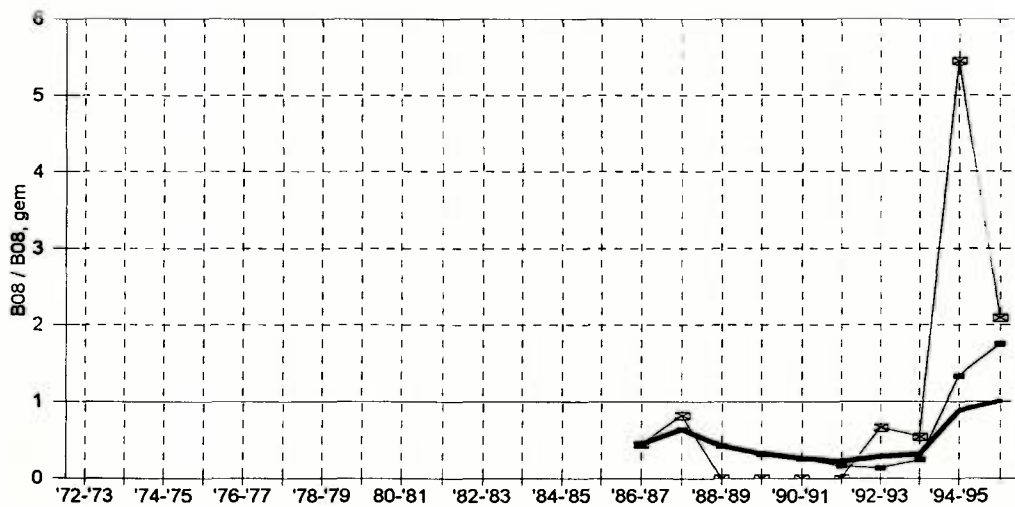
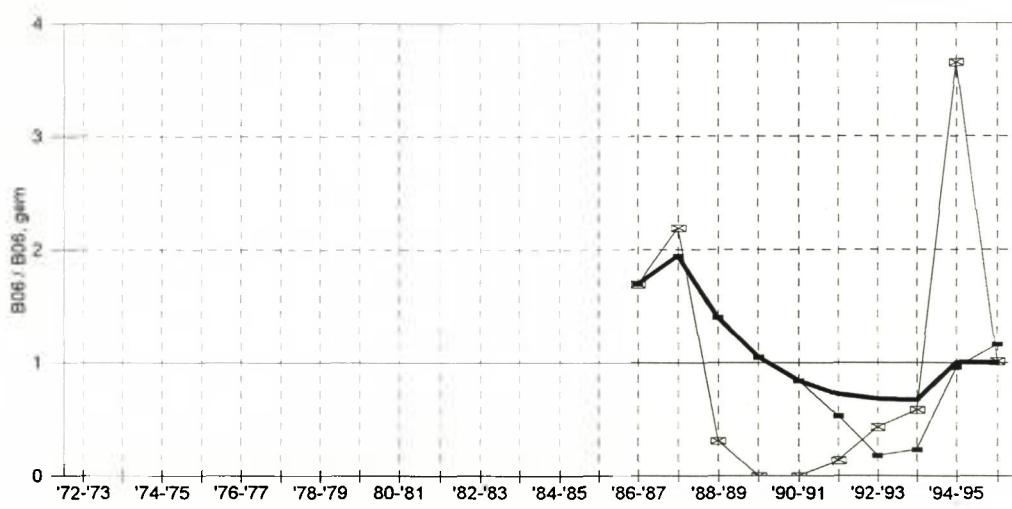
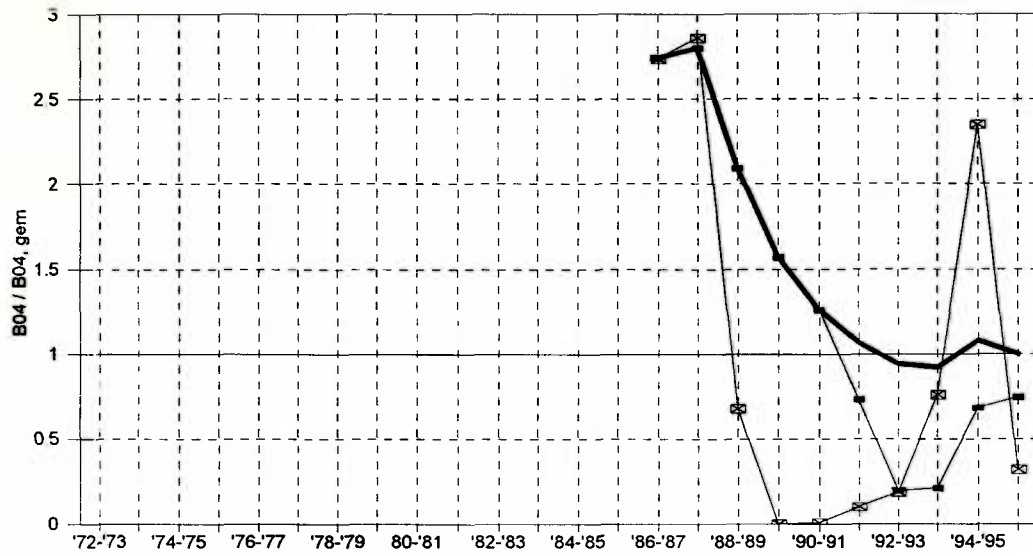
Waterjaar	piekdebiet		berging		
	(m ³ /s)	datum	(mm)	(uur)	datum
Bergingen boven 0,8 · Qgem					
'86 -'87	3.107	02/01/87	0.51	100	03/01/87
'87 -'88	3.146	14/03/88	0.95	145	17/03/88
'88 -'89			0.00	0	
'89 -'90			0.00	0	
'90 -'91			0.00	0	
'91 -'92			0.00	0	
'92 -'93	3.934	23/01/93	0.77	46	23/01/93
'93 -'94	3.608	21/12/93	0.63	61	22/12/93
'94 -'95	5.131	30/01/95	6.34	274	31/01/95
'95 -'96	4.197	30/08/96	2.43	81	30/08/96

Station 086 : Grote Laak / Vorst



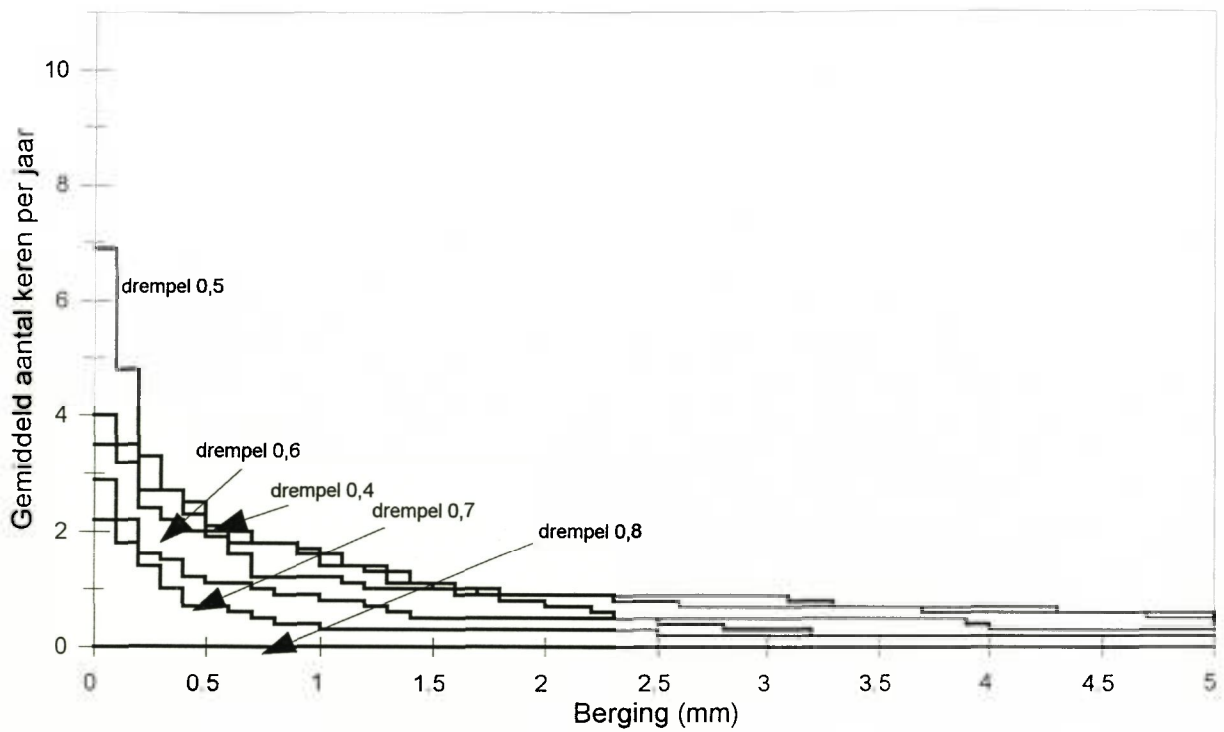
— doorlopend gemiddelde —□— Jaarmaxima —■— 5-jaargemiddelde

Station 086 : Grote Laak / Vorst

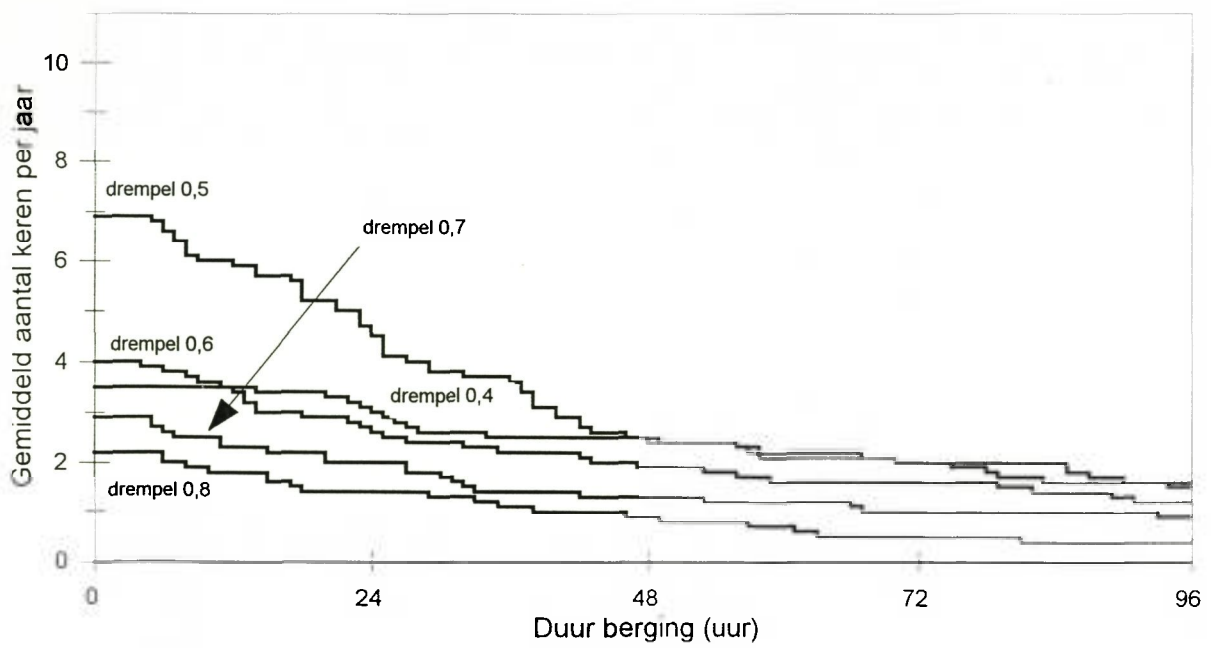


— doorlopend gemiddelde —□— Jaarmaxima —■— 5-jaargemiddelde

Station 086 - Grote Laak te Vorst



Station 086 - Grote Laak te Vorst

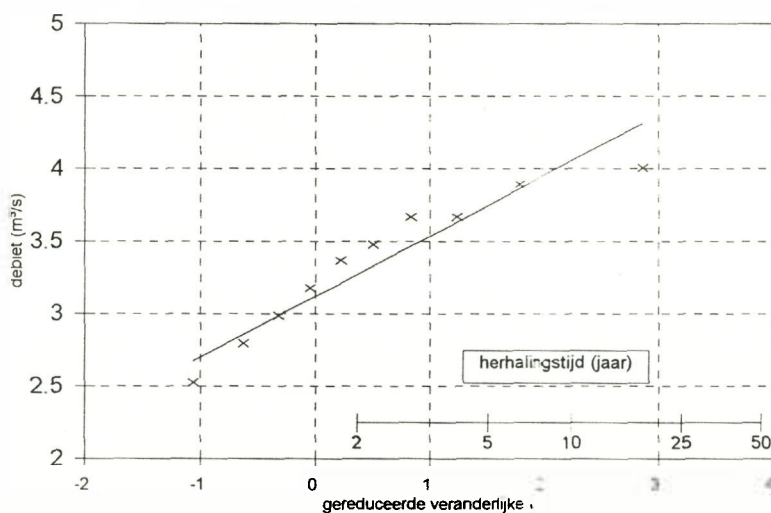


18. Station 147

**De Hulpe
te Molenstede**

Station nr. 147 : Hulpe te Molenstede

Nr.	Waterjaar	Datum	Hoogte (cm)	Debiet (m³/s)
1	'90 - '91	30/12/90	66	2 527
2	'89 - '90	14/02/90	73	2 796
3	'95 - '96	30/08/96	80	2 987
4	'91 - '92	22/12/91	83	3 177
5	'88 - '89	14/04/89	88	3 367
6	'92 - '93	23/01/93	91	3 480
7	'86 - '87	3/03/87	96	3 668
8	'93 - '94	21/12/93	96	3 668
9	'87 - '88	15/03/88	102	3 893
10	'94 - '95	30/01/95	105	4 005



Herhalingstijd (jaar)	Debiet (m³/s)	Spec. afvoer (l/s.ha)
2	3.269	0.41
5	3.741	0.47
10	4.054	0.51
25	4.449	0.56
50	4.742	0.59

Station 147 : Hulpe te Molenstede

Runoffhoeveelheden

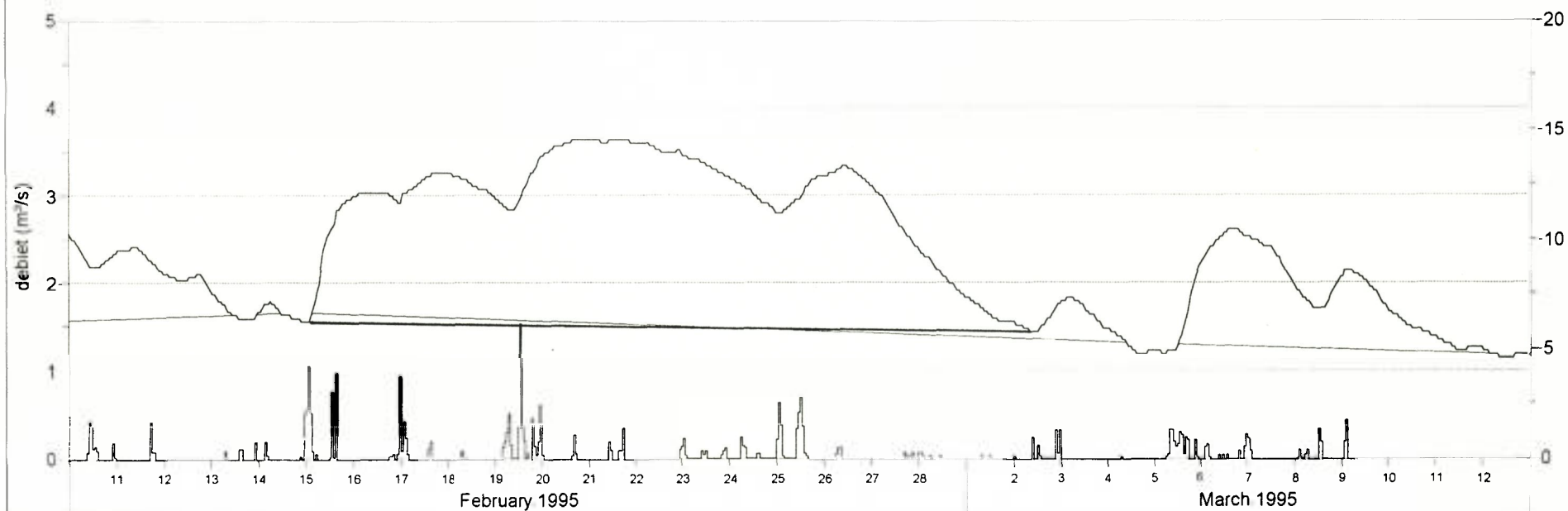
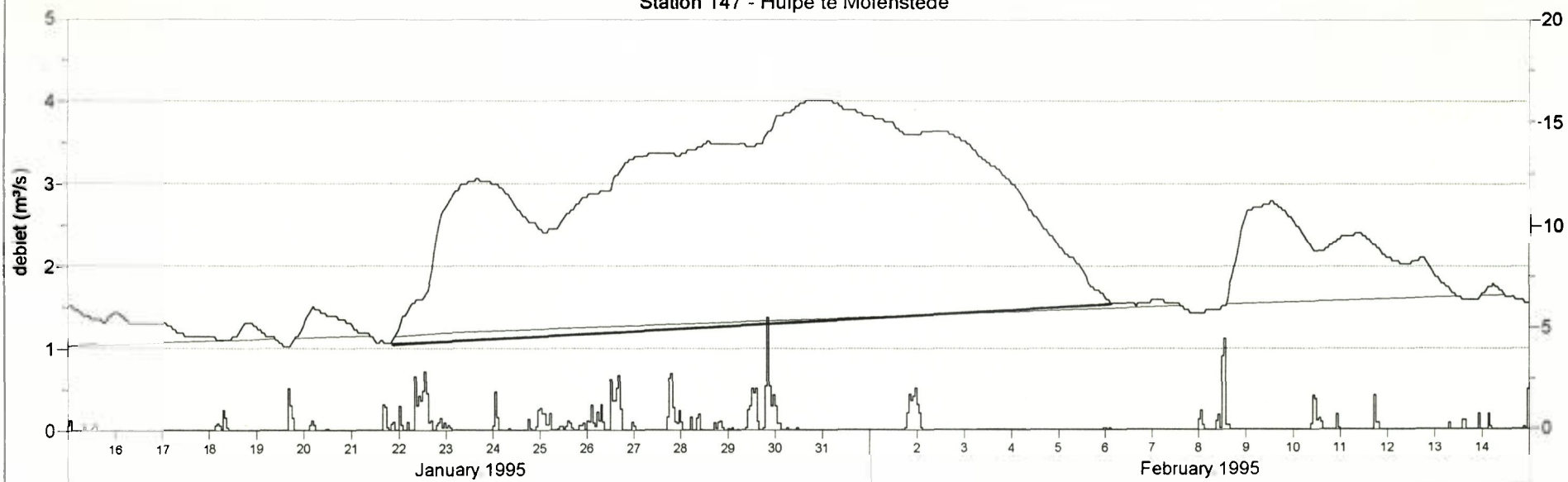
Stroomgebied = 7974 ha

Tijdreeks : 1986 - '96

Nr.	Was van (datum Q_{max})	q_{max} (l/s ha)	q_{begin} (l/s ha)	q_{eind} (l/s ha)	Neerslag som (mm)	Neerslag duur (uur)	Concentratie tijd (uur)	Runoff (mm)	Runoff- Coeff. (-)	Runoff duur (uur)
1	31/01/95	0.50	0.14	0.19	96.1	288	75	28.8	0.30	366
2	21/02/95	0.46	0.19	0.19	75.6	360	47	23.2	0.31	351
3	25/03/87	0.46	0.12	0.17	69.7	304	35	15.1	0.22	315
4	28/12/94	0.36	0.08	0.11	66.1	274	25	14.2	0.21	311
5	15/03/88	0.49	0.16	0.25	56.5	141	46	13.5	0.24	188
6	26/03/88	0.46	0.21	0.21	53.8	221	33	13.1	0.24	227
7	31/08/96	0.38	0.04	0.10	89.0	144	57	13.0	0.15	205
8	27/01/88	0.42	0.14	0.18	68.1	219	47	13.0	0.19	231
9	03/03/87	0.46	0.14	0.14	38.4	99	22	12.4	0.32	206
10	23/11/87	0.40	0.13	0.15	55.3	215	30	11.6	0.21	258
11	23/01/93	0.44	0.13	0.14	48.6	237	35	11.0	0.23	270
12	28/01/94	0.36	0.13	0.14	36.0	251	14	10.5	0.29	272
13	23/12/95	0.31	0.06	0.11	59.6	120	33	5.9	0.10	157
14	15/11/93	0.36	0.06	0.13	51.0	48	23	4.7	0.09	90
15	14/02/90	0.35	0.12	0.16	38.4	97	26	4.6	0.12	123
16	17/03/89	0.42	0.14	0.16	25.2	33	27	4.4	0.17	79
17	20/03/94	0.42	0.14	0.18	20.2	48	28	4.3	0.21	81
18	26/03/94	0.36	0.15	0.19	22.2	120	28	4.2	0.19	124
19	08/03/89	0.40	0.12	0.15	24.1	22	27	4.1	0.17	85
20	14/04/89	0.42	0.14	0.15	25.0	24	24	4.1	0.16	73
21	02/03/88	0.41	0.15	0.22	26.7	78	31	4.1	0.15	92
22	12/01/93	0.37	0.15	0.18	25.8	120	30	4.0	0.16	128
23	22/10/86	0.36	0.09	0.12	52.5	51	24	3.9	0.07	82
24	09/02/95	0.35	0.19	0.20	19.6	96	34	3.8	0.19	122
25	11/01/95	0.32	0.12	0.19	19.2	96	20	3.6	0.19	129
26	01/12/96	0.34	0.15	0.18	21.6	48	24	3.5	0.16	100
27	02/01/87	0.44	0.25	0.28	29.8	73	30	3.5	0.12	84
28	05/12/92	0.31	0.12	0.16	27.2	72	25	3.5	0.13	101
29	24/01/90	0.29	0.09	0.13	39.8	95	23	3.5	0.09	115
30	20/12/86	0.33	0.13	0.16	25.0	64	24	3.1	0.13	96

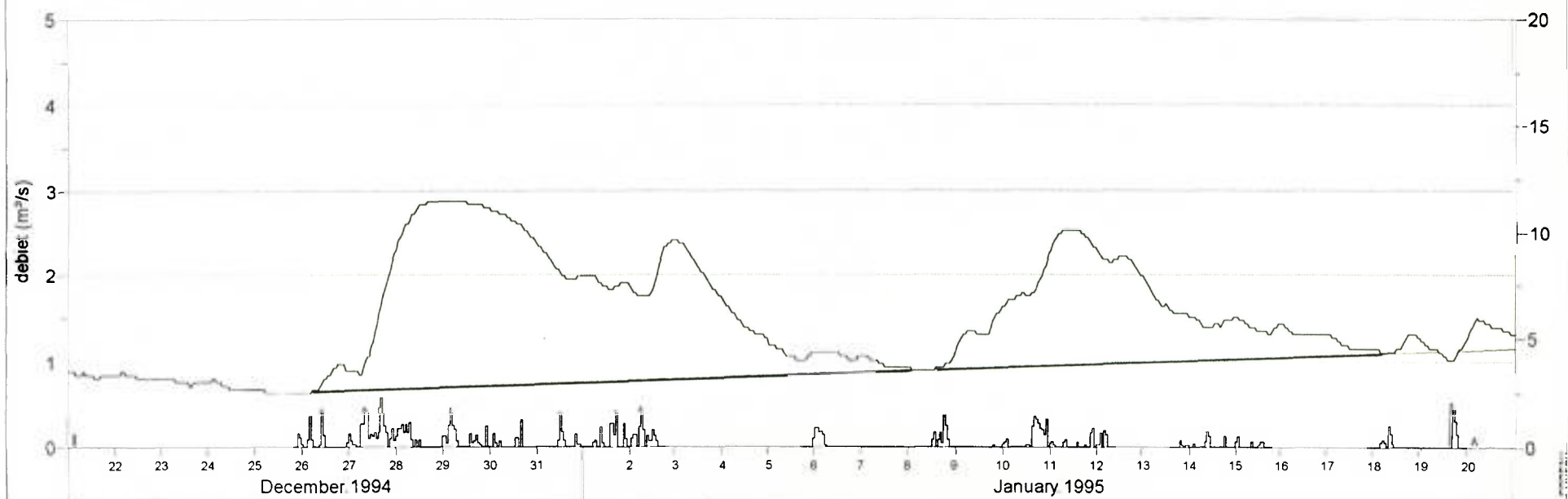
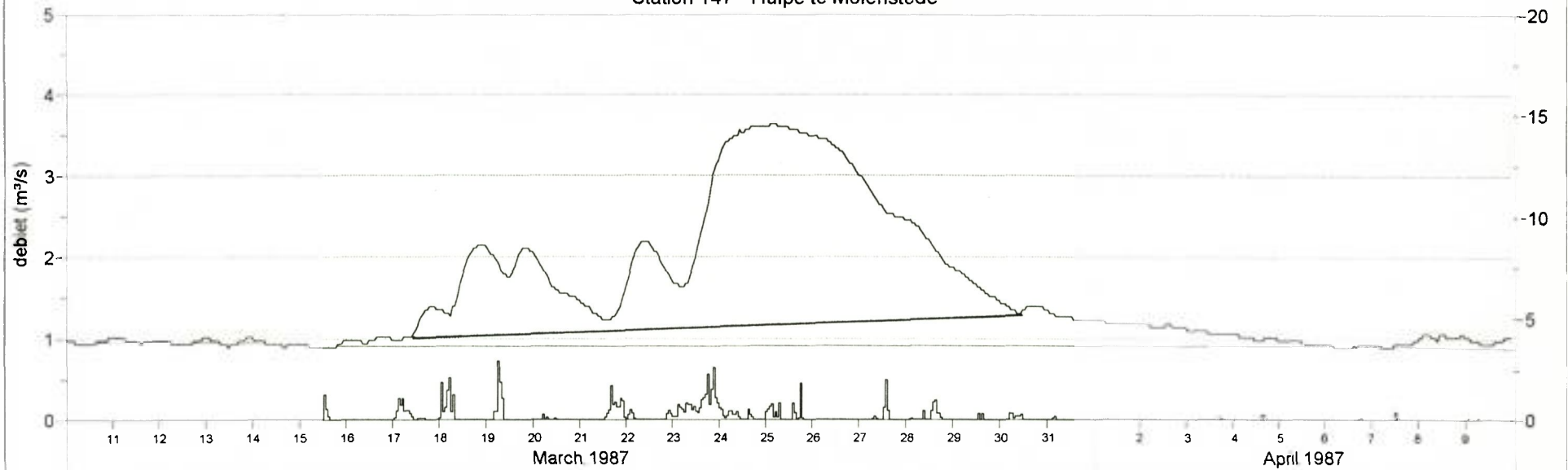
Uurwaarden van neerslag, debiet en basisafvoer

Station 147 - Hulpe te Molenstede



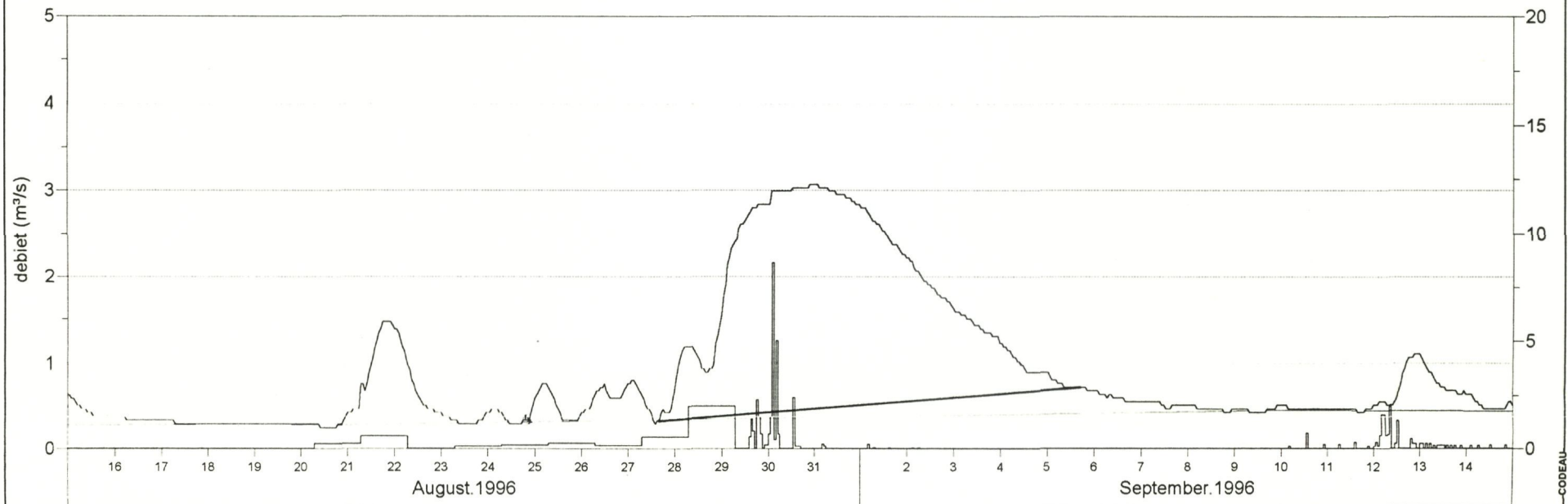
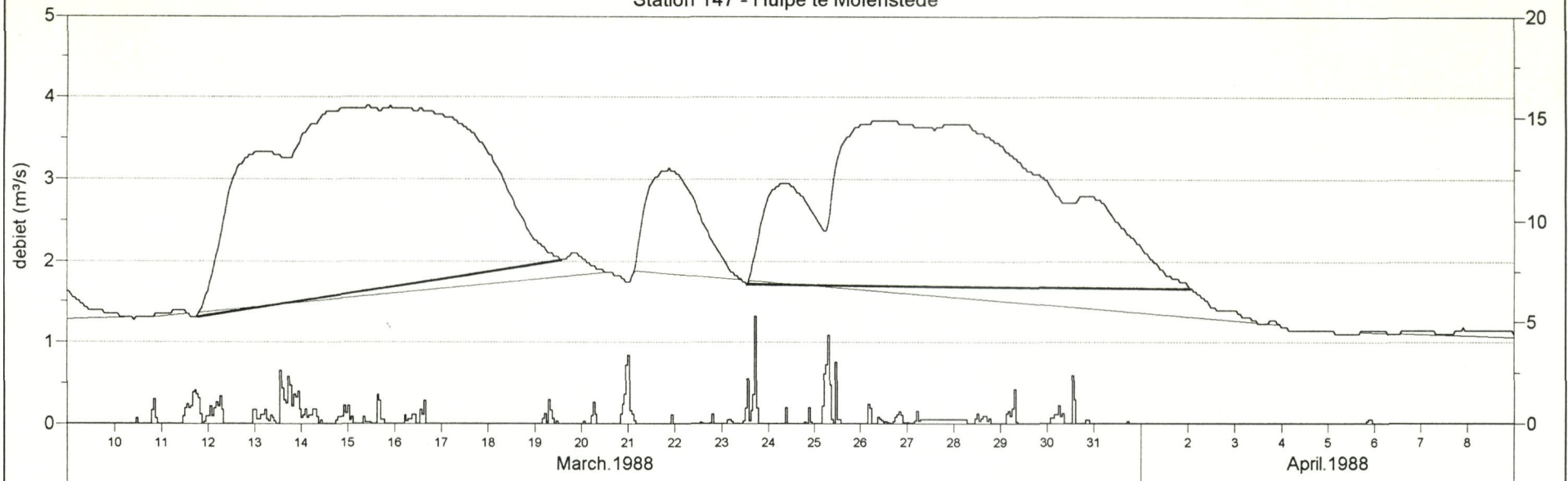
Uurwaarden van neerslag, debiet en basisafvoer

Station 147 - Hulpe te Molenstede



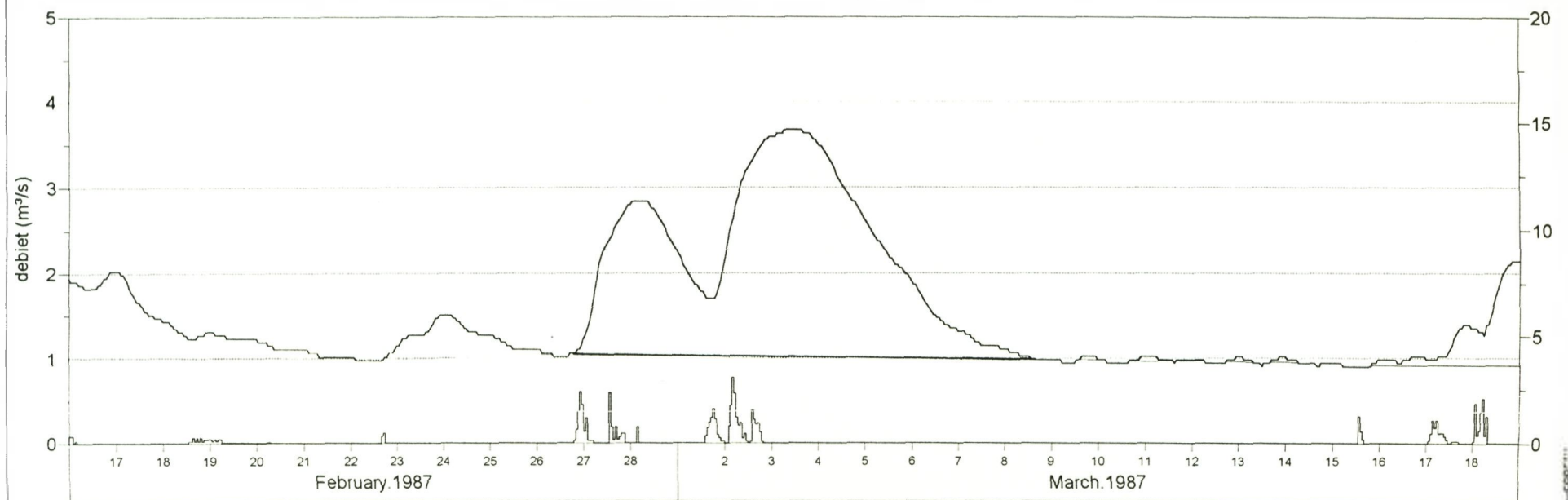
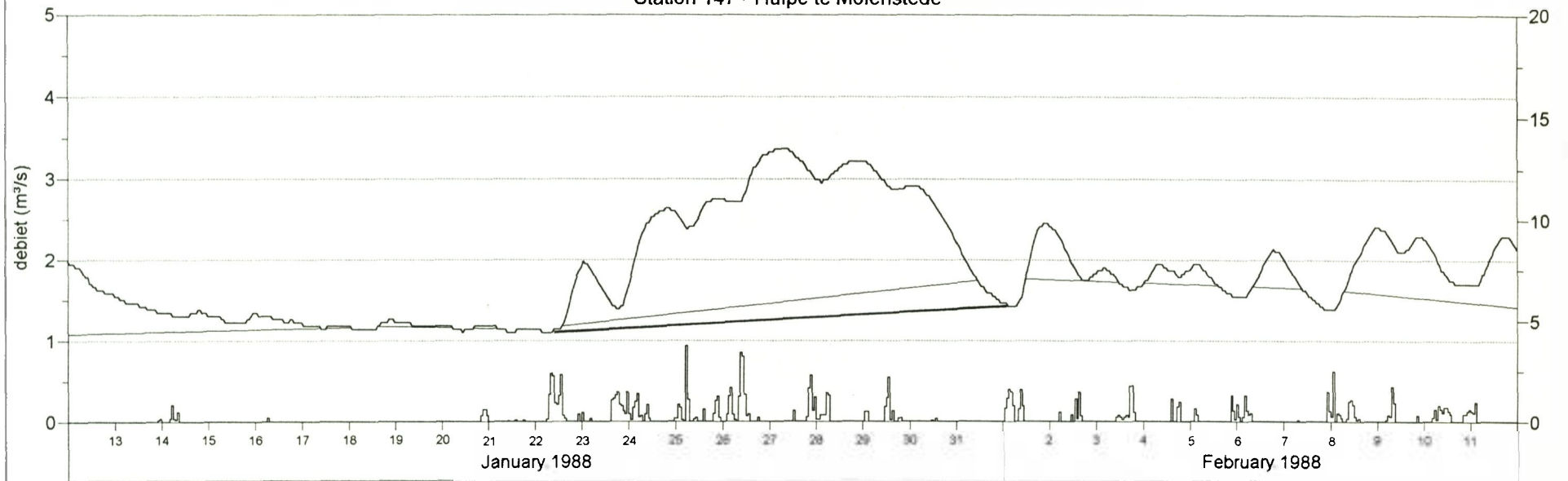
Uurwaarden van neerslag, debiet en basisafvoer

Station 147 - Hulpe te Molenstede



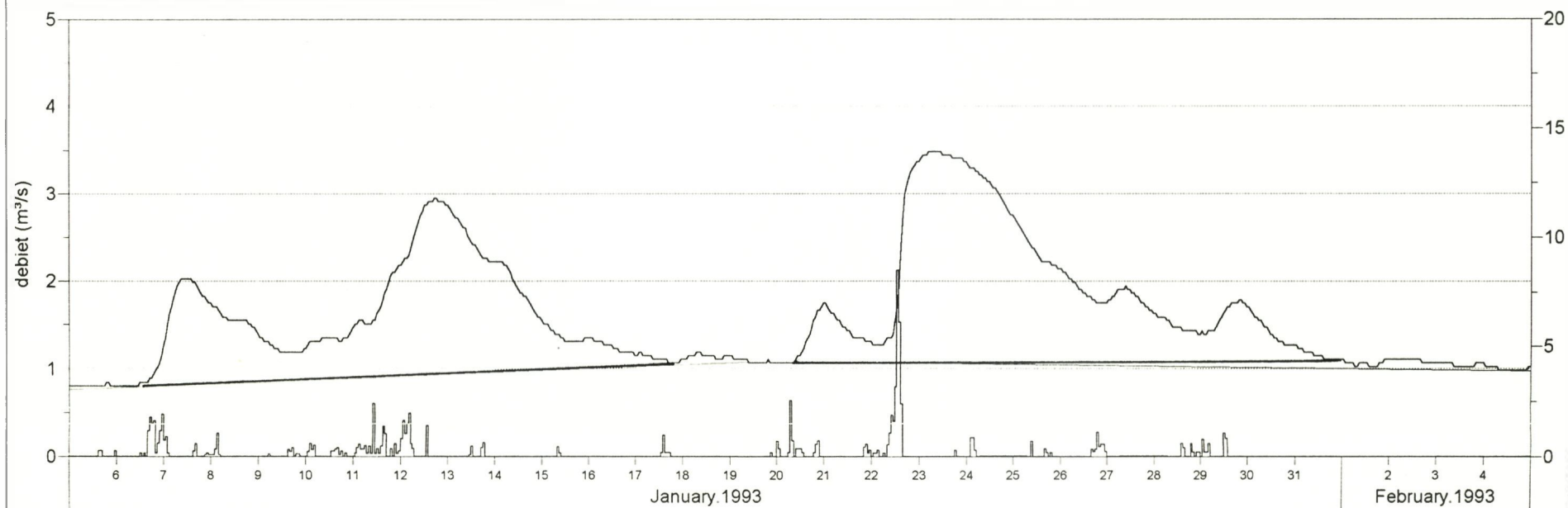
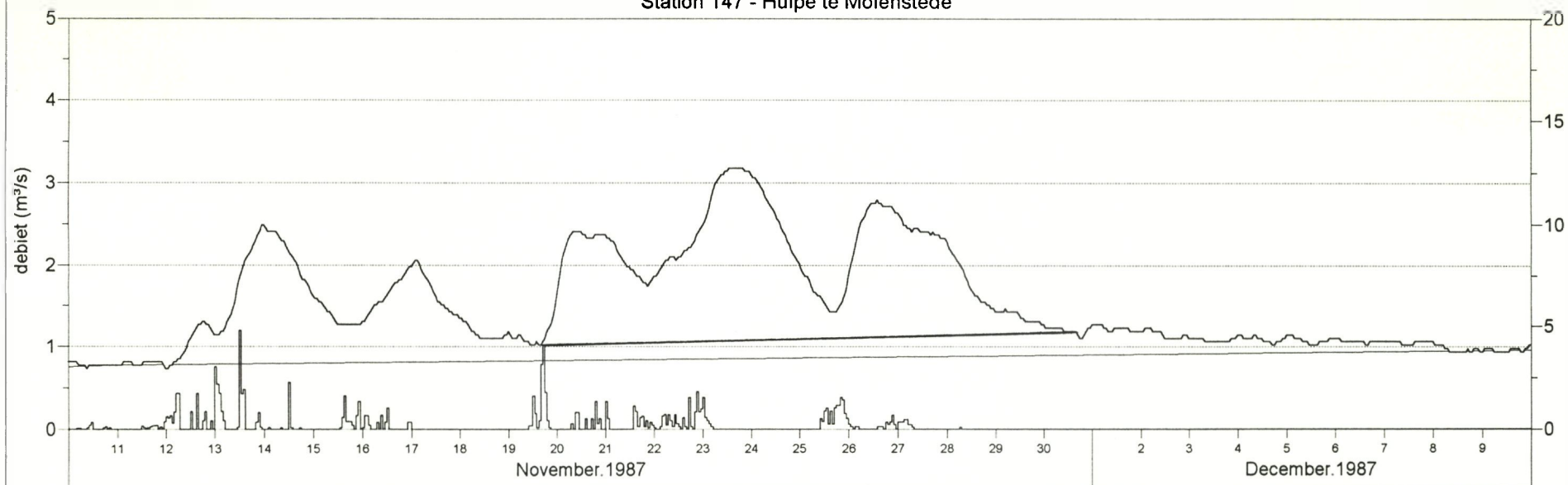
Uurwaarden van neerslag, debiet en basisafvoer

Station 147 - Hulpe te Molenstede



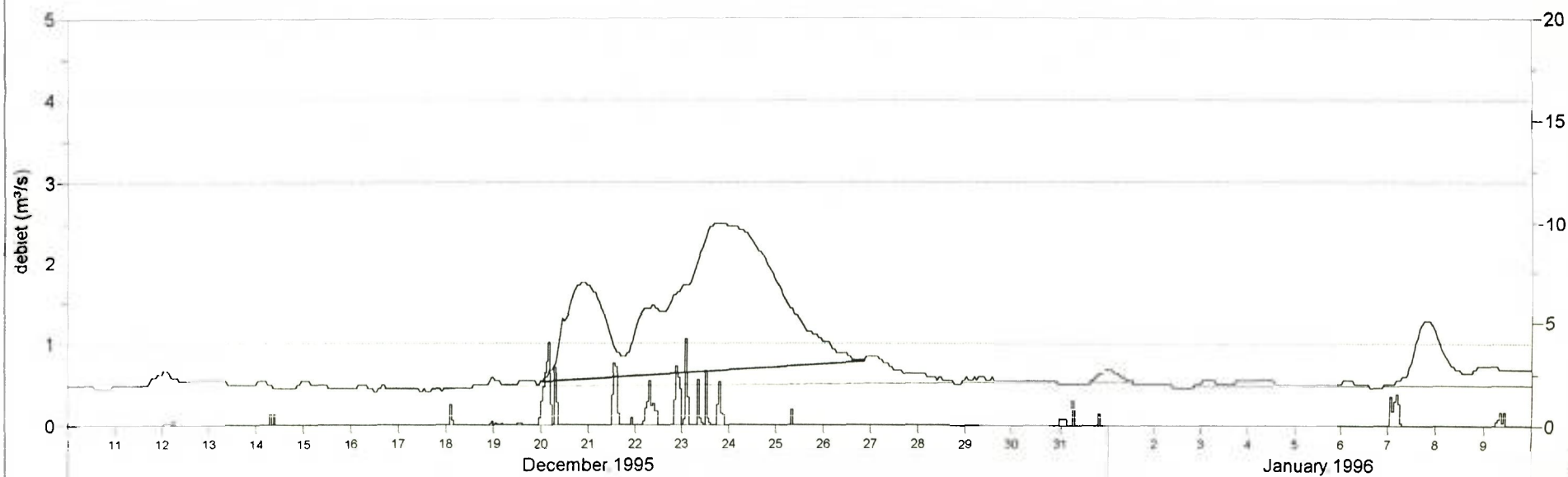
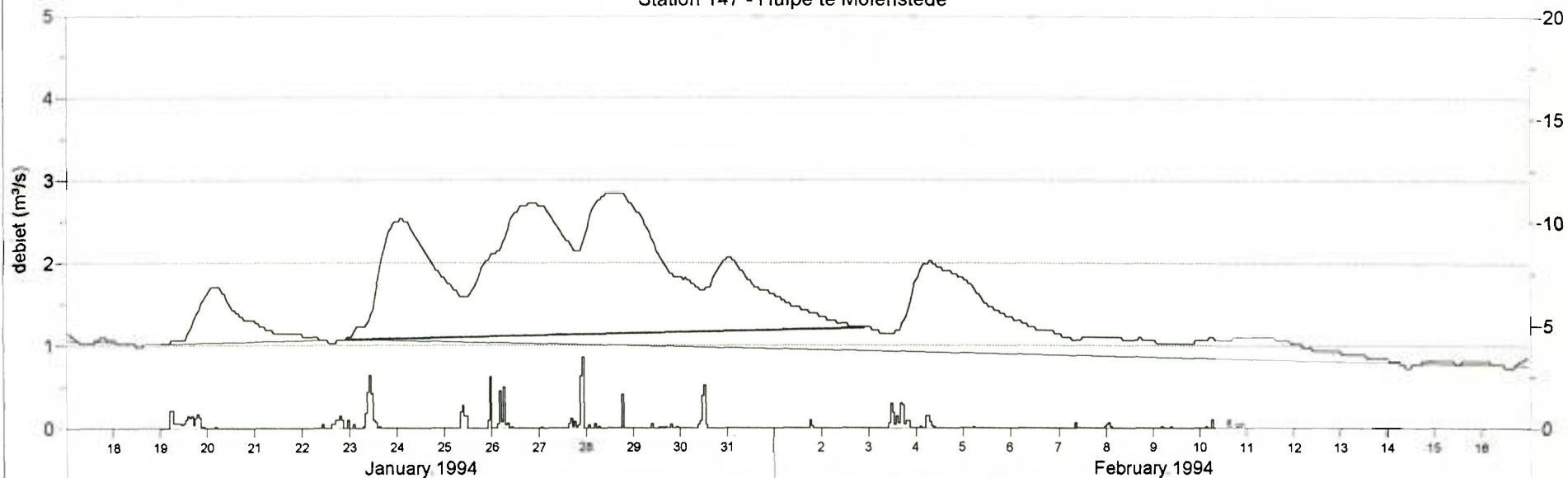
Uurwaarden van neerslag, debiet en basisafvoer

Station 147 - Hulpe te Molenstede

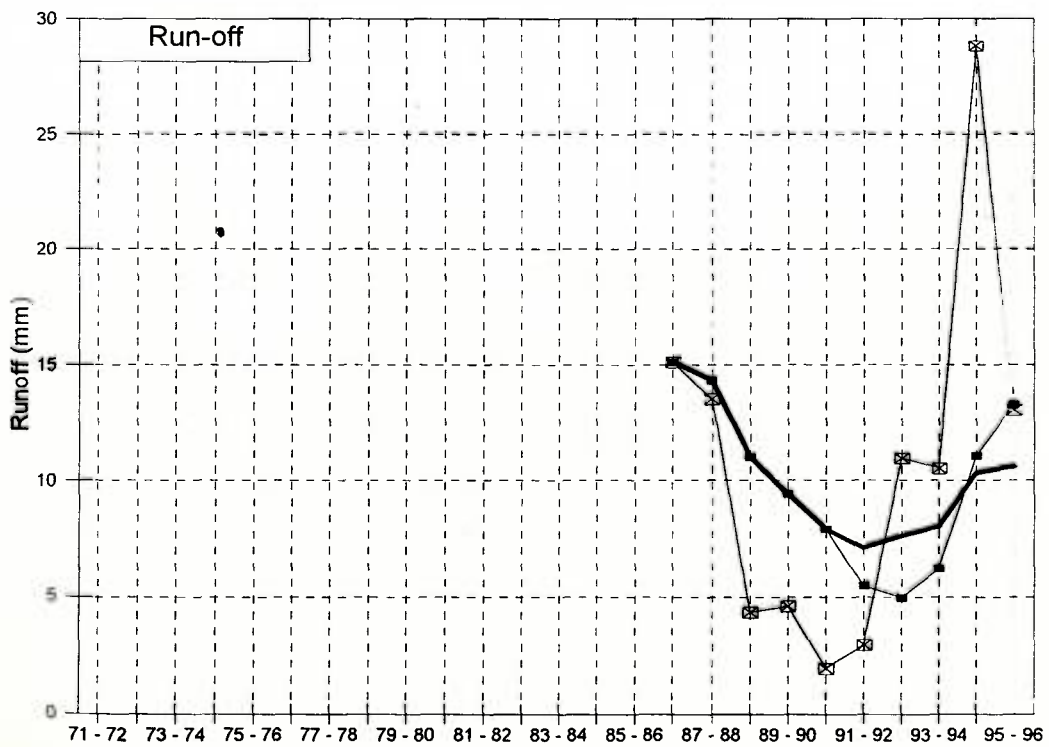
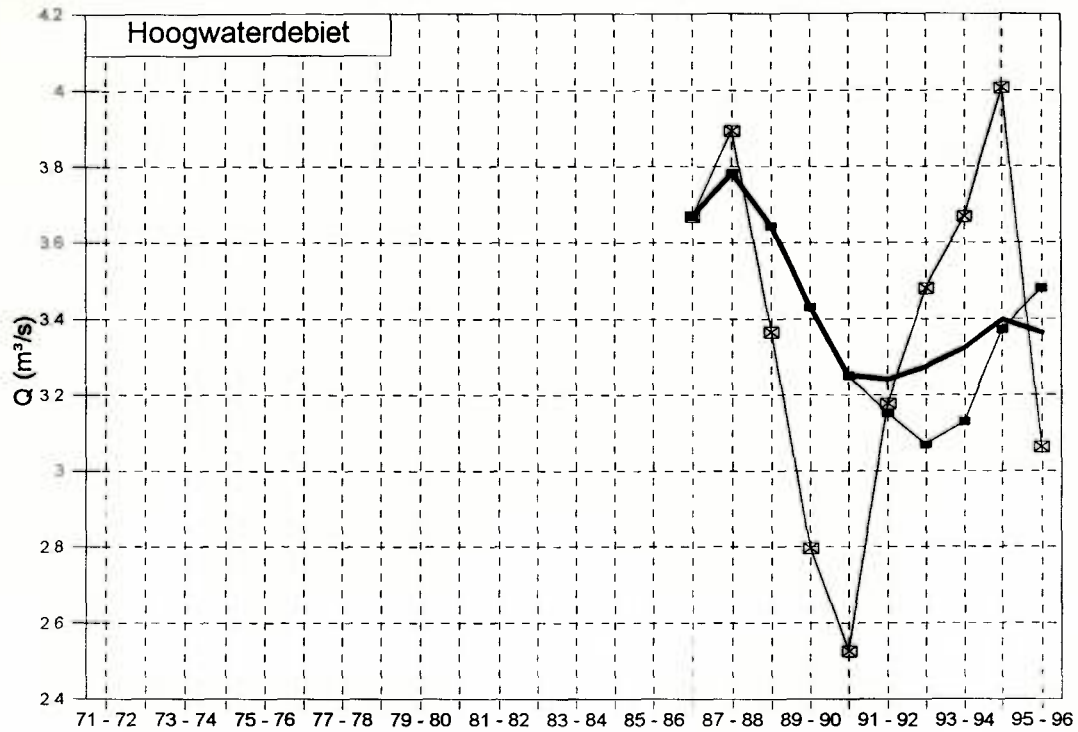


Uurwaarden van neerslag, debiet en basisafvoer

Station 147 - Hulpe te Molenstede

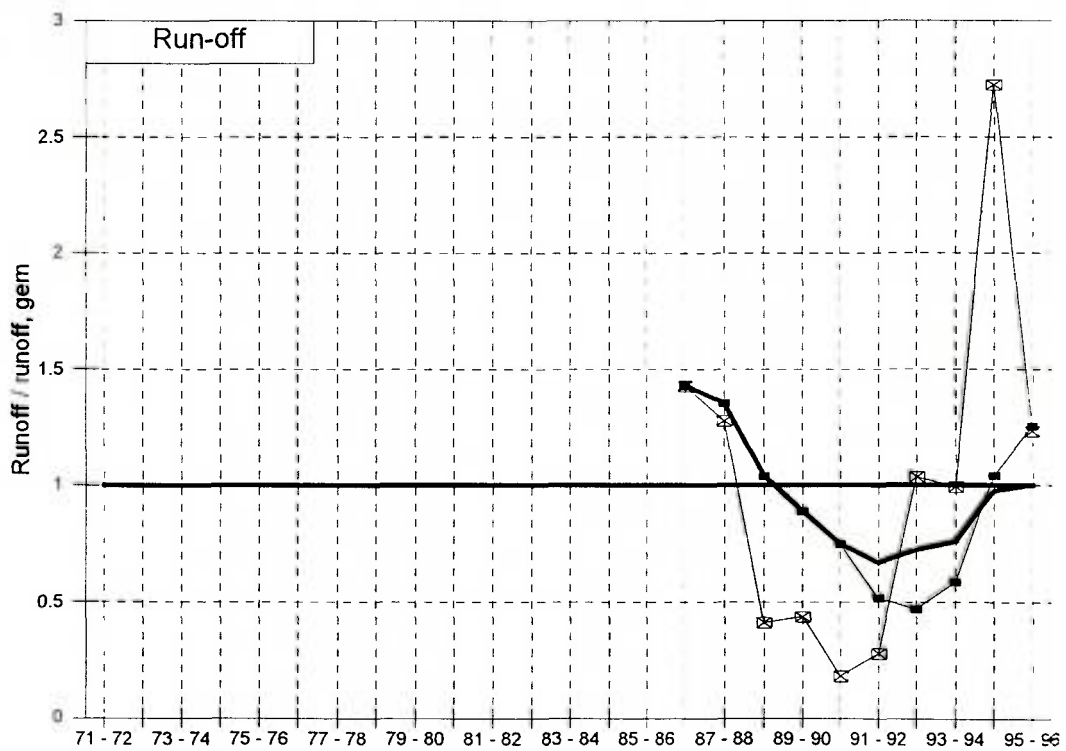
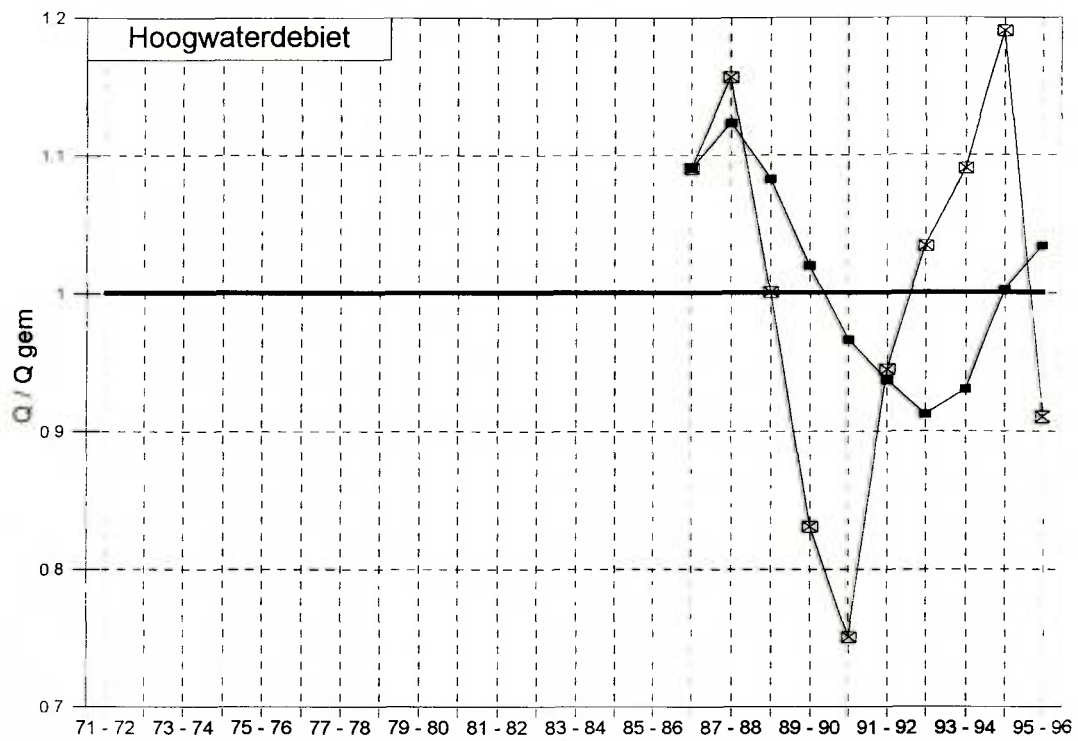


Station 147 : Hulpe / Molenstede



— doorlopend gemiddelde —x— Jaarmaxima —■— 5-jaargemiddelde

Station 147 : Hulpe / Molenstede

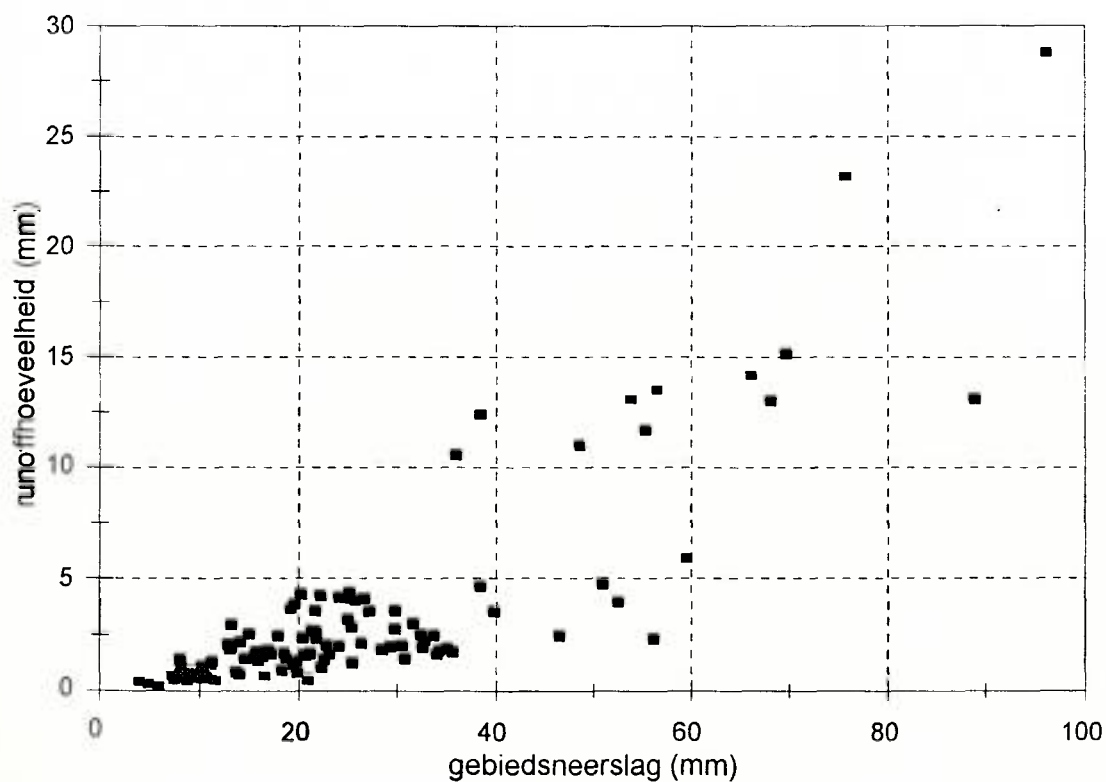
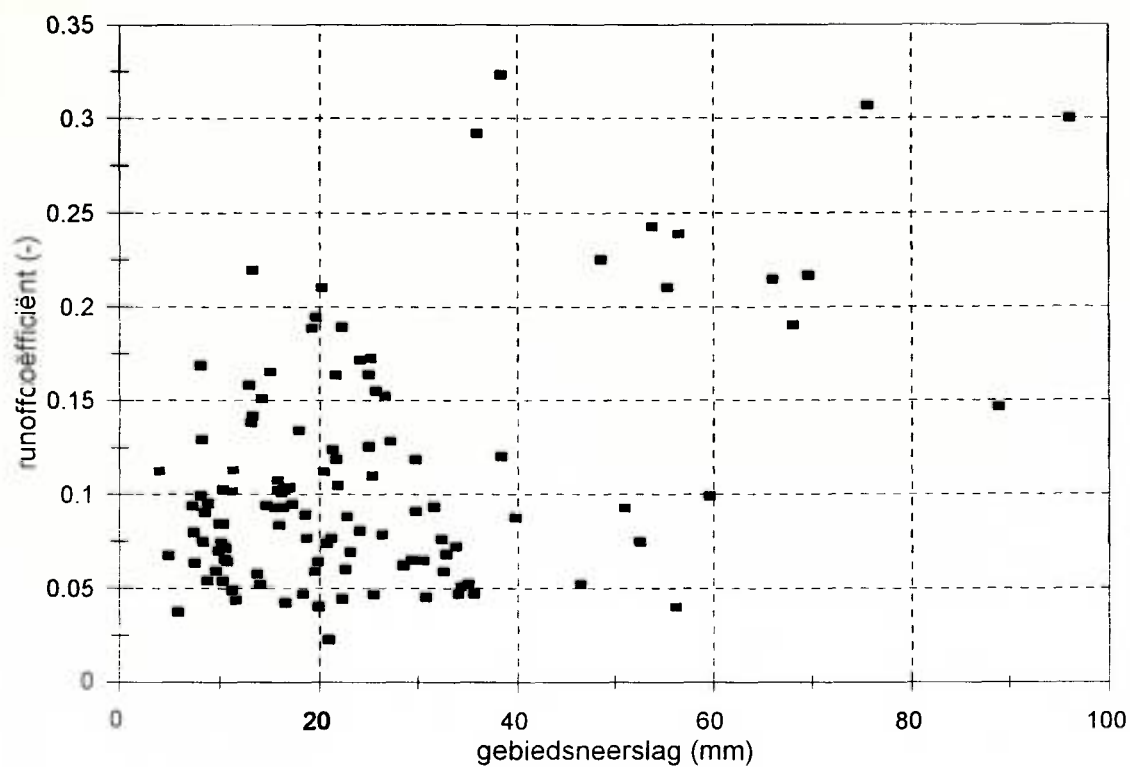


— doorlopend gemiddelde

—x— Jaarmaxima

—■— 5-jaargemiddelde

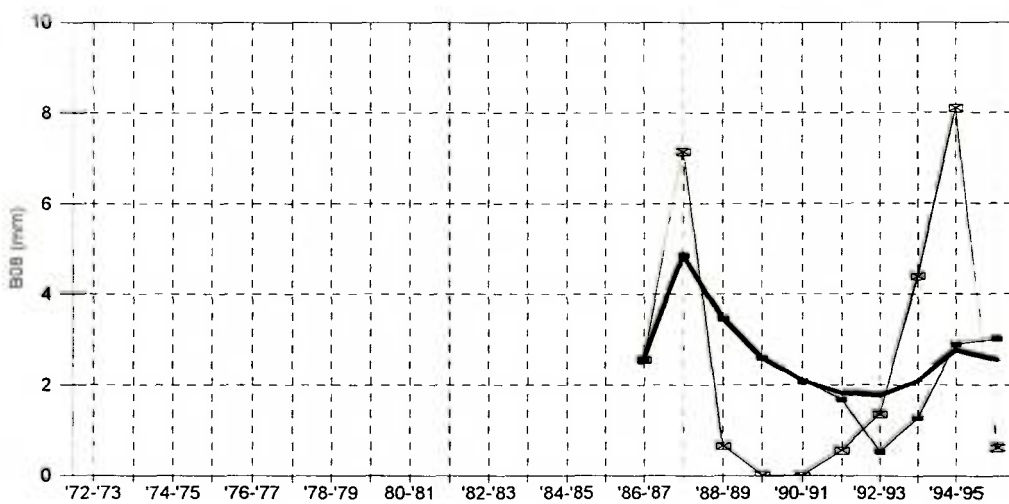
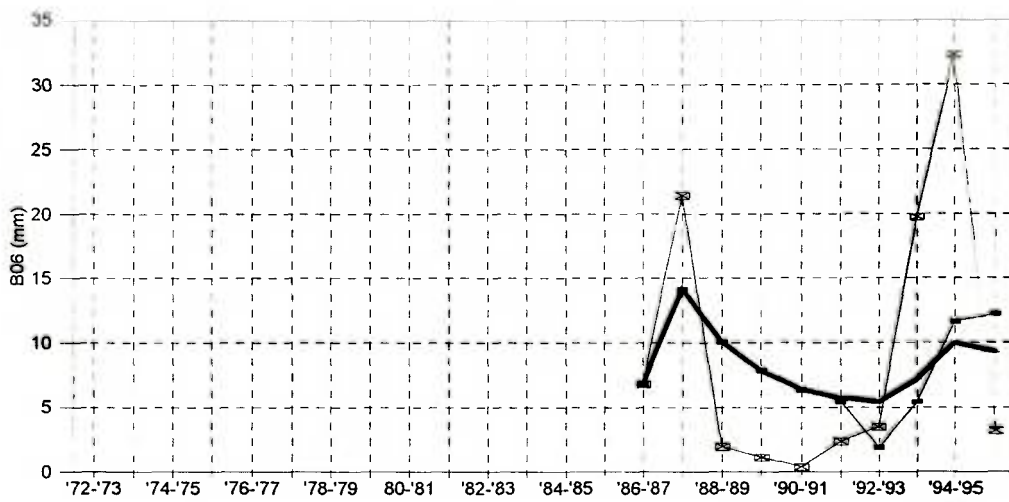
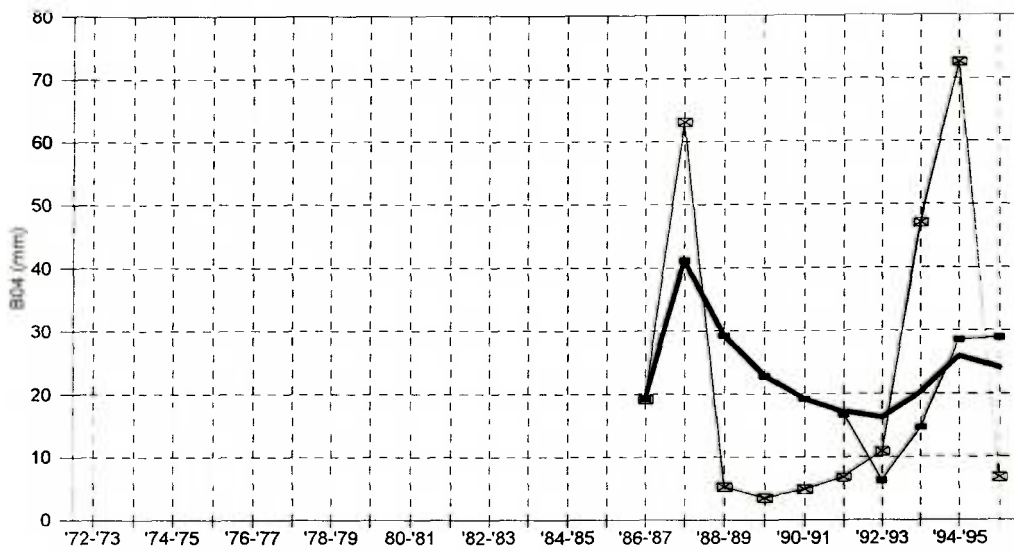
Station 147 : Hulpe / Molenstede



Jaarmaxima van bergingen					
Station 147 : Hulpe / Molenstede			Gemidd. jaarmax. : 3.364 m³/s		
Waterjaar	piekdebiet		berging		
	(m³/s)	datum	(mm)	(uur)	datum
Bergingen boven 0,4 . Qgem					
'86 -'87	3.668	03/03/87	19 20	3430	30/03/87
'87 -'88	3.893	15/03/88	63 11	6255	03/04/88
'88 -'89	3.329	17/03/89	5 18	656	19/03/89
'89 -'90	2.796	14/02/90	3 47	704	04/03/90
'90 -'91	2.527	30/12/90	4 85	624	12/01/91
'91 -'92	3.177	22/12/91	6 80	758	27/12/91
'92 -'93	3.480	23/01/93	10 90	1163	30/01/93
'93 -'94	3.668	22/12/93	47 07	4770	05/02/94
'94 -'95	4.005	31/01/95	72 61	5029	11/03/95
'95 -'96	3.063	31/08/96	6 76	339	03/09/96
Bergingen boven 0,5 . Qgem					
'86 -'87	3.518	03/01/87	10 11	545	08/01/87
'87 -'88	3.893	15/03/88	34 50	2669	02/04/88
'88 -'89	3.329	17/03/89	2 77	176	19/03/89
'89 -'90	2.796	14/02/90	2 10	174	16/02/90
'90 -'91	2.527	30/12/90	0 85	232	05/01/91
'91 -'92	3.177	22/12/91	4 05	329	25/12/91
'92 -'93	3.480	23/01/93	5 06	351	27/01/93
'93 -'94	3.668	22/12/93	29 56	2180	08/01/94
'94 -'95	4.005	31/01/95	46 98	2716	10/03/95
'95 -'96	3.063	31/08/96	4 82	243	02/09/96
Bergingen boven 0,6 . Qgem					
'86 -'87	3.518	03/01/87	6 79	380	08/01/87
'87 -'88	3.893	15/03/88	21 42	993	01/04/88
'88 -'89	3.329	17/03/89	1 94	108	18/03/89
'89 -'90	2.796	14/02/90	1 12	95	16/02/90
'90 -'91	2.527	30/12/90	0 35	41	30/12/90
'91 -'92	3.177	22/12/91	2 35	169	24/12/91
'92 -'93	3.480	23/01/93	3 47	232	26/01/93
'93 -'94	3.668	22/12/93	19 76	1466	08/01/94
'94 -'95	4.005	31/01/95	32 25	1934	28/02/95
'95 -'96	3.063	31/08/96	3 17	185	02/09/96
Bergingen boven 0,7 . Qgem					
'86 -'87	3.631	25/03/87	4 02	211	28/03/87
'87 -'88	3.893	15/03/88	14 17	744	31/03/88
'88 -'89	3.329	17/03/89	1 22	76	18/03/89
'89 -'90	2.796	14/02/90	0 31	63	16/02/90
'90 -'91	2.527	30/12/90	0 05	18	30/12/90
'91 -'92	3.177	22/12/91	1 35	112	24/12/91
'92 -'93	3.480	23/01/93	2 30	154	25/01/93
'93 -'94	3.668	22/12/93	11 11	715	07/01/94
'94 -'95	4 005	31/01/95	18 79	1379	28/02/95
'95 -'96	3 063	31/08/96	1 75	140	01/09/96

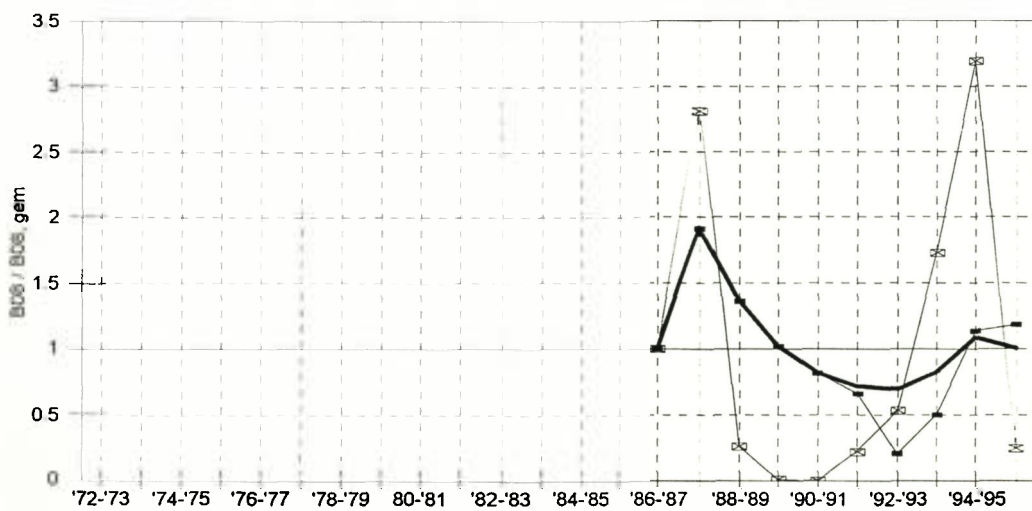
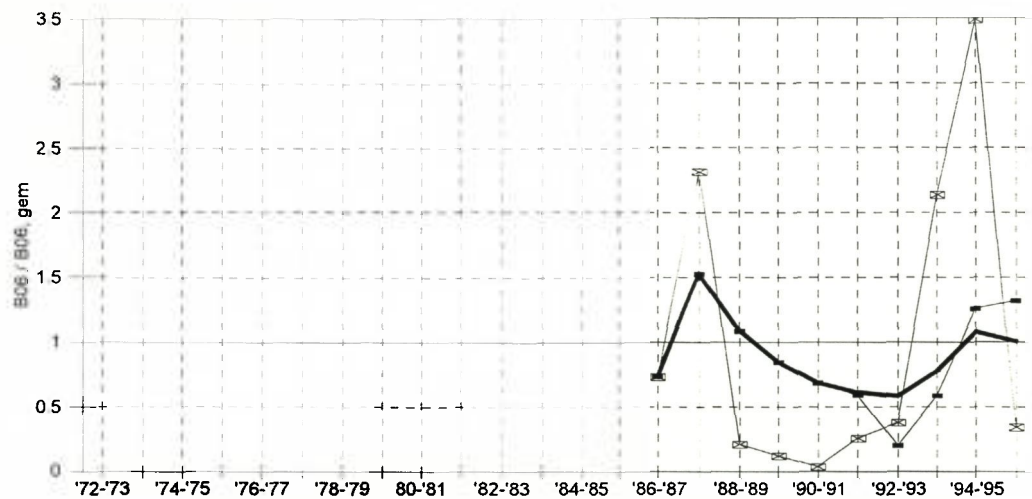
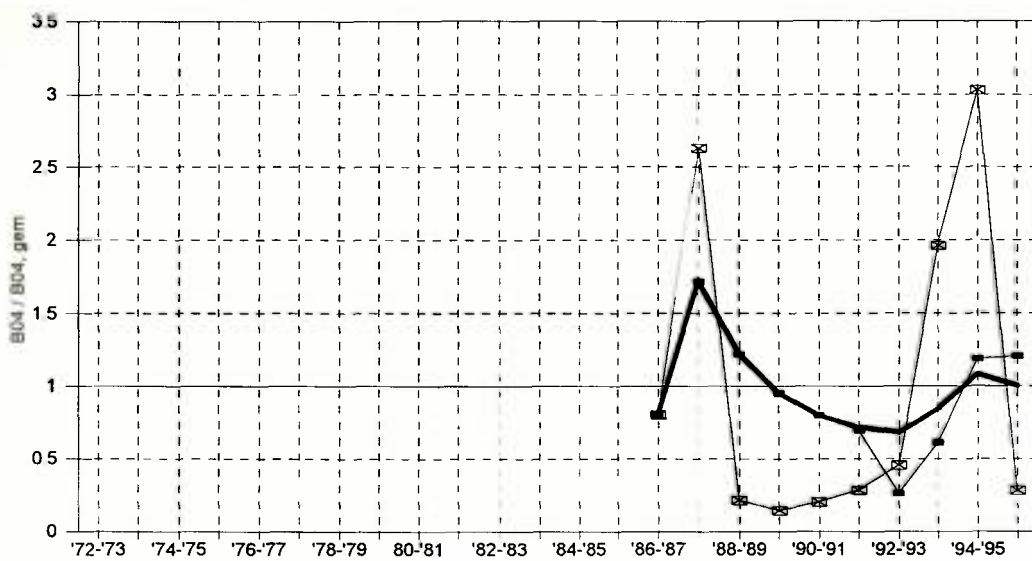
Jaarmaxima van bergingen					
Station 147 : Hulpe / Molenstede			Gemidd. jaarmax. : 3.364 m³/s		
Waterjaar	piekdebiet (m³/s)	datum	(mm)	berging (uur)	datum
Bergingen boven 0,8 - Qgem					
'86 -'87	3.631	25/03/87	2.55	159	27/03/87
'87 -'88	3.893	15/03/88	7.15	584	31/03/88
'88 -'89	3.367	15/04/89	0.66	51	15/04/89
'89 -'90	2.796	14/02/90	0.02	14	14/02/90
'90 -'91			0.00	0	
'91 -'92	3.177	22/12/91	0.56	71	23/12/91
'92 -'93	3.480	23/01/93	1.35	104	25/01/93
'93 -'94	3.668	22/12/93	4.39	536	26/12/93
'94 -'95	4.005	31/01/95	8.11	542	04/02/95
'95 -'96	3.063	31/08/96	0.62	94	01/09/96

Station 147 : Hulpe / Molenstede



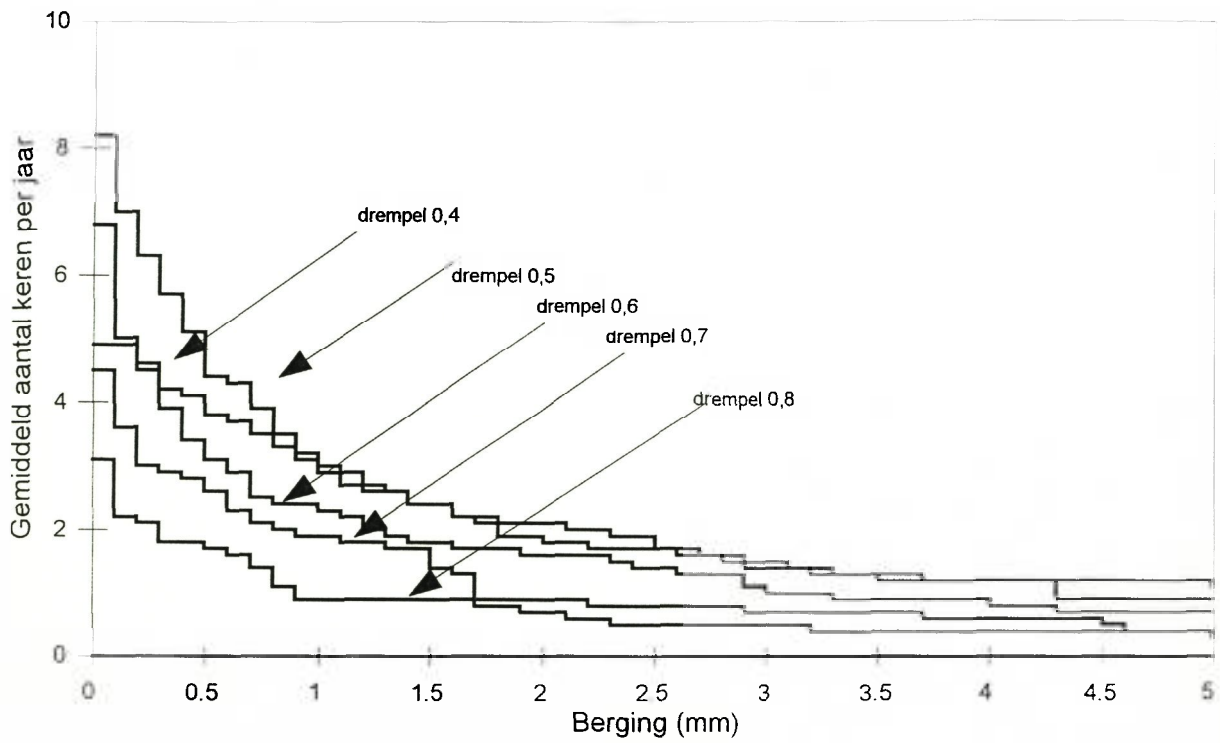
— doorlopend gemiddelde ○— Jaarmaxima —■— 5-jaargemiddelde

Station 147 : Hulpe / Molenstede

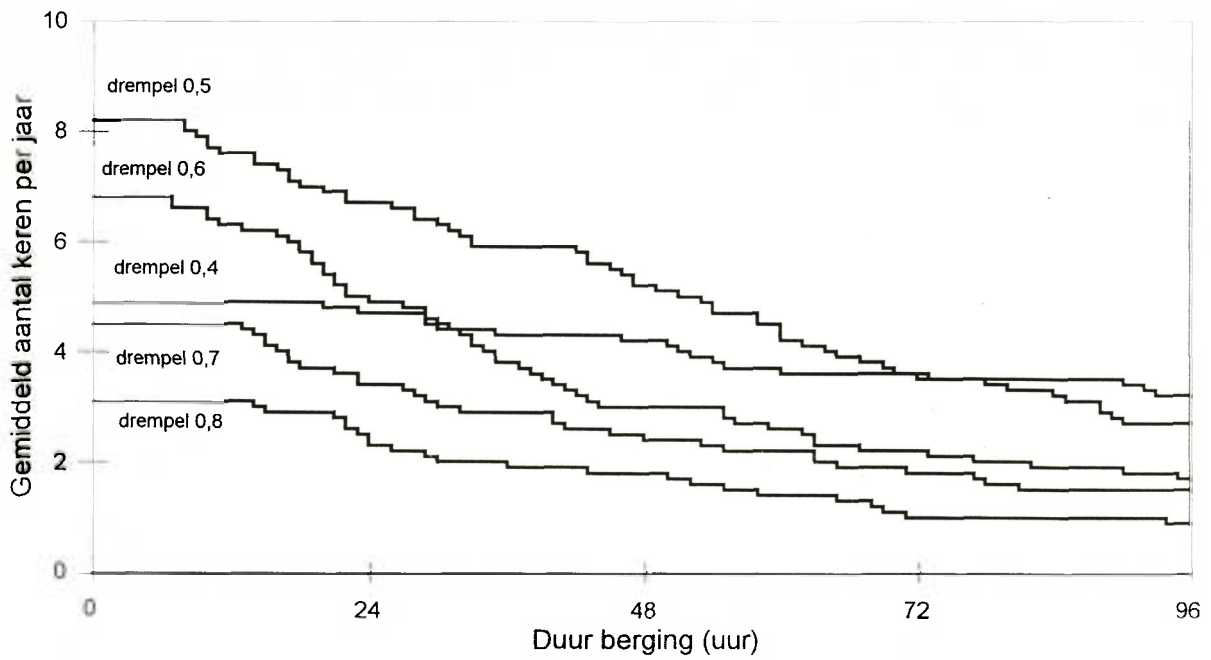


— doorlopend gemiddelde ○ Jaarmaxima □ 5-jaargemiddelde

Station 147 - Hulpe te Molenstede



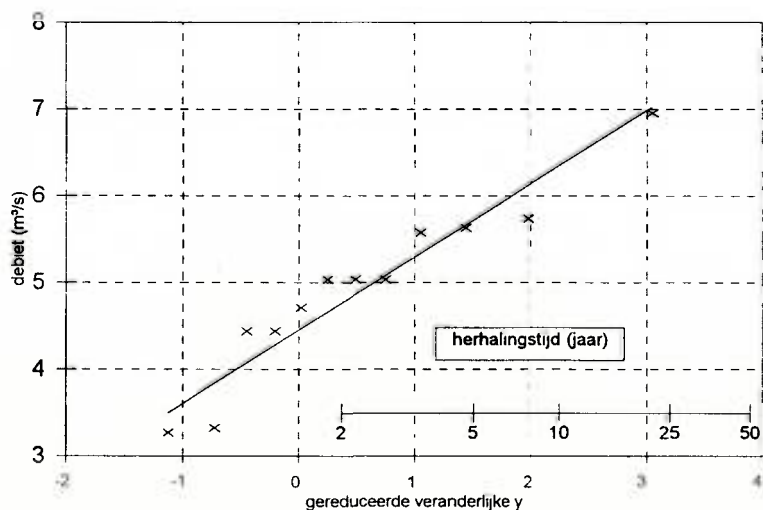
Station 147 - Hulpe te Molenstede



19. Station 148
**De Zwartebeek
te Lummen**

Station nr. 148 : Zwarte Beek te Lummen

Nr.	Waterjaar	Datum	Hoogte (cm)	Debiet (m ³ /s)
1	'89 - '90	14/02/90	58	3.271
2	'90 - '91	29/12/90	59	3.327
3	'88 - '89	8/03/89	79	4.435
4	'92 - '93	22/01/93	79	4.435
5	'91 - '92	22/12/91	84	4.708
6	'85 - '86	31/03/86	90	5.035
7	'87 - '88	25/03/88	90	5.035
8	'93 - '94	21/12/93	90	5.035
9	'86 - '87	2/01/87	100	5.574
10	'94 - '95	30/01/95	101	5.628
11	'84 - '85	12/04/85	103	5.735
12	'83 - '84	7/02/84	126	6.952



Herhalingsstijd (jaar)	Debiet (m ³ /s)	Spec. afvoer (l/s.ha)
2	4.753	0.49
5	5.709	0.59
10	6.342	0.66
25	7.142	0.74
50	7.736	0.80

Station 148 : Zwarte Beek te Lummen
Runoffhoeveelheden

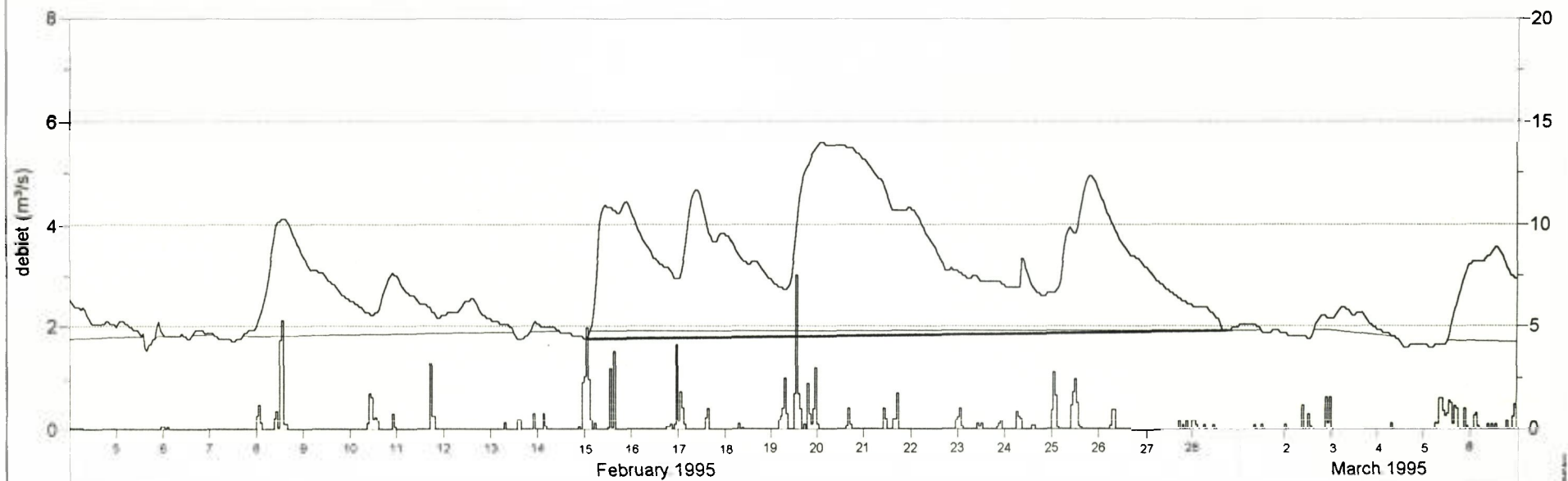
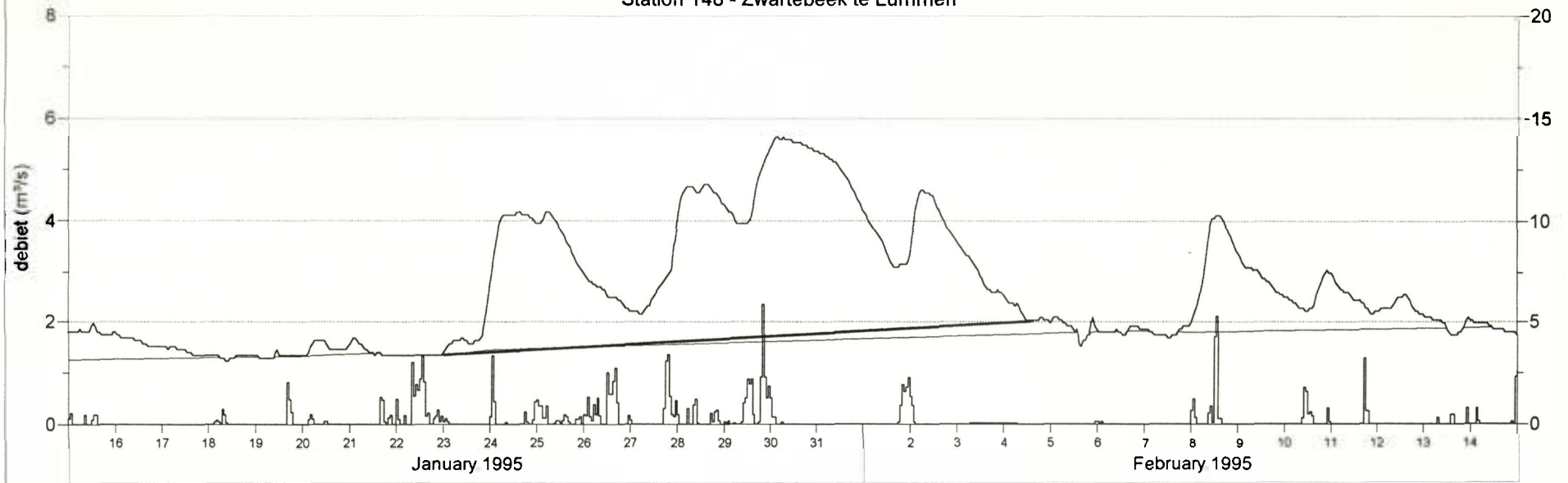
Stroomgebied = 9629 ha

Tijdreeks : 1983 - '96

Nr.	Was van (datum Q _{max})	q _{max} (l/s ha)	q _{begin} (l/s ha)	q _{eind} (l/s ha)	Neerslag som (mm)	Neerslag duur (uur)	Concentratie tijd (uur)	Runoff (mm)	Runoff- Coëff. (-)	Runoff duur (uur)
1	30/01/95	0 58	0 14	0 23	103 3	264	58	21 2	0 21	298
2	20/02/95	0 58	0 18	0 23	81 7	312	25	20 0	0 24	321
3	24/03/87	0 55	0 12	0 14	75 1	341	43	15 2	0 20	384
4	02/01/87	0 58	0 13	0 17	86 5	316	43	14 4	0 17	336
5	07/02/84	0 72	0 17	0 21	61 7	92	28	13 2	0 21	114
6	21/12/93	0 52	0 14	0 17	63 3	181	18	13 0	0 20	199
7	31/12/93	0 51	0 17	0 19	57 4	192	13	12 7	0 22	199
8	28/12/94	0 48	0 11	0 16	59 9	192	9	10 5	0 18	197
9	26/05/83	0 65	0 13	0 18	52 9	131	25	10 3	0 19	157
10	14/03/88	0 51	0 16	0 21	63 2	125	24	9 6	0 15	146
11	25/03/88	0 52	0 17	0 18	50 0	209	12	9 1	0 18	214
12	12/04/85	0 60	0 17	0 22	45 6	75	21	6 6	0 14	88
13	01/10/84	0 54	0 13	0 19	46 3	63	20	5 6	0 12	64
14	15/11/93	0 47	0 11	0 14	39 7	48	23	5 2	0 13	103
15	22/10/86	0 55	0 10	0 16	55 2	62	20	5 0	0 09	64
16	03/03/87	0 57	0 20	0 20	27 2	30	20	5 0	0 18	68
17	30/08/96	0 31	0 10	0 13	28 1	120	36	4 7	0 17	115
18	11/01/95	0 41	0 12	0 17	20 0	96	20	4 6	0 23	121
19	25/01/95	0 43	0 14	0 22	43 4	120	14	4 6	0 11	102
20	24/11/84	0 48	0 14	0 19	45 7	98	25	4 2	0 09	111
21	13/12/93	0 45	0 14	0 19	28 8	24	25	3 8	0 13	66
22	26/01/85	0 56	0 17	0 23	25 3	48	17	3 7	0 15	50
23	23/01/93	0 46	0 16	0 21	34 3	96	15	3 6	0 11	60
24	26/09/93	0 35	0 11	0 13	41 9	96	17	3 6	0 09	97
25	05/06/94	0 50	0 13	0 17	30 9	24	17	3 4	0 11	49
26	25/07/93	0 29	0 08	0 12	46 0	120	22	3 3	0 07	106
27	19/01/86	0 47	0 14	0 19	25 4	40	18	3 3	0 13	61
28	01/09/92	0 44	0 14	0 19	35 0	48	10	3 2	0 09	57
29	28/02/87	0 42	0 13	0 20	15 6	47	21	3 2	0 20	66
30	27/09/95	0 45	0 07	0 11	38 7	48	16	3 1	0 08	58

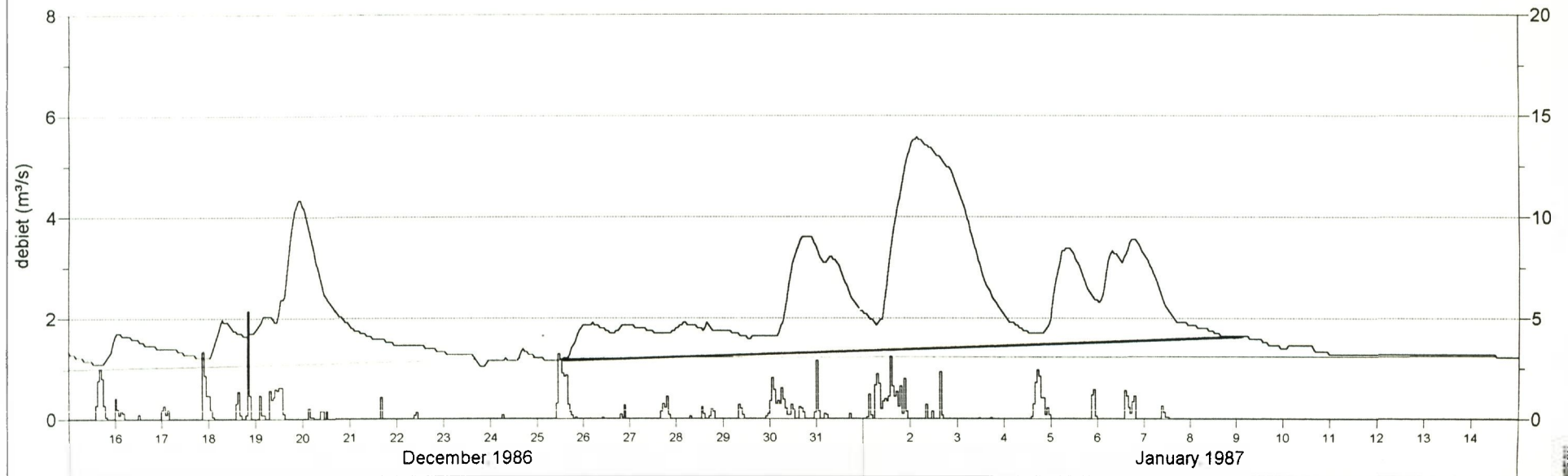
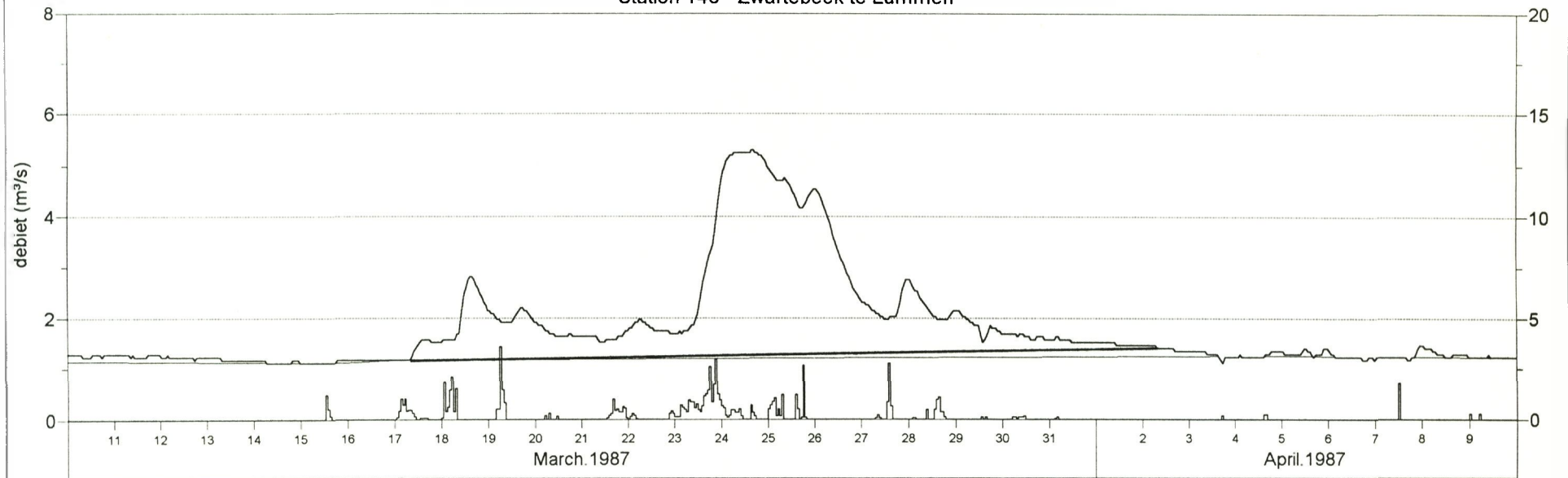
Uurwaarden van neerslag, debiet en basisafvoer

Station 148 - Zwartebeek te Lummen



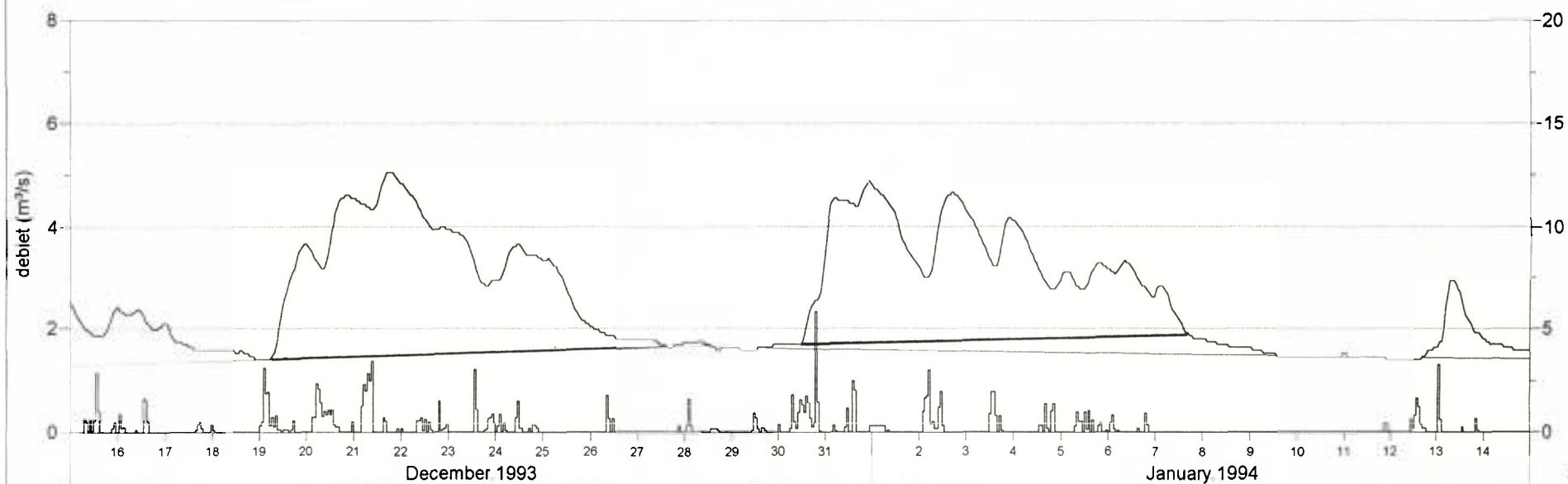
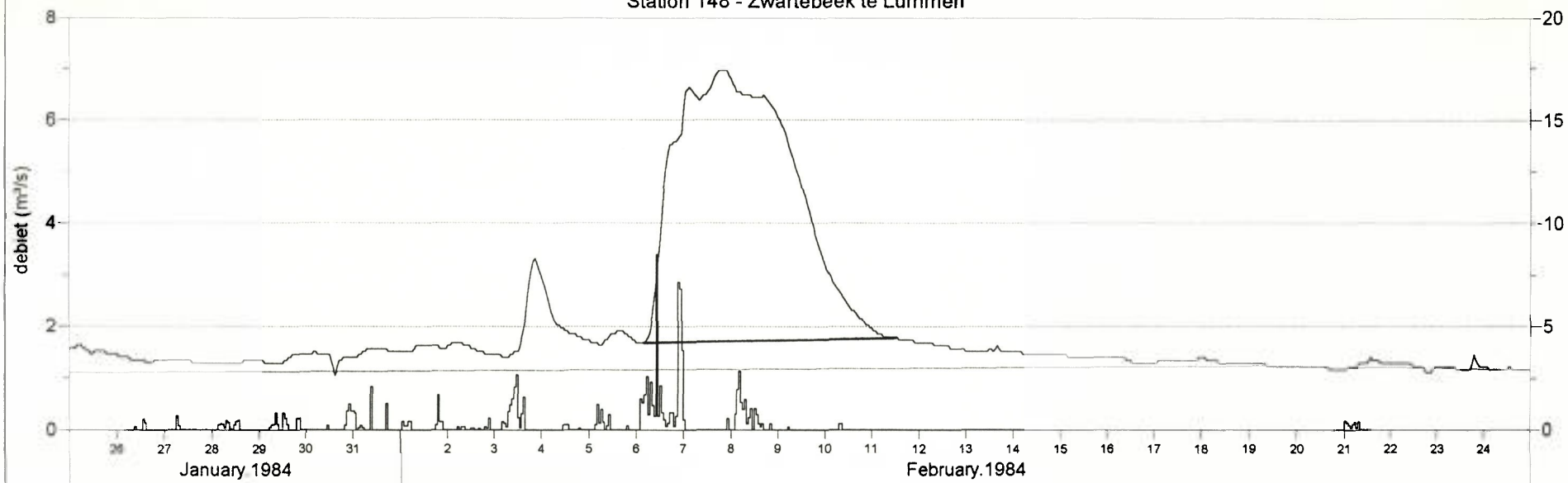
Uurwaarden van neerslag, debiet en basisafvoer

Station 148 - Zwartebeek te Lummen



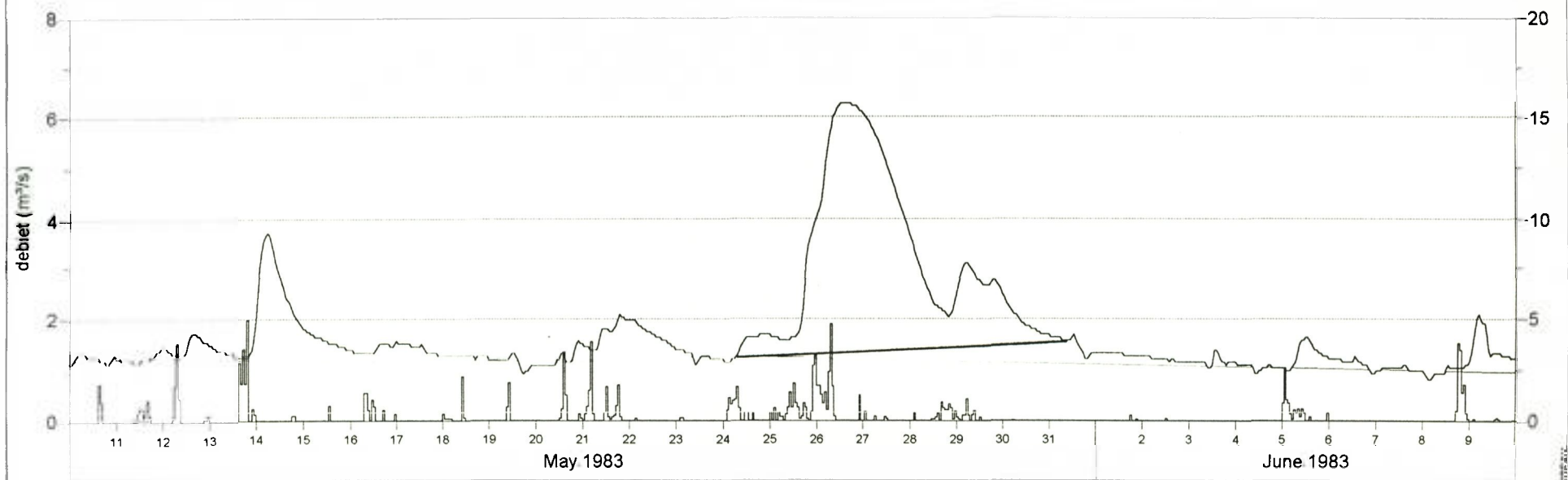
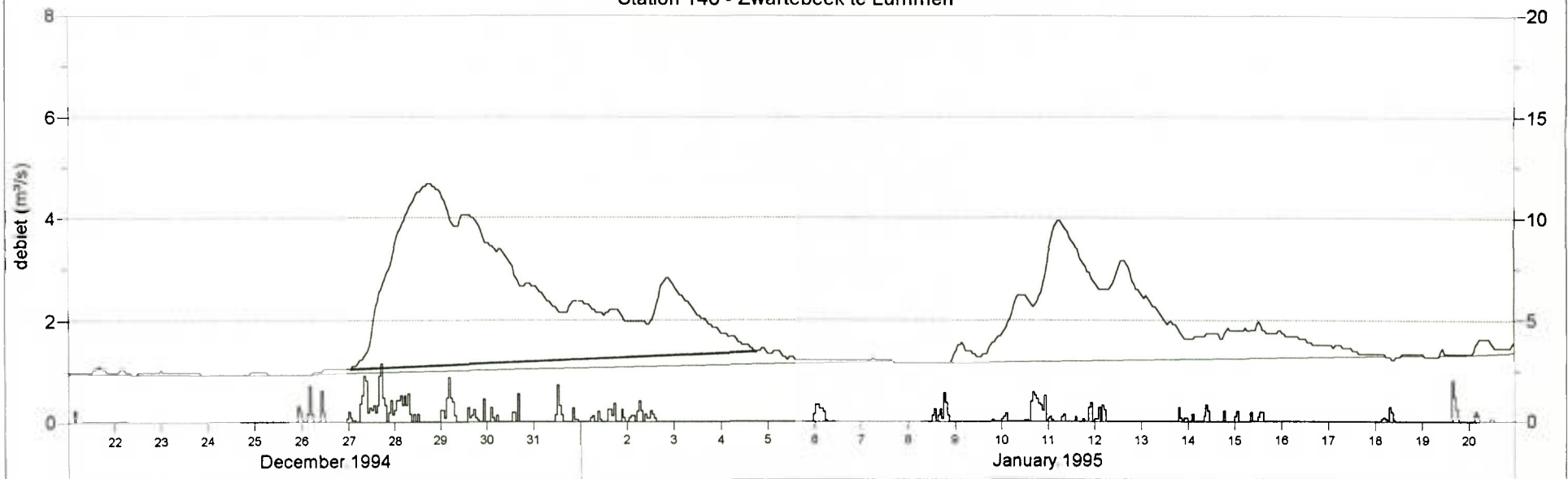
Uurwaarden neerslag, debiet en basisafvoer

Station 148 - Zwartebeek te Lummen



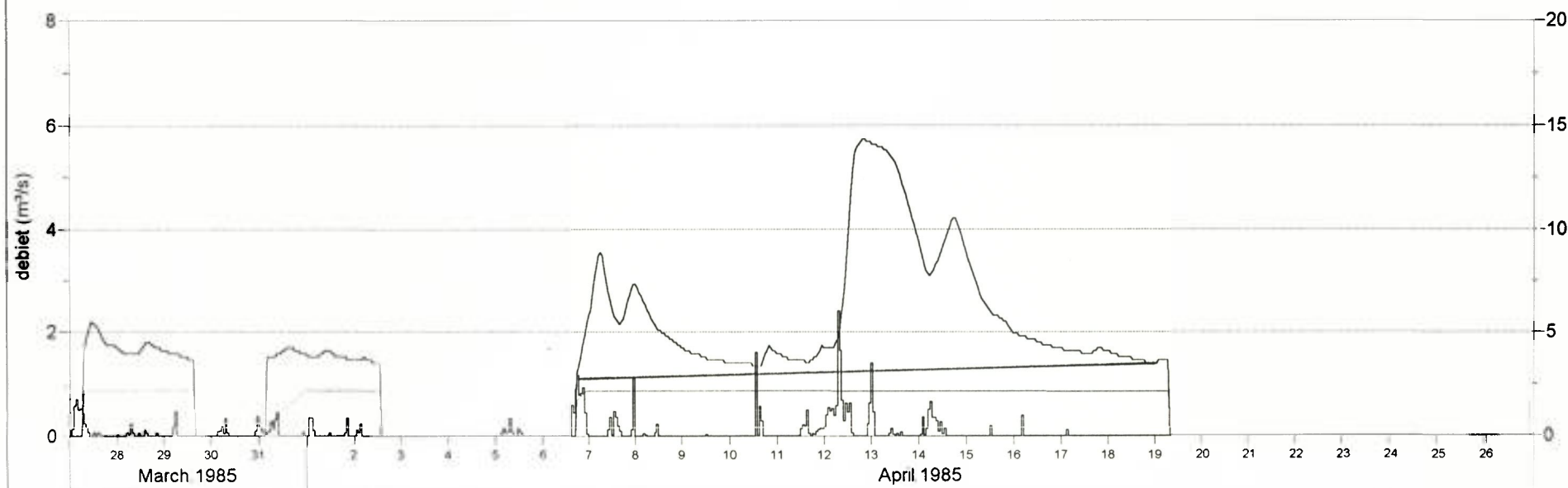
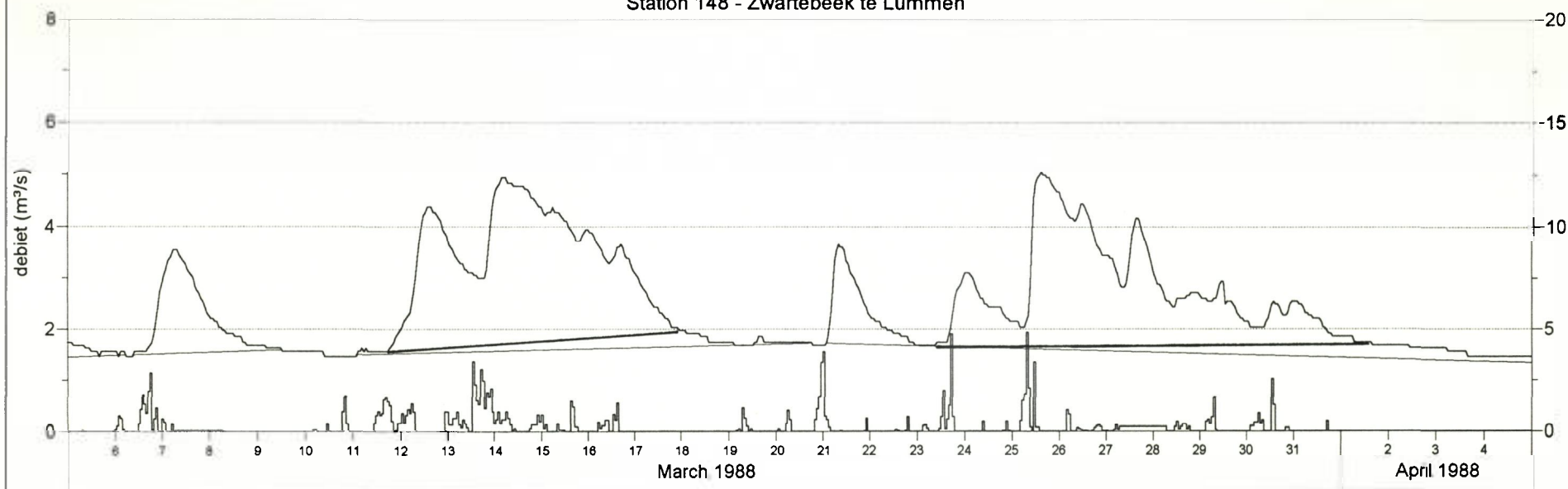
Uurwaarden van neerslag, debiet en basisafvoer

Station 148 - Zwartebeek te Lummen



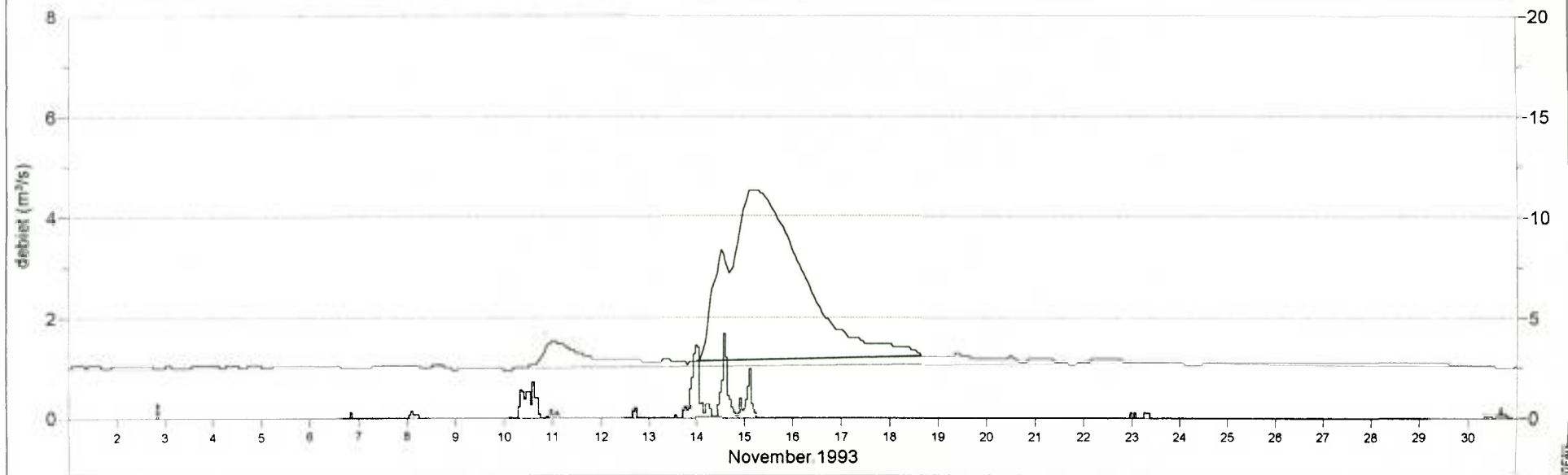
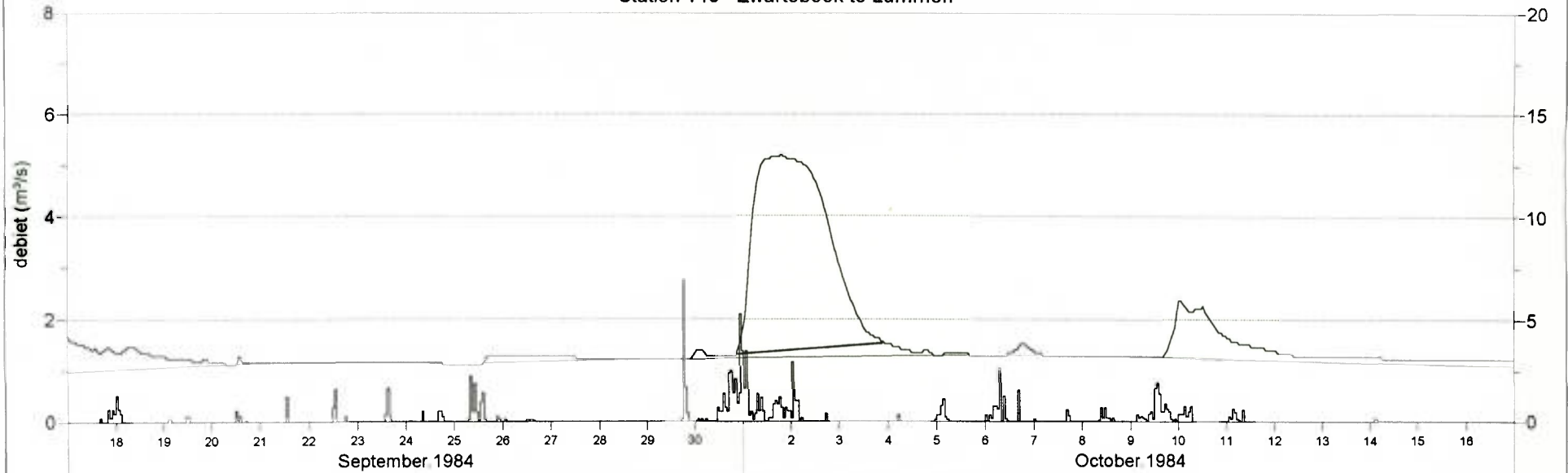
Uurwaarden van neerslag, debiet en basisafvoer

Station 148 - Zwartebeek te Lummen

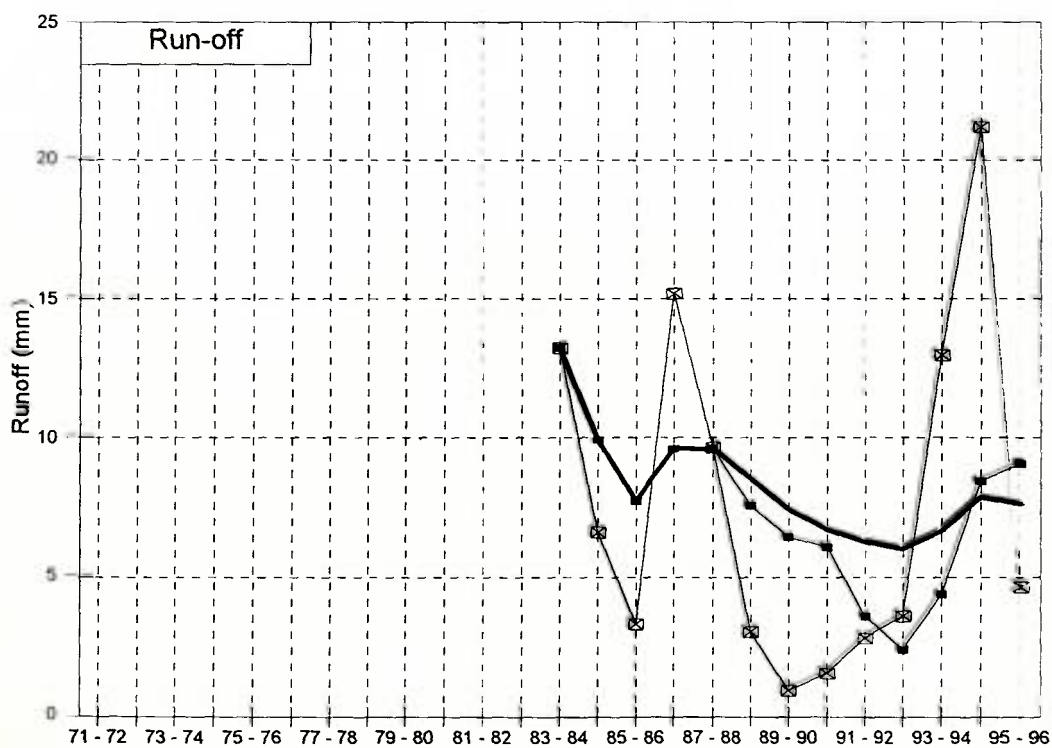
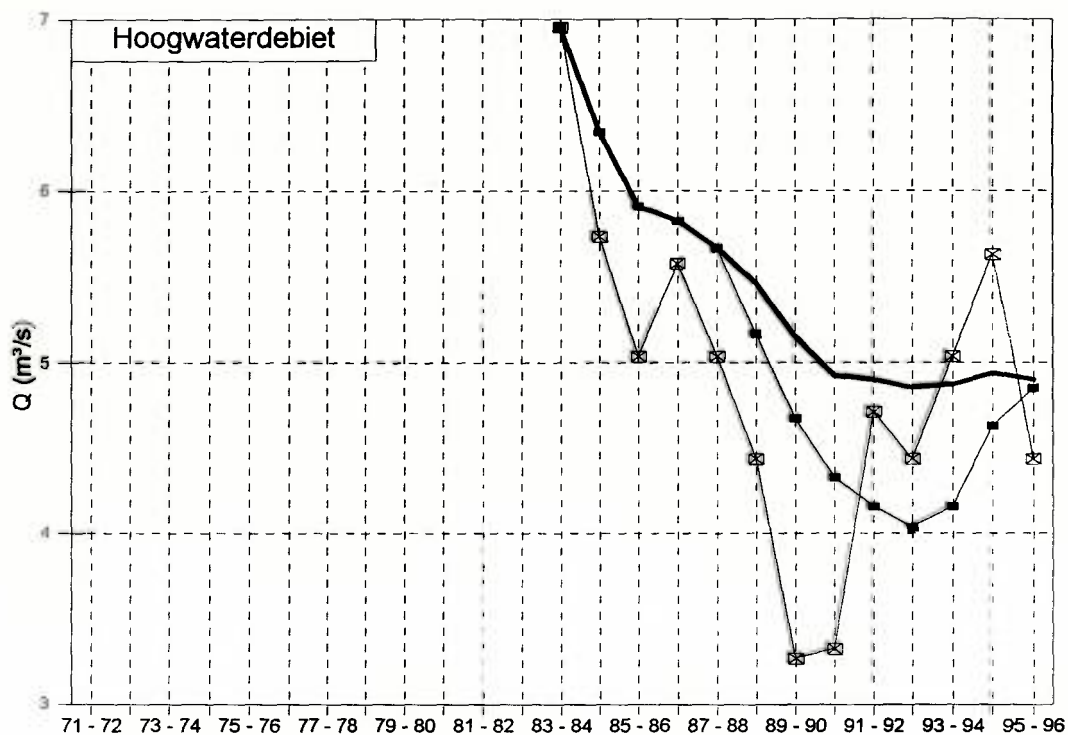


Uurwaarden van neerslag, debiet en basisafvoer

Station 148 - Zwartebeek te Lummen



Station 148 : Zwarte Beek / Lummen

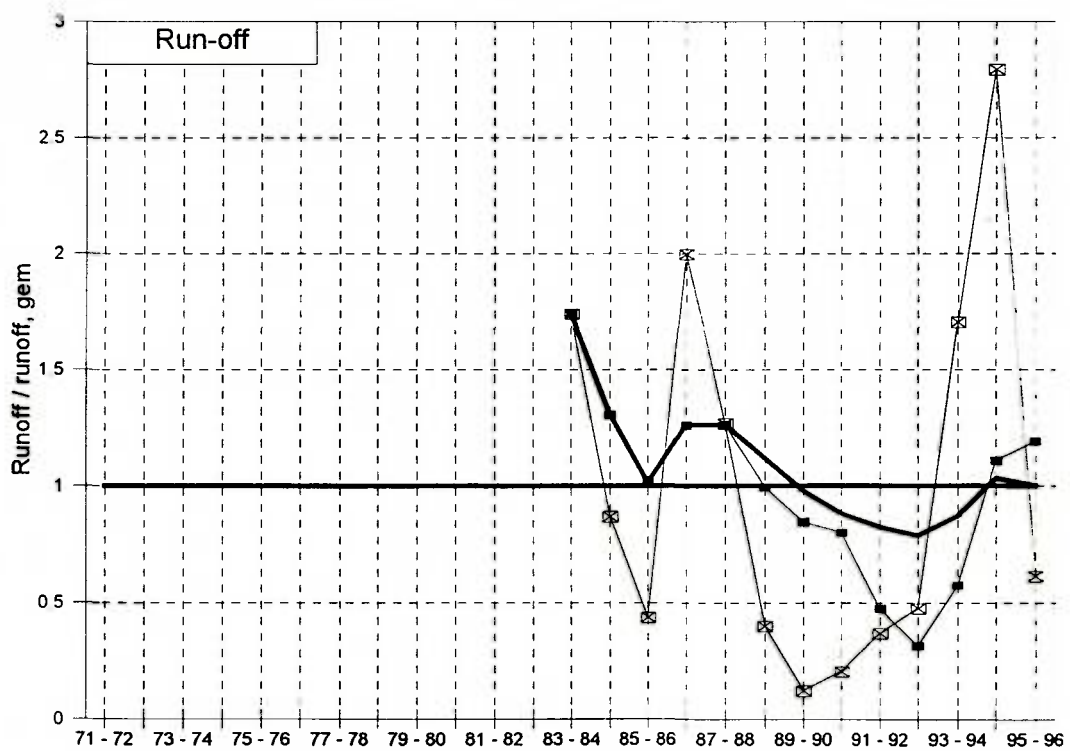
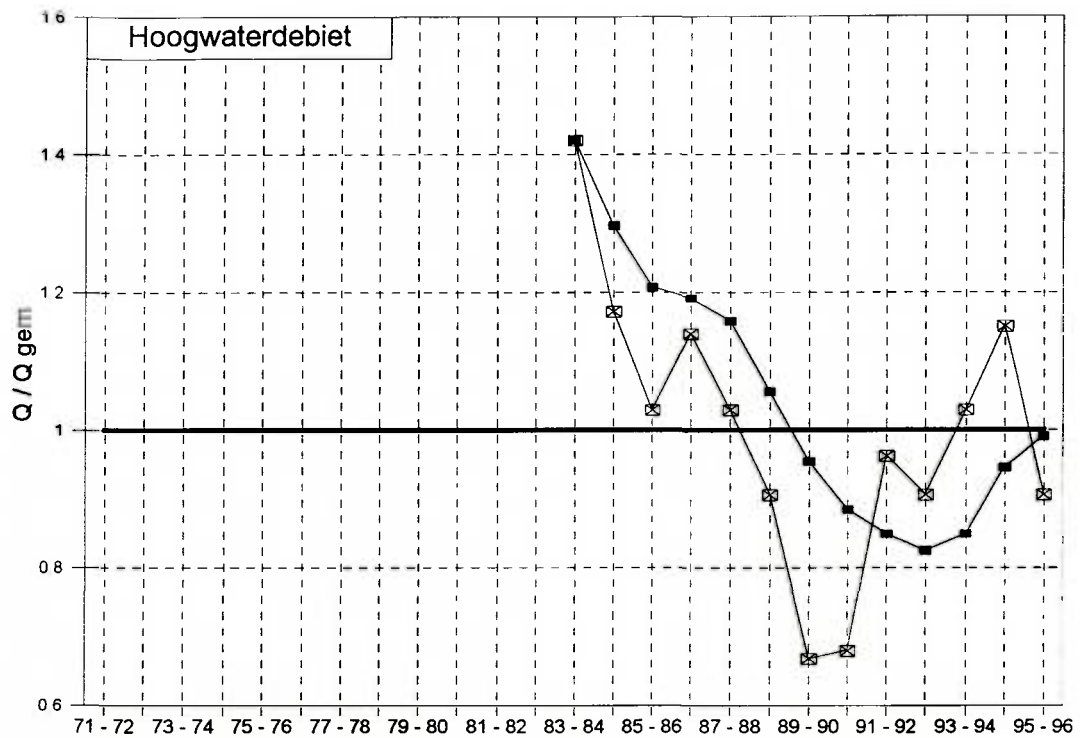


— doorlopend gemiddelde

—x— Jaarmaxima

—■— 5-jaargemiddelde

Station 148 : Zwarte Beek / Lummen

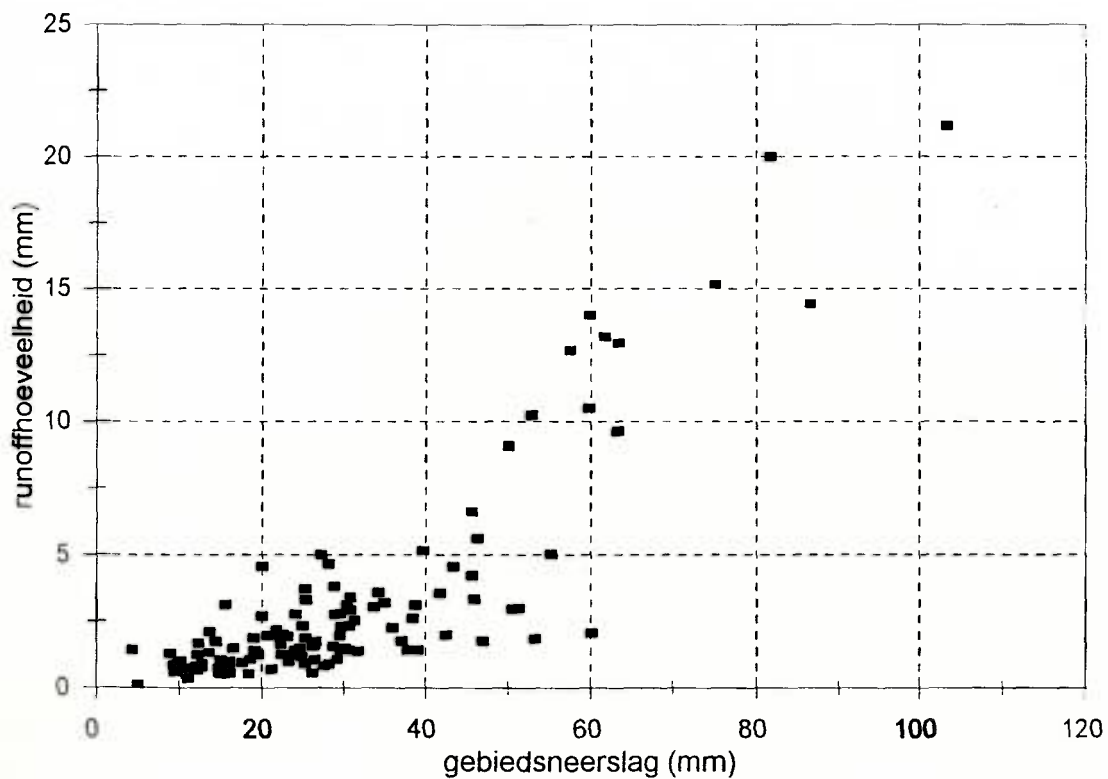
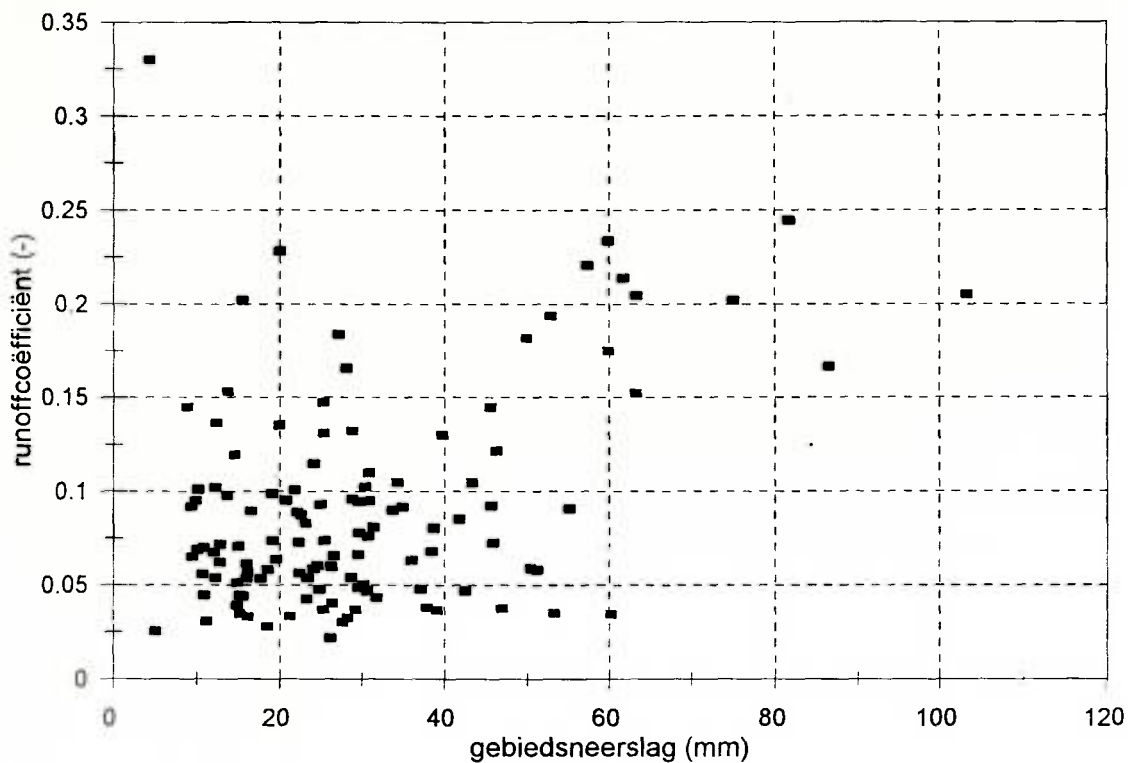


— doorlopend gemiddelde

—x— Jaarmaxima

—■— 5-jaargemiddelde

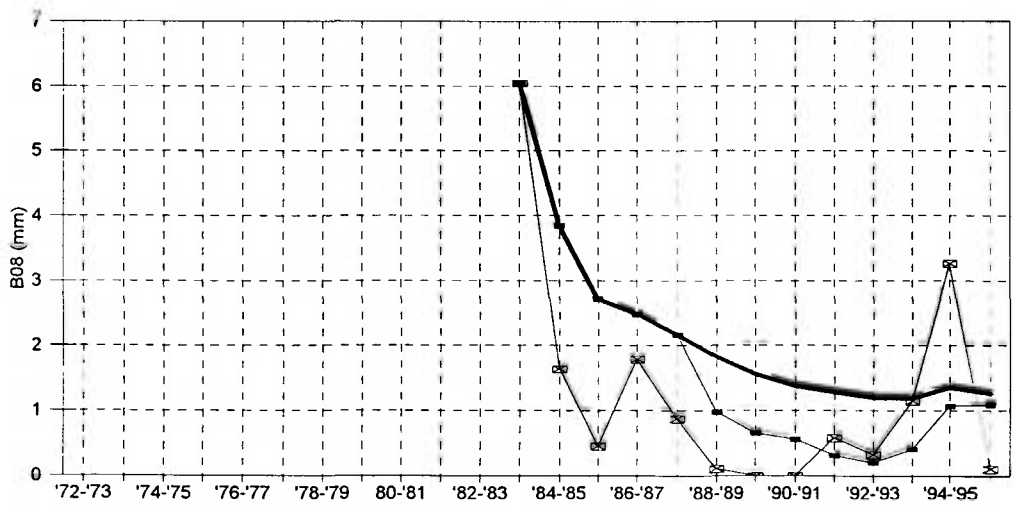
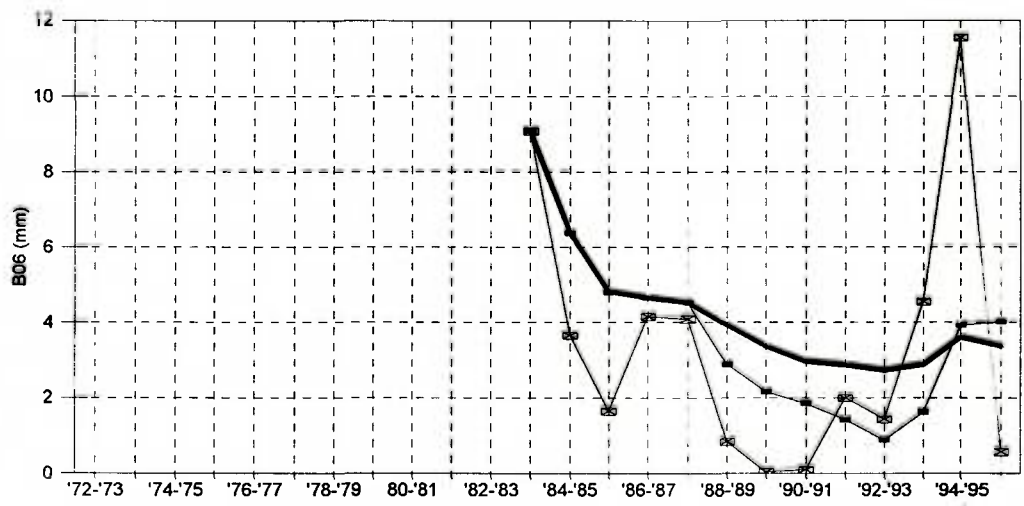
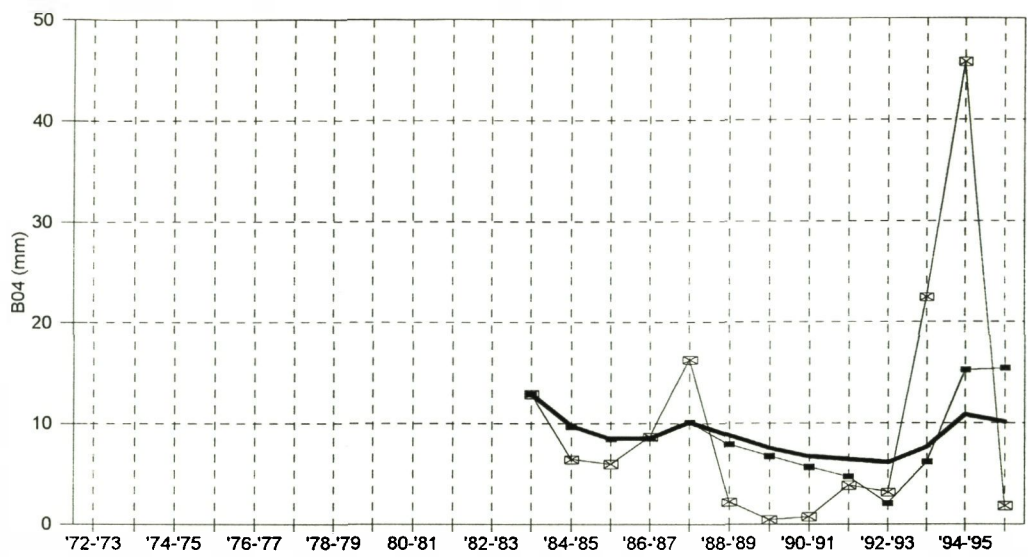
Station 148 : Zwarte Beek / Lummen



Jaarmaxima van bergingen					
Station 148 : Zwarte Beek / Lummen			Gemidd. jaarmax : 4 931 m ³ /s		
Waterjaar	piekdebiet (m ³ /s)	datum	(mm)	berging (uur)	datum
Bergingen boven 0,3 Qgem					
'83 -'84	6 952	07/02/84	16.82	1883	14/02/84
'84 -'85	5 735	12/04/85	10.42	299	18/04/85
'85 -'86	5 035	31/03/86	9.94	1628	05/04/86
'86 -'87	5 574	02/01/87	25.95	4397	01/04/87
'87 -'88	5 035	25/03/88	42.35	4811	03/04/88
'88 -'89	4 435	08/03/89	4.27	694	19/03/89
'89 -'90	3 271	14/02/90	1.59	265	16/02/90
'90 -'91	3 327	30/12/90	2.95	565	12/01/91
'91 -'92	4 708	22/12/91	5.85	678	25/12/91
'92 -'93	4 435	23/01/93	6.99	1245	31/01/93
'93 -'94	5 035	21/12/93	43.92	7533	14/04/94
'94 -'95	5 628	30/01/95	86.33	3635	06/04/95
'95 -'96	2 991	30/08/96	3.19	254	01/09/96
Bergingen boven 0,4 Qgem					
'83 -'84	6 952	07/02/84	12.88	685	10/02/84
'84 -'85	5 735	12/04/85	6.43	167	15/04/85
'85 -'86	5 035	31/03/86	5.98	425	02/04/86
'86 -'87	5 574	02/01/87	8.65	549	07/01/87
'87 -'88	5 035	25/03/88	16.27	1381	31/03/88
'88 -'89	4 325	17/03/89	2.19	153	18/03/89
'89 -'90	3 271	14/02/90	0.42	78	15/02/90
'90 -'91	3 327	30/12/90	0.72	76	30/12/90
'91 -'92	4 708	22/12/91	3.88	211	23/12/91
'92 -'93	4 435	23/01/93	3.19	260	25/01/93
'93 -'94	5 035	21/12/93	22.46	2059	07/01/94
'94 -'95	5 628	30/01/95	45.70	3633	09/03/95
'95 -'96	2 991	30/08/96	1.81	141	31/08/96
Bergingen boven 0,5 Qgem					
'83 -'84	6 952	07/02/84	10.80	379	10/02/84
'84 -'85	5 735	12/04/85	4.94	165	15/04/85
'85 -'86	5 035	31/03/86	3.69	242	01/04/86
'86 -'87	5 305	24/03/87	5.55	274	26/03/87
'87 -'88	5 035	25/03/88	7.55	662	29/03/88
'88 -'89	4 325	17/03/89	1.42	86	18/03/89
'89 -'90	3 271	14/02/90	0.17	19	14/02/90
'90 -'91	3 327	30/12/90	0.34	34	30/12/90
'91 -'92	4 708	22/12/91	2.87	130	23/12/91
'92 -'93	4 435	23/01/93	2.21	129	24/01/93
'93 -'94	5 035	21/12/93	11.69	796	07/01/94
'94 -'95	5 628	30/01/95	26.80	1933	27/02/95
'95 -'96	4 435	13/08/96	0.91	40	14/08/96

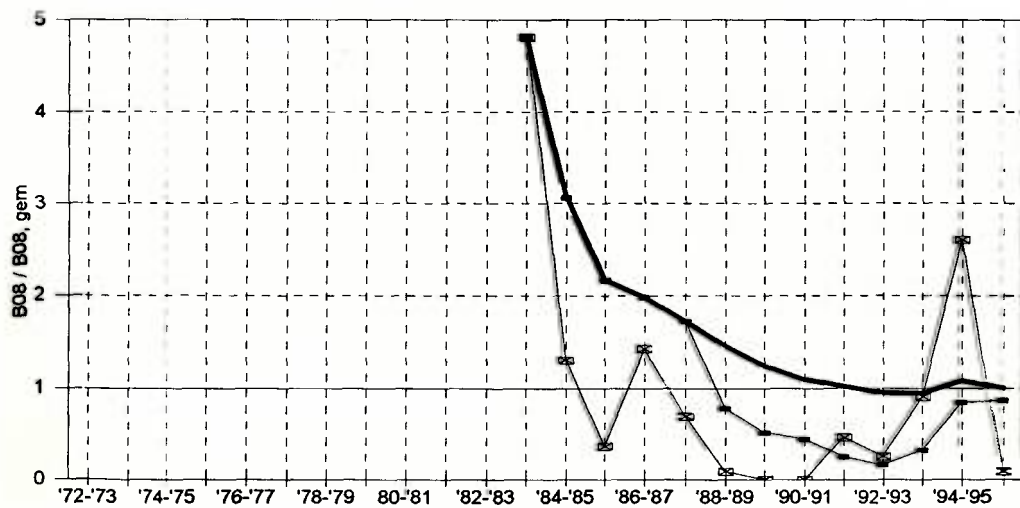
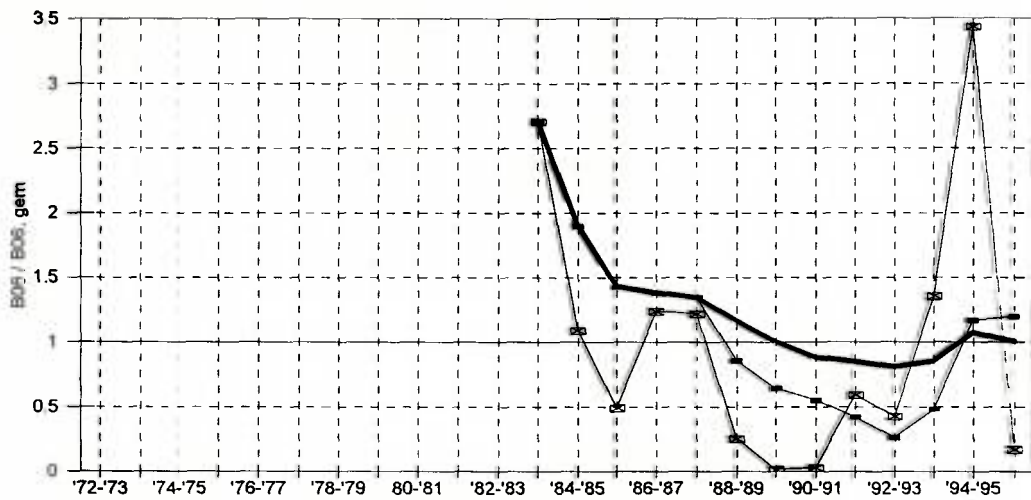
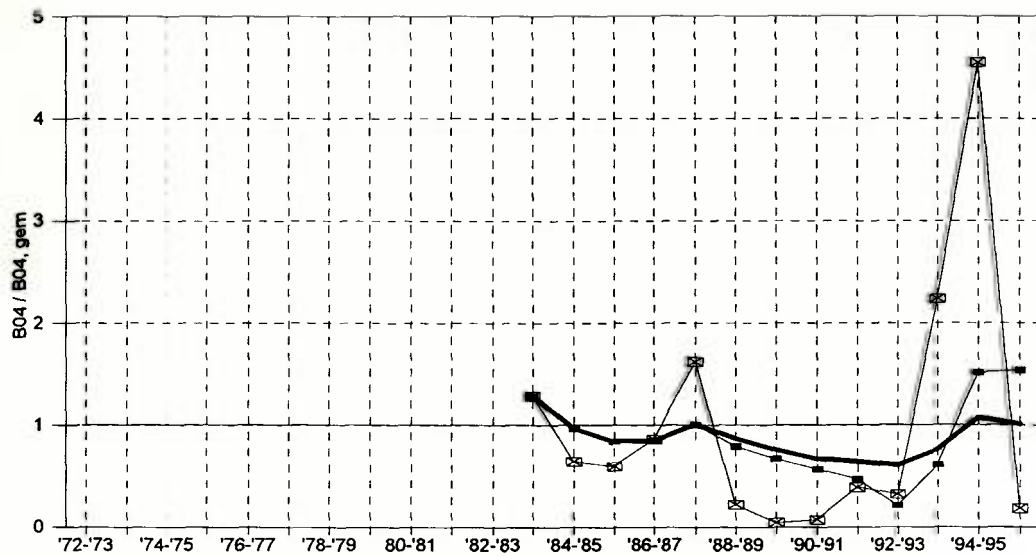
Jaarmaxima van bergingen					
Station 148 : Zwarte Beek / Lummen			Gemidd. jaarmax. : 4 931 m³/s		
Waterjaar	piekdebiet (m³/s)	datum	(mm)	berging (uur)	datum
Bergingen boven 0,6 . Qgem					
'83 -'84	6 952	07/02/84	9 08	267	10/02/84
'84 -'85	5 735	12/04/85	3 65	151	15/04/85
'85 -'86	5 035	31/03/86	1 65	152	01/04/86
'86 -'87	5 305	24/03/87	4 15	185	26/03/87
'87 -'88	4 926	14/03/88	4 09	239	17/03/88
'88 -'89	4 325	17/03/89	0 84	54	18/03/89
'89 -'90	3 271	14/02/90	0 04	7	14/02/90
'90 -'91	3 327	30/12/90	0 09	15	30/12/90
'91 -'92	4 708	22/12/91	1 99	89	23/12/91
'92 -'93	4 435	23/01/93	1 42	80	24/01/93
'93 -'94	4 872	31/12/93	4 55	265	06/01/94
'94 -'95	5 628	30/01/95	11 53	1179	27/02/95
'95 -'96	4 435	13/08/96	0 57	29	13/08/96
Bergingen boven 0,7 . Qgem					
'83 -'84	6 952	07/02/84	7 51	203	09/02/84
'84 -'85	5 735	12/04/85	2 48	110	15/04/85
'85 -'86	5 035	31/03/86	0 80	43	01/04/86
'86 -'87	5 305	24/03/87	2 91	130	26/03/87
'87 -'88	4 926	14/03/88	2 06	152	16/03/88
'88 -'89	4 325	17/03/89	0 35	34	18/03/89
'89 -'90			0 00	0	
'90 -'91			0 00	0	
'91 -'92	4 708	22/12/91	1 21	64	23/12/91
'92 -'93	4 435	23/01/93	0 83	55	23/01/93
'93 -'94	5 035	21/12/93	2 39	156	23/12/93
'94 -'95	5 628	30/01/95	5 73	262	03/02/95
'95 -'96	4 435	13/08/96	0 30	20	13/08/96
Bergingen boven 0,8 . Qgem					
'83 -'84	6 952	07/02/84	6 04	161	09/02/84
'84 -'85	5 735	12/04/85	1 64	84	13/04/85
'85 -'86	5 035	31/03/86	0 46	29	01/04/86
'86 -'87	5 305	24/03/87	1 79	91	26/03/87
'87 -'88	4 926	14/03/88	0 87	83	15/03/88
'88 -'89	4 435	08/03/89	0 11	13	08/03/89
'89 -'90			0 00	0	
'90 -'91			0 00	0	
'91 -'92	4 708	22/12/91	0 58	48	23/12/91
'92 -'93	4 435	23/01/93	0 32	36	23/01/93
'93 -'94	5 035	21/12/93	1 14	111	22/12/93
'94 -'95	5 628	30/01/95	3 27	198	01/02/95
'95 -'96	4 435	13/08/96	0 11	13	13/08/96

Station 148 : Zwarte Beek / Lummen



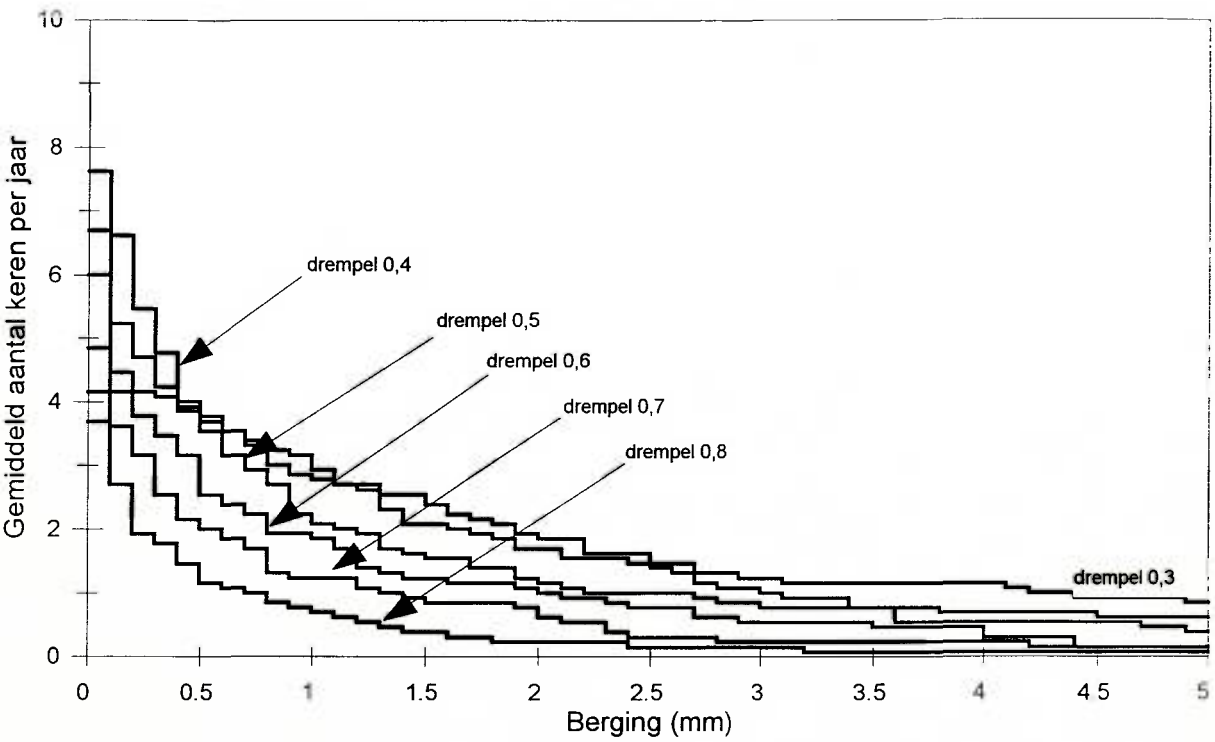
— doorlopend gemiddelde —■— Jaarmaxima - - - 5-jaargemiddelde

Station 148 : Zwarte Beek / Lummen

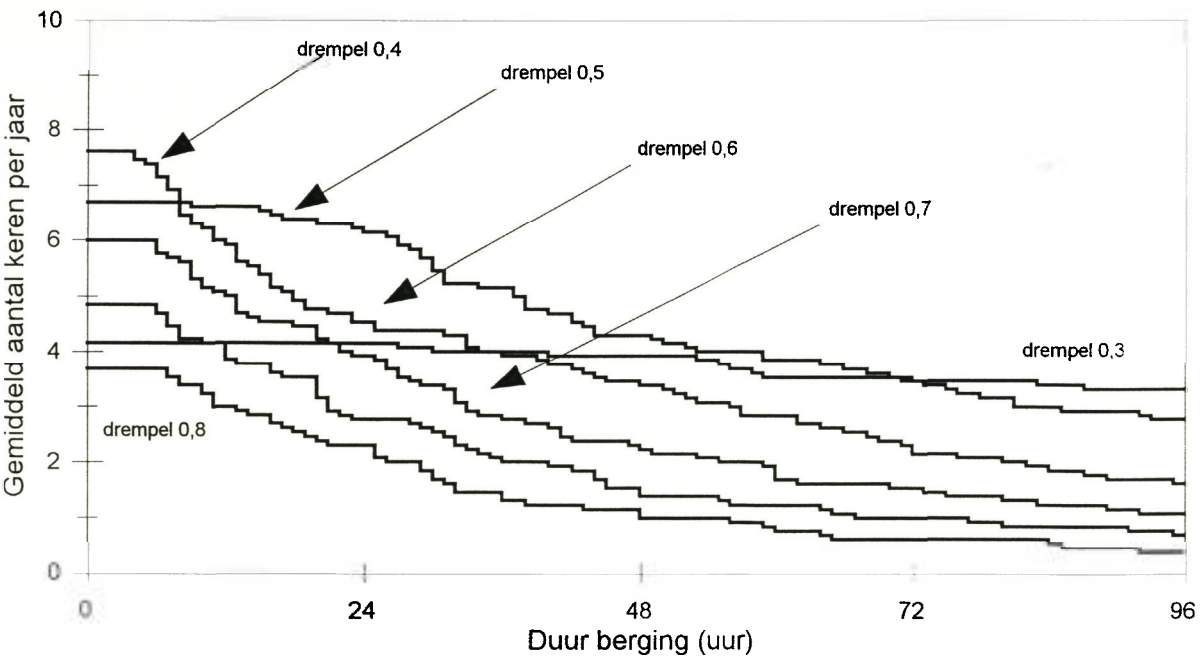


— doorlopend gemiddelde —■— Jaarmaxima —+— 5-jaargemiddelde

Station 148 - Zwartebeek te Lummen



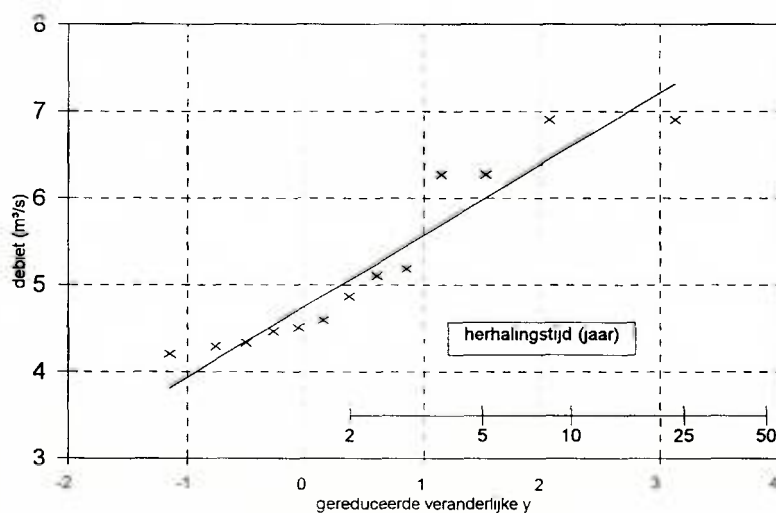
Station 148 - Zwartebeek te Lummen



20. Station 161
**De Mangelbeek
te Lummen**

Station nr. 161 : Mangelbeek te Lummen

Nr.	Waterjaar	Datum	Hoogte (cm)	Debiet (m ³ /s)
1	'91 - '92	22/12/91	115	4 205
2	'90 - '91	29/12/90	117	4 291
3	'92 - '93	22/01/93	118	4 334
4	'93 - '94	19/03/94	121	4 464
5	'94 - '95	30/01/95	122	4 507
6	'95 - '96	30/08/96	124	4 593
7	'89 - '90	22/12/89	114	4 865
8	'85 - '86	31/03/86	117	5 100
9	'88 - '89	8/03/89	118	5 180
10	'84 - '85	1/10/84	131	6 270
11	'87 - '88	14/03/88	131	6 270
12	'86 - '87	22/10/86	138	6 900
13	'83 - '84	7/02/84	138	6 900



Herhalingstijd (jaar)	Debiet (m ³ /s)	Spec. afvoer (l/s.ha)
2	5.049	0.50
5	5.976	0.59
10	6.590	0.65
25	7 366	0.73
50	7.942	0.79

Station 161 : Mangelbeek te Lummen

Runoffhoeveelheden

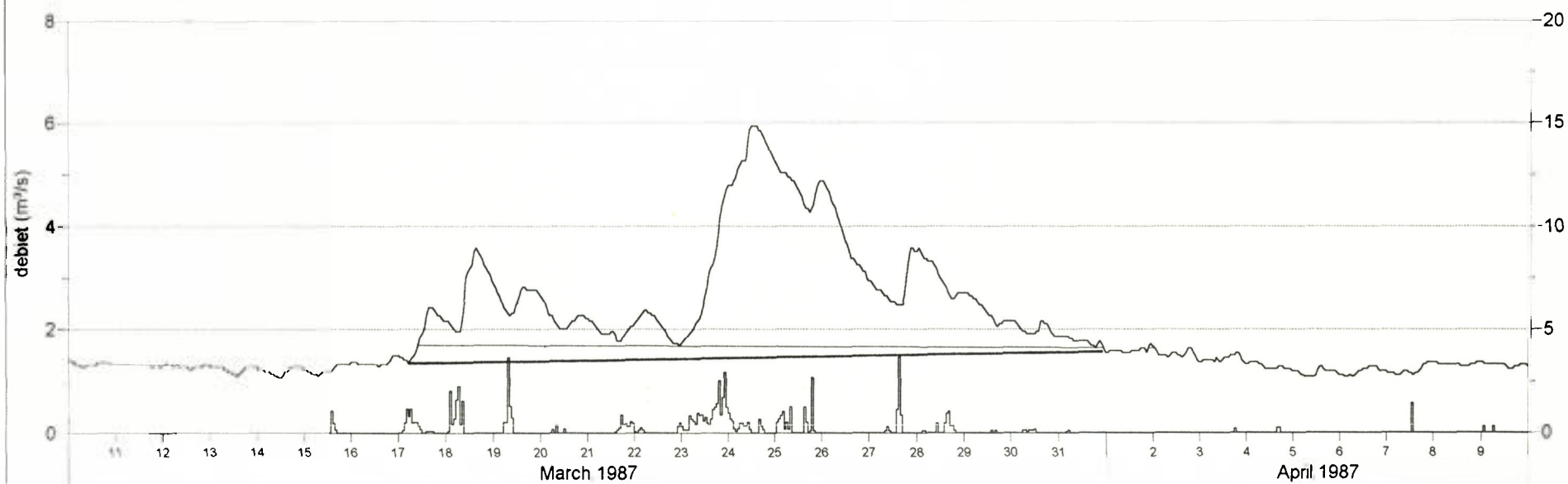
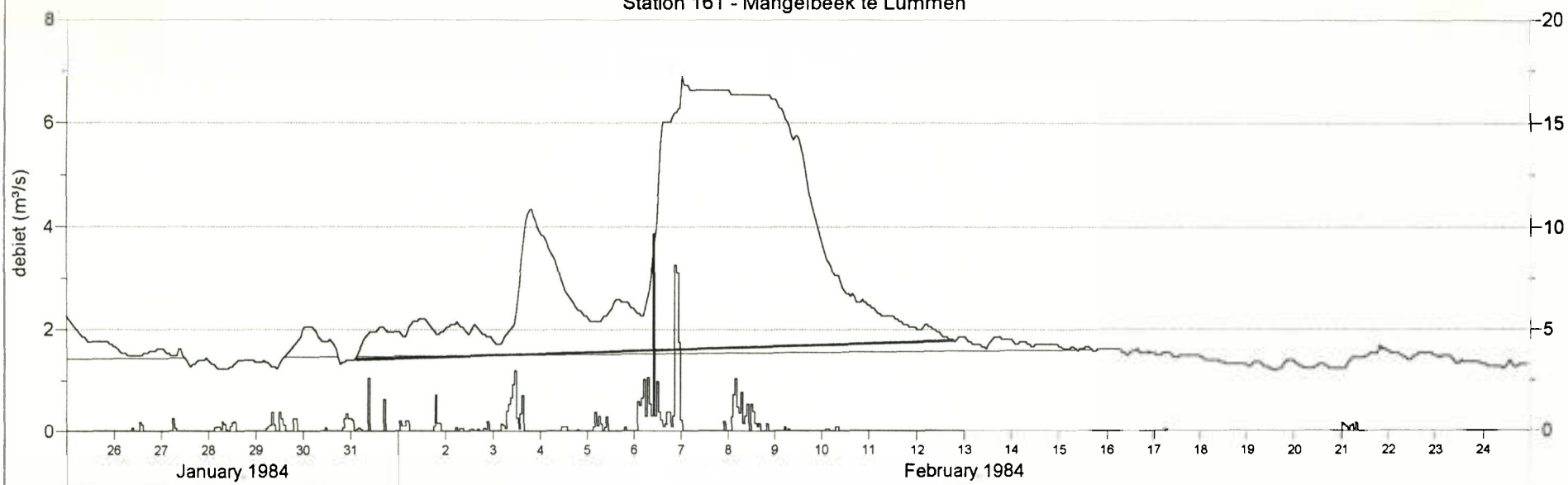
Stroomgebied = 10066 ha

Tijdreeks : 1983 - '96

Nr.	Was van (datum Q_{max})	q_{max} (l/s ha)	q_{begin} (l/s ha)	q_{eind} (l/s ha)	Neerslag som (mm)	Neerslag duur (uur)	Concentratie tijd (uur)	Runoff (mm)	Runoff- Coeff. (-)	Runoff duur (uur)
1	07/02/84	0.69	0.14	0.18	99.8	255	33	19.3	0.19	299
2	24/03/87	0.62	0.15	0.16	76.9	343	25	17.5	0.23	354
3	25/03/88	0.65	0.21	0.24	62.5	244	17	13.7	0.22	263
4	17/02/95	0.41	0.19	0.22	84.8	336	36	13.1	0.15	362
5	26/05/83	0.65	0.13	0.20	58.3	148	28	13.0	0.22	183
6	30/08/96	0.47	0.05	0.09	99.5	145	25	11.3	0.11	196
7	31/12/93	0.41	0.16	0.18	62.7	216	26	10.9	0.17	257
8	08/11/91	0.42	0.06	0.14	112.9	288	16	10.8	0.10	282
9	08/09/84	0.51	0.05	0.12	98.9	133	6	10.5	0.11	154
10	12/04/85	0.58	0.14	0.15	46.2	138	26	9.8	0.21	175
11	14/03/88	0.62	0.17	0.29	60.7	125	18	9.8	0.16	140
12	01/09/92	0.43	0.07	0.10	100.8	192	26	9.6	0.10	209
13	21/12/93	0.41	0.15	0.19	63.5	182	9	9.3	0.15	203
14	24/11/84	0.42	0.10	0.19	57.0	127	28	8.2	0.14	159
15	22/10/86	0.69	0.09	0.20	78.9	84	26	8.1	0.10	103
16	01/10/84	0.62	0.08	0.21	54.1	73	25	8.0	0.15	106
17	28/12/94	0.42	0.10	0.16	65.1	216	-3	7.5	0.12	208
18	31/03/86	0.51	0.16	0.22	60.3	116	19	7.2	0.12	134
19	25/06/85	0.45	0.09	0.20	45.3	97	13	6.2	0.14	106
20	12/01/93	0.38	0.10	0.16	54.6	216	-2	6.1	0.11	209
21	19/03/94	0.44	0.14	0.20	38.0	144	21	5.4	0.14	169
22	06/10/87	0.46	0.07	0.17	55.9	69	18	5.3	0.10	86
23	29/05/84	0.61	0.10	0.18	33.3	47	19	5.3	0.16	65
24	16/11/93	0.34	0.09	0.13	36.6	48	29	4.9	0.13	99
25	02/03/87	0.59	0.23	0.23	27.9	30	17	4.8	0.17	68
26	23/12/95	0.35	0.09	0.12	56.6	96	16	4.8	0.08	139
27	23/11/87	0.46	0.15	0.21	40.2	91	18	4.6	0.11	116
28	08/03/89	0.51	0.10	0.17	28.4	22	23	4.3	0.15	67
29	28/11/83	0.33	0.06	0.15	53.2	84	19	4.3	0.08	102
30	24/07/88	0.59	0.13	0.19	31.4	15	13	4.1	0.13	49

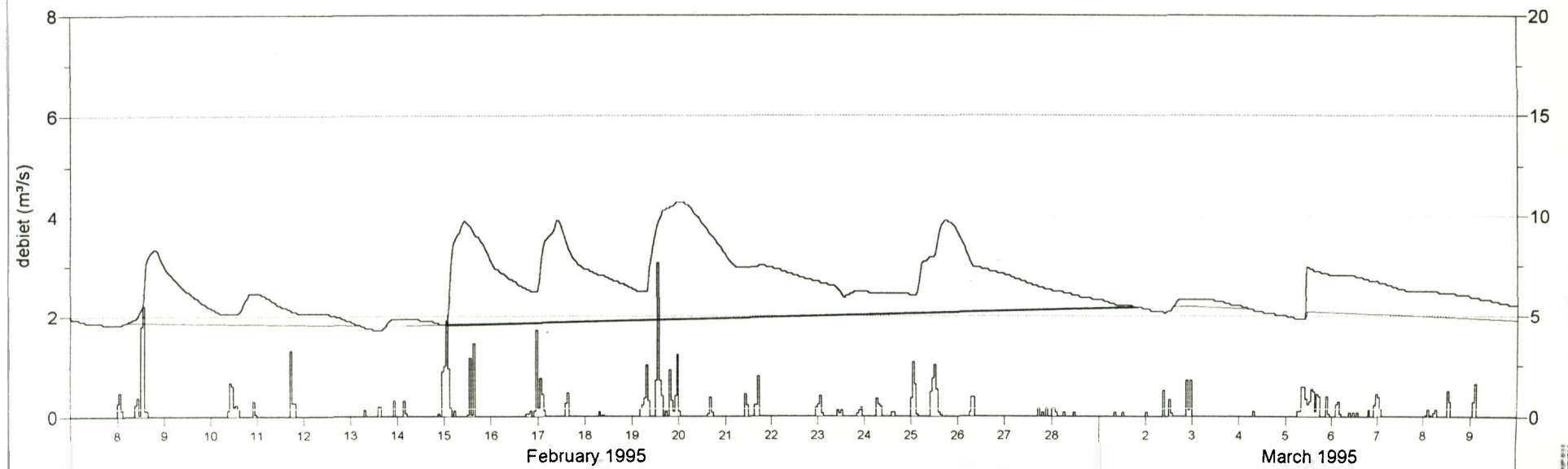
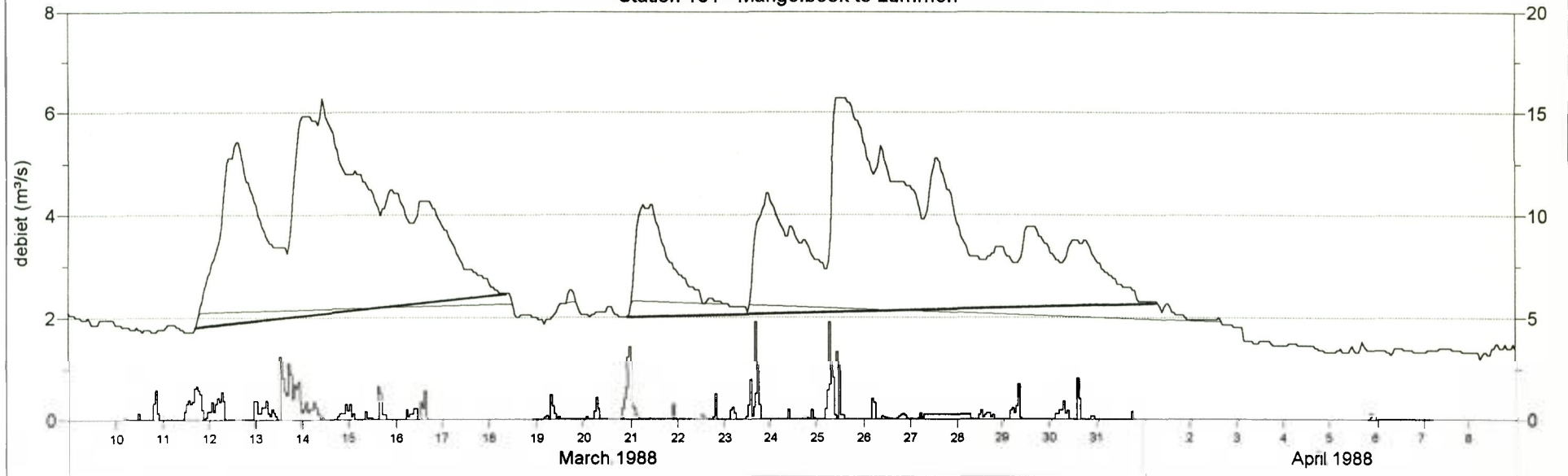
Uurwaarden van neerslag, debiet en basisafvoer

Station 161 - Mangelbeek te Lummen



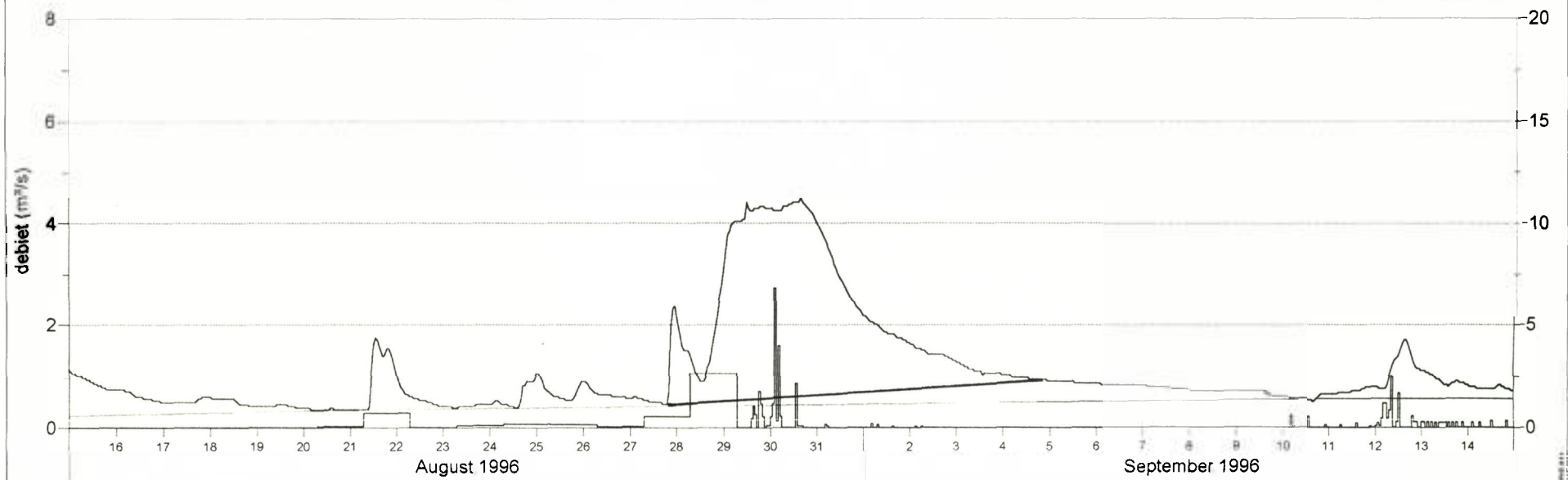
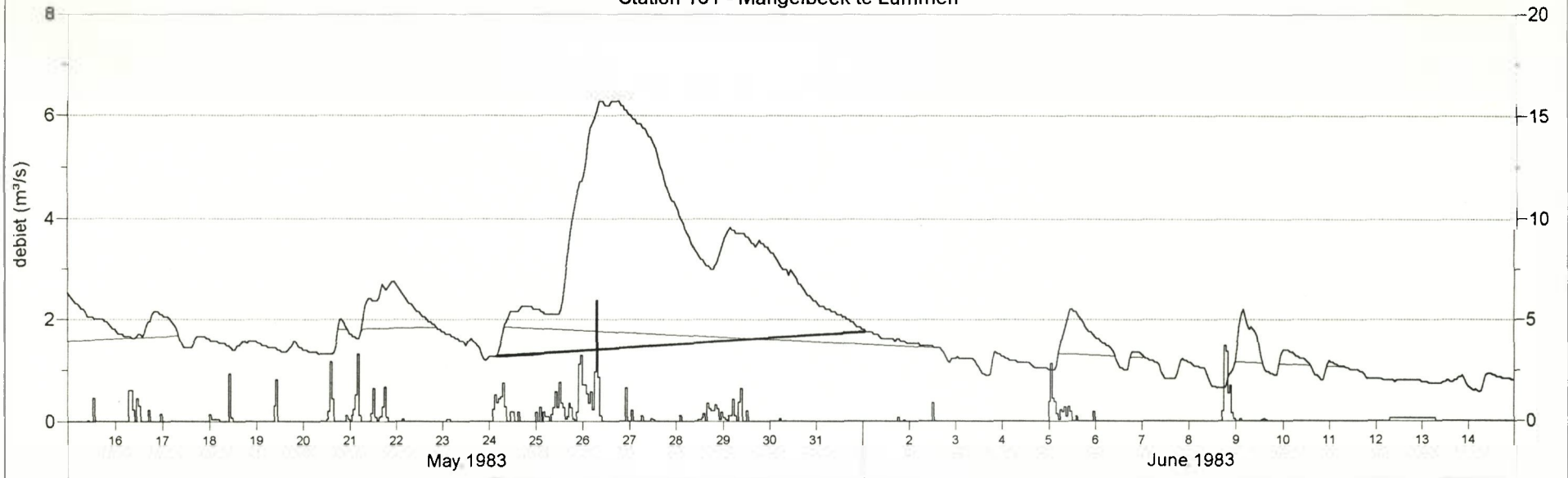
Uurwaarden van neerslag, debiet en basisafvoer

Station 161 - Mangelbeek te Lummen



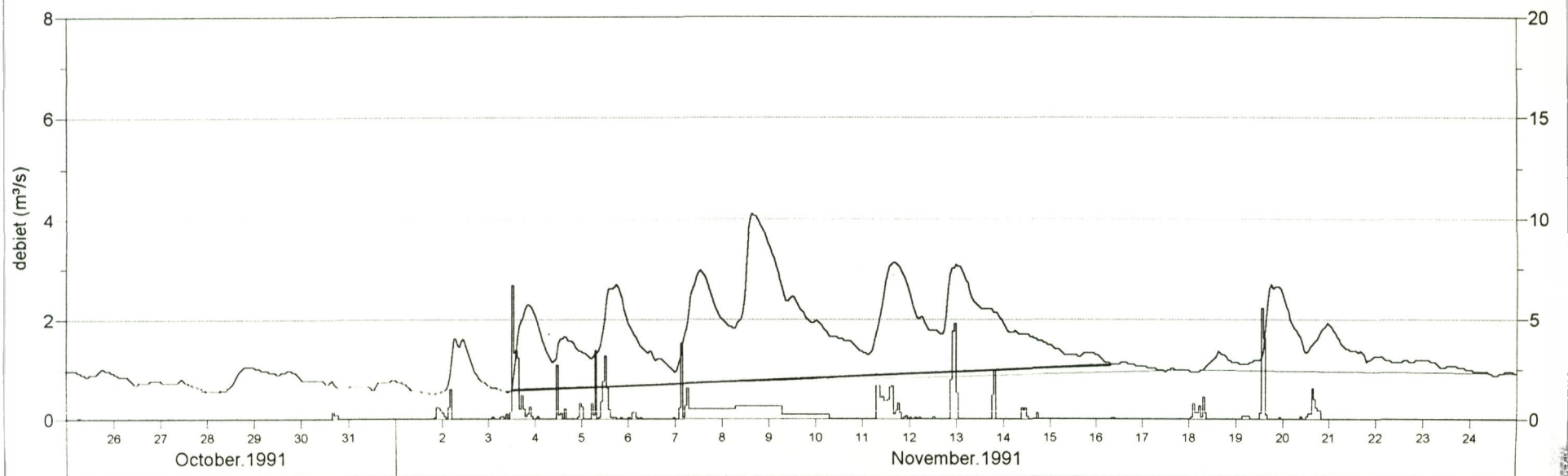
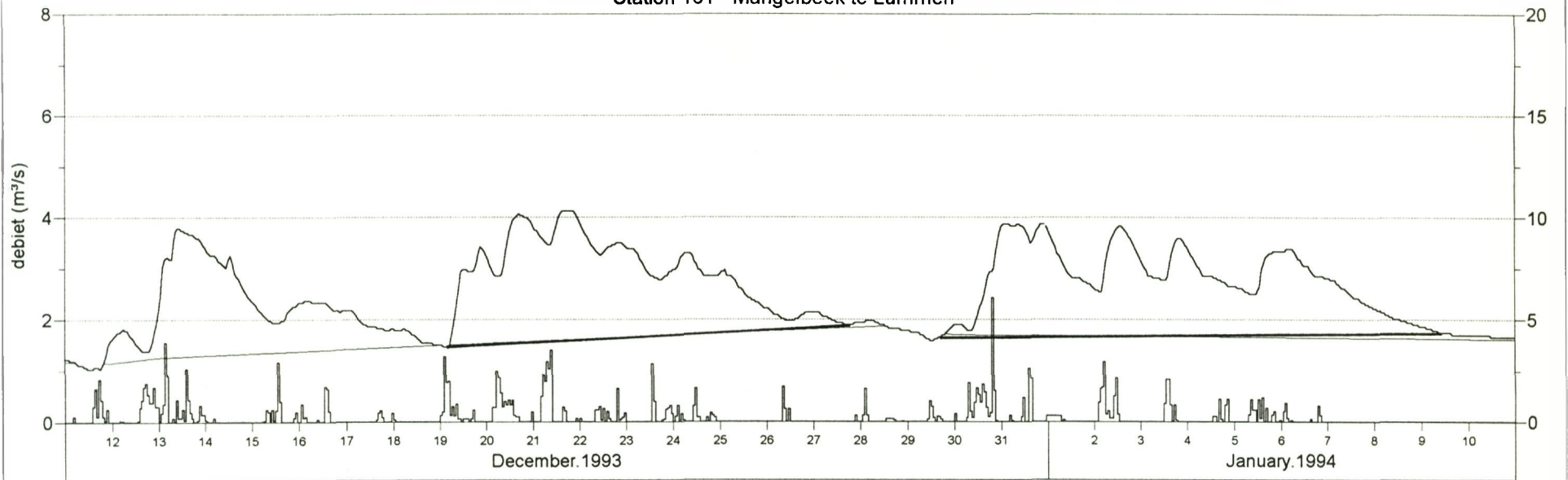
Uurwaarden van neerslag, debiet en basisafvoer

Station 161 - Mangelbeek te Lummen



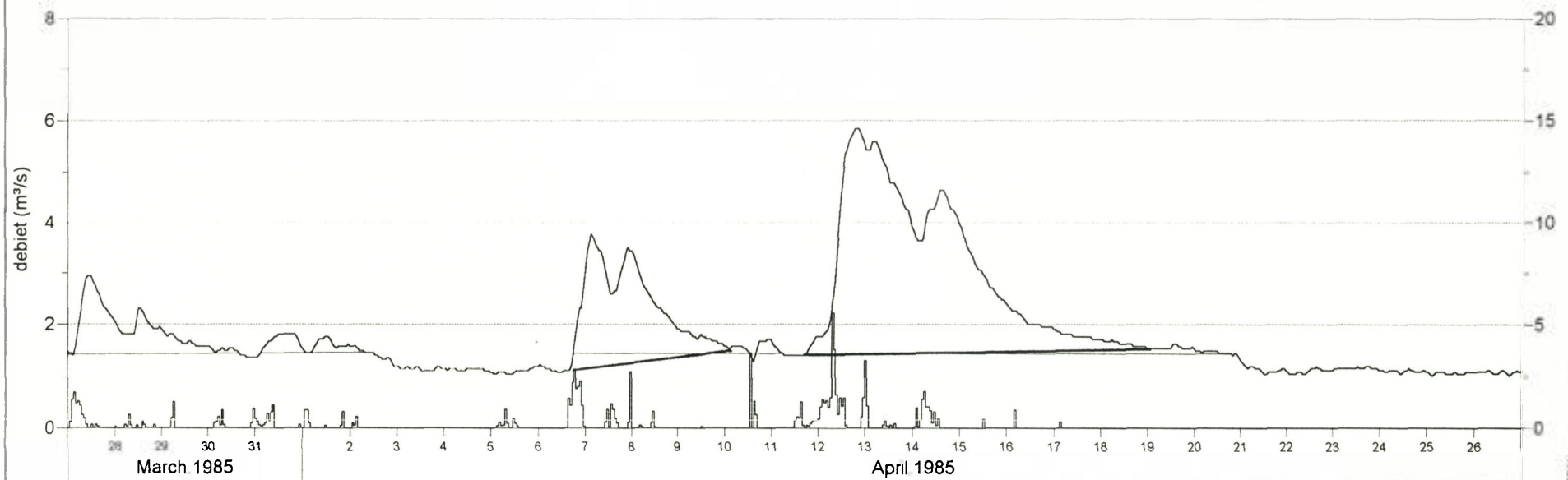
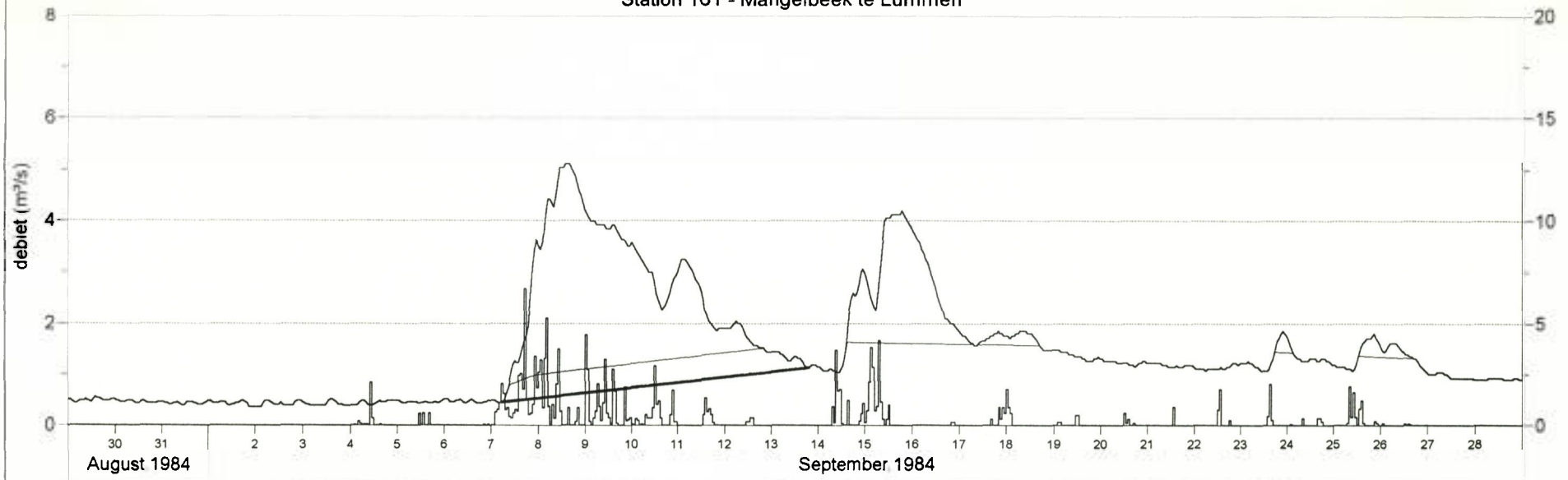
Uurwaarden van neerslag, debiet en basisafvoer

Station 161 - Mangelbeek te Lummen



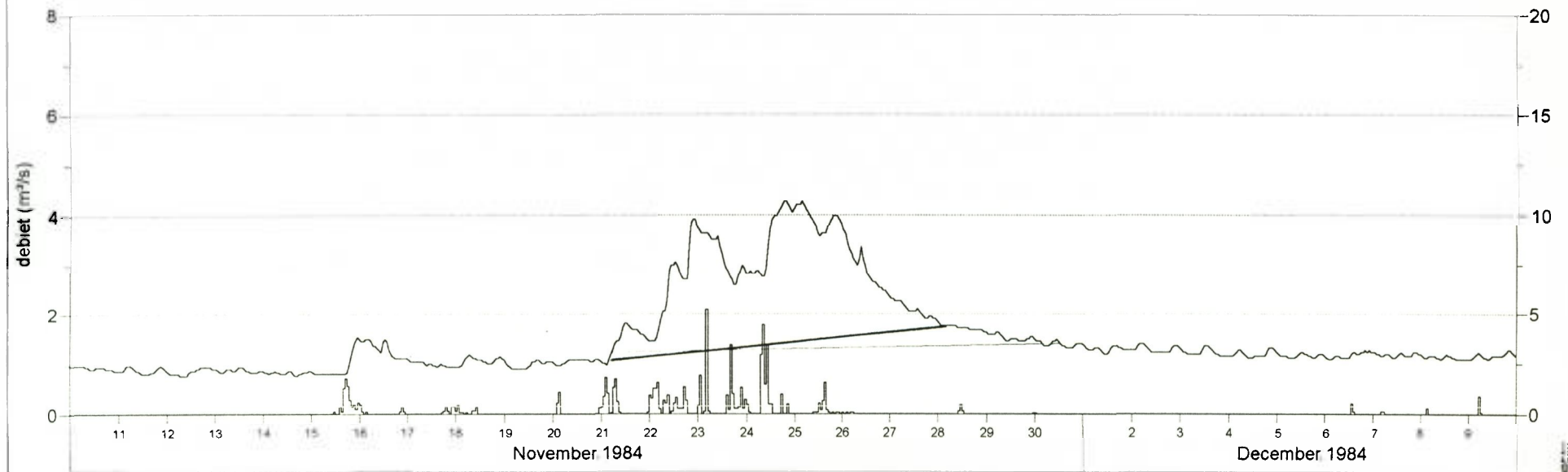
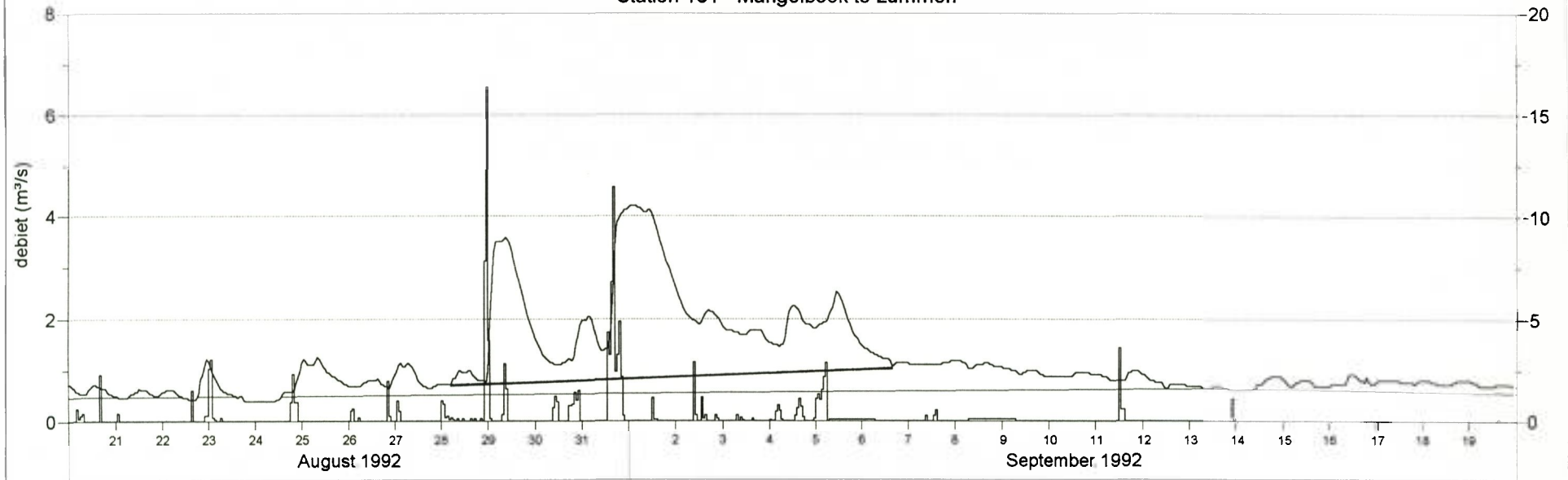
Uurwaarden van neerslag, debiet en basisafvoer

Station 161 - Mangelbeek te Lummen



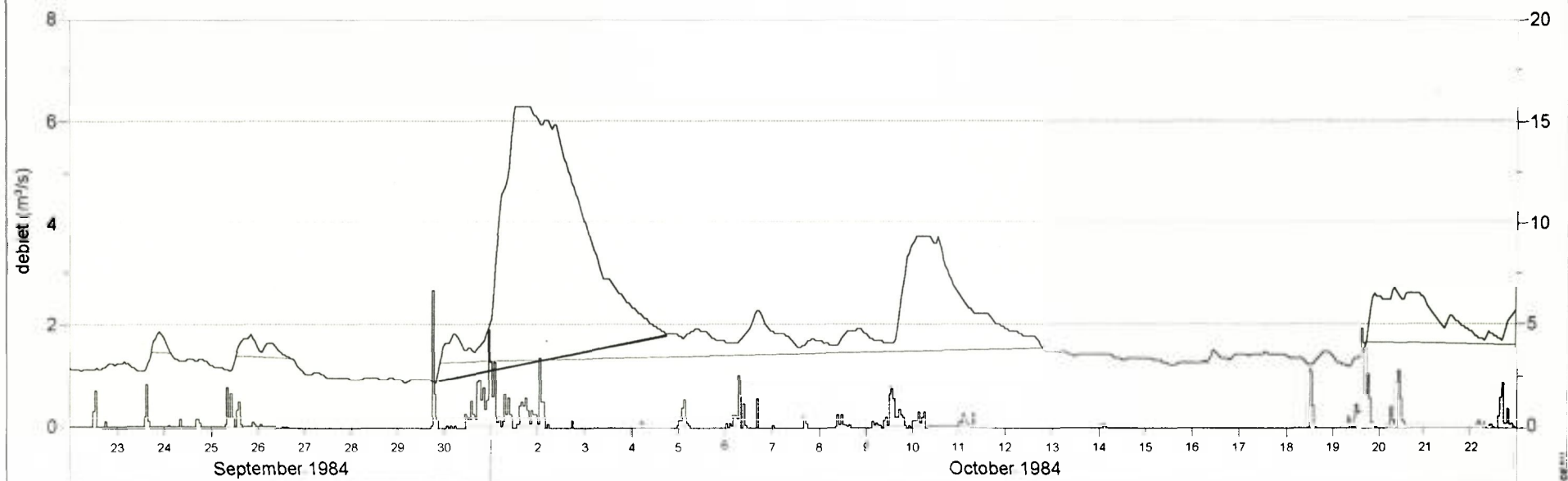
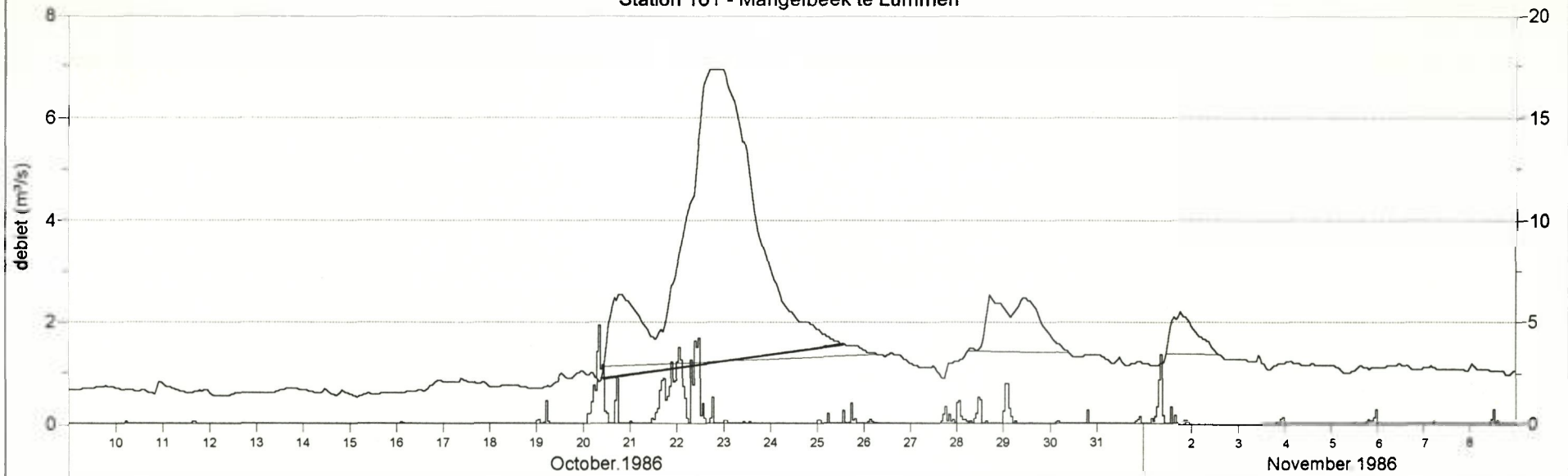
Uurwaarden van neerslag, debiet en basisafvoer

Station 161 - Mangelbeek te Lummen



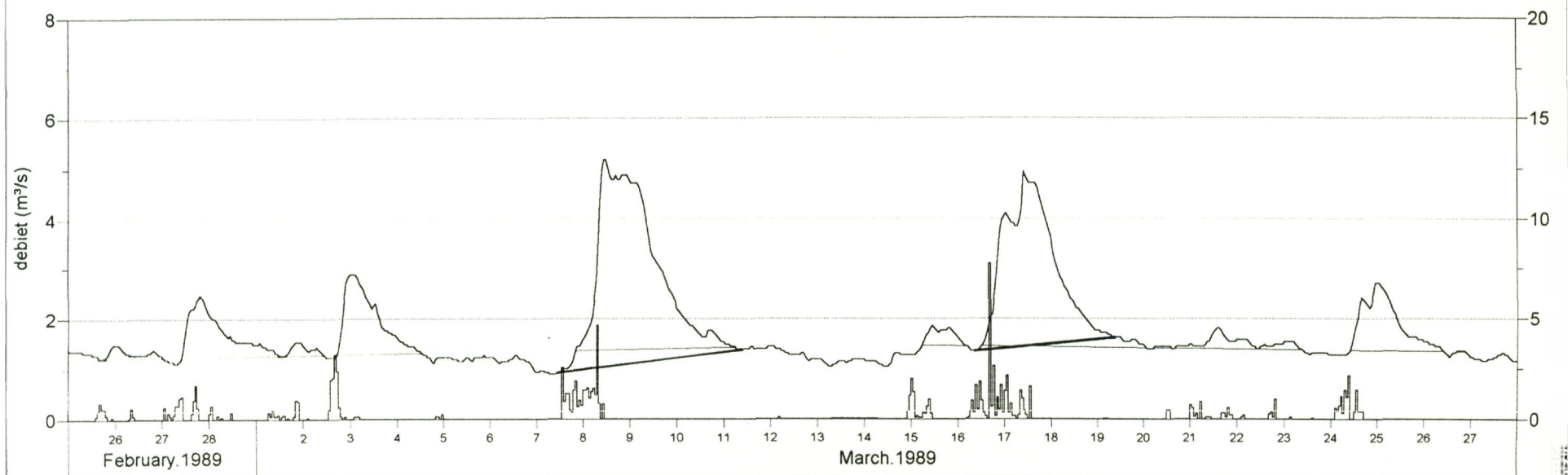
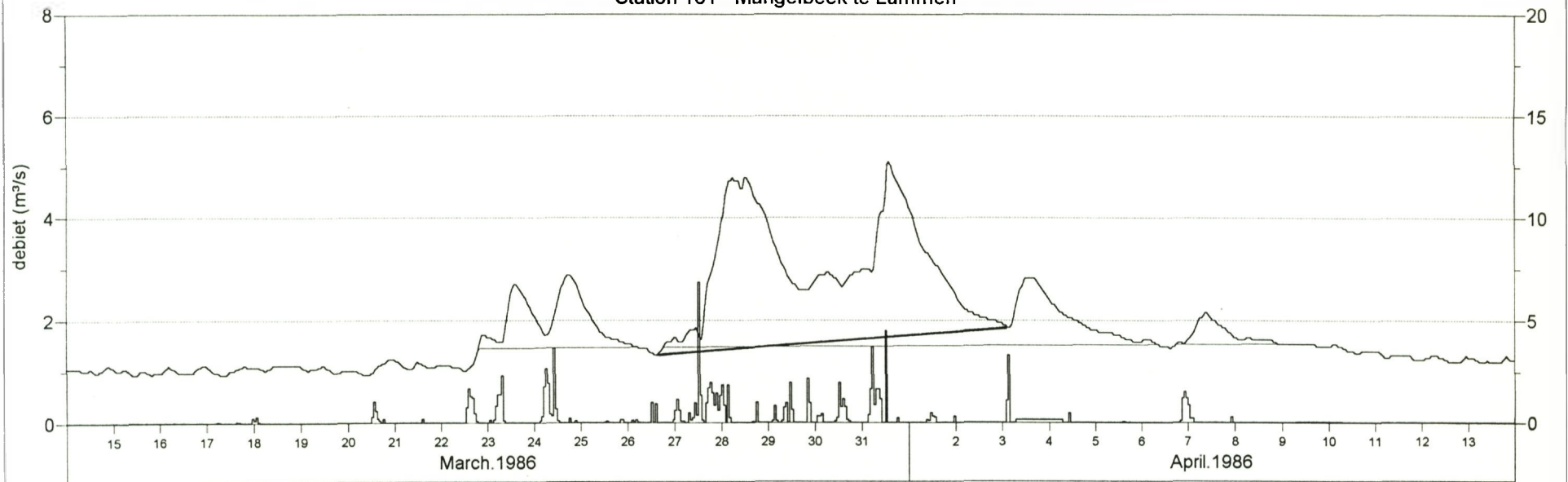
Uurwaarden van neerslag, debiet en basisafvoer

Station 161 - Mangelbeek te Lummen

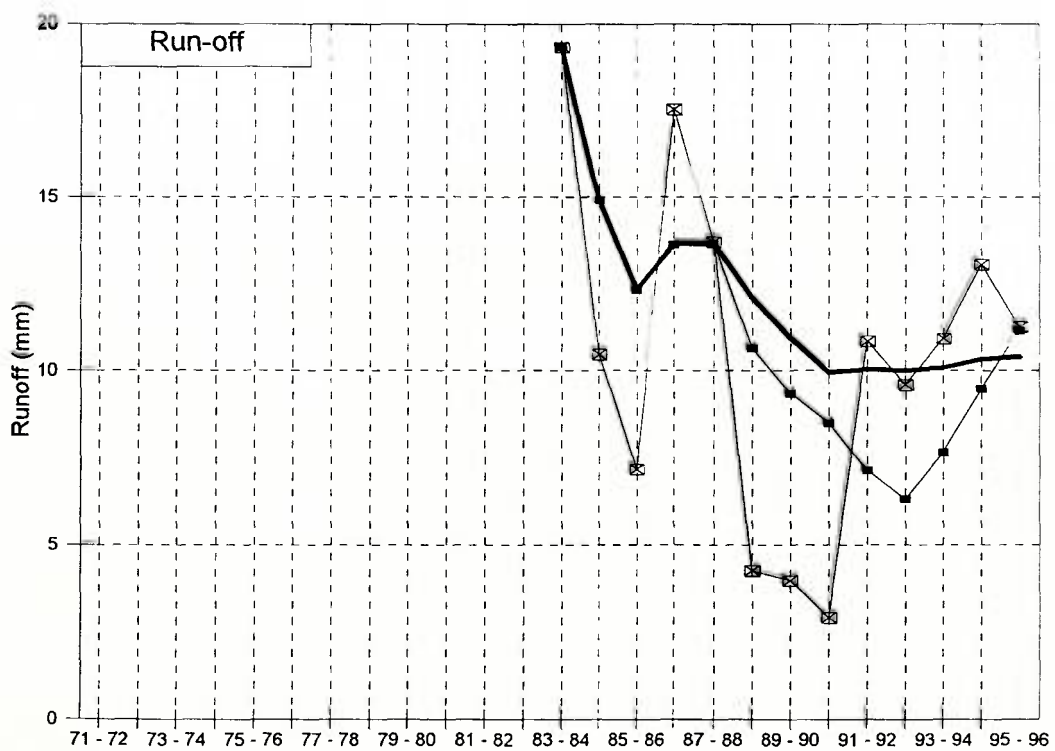
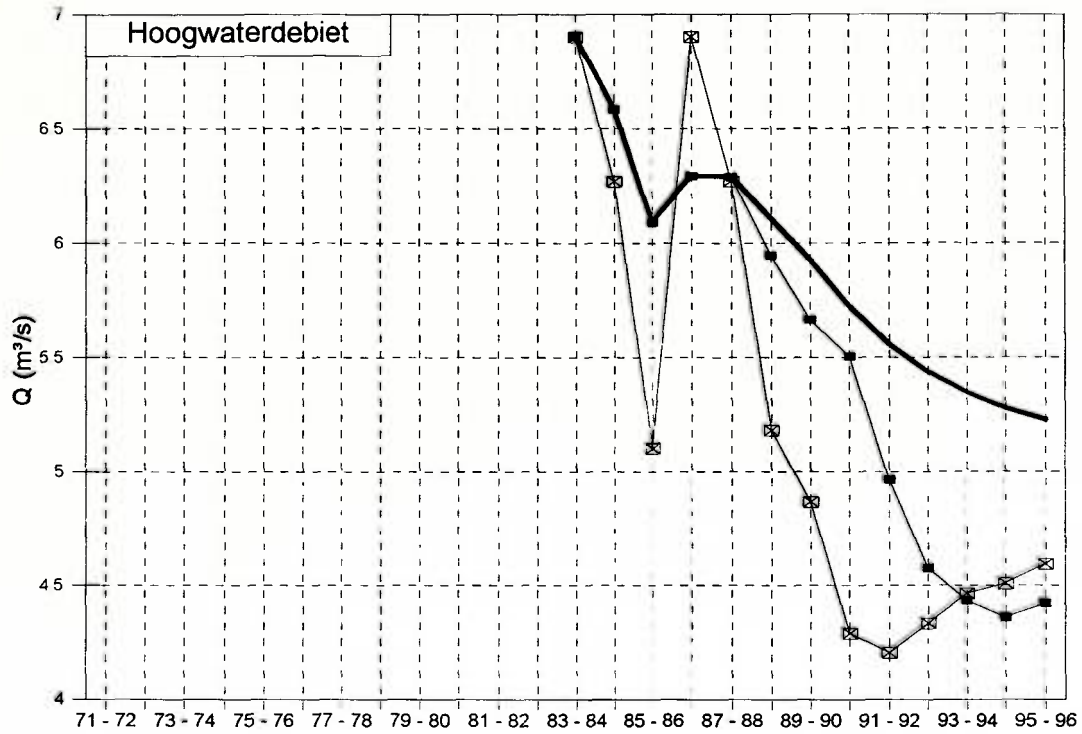


Uurwaarden van neerslag, debiet en basisafvoer

Station 161 - Mangelbeek te Lummen



Station 161 : Mangelbeek / Lummen

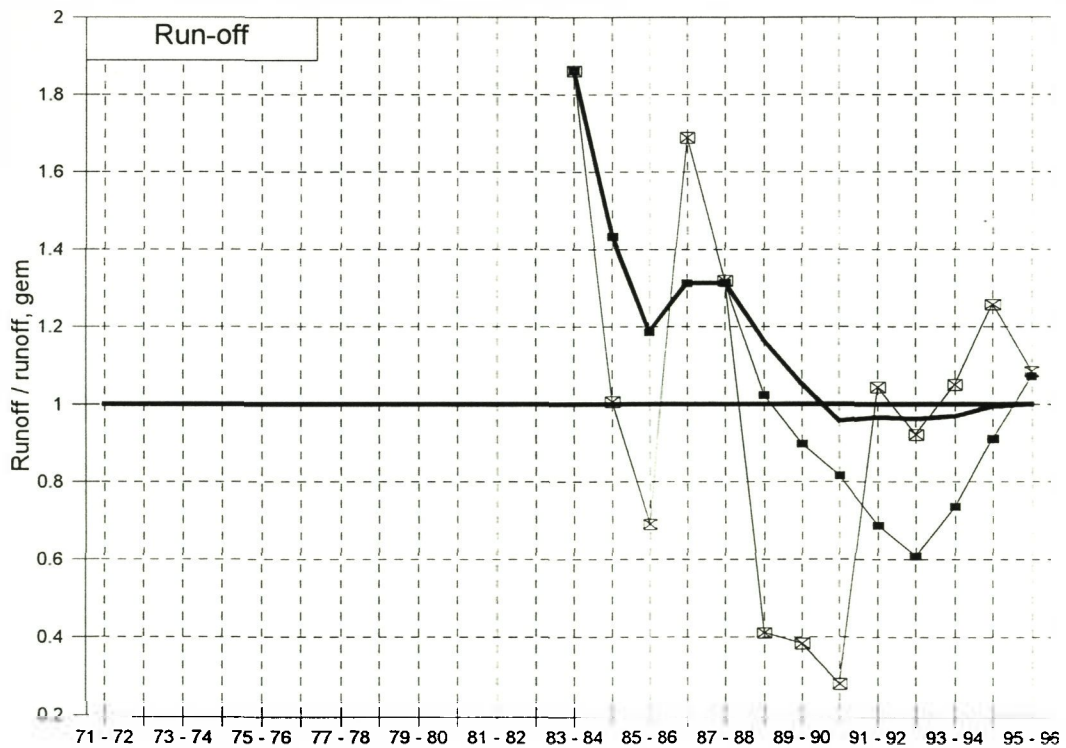
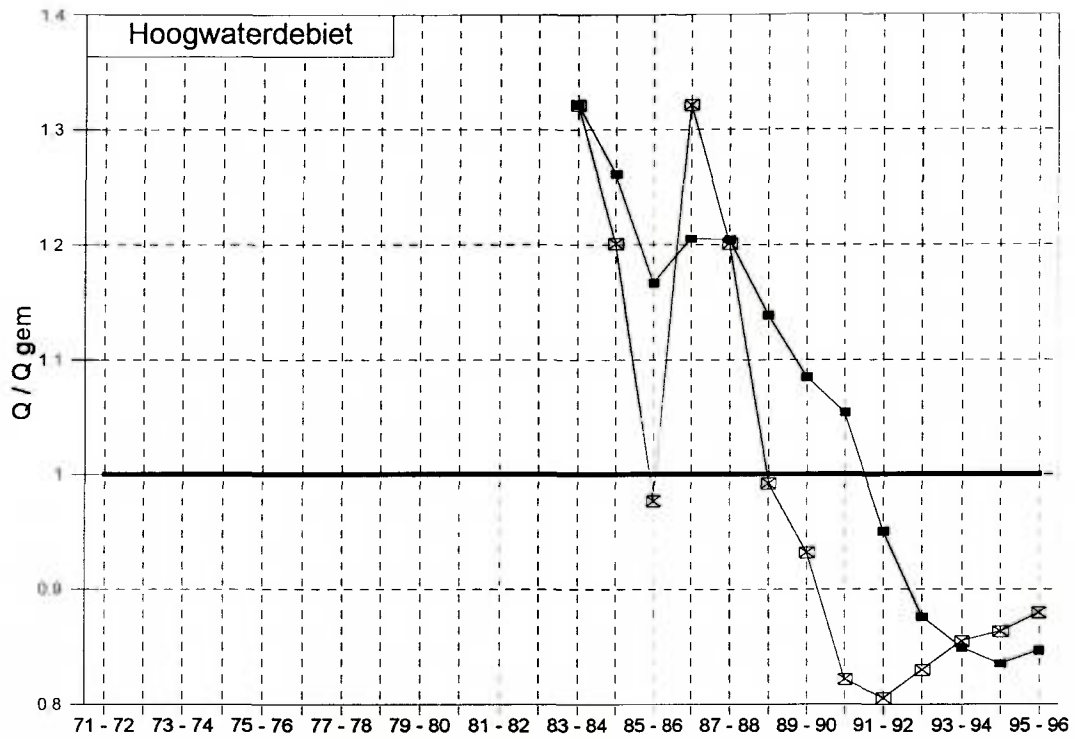


— doorlopend gemiddelde

—x— Jaarmaxima

—■— 5-jaargemiddelde

Station 161 : Mangelbeek / Lummen

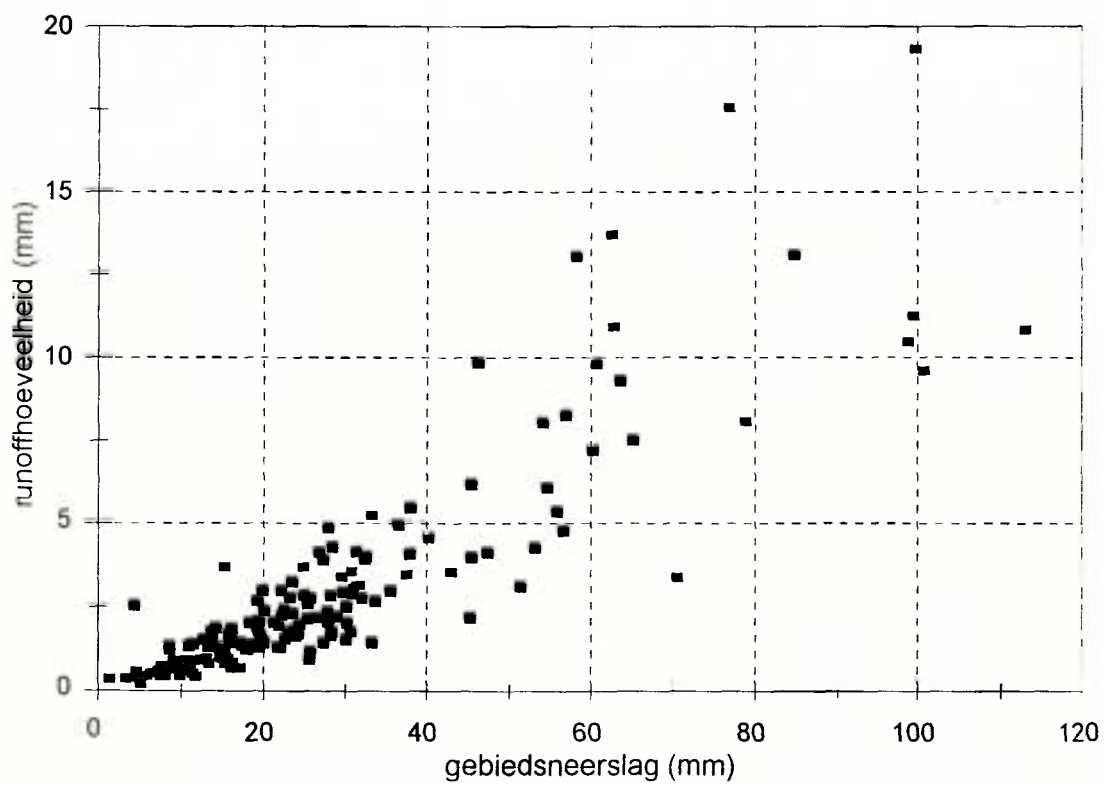
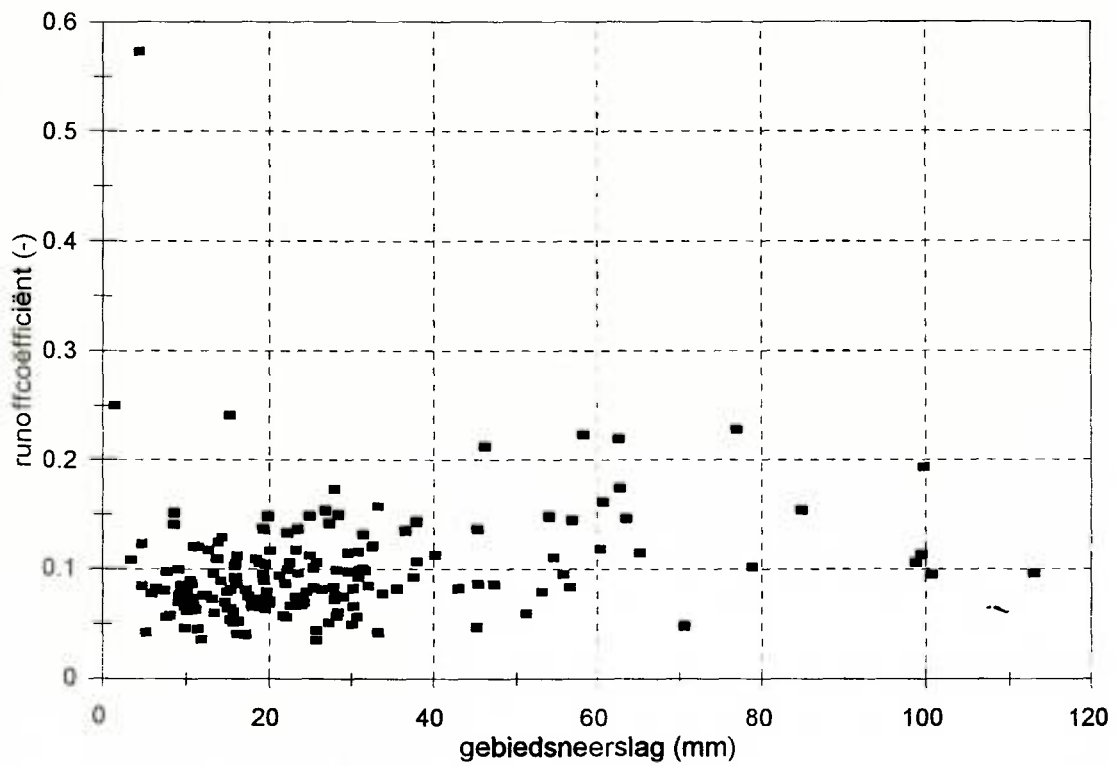


— doorlopend gemiddelde

—x— Jaarmaxima

— 5-jaargemiddelde

Station 161 : Mangelbeek / Lummen



Jaarmaxima van bergingen					
Station 161 : Mangelbeek / Lummen			Gemidd jaarmax : 5.222 m³/s		
Waterjaar	piekdebiet			berging	
	(m³/s)	datum	(mm)	(uur)	datum
Bergingen boven 0,3 Qgem					
'83 -'84	6.900	07/02/84	22.98	2612	16/02/84
'84 -'85	6.270	01/10/84	19.84	4353	30/10/84
'85 -'86	4.486	19/01/86	19.52	1912	03/02/86
'86 -'87	5.924	24/03/87	39.50	5137	02/04/87
'87 -'88	6.270	25/03/88	65.64	7230	03/04/88
'88 -'89	5.180	08/03/89	6.57	873	25/03/89
'89 -'90	4.560	14/02/90	6.55	844	04/03/90
'90 -'91	4.291	29/12/90	8.69	943	12/01/91
'91 -'92	3.436	23/03/92	1.68	240	25/03/92
'92 -'93	4.334	22/01/93	9.07	1315	31/01/93
'93 -'94	4.464	19/03/94	50.19	5588	12/04/94
'94 -'95	4.507	30/01/95	64.01	3651	06/04/95
'95 -'96	4.593	30/08/96	6.46	367	02/09/96
Bergingen boven 0,4 Qgem					
'83 -'84	6.900	07/02/84	15.13	838	11/02/84
'84 -'85	5.839	12/04/85	6.91	485	16/04/85
'85 -'86	4.486	19/01/86	7.96	751	27/01/86
'86 -'87	5.924	24/03/87	11.52	1226	30/03/87
'87 -'88	6.270	25/03/88	29.33	1714	01/04/88
'88 -'89	5.180	08/03/89	2.88	153	10/03/89
'89 -'90	4.560	14/02/90	2.65	203	16/02/90
'90 -'91	4.291	29/12/90	3.04	413	05/01/91
'91 -'92	4.205	22/12/91	3.13	246	23/12/91
'92 -'93	4.334	22/01/93	2.71	272	25/01/93
'93 -'94	4.205	21/12/93	15.22	1702	08/01/94
'94 -'95	4.507	30/01/95	25.65	2614	10/03/95
'95 -'96	4.593	30/08/96	4.74	219	01/09/96
Bergingen boven 0,5 Qgem					
'83 -'84	6.900	07/02/84	11.63	492	10/02/84
'84 -'85	5.839	12/04/85	5.16	228	15/04/85
'85 -'86	5.100	31/03/86	4.06	289	01/04/86
'86 -'87	5.924	24/03/87	6.40	316	29/03/87
'87 -'88	6.270	25/03/88	17.01	880	31/03/88
'88 -'89	5.180	08/03/89	2.11	96	09/03/89
'89 -'90	4.560	14/02/90	1.42	98	16/02/90
'90 -'91	4.291	29/12/90	1.18	103	30/12/90
'91 -'92	4.205	22/12/91	1.62	95	23/12/91
'92 -'93	4.334	22/01/93	1.61	122	24/01/93
'93 -'94	4.205	21/12/93	4.88	646	07/01/94
'94 -'95	4.507	30/01/95	6.50	1285	27/02/95
'95 -'96	4.593	30/08/96	3.38	151	31/08/96

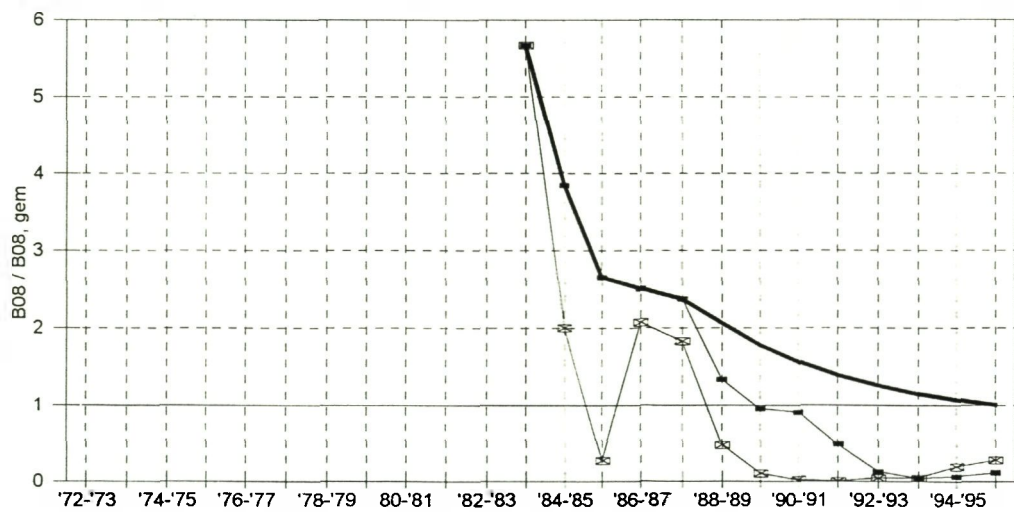
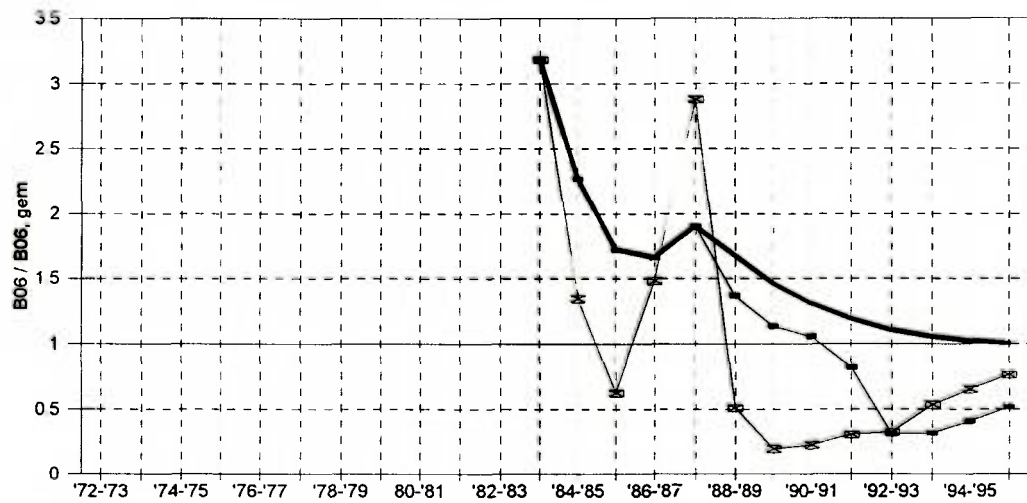
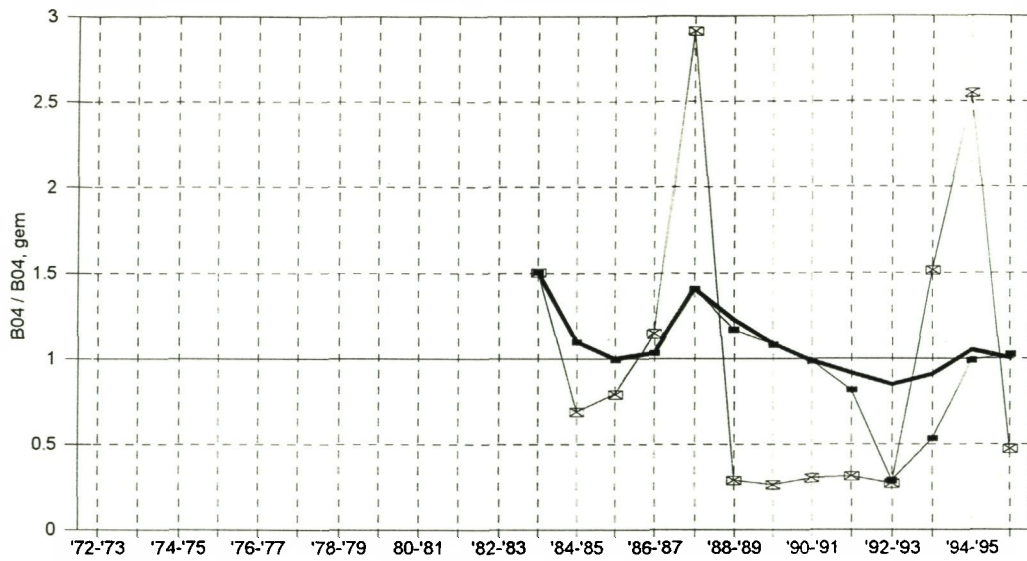
Jaarmaxima van bergingen

Station 161 : Mangelbeek / Lummen

Gemidd. jaarmax : 5 222 m³/s

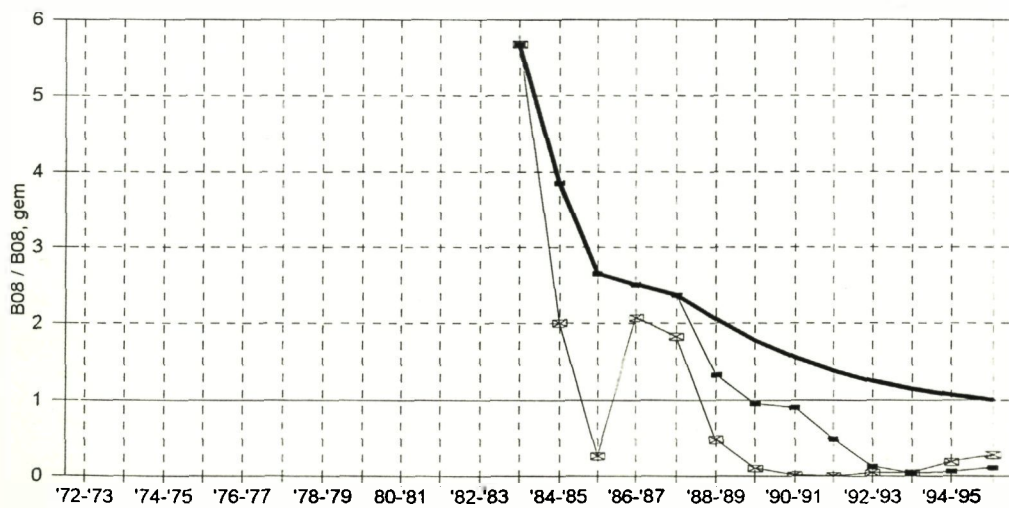
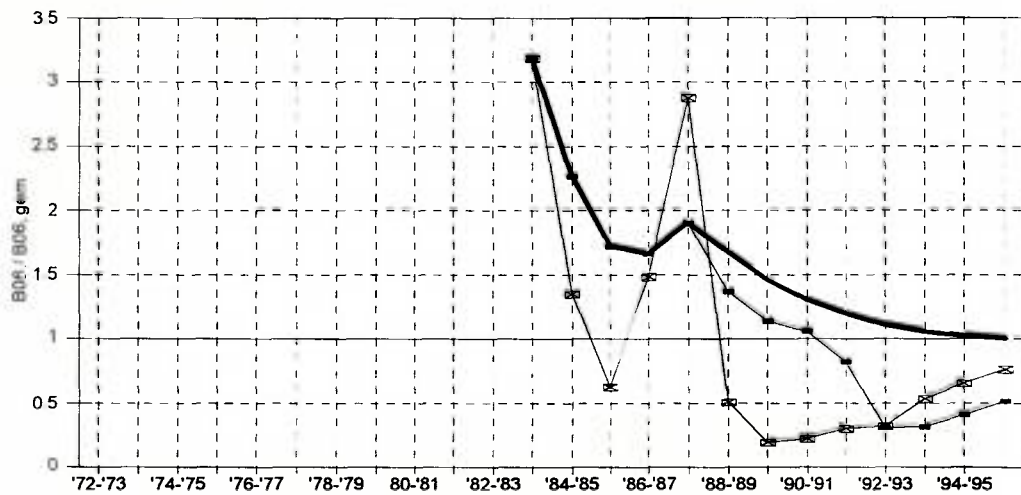
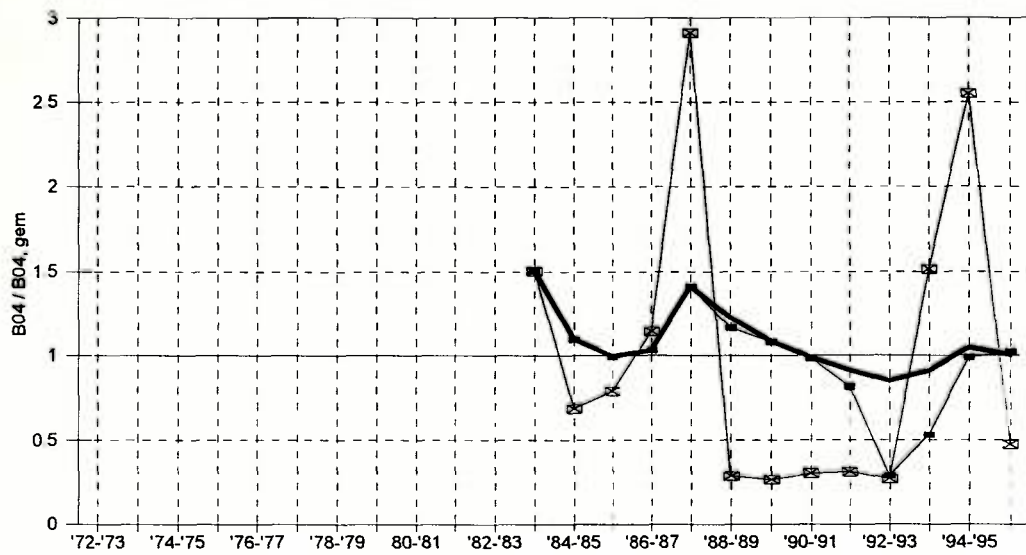
Waterjaar	piekdebiet		berging		
	(m³/s)	datum	(mm)	(uur)	datum
Bergingen boven 0,6 Qgem					
'83 -'84	6 900	07/02/84	9 23	288	10/02/84
'84 -'85	6 270	01/10/84	3 91	148	03/10/84
'85 -'86	5 100	31/03/86	1 81	177	01/04/86
'86 -'87	5 924	24/03/87	4 29	219	26/03/87
'87 -'88	6 270	25/03/88	8 33	621	30/03/88
'88 -'89	5 180	08/03/89	1 47	66	09/03/89
'89 -'90	4 560	14/02/90	0 56	64	14/02/90
'90 -'91	4 291	29/12/90	0 64	47	30/12/90
'91 -'92	4 205	22/12/91	0 87	62	23/12/91
'92 -'93	4 334	22/01/93	0 93	70	23/01/93
'93 -'94	4 205	21/12/93	1 54	172	23/12/93
'94 -'95	4 507	30/01/95	1 89	234	31/01/95
'95 -'96	4 593	30/08/96	2 21	110	31/08/96
Bergingen boven 0,7 Qgem					
'83 -'84	6 900	07/02/84	7 55	216	10/02/84
'84 -'85	6 270	01/10/84	2 96	105	03/10/84
'85 -'86	4 788	28/03/86	0 73	51	29/03/86
'86 -'87	5 924	24/03/87	2 96	155	26/03/87
'87 -'88	6 270	14/03/88	3 79	199	17/03/88
'88 -'89	5 180	08/03/89	0 96	47	09/03/89
'89 -'90	4 865	22/12/89	0 28	21	22/12/89
'90 -'91	4 291	29/12/90	0 24	29	30/12/90
'91 -'92	4 205	22/12/91	0 27	39	22/12/91
'92 -'93	4 334	22/01/93	0 41	41	23/01/93
'93 -'94	4 205	21/12/93	0 43	76	22/12/93
'94 -'95	4 507	30/01/95	0 73	64	30/01/95
'95 -'96	4 593	30/08/96	1 17	80	31/08/96
Bergingen boven 0,8 Qgem					
'83 -'84	6 900	07/02/84	5 98	168	09/02/84
'84 -'85	6 270	01/10/84	2 11	81	02/10/84
'85 -'86	4 788	28/03/86	0 28	30	28/03/86
'86 -'87	6 900	23/10/86	2 19	69	23/10/86
'87 -'88	6 270	25/03/88	1 93	127	27/03/88
'88 -'89	5 180	08/03/89	0 51	35	09/03/89
'89 -'90	4 865	22/12/89	0 11	12	22/12/89
'90 -'91	4 291	29/12/90	0 02	8	29/12/90
'91 -'92	4 205	08/11/91	0 00	1	08/11/91
'92 -'93	4 334	22/01/93	0 05	19	23/01/93
'93 -'94	4 464	19/03/94	0 05	10	19/03/94
'94 -'95	4 507	30/01/95	0 20	32	30/01/95
'95 -'96	4 593	30/08/96	0 29	48	30/08/96

Station 161 : Mangelbeek / Lummen



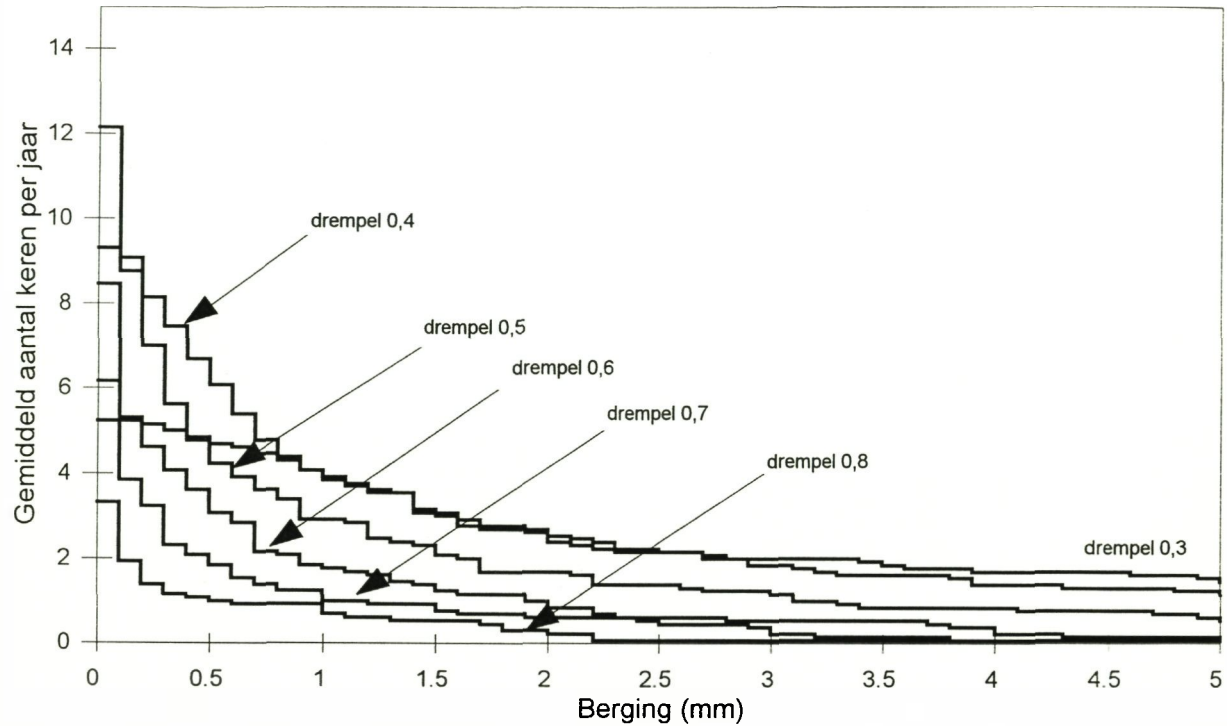
— doorlopend gemiddelde —□— Jaarmaxima —■— 5-jaargemiddelde

Station 161 : Mangelbeek / Lummen

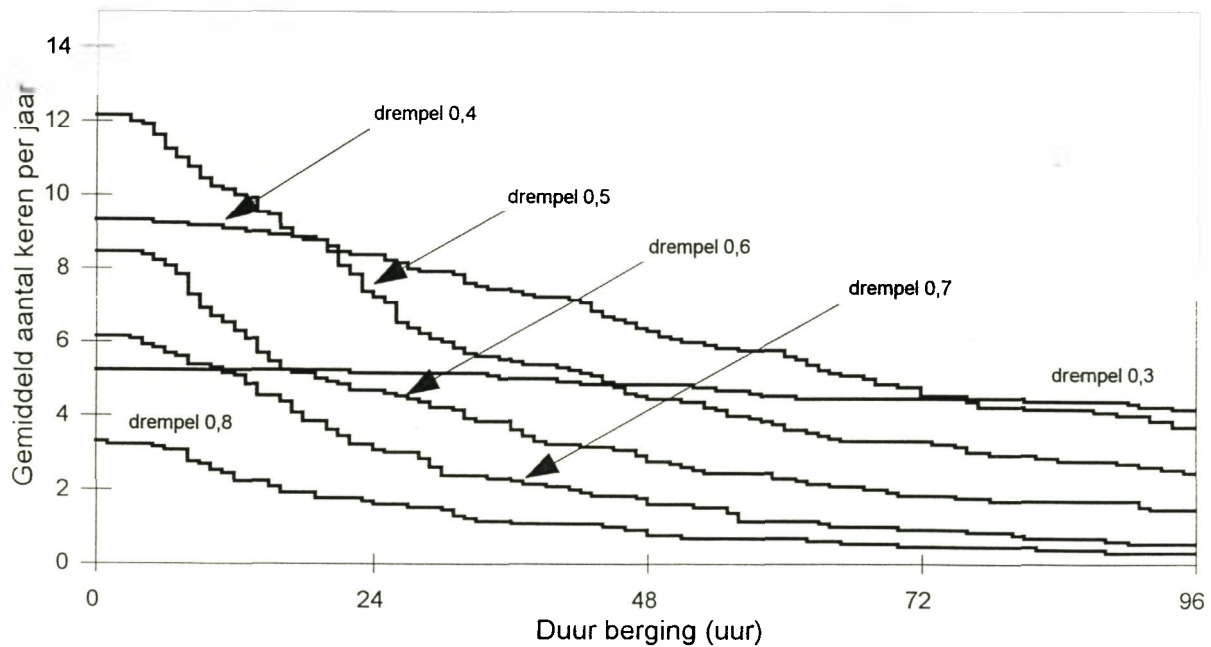


— doorlopend gemiddelde —■— Jaarmaxima —+— 5-jaargemiddelde

Station 161 - Mangelbeek te Lummen



Station 161 - Mangelbeek te Lummen

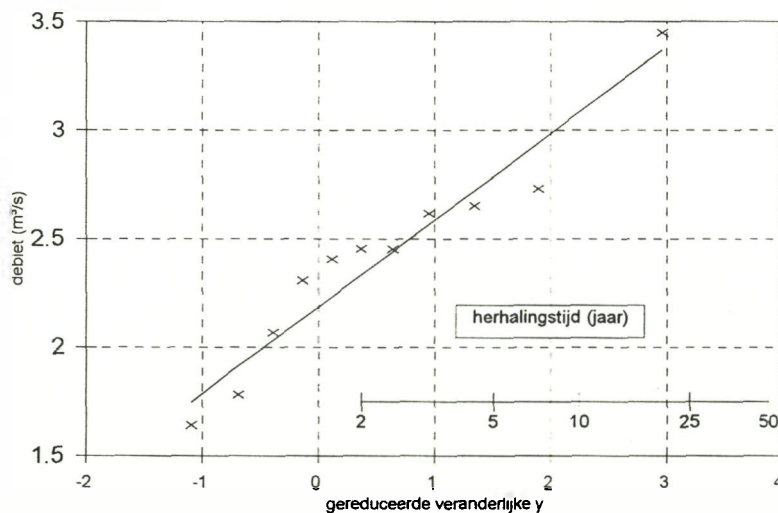


21. Station 513

**De Aabeek
te Bree**

Station nr. 513 : Abeek te Bree

Nr.	Waterjaar	Datum	Hoogte (cm)	Debiet (m³/s)
1	'90 - '91	30/12/90	80	1.642
2	'89 - '90	14/02/90	83	1.782
3	'86 - '87	24/03/87	89	2.067
4	'88 - '89	8/03/89	94	2.308
5	'91 - '92	6/06/92	96	2.406
6	'85 - '86	28/03/86	97	2.454
7	'92 - '93	23/01/93	97	2.454
8	'93 - '94	5/06/94	69	2.618
9	'87 - '88	10/05/88	101	2.651
10	'95 - '96	29/08/96	70	2.730
11	'94 - '95	20/02/95	76	3.449



Herhalingstijd (jaar)	Debiet (m³/s)	Spec. afvoer (l/s.ha)
2	2.331	0.40
5	2.784	0.48
10	3.084	0.53
25	3.463	0.59
50	3.745	0.64

Station 513 : Abeek te Bree

Runoffhoeveelheden

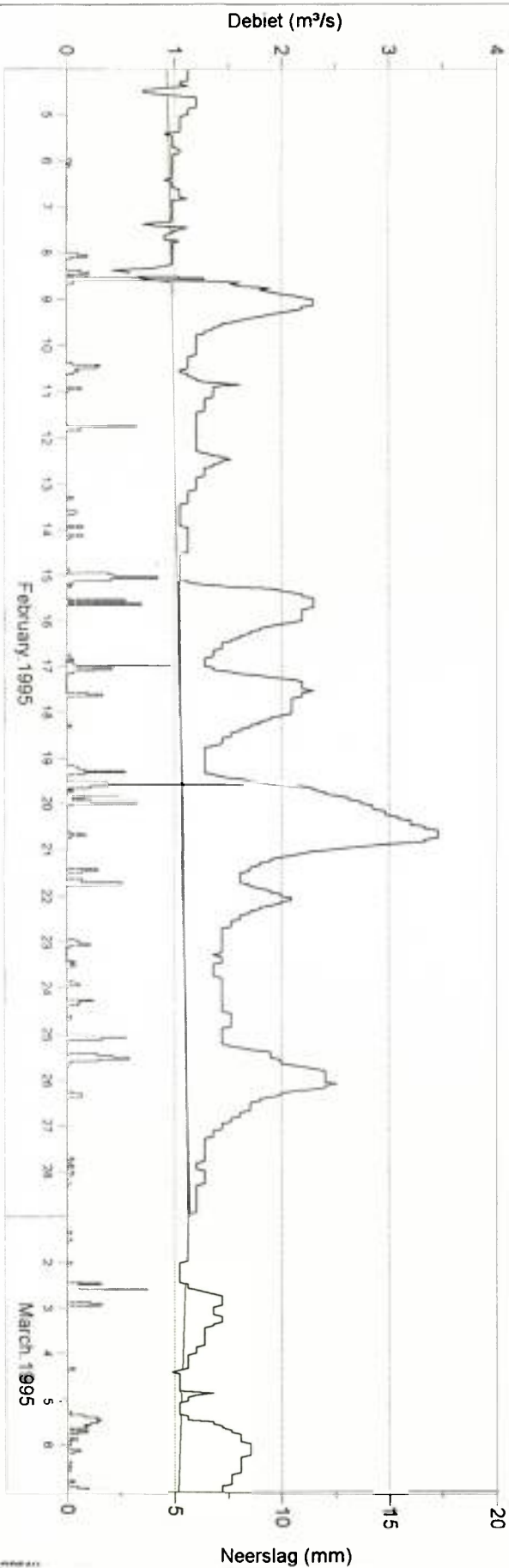
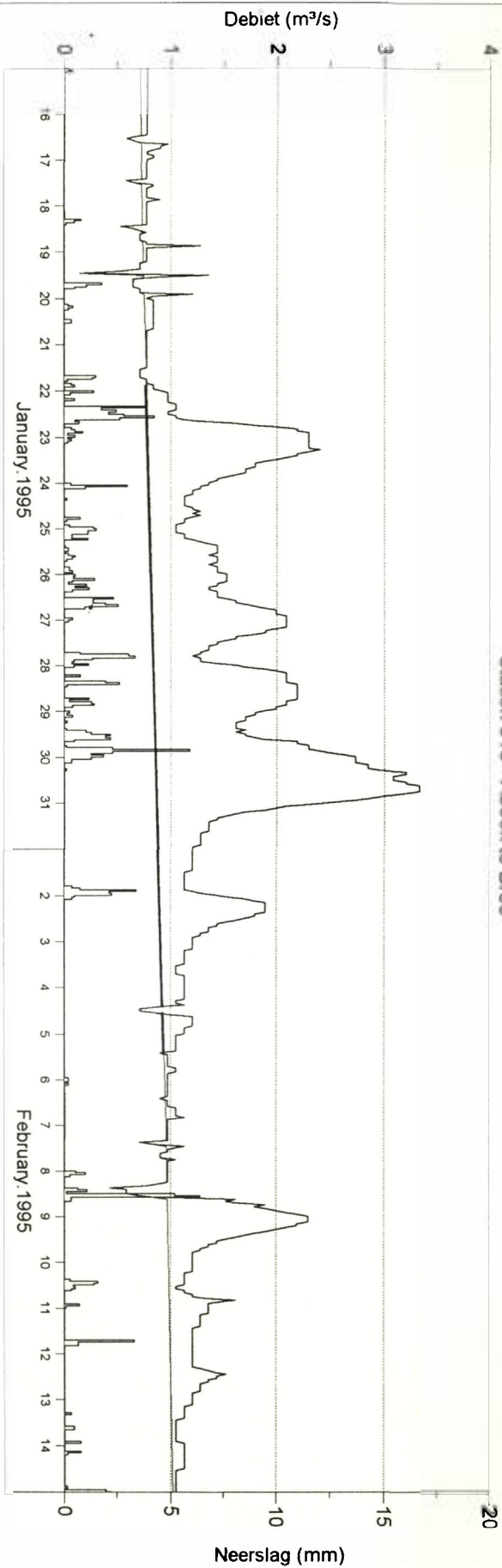
Stroomgebied = 5842 ha

Tijdreeks : 1985 - '96

Nr	Was van (datum Q _{max})	q _{max} (l/s ha)	q _{begin} (l/s ha)	q _{eind} (l/s ha)	Neerslag som (mm)	Neerslag duur (uur)	Concentratie tijd (uur)	Runoff (mm)	Runoff- Coëff. (-)	Runoff duur (uur)
1	30/01/95	0.57	0.12	0.15	119.7	274	41	17.0	0.14	353
2	20/02/95	0.59	0.18	0.19	87.4	276	25	14.1	0.16	333
3	31/12/93	0.39	0.08	0.14	71.4	200	20	9.5	0.13	211
4	28/03/86	0.43	0.08	0.11	79.9	215	22	8.4	0.10	228
5	28/06/85	0.36	0.07	0.07	60.2	175	31	7.9	0.13	228
6	14/04/85	0.43	0.10	0.11	45.2	136	35	7.8	0.17	161
7	27/01/88	0.33	0.11	0.14	61.0	220	27	7.8	0.13	238
8	03/03/87	0.35	0.07	0.12	42.5	97	8	7.7	0.18	160
9	26/03/88	0.36	0.15	0.15	66.6	279	35	7.7	0.12	310
10	23/11/87	0.32	0.11	0.11	65.8	213	29	7.4	0.11	237
11	26/01/85	0.36	0.05	0.11	41.6	241	24	7.1	0.17	232
12	02/01/87	0.33	0.11	0.12	70.2	204	23	6.8	0.10	225
13	23/01/94	0.34	0.11	0.13	53.2	197	26	6.6	0.12	230
14	12/03/88	0.32	0.13	0.16	50.0	149	28	6.3	0.13	175
15	27/12/94	0.36	0.09	0.13	68.0	185	7	6.1	0.09	206
16	29/08/96	0.47	0.04	0.05	93.4	72	19	5.4	0.06	105
17	12/01/93	0.34	0.07	0.09	58.2	194	22	5.3	0.09	237
18	16/07/88	0.35	0.09	0.09	69.0	114	26	5.2	0.07	171
19	20/12/93	0.34	0.09	0.11	62.1	141	17	5.1	0.08	167
20	22/10/86	0.34	0.07	0.07	80.6	111	26	4.5	0.06	147
21	23/01/93	0.43	0.08	0.09	51.3	148	23	4.5	0.09	153
22	24/03/87	0.36	0.12	0.15	41.1	103	28	4.2	0.10	102
23	15/01/86	0.28	0.07	0.10	35.4	142	19	4.0	0.11	177
24	10/05/88	0.46	0.13	0.13	83.0	32	11	4.0	0.05	71
25	07/10/87	0.34	0.07	0.08	54.0	79	19	4.0	0.07	109
26	17/03/89	0.34	0.11	0.12	32.9	104	23	3.7	0.11	137
27	22/04/86	0.28	0.09	0.10	29.2	106	22	3.5	0.12	137
28	19/01/86	0.36	0.11	0.12	33.4	59	19	3.4	0.10	72
29	01/03/88	0.32	0.13	0.15	33.0	132	16	3.3	0.10	149
30	08/03/89	0.40	0.11	0.14	34.1	22	22	3.2	0.09	65

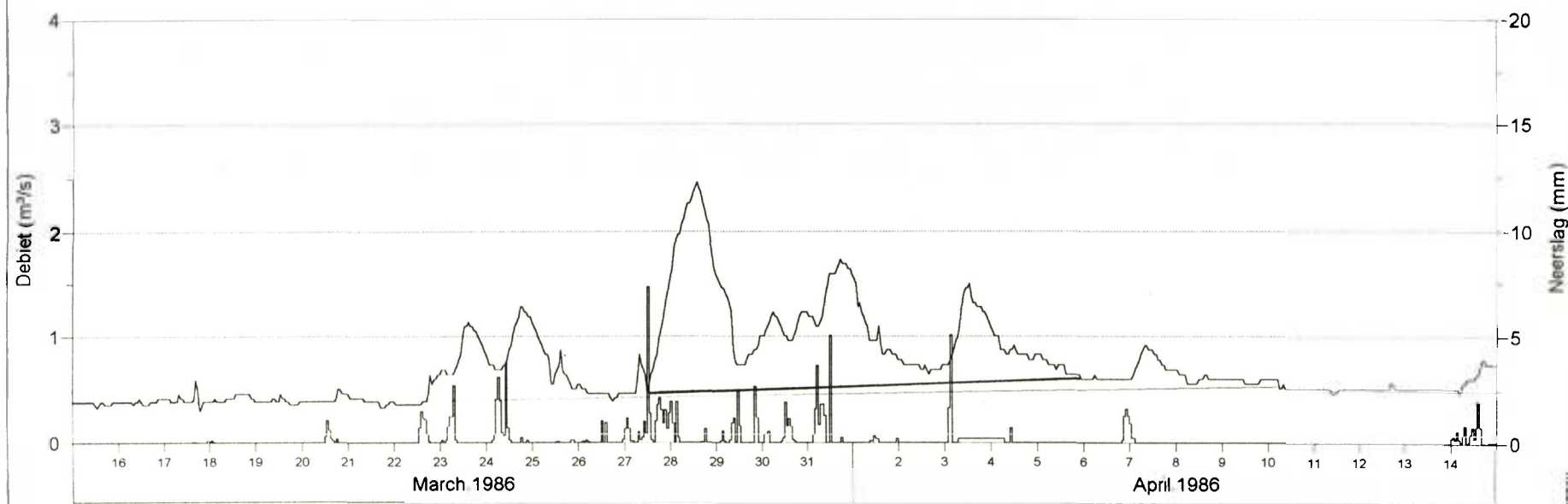
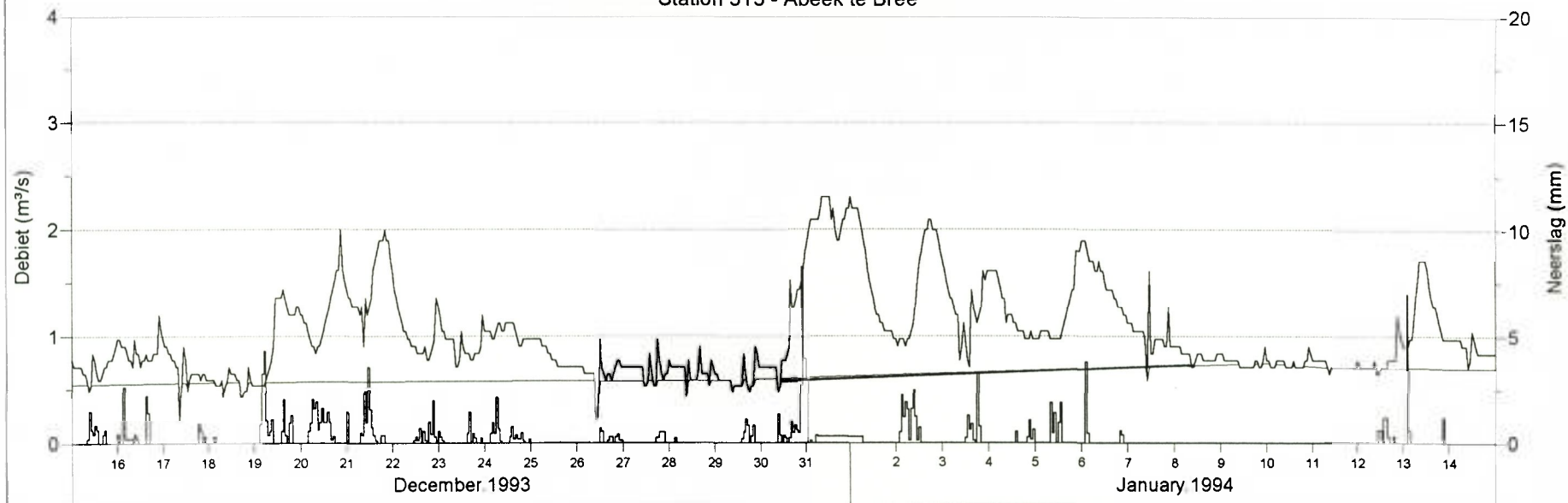
Uurwaarden van neerslag, debiet en basisafvoer

Station 513 - Abbeek te Bree



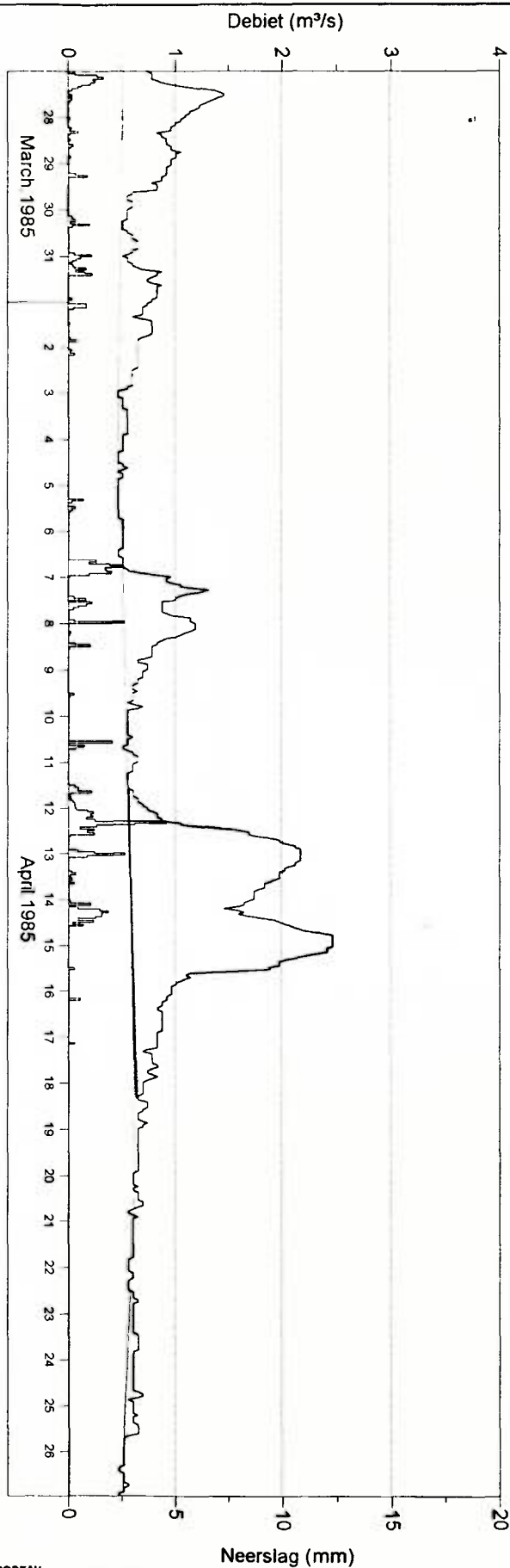
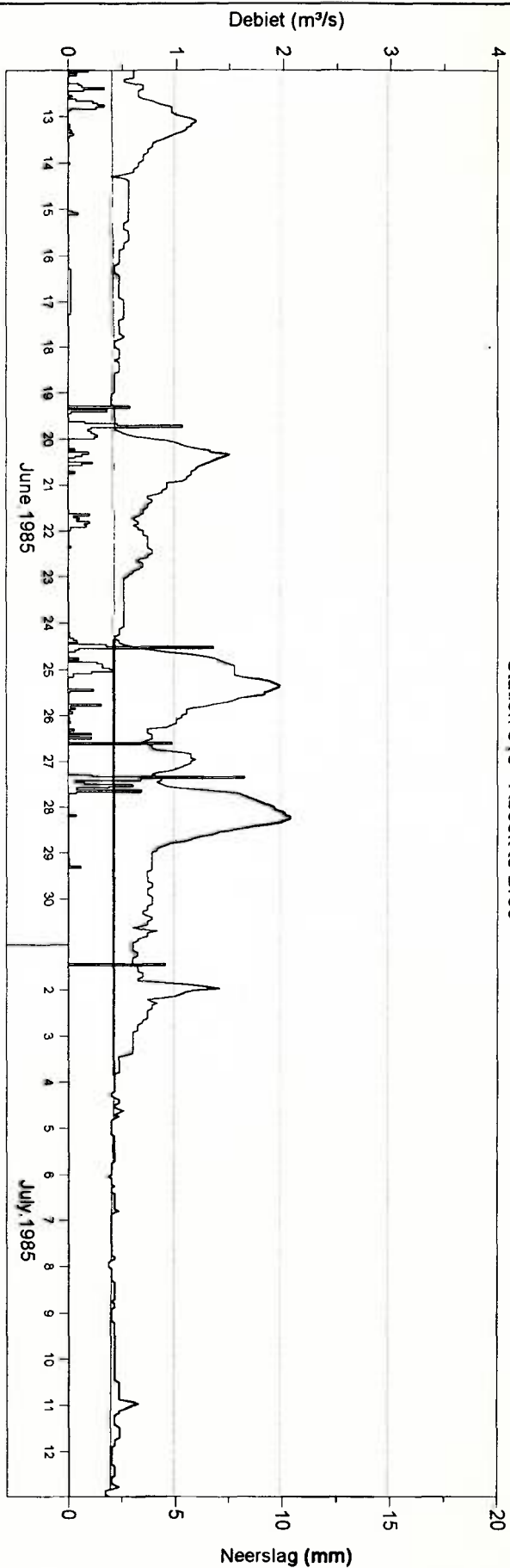
Uurwaarden van neerslag, debiet en basisafvoer

Station 513 - Abeek te Bree



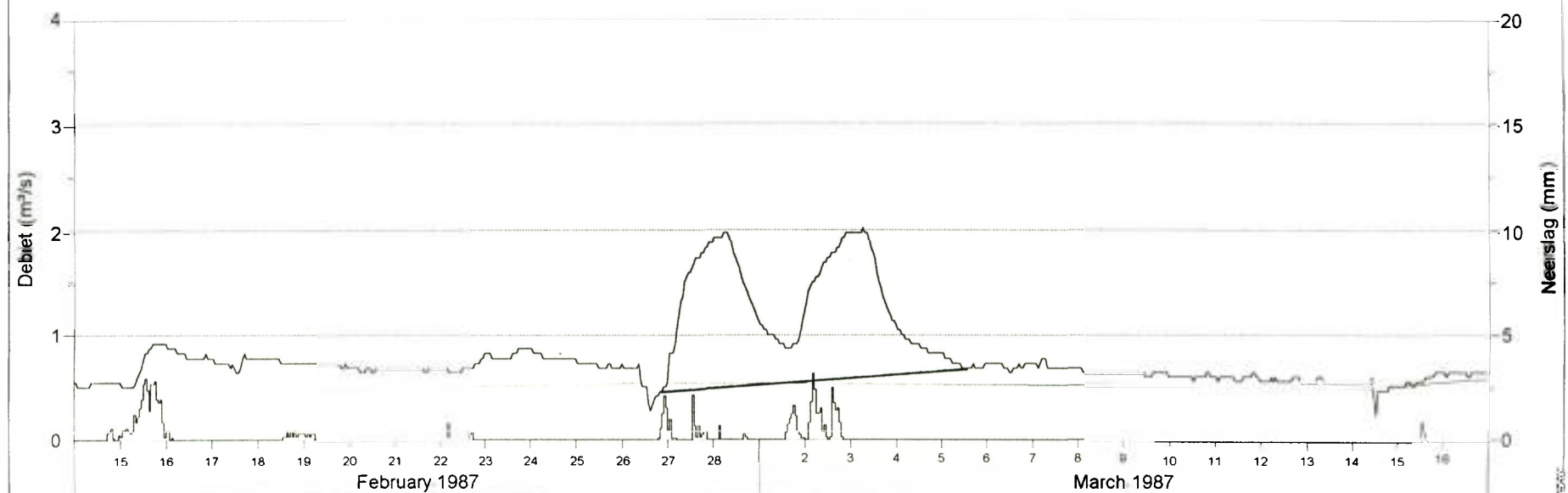
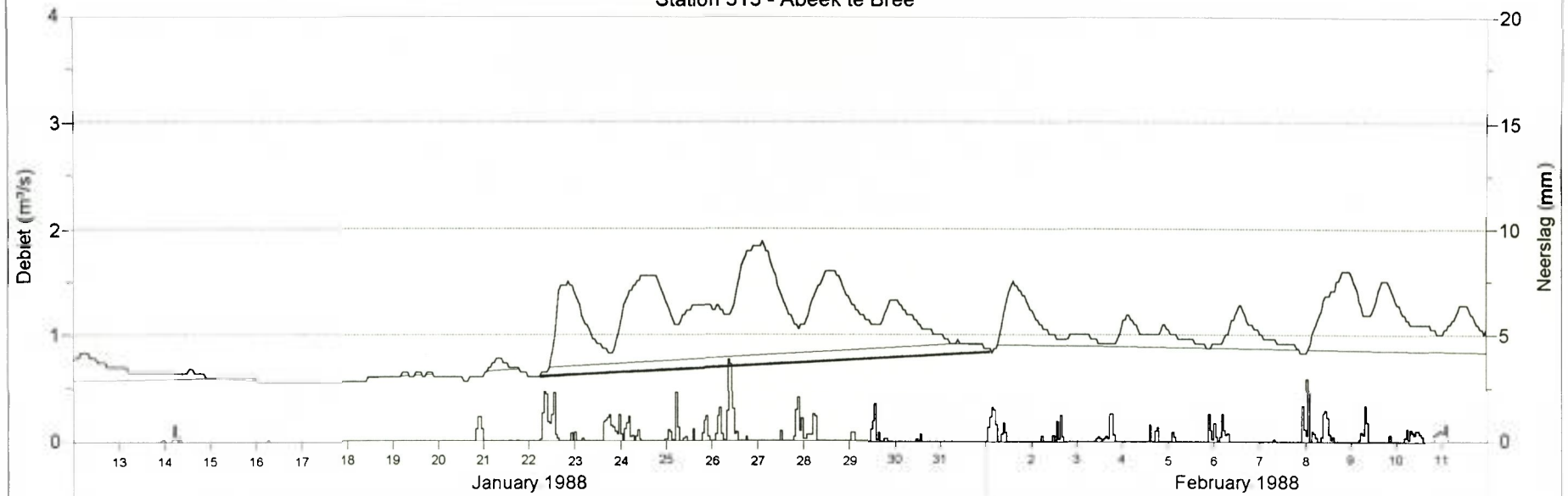
Uurwaarden van neerslag, debiet en basisafvoer

Station 513 - Abeek te Bree



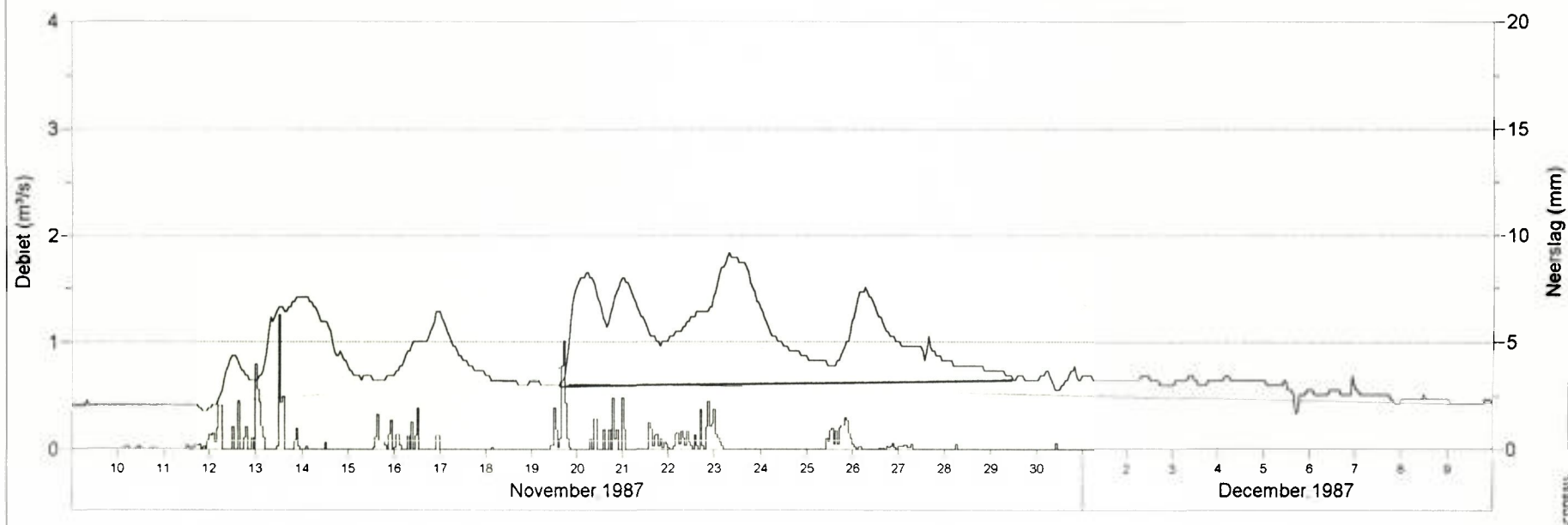
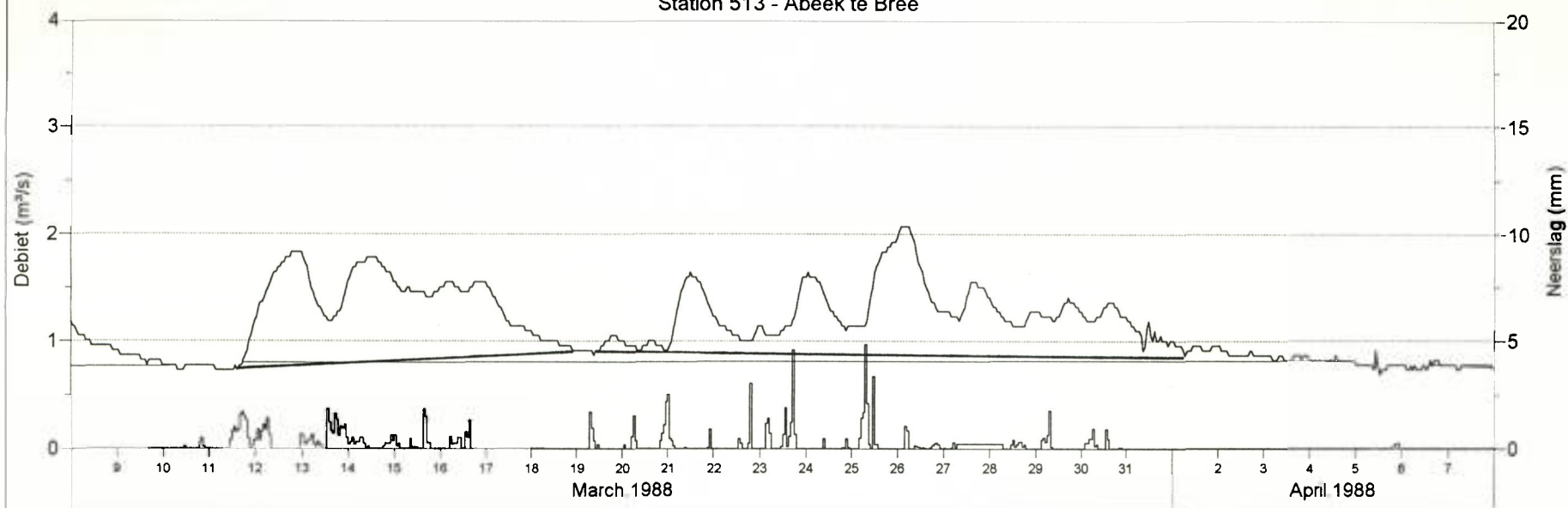
Uurwaarden van neerslag, debiet en basisafvoer

Station 513 - Abeek te Bree

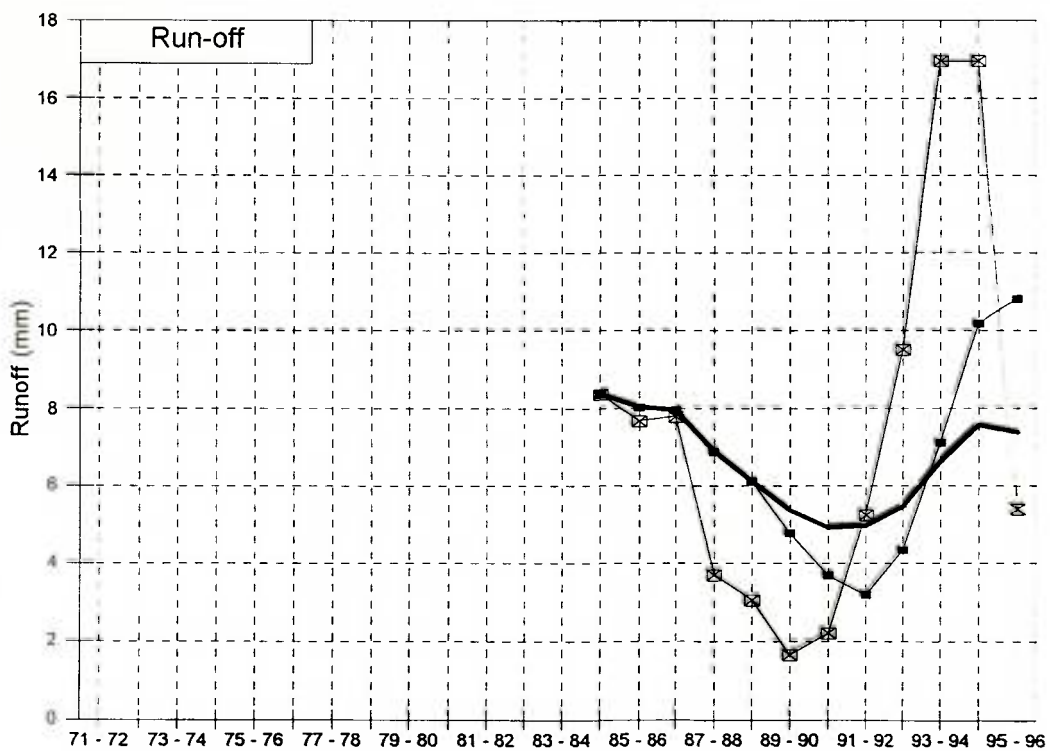
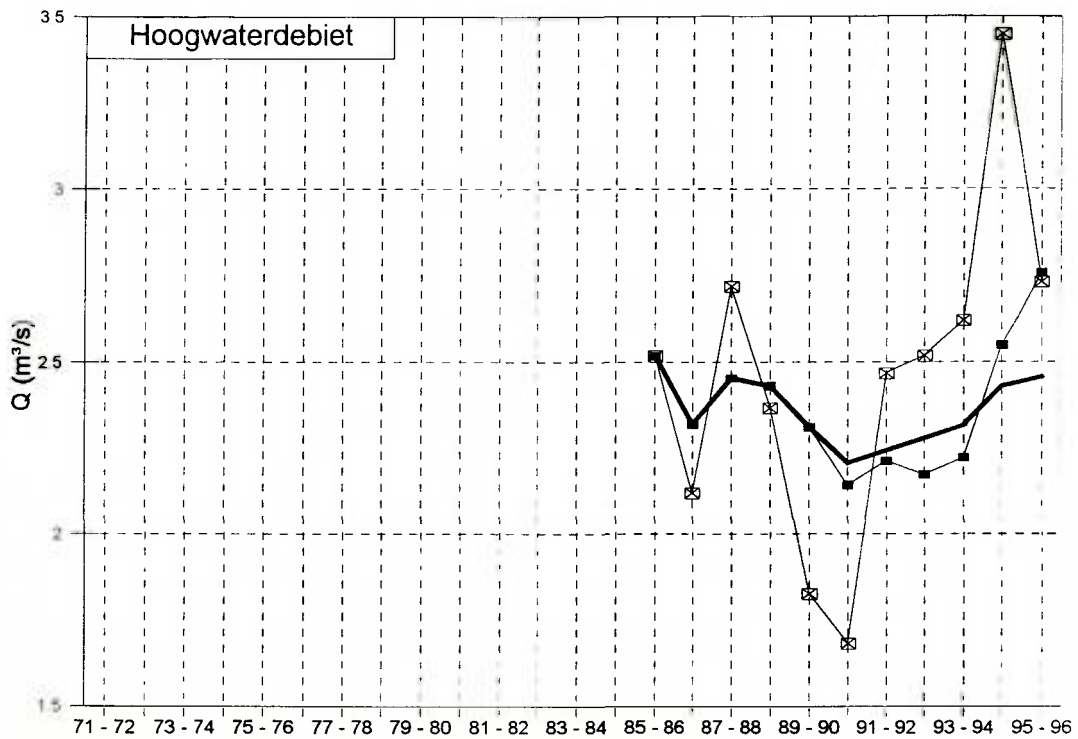


Uurwaarden van neerslag, debiet en basisafvoer

Station 513 - Abeek te Bree



Station 513 : A-beek / Bree

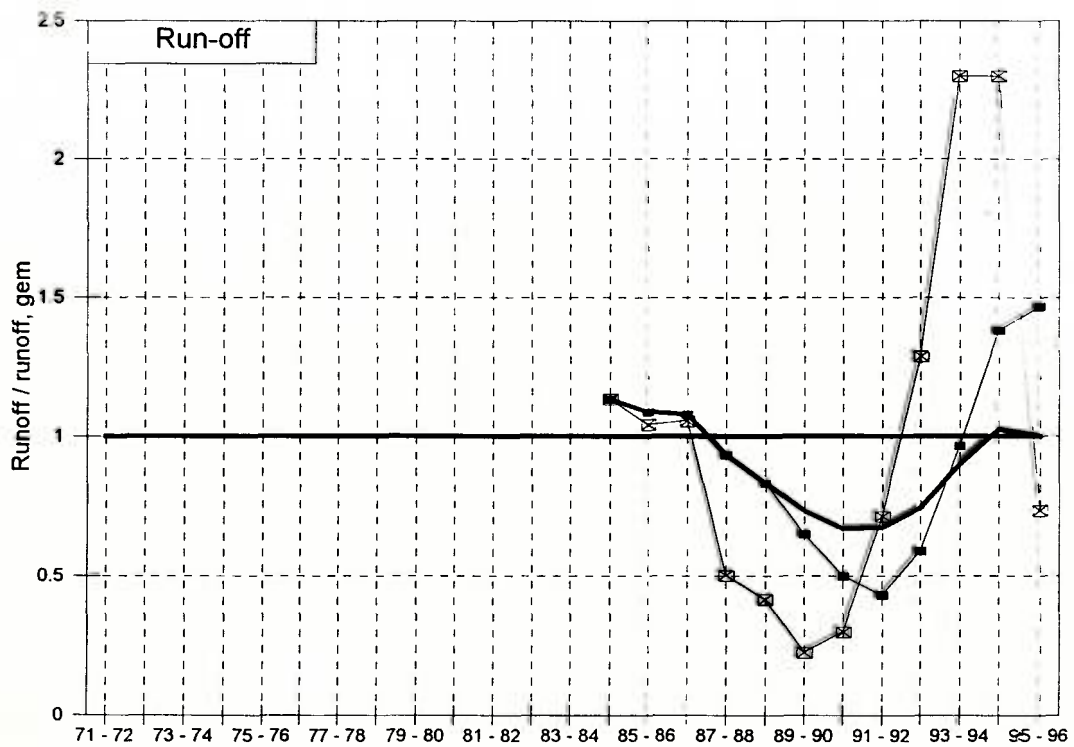
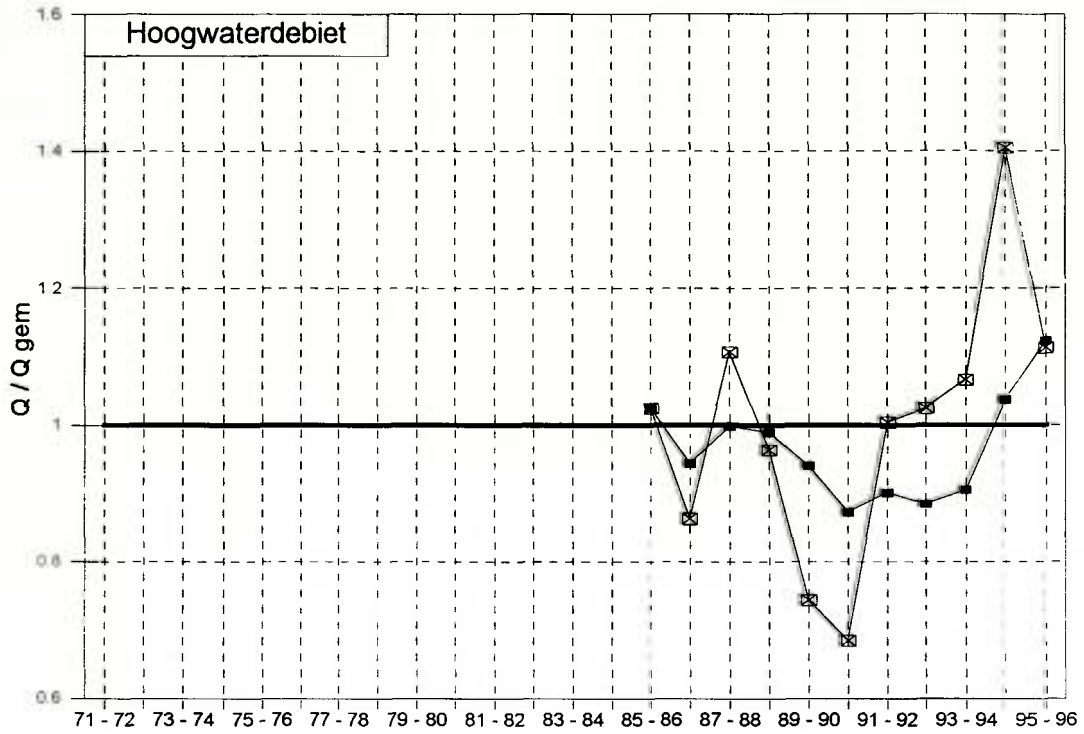


— doorlopend gemiddelde

—x— Jaarmaxima

—■— 5-jaargemiddelde

Station 513 : A-beek / Bree

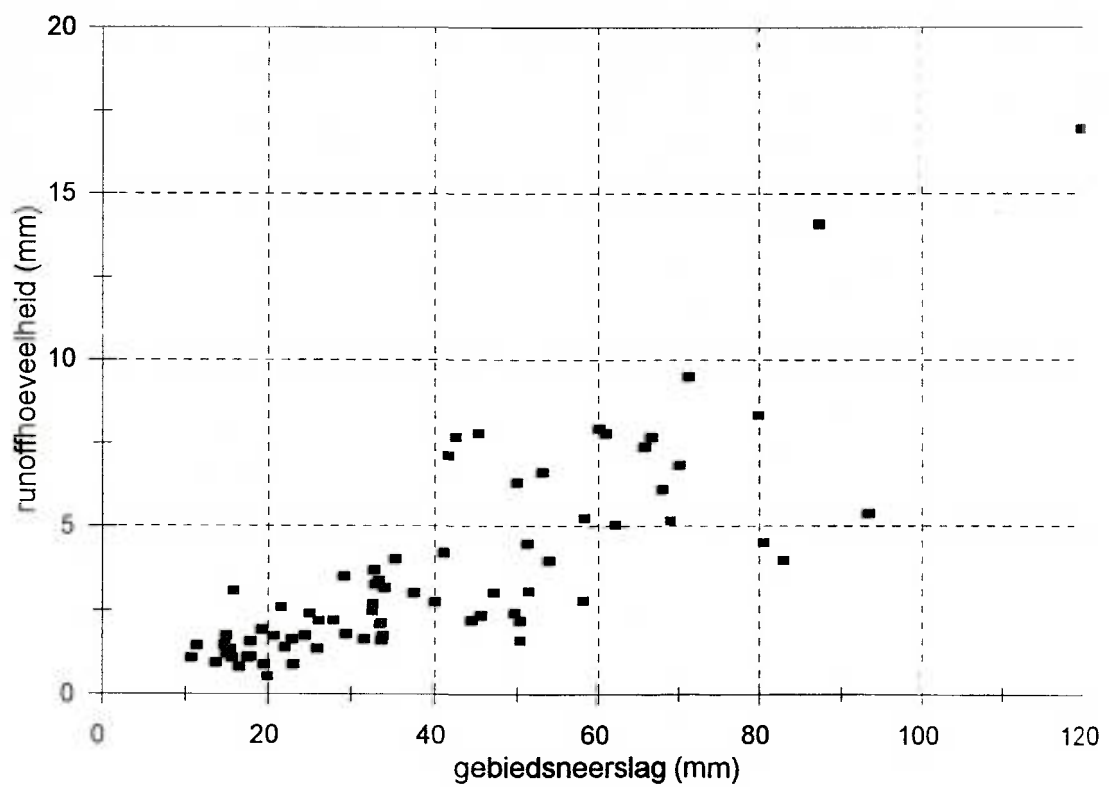
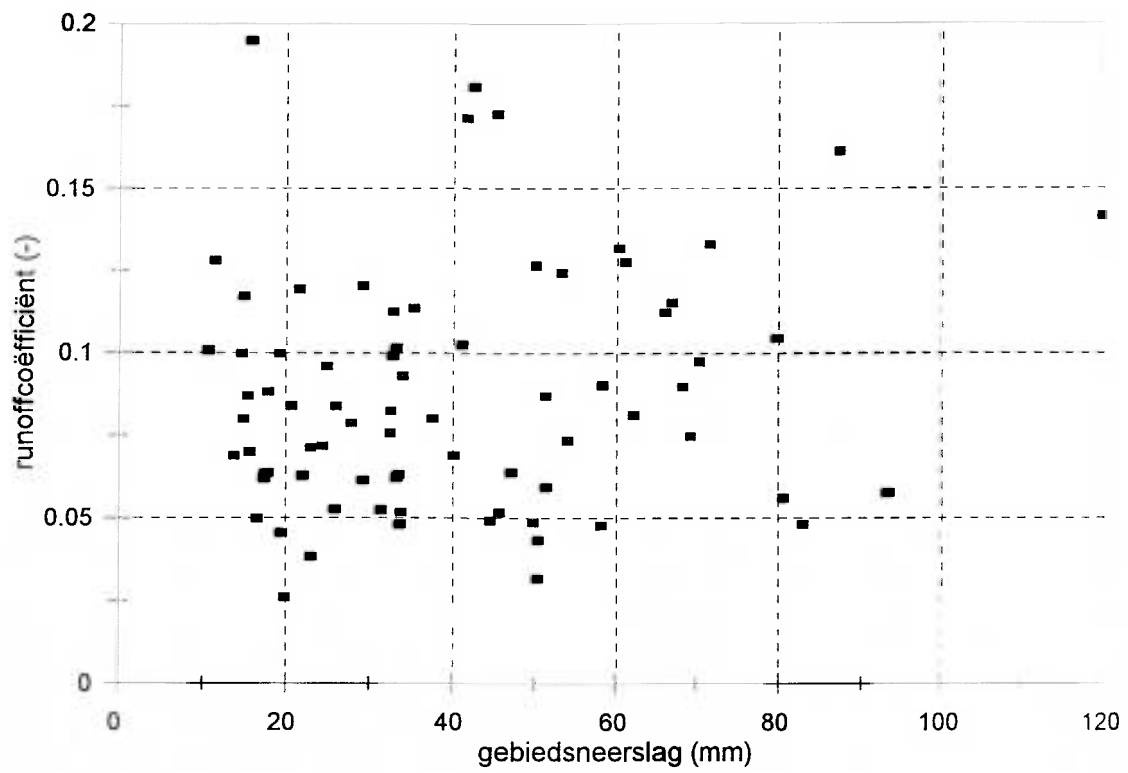


— doorlopend gemiddelde

—■— Jaarmaxima

—■— 5-jaargemiddelde

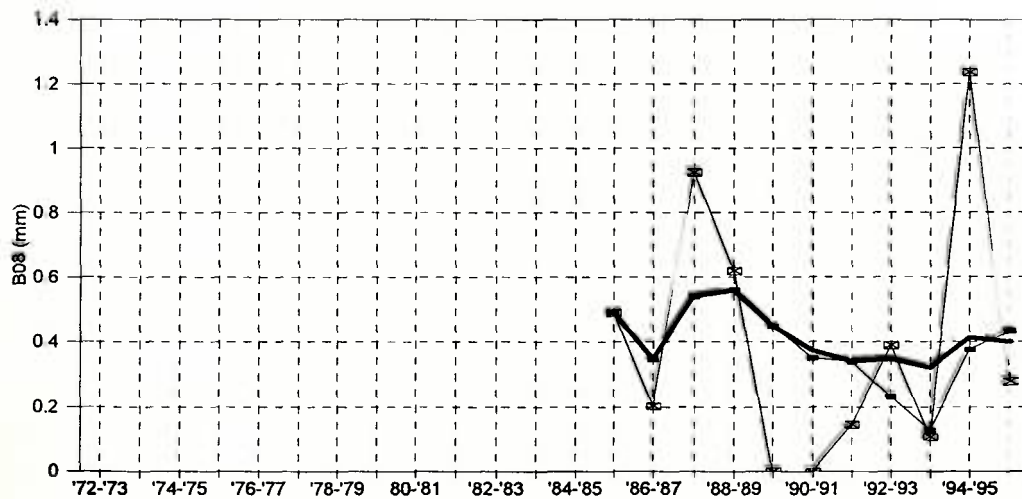
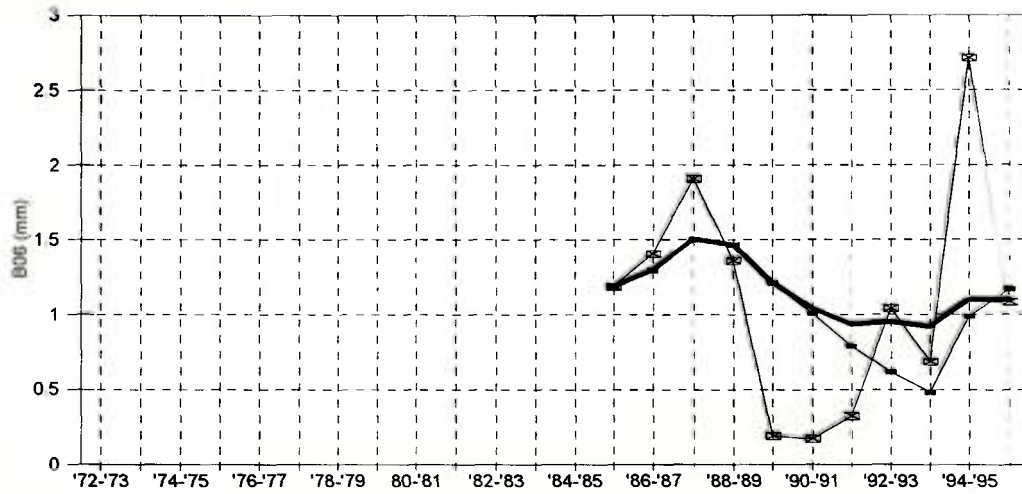
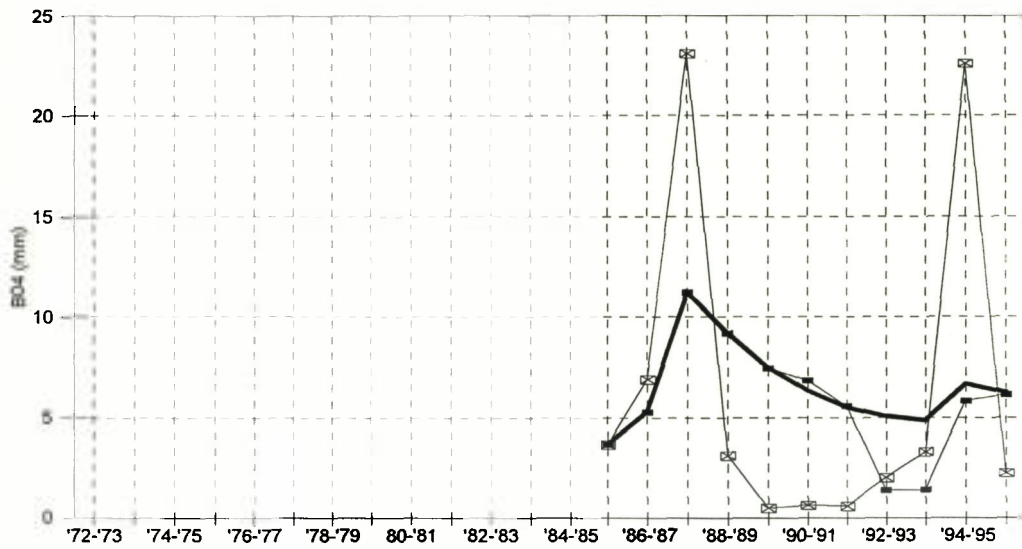
Station 513 : Abeek / Bree



Jaarmaxima van bergingen					
Station 513 : Abeek / Bree			Gemidd.jaarmax. : 2.933 m³/s		
Waterjaar	piekdebiet		berging		
	(m³/s)	datum	(mm)	(uur)	datum
Bergingen boven 0,4 . Qgem					
'85 -'86	2.454	28/03/86	3.64	398	04/04/86
'86 -'87	2.067	24/03/87	6.88	955	13/04/87
'87 -'88	2.651	10/05/88	23.09	3521	02/04/88
'88 -'99	2.308	09/03/89	3.10	558	18/03/89
'89 -'90	1.782	14/02/90	0.49	61	14/02/90
'90 -'91	1.642	30/12/90	0.62	50	30/12/90
'91 -'92	2.406	06/06/92	0.58	33	06/06/92
'92 -'93	2.454	23/01/93	2.00	182	24/01/93
'93 -'94	2.294	01/01/94	3.28	318	06/01/94
'94 -'95	3.449	20/02/95	22.59	2646	09/03/95
'95 -'96	2.730	29/08/96	2.21	91	30/08/96
Bergingen boven 0,5 . Qgem					
'85 -'86	2.454	28/03/86	1.96	228	01/04/86
'86 -'87	2.020	03/03/87	2.91	239	03/03/87
'87 -'88	2.067	26/03/88	6.08	784	31/03/88
'88 -'99	2.308	09/03/89	1.82	126	09/03/89
'89 -'90	1.782	14/02/90	0.32	23	14/02/90
'90 -'91	1.642	30/12/90	0.37	31	30/12/90
'91 -'92	2.406	06/06/92	0.43	21	06/06/92
'92 -'93	2.454	23/01/93	1.44	97	23/01/93
'93 -'94	2.294	01/01/94	1.31	136	01/01/94
'94 -'95	3.449	20/02/95	6.87	660	26/02/95
'95 -'96	2.730	29/08/96	1.59	62	30/08/96
Bergingen boven 0,6 . Qgem					
'85 -'86	2.454	28/03/86	1.19	123	29/03/86
'86 -'87	2.020	03/03/87	1.41	154	03/03/87
'87 -'88	2.651	10/05/88	1.91	100	11/05/88
'88 -'99	2.308	09/03/89	1.36	77	09/03/89
'89 -'90	1.782	14/02/90	0.19	14	14/02/90
'90 -'91	1.642	30/12/90	0.17	19	30/12/90
'91 -'92	2.406	06/06/92	0.32	16	06/06/92
'92 -'93	2.454	23/01/93	1.04	65	23/01/93
'93 -'94	2.294	01/01/94	0.69	50	01/01/94
'94 -'95	3.324	30/01/95	2.71	169	31/01/95
'95 -'96	2.730	29/08/96	1.08	44	30/08/96

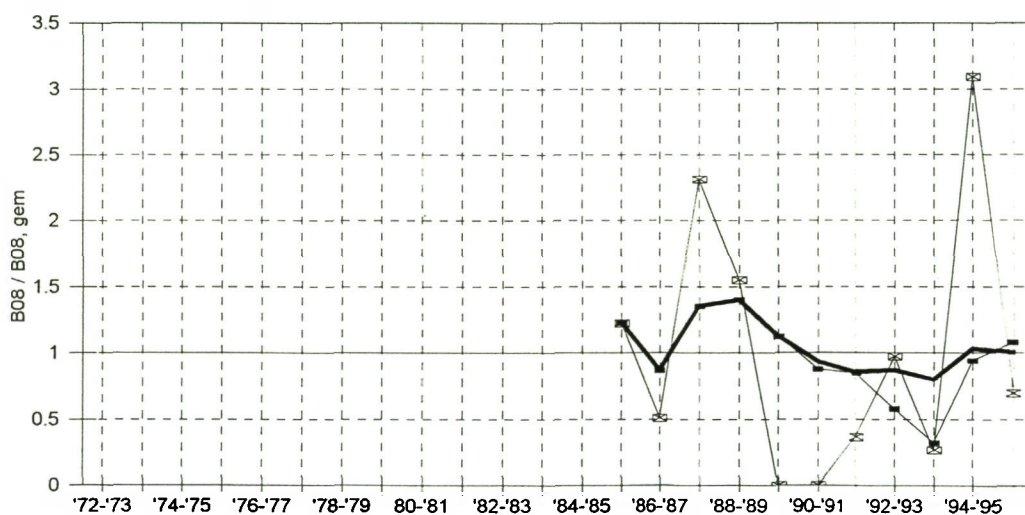
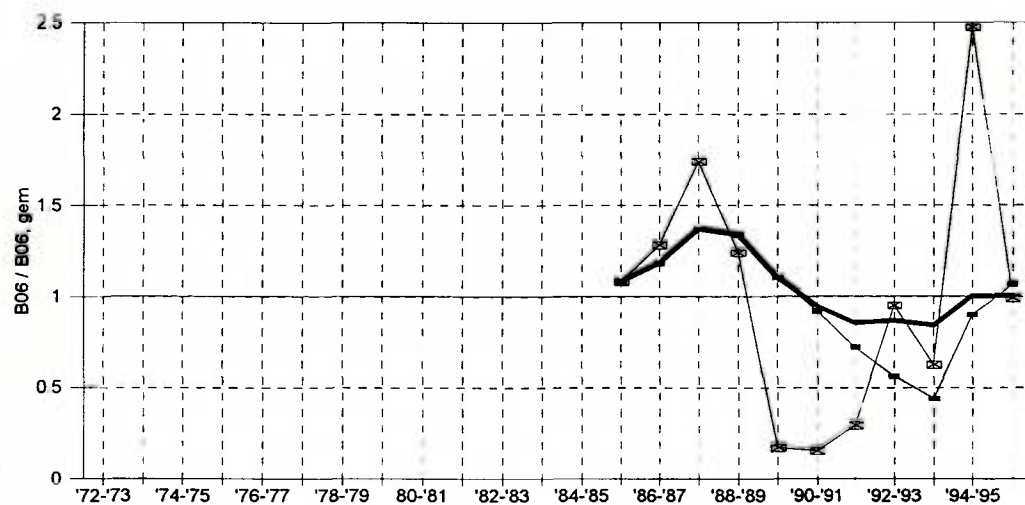
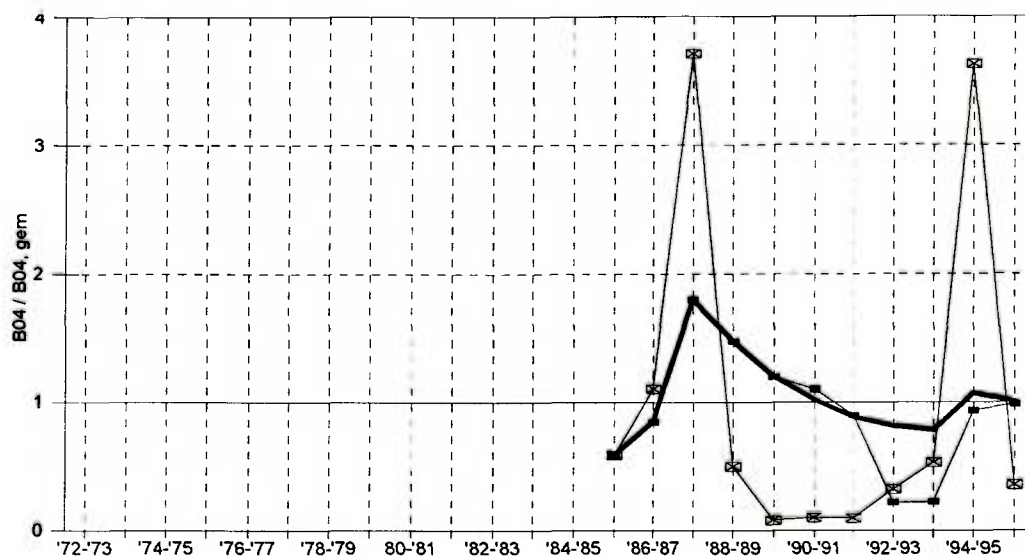
Jaarmaxima van bergingen					
Station 513 : Abeek / Bree			Gemidd jaarmax : 2 933 m³/s		
Waterjaar	piekdebiet		berging		
	(m³/s)	datum	(mm)	(uur)	datum
Bergingen boven 0,7 · Qgem					
'85 -'86	2 454	28/03/86	0 79	47	29/03/86
'86 -'87	2 067	24/03/87	0 60	75	25/03/87
'87 -'88	2 651	10/05/88	1 31	61	10/05/88
'88 -'99	2 308	09/03/89	0 97	55	09/03/89
'89 -'90	1 782	14/02/90	0 07	8	14/02/90
'90 -'91	1 642	30/12/90	0 02	7	30/12/90
'91 -'92	2 406	06/06/92	0 23	11	06/06/92
'92 -'93	2 454	23/01/93	0 70	46	23/01/93
'93 -'94	2 618	05/06/94	0 28	17	05/06/94
'94 -'95	3 449	20/02/95	1 86	103	21/02/95
'95 -'96	2 730	29/08/96	0 64	34	30/08/96
Bergingen boven 0,8 · Qgem					
'85 -'86	2 454	28/03/86	0 49	34	28/03/86
'86 -'87	2 067	24/03/87	0 20	35	25/03/87
'87 -'88	2 651	10/05/88	0 92	47	10/05/88
'88 -'99	2 308	09/03/89	0 62	40	09/03/89
'89 -'90	1 782	14/02/90	0 00	2	14/02/90
'90 -'91			0 00	0	
'91 -'92	2 406	06/06/92	0 15	8	06/06/92
'92 -'93	2 454	23/01/93	0 39	32	23/01/93
'93 -'94	2 618	05/06/94	0 11	11	05/06/94
'94 -'95	3 449	20/02/95	1 24	67	21/02/95
'95 -'96	2 730	29/08/96	0 28	24	30/08/96

Station 513 : A-beek / Bree



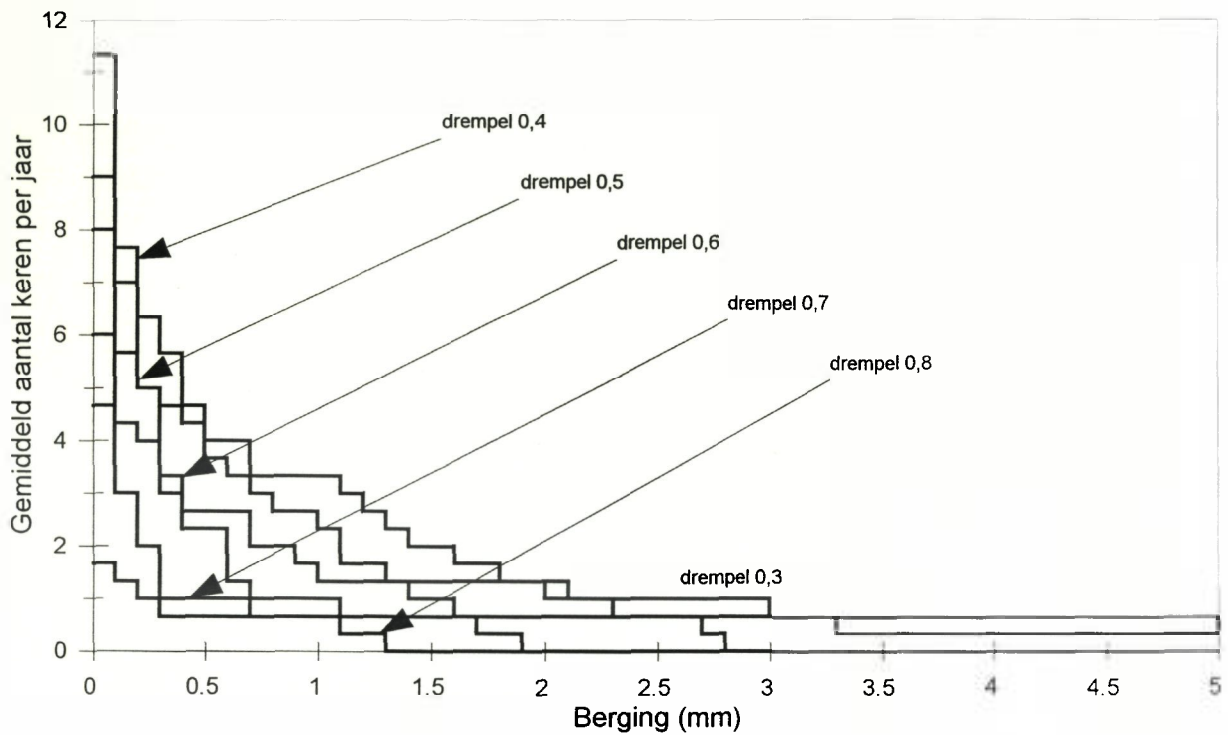
— doorlopend gemiddelde —■— Jaarmaxima —●— 5-jaargemiddelde

Station 513 : A-beek / Bree

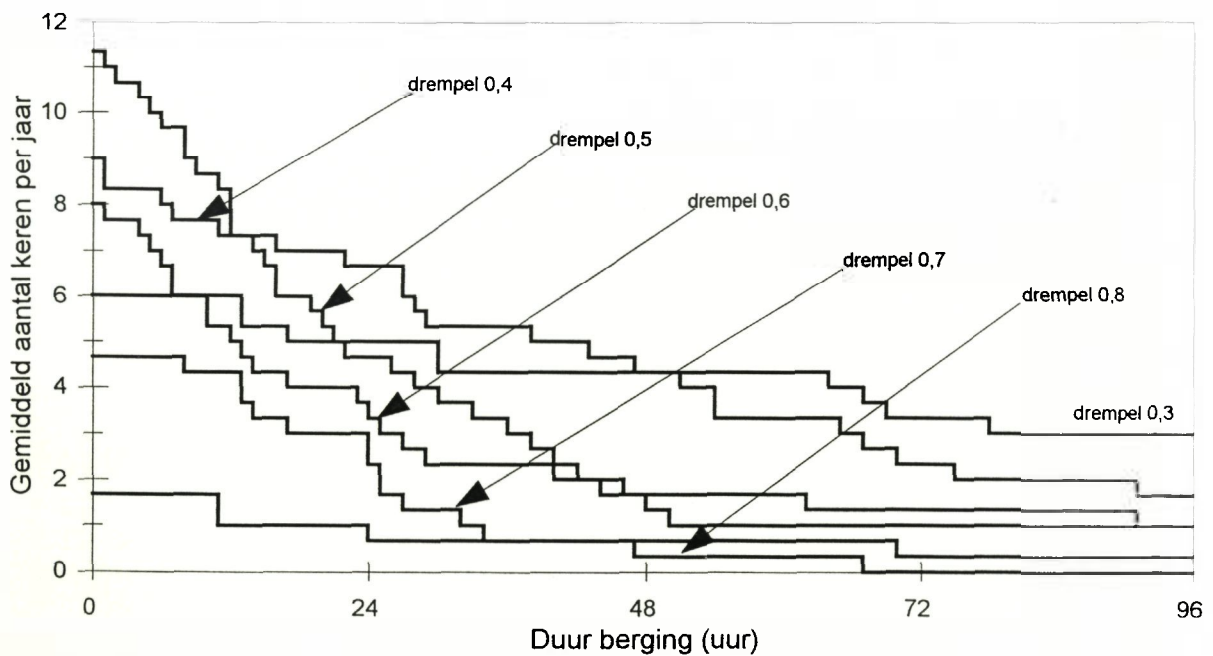


— doorlopend gemiddelde —■— Jaarmaxima —x— 5-jaargemiddelde

Station 513 - Abeek te Bree



Station 513 - Abeek te Bree

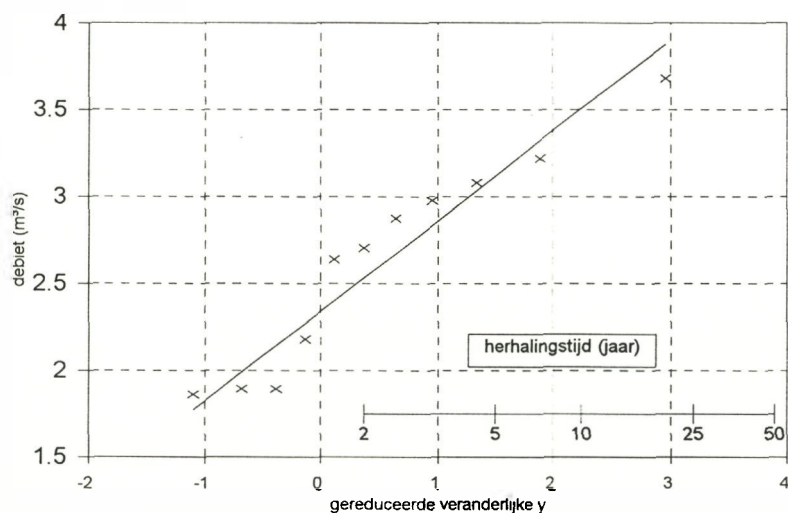


22. Station 517

**De Witbeek
te Kessenich**

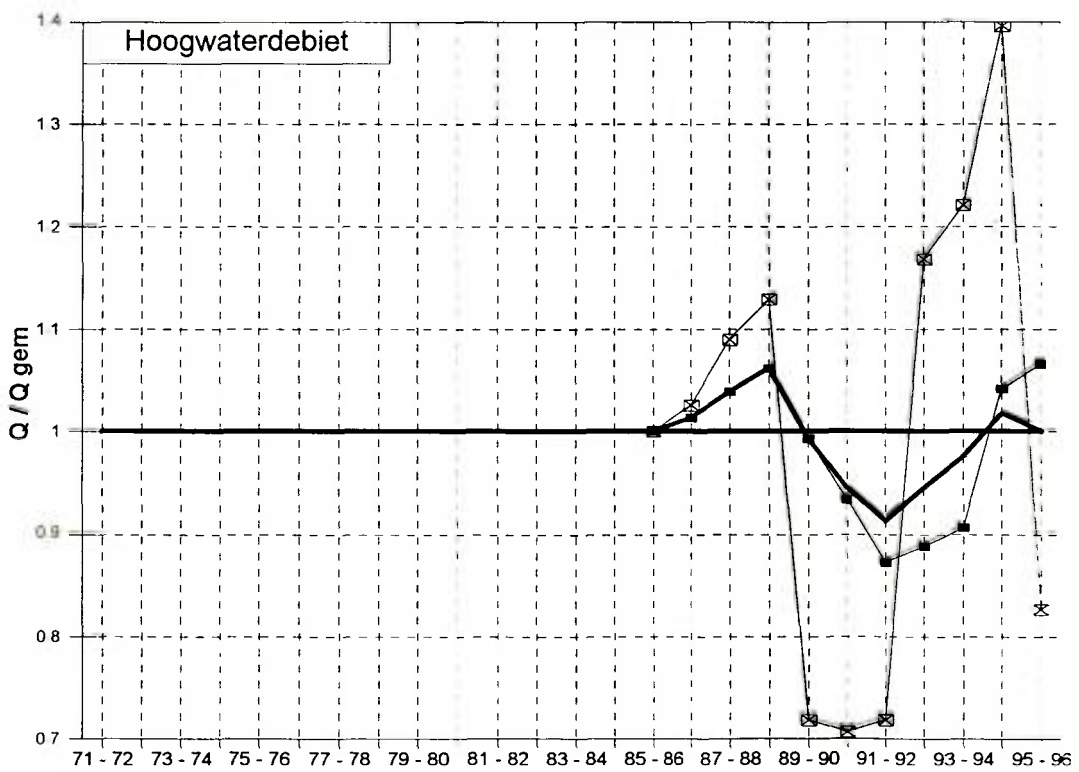
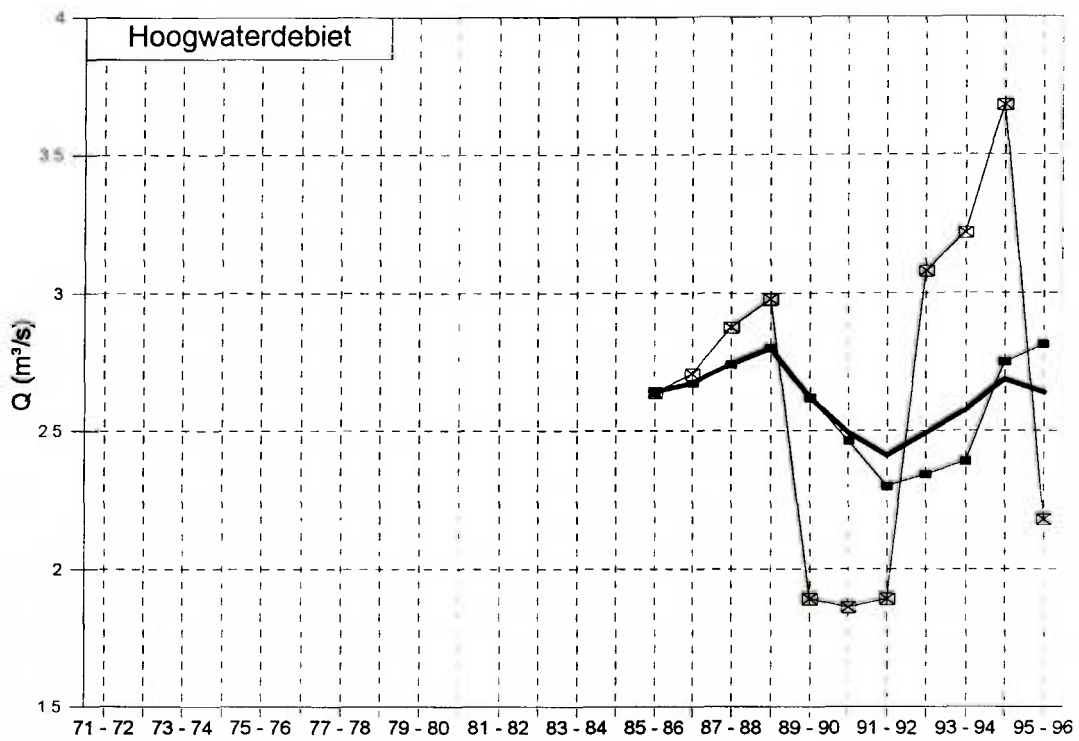
Station nr. 517 : Witbeek te Kessenich

Nr.	Waterjaar	Datum	Hoogte (cm)	Debiet (m³/s)
1	'90 - '91	30/12/90	74	1.862
2	'91 - '92	9/06/92	75	1.893
3	'89 - '90	1/03/90	75	1.893
4	'95 - '96	28/09/95	84	2.179
5	'85 - '86	19/01/86	98	2.638
6	'86 - '87	2/03/87	100	2.705
7	'87 - '88	26/03/88	105	2.874
8	'88 - '89	9/03/89	108	2.976
9	'92 - '93	23/01/93	111	3.080
10	'93 - '94	31/12/93	115	3.219
11	'94 - '95	30/01/95	128	3.680



Herhalingstijd (jaar)	Debiet (m³/s)	Spec. afvoer (l/s.ha)
2	2.527	0.28
5	3.115	0.34
10	3.504	0.39
25	3.997	0.44
50	4.362	0.48

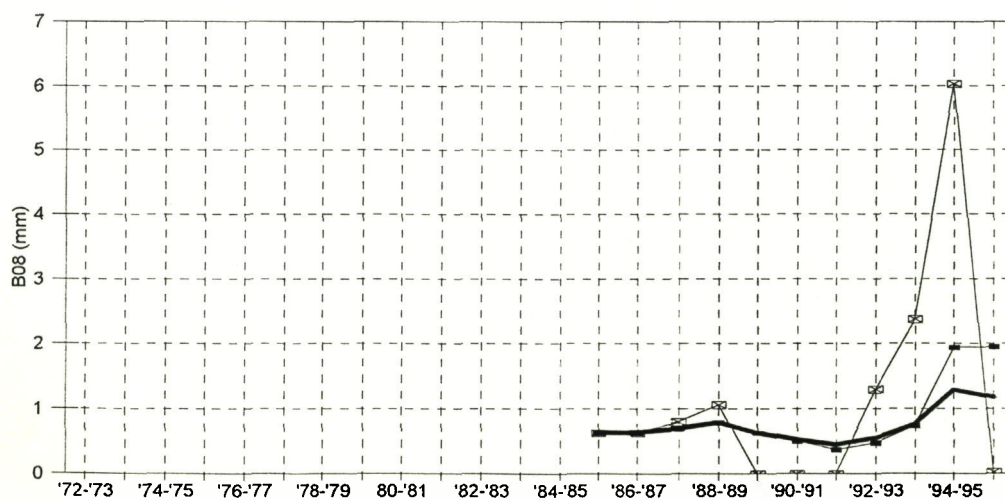
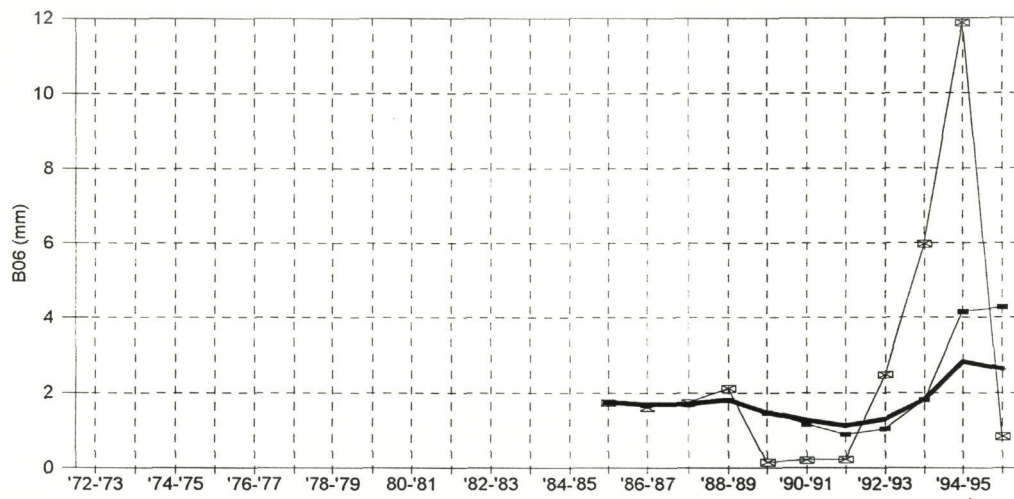
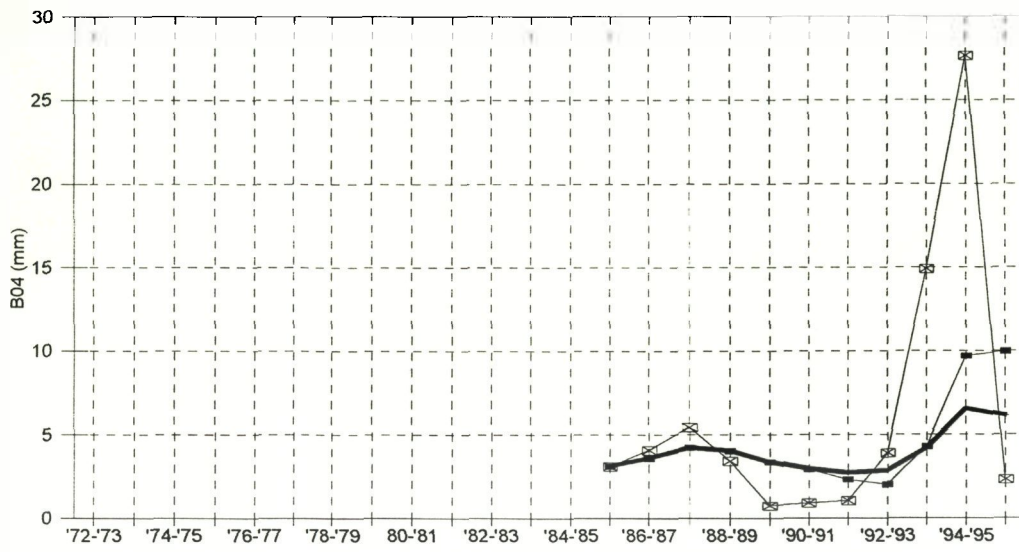
Station 517 : Witbeek / Kessenich



Jaarmaxima van bergingen					
Station 517 : Witbeek / Kessenich			Gemidd jaarmax : 2.636		
Waterjaar	piekdebiet		berging		
	(m³/s)	datum	(mm)	(uur)	datum
Bergingen boven 0,3 Qgem					
'85 -'86	2.638	20/01/86	3.90	292	20/01/86
'86 -'87	2.705	03/03/87	6.08	314	03/03/87
'87 -'88	2.874	26/03/88	11.41	793	28/03/88
'88 -'99	2.976	09/03/89	5.32	469	18/03/89
'89 -'90	1.893	01/03/90	1.18	79	02/03/90
'90 -'91	1.862	30/12/90	1.33	71	30/12/90
'91 -'92	1.831	22/12/91	1.64	88	23/12/91
'92 -'93	3.080	23/01/93	4.89	281	25/01/93
'93 -'94	3.219	31/12/93	24.82	3126	07/01/94
'94 -'95	3.680	30/01/95	42.77	992	26/02/95
'95 -'96	2.179	28/09/95	22.58	3790	11/10/95
Bergingen boven 0,4 Qgem					
'85 -'86	2.638	20/01/86	3.11	140	20/01/86
'86 -'87	2.705	03/03/87	4.10	202	03/03/87
'87 -'88	2.874	26/03/88	5.45	509	17/03/88
'88 -'99	2.976	09/03/89	3.45	156	09/03/89
'89 -'90	1.893	01/03/90	0.75	45	01/03/90
'90 -'91	1.862	30/12/90	0.90	43	30/12/90
'91 -'92	1.831	22/12/91	1.04	55	23/12/91
'92 -'93	3.080	23/01/93	3.89	160	24/01/93
'93 -'94	3.219	31/12/93	14.89	1157	07/01/94
'94 -'95	3.680	30/01/95	27.64	991	25/02/95
'95 -'96	2.179	28/09/95	2.31	368	29/09/95
Bergingen boven 0,5 Qgem					
'85 -'86	2.638	20/01/86	2.39	80	20/01/86
'86 -'87	2.705	02/01/87	2.21	79	03/01/87
'87 -'88	2.439	12/03/88	3.24	182	17/03/88
'88 -'99	2.976	09/03/89	2.75	98	09/03/89
'89 -'90	1.893	01/03/90	0.41	28	01/03/90
'90 -'91	1.862	30/12/90	0.52	30	30/12/90
'91 -'92	1.831	22/12/91	0.55	38	22/12/91
'92 -'93	3.080	23/01/93	3.15	106	24/01/93
'93 -'94	3.219	31/12/93	8.69	376	07/01/94
'94 -'95	3.680	30/01/95	16.69	990	03/02/95
'95 -'96	2.179	28/09/95	1.47	112	28/09/95

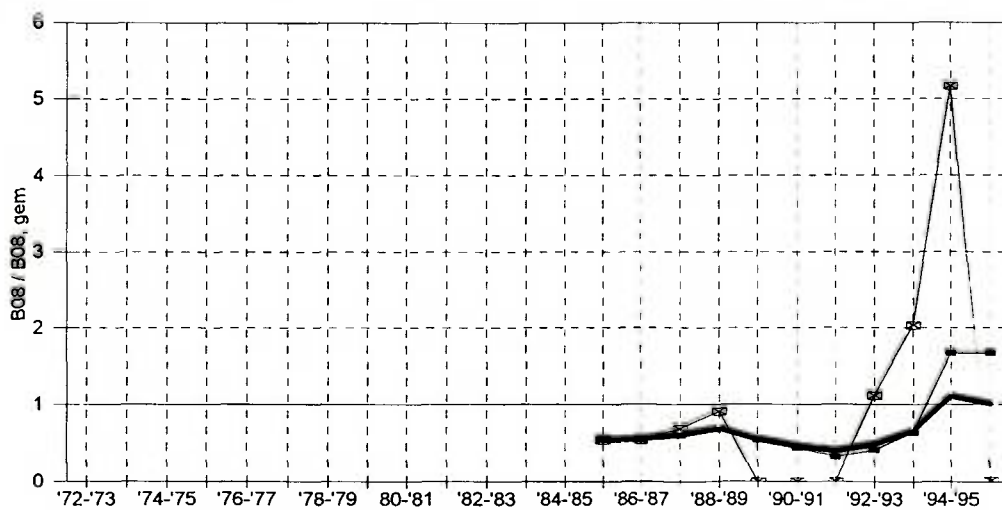
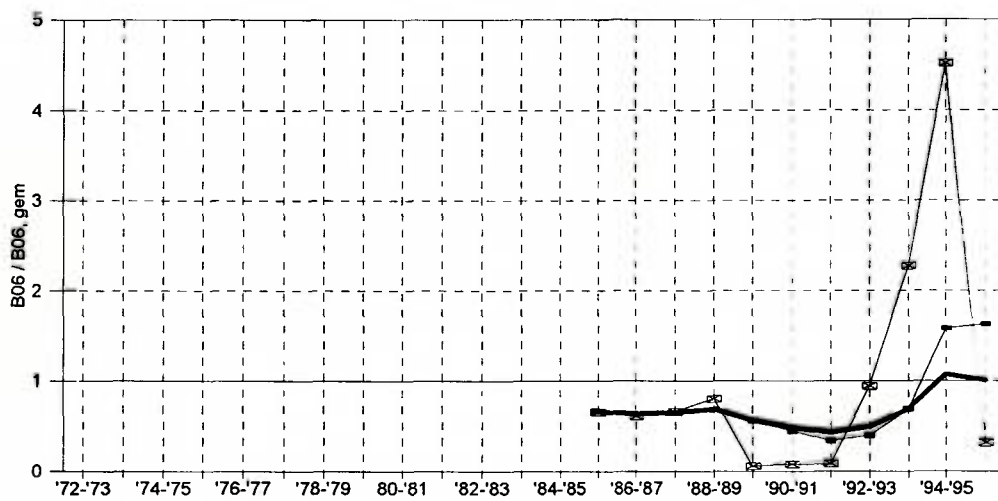
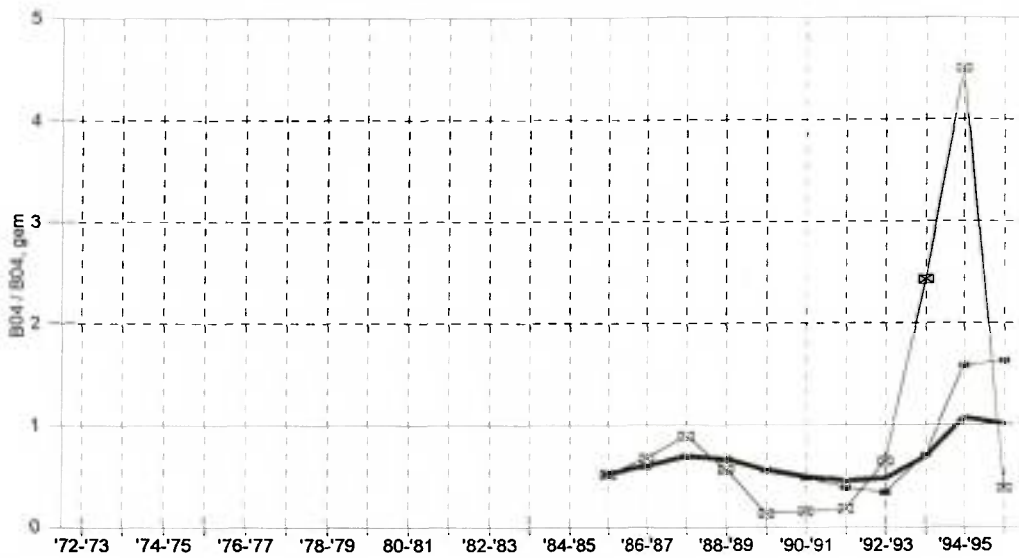
Jaarmaxima van bergingen					
Station 517 Witbeek / Kessenich			Gemidd. jaarmax : 2 636		
Waterjaar	piekdebiet		berging		
	(m ³ /s)	datum	(mm)	(uur)	datum
Bergingen boven 0,6 - Qgem					
'85 -'86	2 638	20/01/86	1.73	60	20/01/86
'86 -'87	2 705	02/01/87	1.60	58	03/01/87
'87 -'88	2 874	26/03/88	1.73	71	26/03/88
'88 -'99	2 976	09/03/89	2.11	71	09/03/89
'89 -'90	1 893	01/03/90	0.15	17	01/03/90
'90 -'91	1 862	30/12/90	0.21	19	30/12/90
'91 -'92	1 893	09/06/92	0.22	21	09/06/92
'92 -'93	3 080	23/01/93	2.48	80	24/01/93
'93 -'94	3 219	31/12/93	5.98	261	04/01/94
'94 -'95	3 680	30/01/95	11.85	503	01/02/95
'95 -'96	2 179	28/09/95	0.83	57	28/09/95
Bergingen boven 0,7 - Qgem					
'85 -'86	2 638	20/01/86	1.14	47	20/01/86
'86 -'87	2 705	02/01/87	1.07	44	02/01/87
'87 -'88	2 874	26/03/88	1.23	49	26/03/88
'88 -'99	2 976	09/03/89	1.55	54	09/03/89
'89 -'90	1 893	01/03/90	0.01	3	01/03/90
'90 -'91	1 862	30/12/90	0.00	3	30/12/90
'91 -'92	1 893	09/06/92	0.01	6	09/06/92
'92 -'93	3 080	23/01/93	1.86	63	24/01/93
'93 -'94	3 219	31/12/93	3.89	204	04/01/94
'94 -'95	3 680	30/01/95	8.29	276	31/01/95
'95 -'96	2 179	28/09/95	0.32	32	28/09/95
Bergingen boven 0,8 - Qgem					
'85 -'86	2 638	20/01/86	0.63	36	20/01/86
'86 -'87	2 705	02/01/87	0.63	33	02/01/87
'87 -'88	2 874	26/03/88	0.80	36	26/03/88
'88 -'99	2 976	09/03/89	1.06	41	09/03/89
'89 -'90			0.00	0	
'90 -'91			0.00	0	
'91 -'92			0.00	0	
'92 -'93	3 080	23/01/93	1.29	50	23/01/93
'93 -'94	3 219	31/12/93	2.38	138	01/01/94
'94 -'95	3 680	30/01/95	6.03	223	31/01/95
'95 -'96	2 179	28/09/95	0.03	11	28/09/95

Station 517 : Witbeek / Kessenich



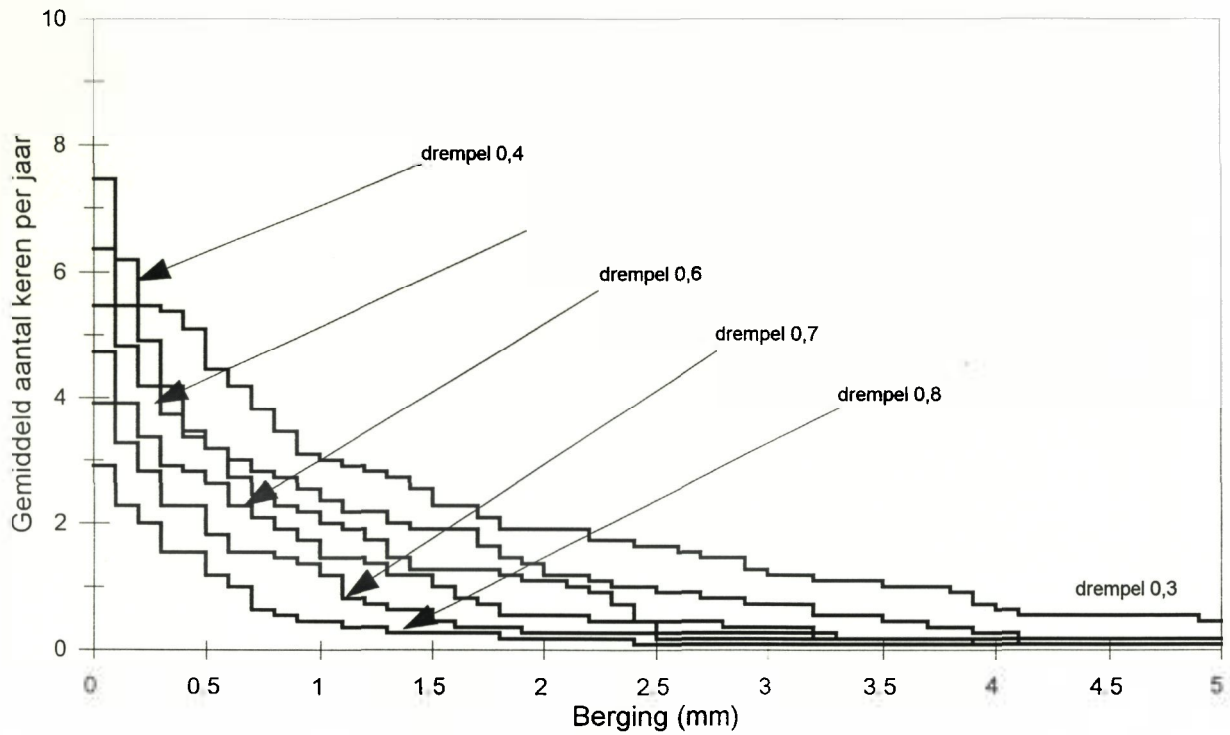
— doorlopend gemiddelde —□— Jaarmaxima —■— 5-jaargemiddelde

Station 517 : Witbeek / Kessenich

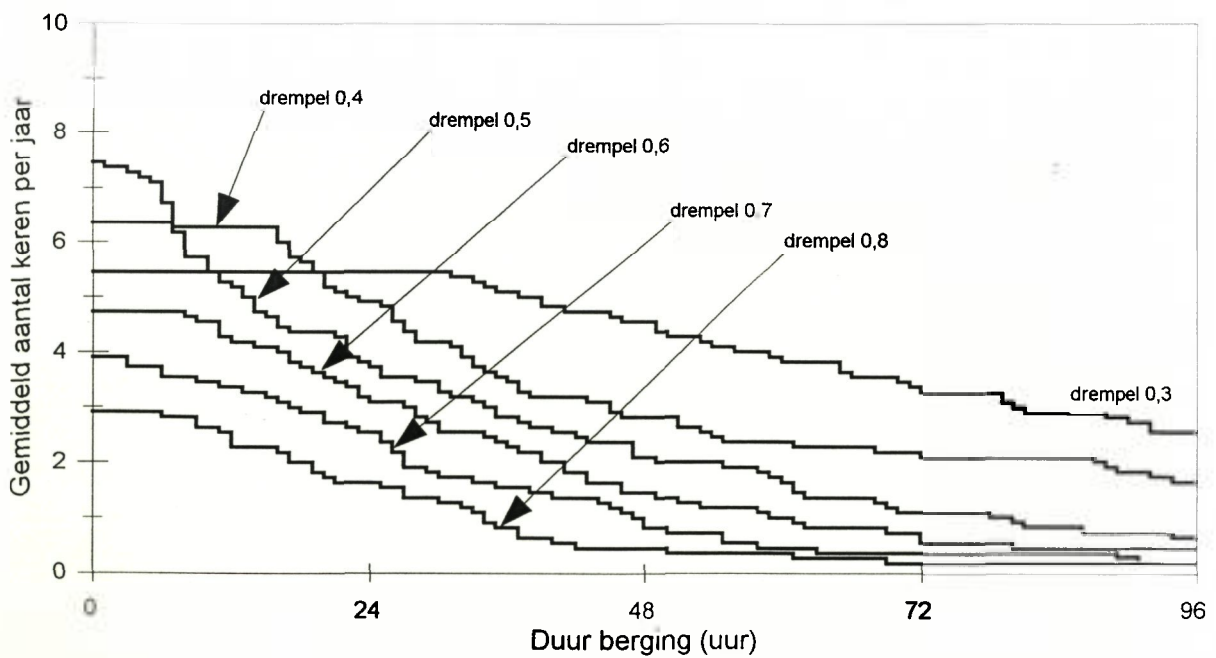


— doorlopend gemiddelde —□— Jaarmaxima —●— 5-jaargemiddelde

Station 517 - Witbeek te Kessenich



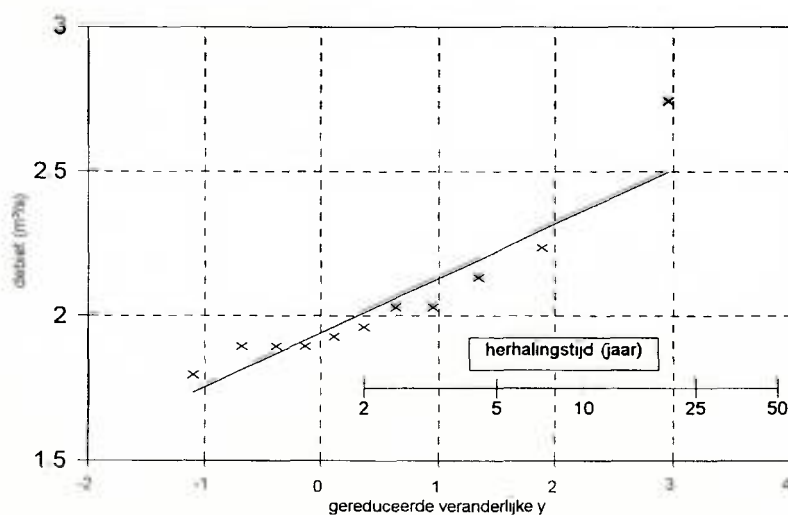
Station 517 - Witbeek te Kessenich



23. Station 518
**De Bosbeek
te Opoeteren**

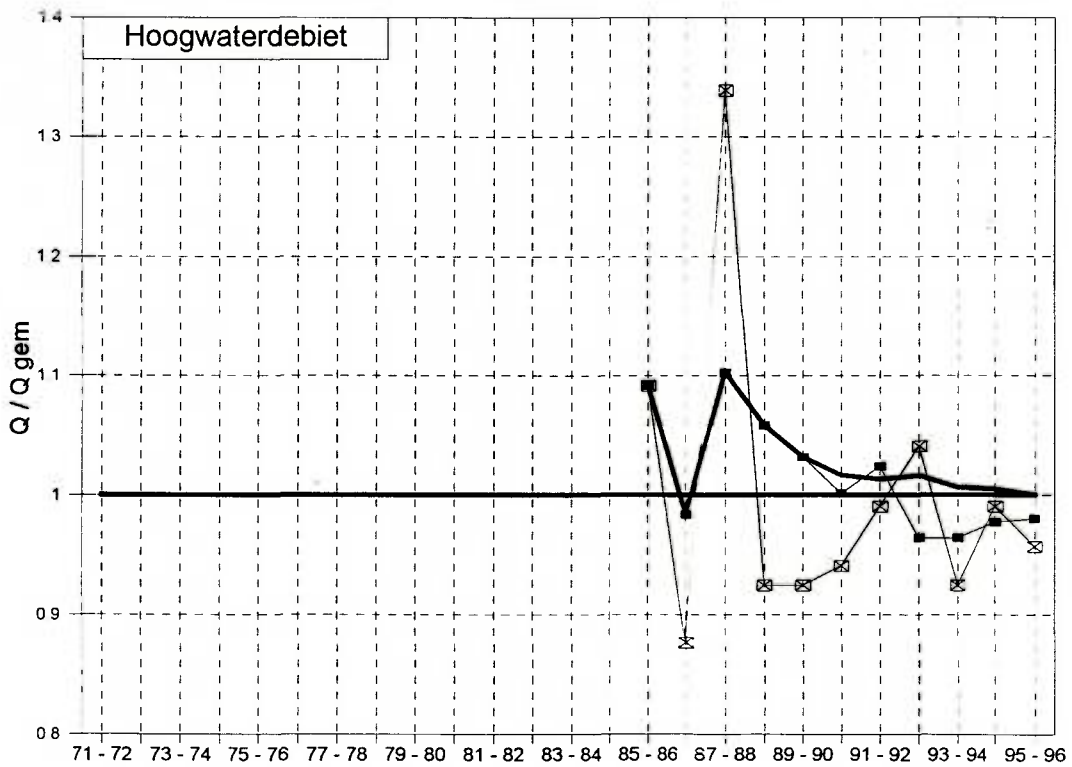
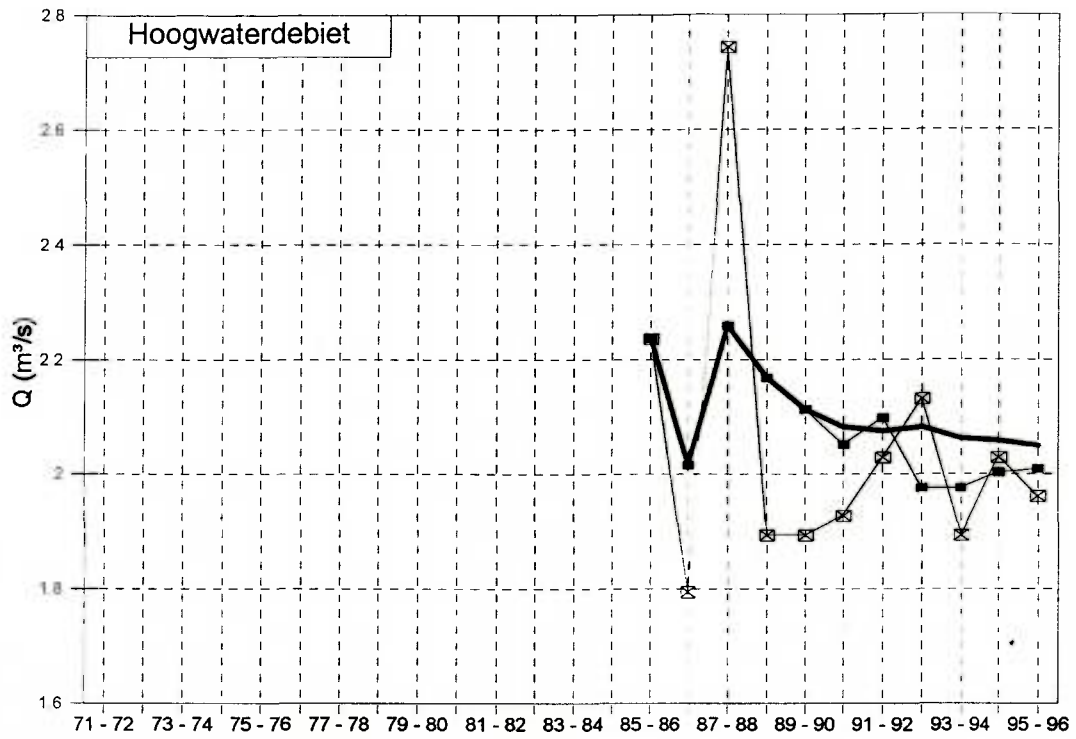
Station nr. 518 : Bosbeek te Opoeteren

Nr.	Waterjaar	Datum	Hoogte (cm)	Debiet (m ³ /s)
1	'86 - '87	23/10/86	75+18	1 795
2	'93 - '94	25/09/93	96	1 894
3	'88 - '89	8/03/89	78+18	1 894
4	'89 - '90	25/01/90	78+18	1 894
5	'90 - '91	28/10/90	79+18	1 927
6	'95 - '96	29/08/96	98	1 961
7	'91 - '92	9/06/92	100	2 028
8	'94 - '95	20/09/94	100	2 028
9	'92 - '93	22/01/93	103	2 131
10	'85 - '86	28/03/86	88+18	2 236
11	'87 - '88	6/10/87	102+18	2 743



Herhalingstijd (jaar)	Debiet (m ³ /s)	Spec. afvoer (l/s ha)
2	2 008	0 22
5	2 222	0 24
10	2 364	0 26
25	2 543	0 28
50	2 675	0 29

Station 518 : Bosbeek / Opoeteren



Jaarmaxima van bergingen

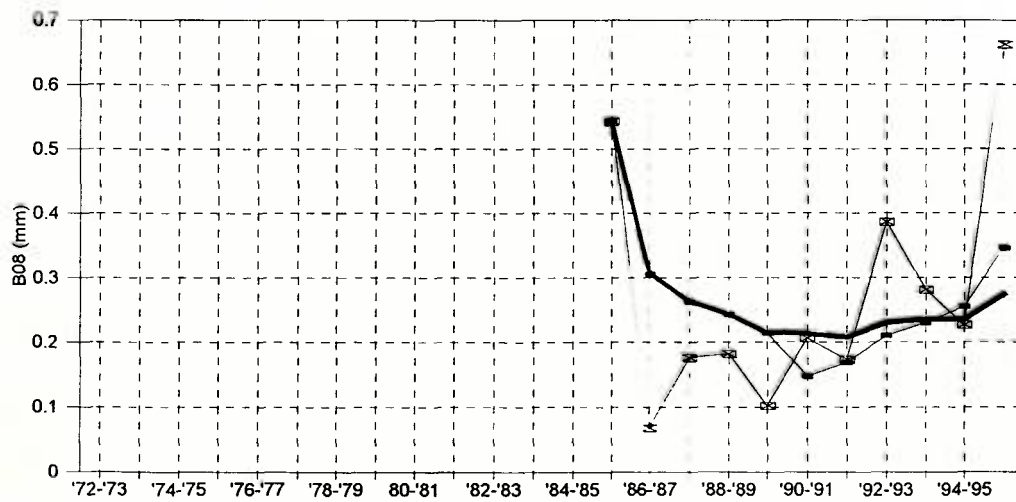
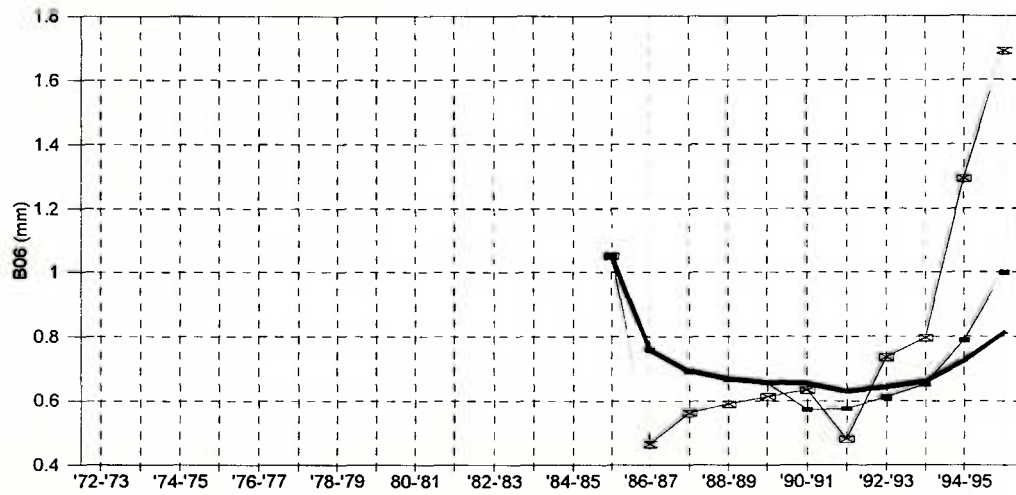
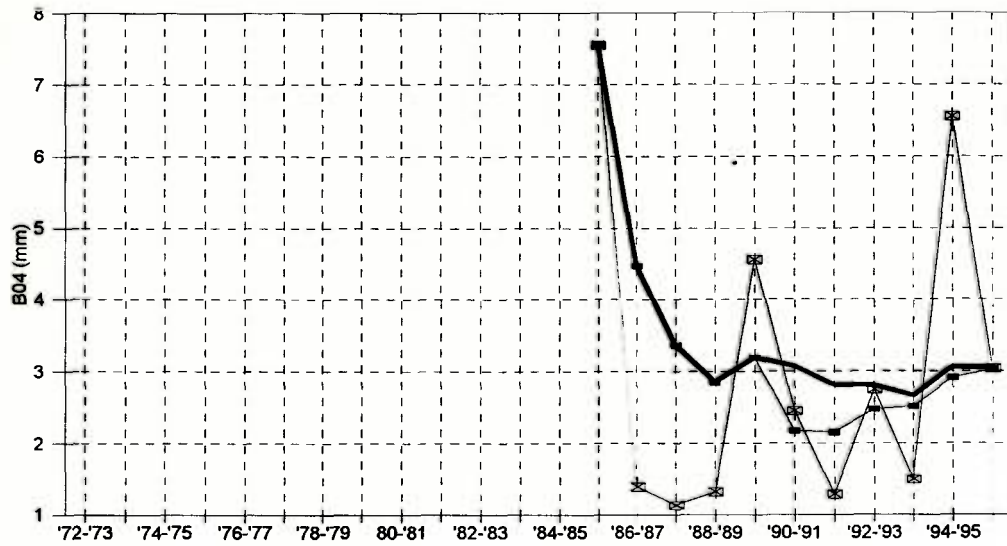
Station 518 : Bosbeek / Opoeteren

Gemidd. jaarmax : 1.950 m³/s

Waterjaar	piekdebiet		berging		
	(m³/s)	datum	(mm)	(uur)	datum
Bergingen boven 0,3 Qgem					
'85 -'86	2 236	28/03/86	15 53	1428	01/04/86
'86 -'87	1 539	24/03/87	3 54	528	26/03/87
'87 -'88	1 730	25/03/88	7 25	1619	31/03/88
'88 -'89	1 665	23/07/89	7.28	1258	27/07/89
'89 -'90	1 894	25/01/90	8 44	2240	05/02/90
'90 -'91	1 927	28/10/90	6 10	941	18/11/90
'91 -'92	1 762	08/11/91	2 95	502	09/11/91
'92 -'93	2 131	22/01/93	6 58	1303	13/01/93
'93 -'94	1 894	26/09/93	2 05	176	27/09/93
'94 -'95	2 028	21/09/94	23 10	4255	27/02/95
'95 -'96	1 961	29/08/96	3 92	286	31/08/96
Bergingen boven 0,4 Qgem					
'85 -'86	2 236	28/03/86	7 55	887	01/04/86
'86 -'87	1 539	24/03/87	1 39	138	26/03/87
'87 -'88	1 446	12/03/88	1 13	204	16/03/88
'88 -'89	1 665	23/07/89	1 32	141	27/07/89
'89 -'90	1 894	25/01/90	4 56	445	05/02/90
'90 -'91	1 416	22/04/91	2 45	299	26/04/91
'91 -'92	1 762	08/11/91	1 29	130	09/11/91
'92 -'93	1 795	12/01/93	2 75	351	12/01/93
'93 -'94	1 894	26/09/93	1 50	103	26/09/93
'94 -'95	2 028	21/09/94	6 55	1593	29/10/94
'95 -'96	1 961	29/08/96	3 04	180	31/08/96
Bergingen boven 0,5 Qgem					
'85 -'86	2 236	28/03/86	1 33	129	28/03/86
'86 -'87	1 795	23/10/86	0 82	58	23/10/86
'87 -'88	1 861	10/05/88	0 80	55	10/05/88
'88 -'89	1 894	08/03/89	0 83	50	08/03/89
'89 -'90	1 894	25/01/90	2 03	315	29/01/90
'90 -'91	1 894	29/12/90	0 89	67	30/12/90
'91 -'92	1 602	22/12/91	0 81	62	22/12/91
'92 -'93	2 131	22/01/93	0 94	55	23/01/93
'93 -'94	1 894	26/09/93	1 11	68	26/09/93
'94 -'95	2 028	21/09/94	3 29	278	21/09/94
'95 -'96	1 961	29/08/96	2 29	127	30/08/96

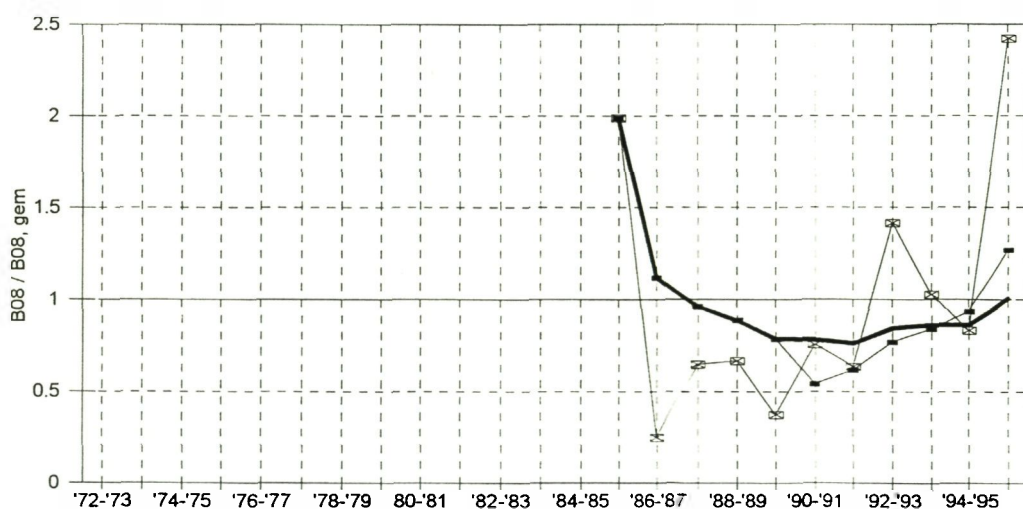
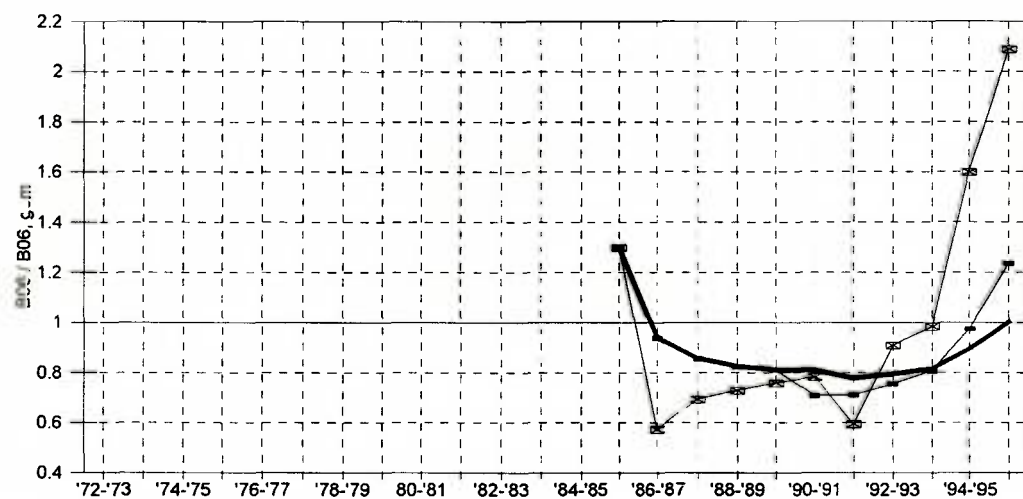
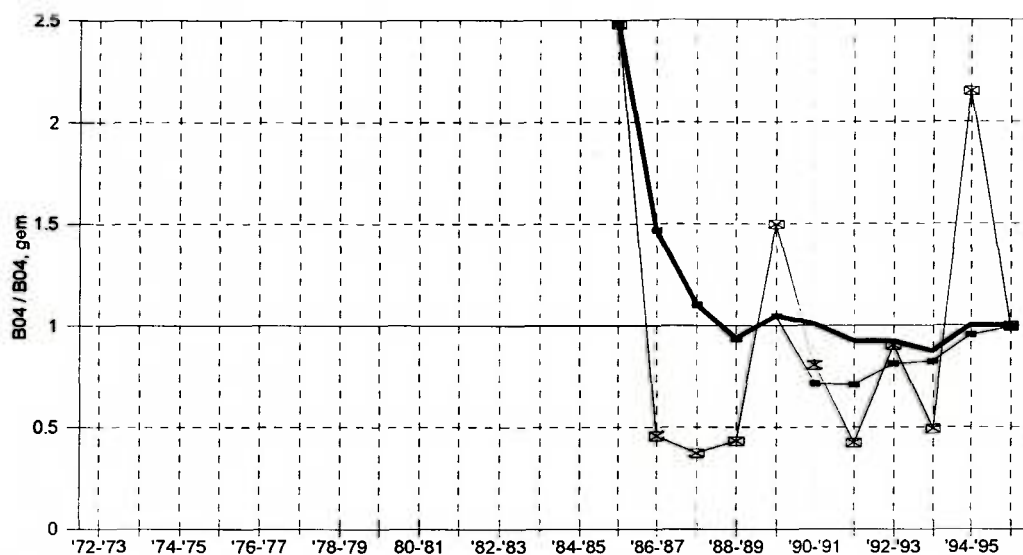
Jaarmaxima van bergingen					
Station 518 : Bosbeek / Opoeteren			Gemidd jaarmax : 1.950 m³/s		
Waterjaar	piekdebiet		berging		
	(m³/s)	datum	(mm)	(uur)	datum
Bergingen boven 0,6 · Qgem					
'85 -'86	2 236	28/03/86	1 05	57	28/03/86
'86 -'87	1.795	23/10/86	0 46	39	23/10/86
'87 -'88	1.861	10/05/88	0 56	37	10/05/88
'88 -'89	1.894	08/03/89	0 59	34	08/03/89
'89 -'90	1.894	25/01/90	0 61	113	27/01/90
'90 -'91	1.894	29/12/90	0 63	41	30/12/90
'91 -'92	2 028	09/06/92	0 48	28	09/06/92
'92 -'93	2 131	22/01/93	0 73	36	23/01/93
'93 -'94	1.894	26/09/93	0 80	49	26/09/93
'94 -'95	2 028	21/09/94	1 29	136	21/09/94
'95 -'96	1.961	29/08/96	1 69	94	30/08/96
Bergingen boven 0,7 · Qgem					
'85 -'86	2 236	28/03/86	0 79	40	28/03/86
'86 -'87	1.795	23/10/86	0 17	14	23/10/86
'87 -'88	1.861	10/05/88	0 35	26	10/05/88
'88 -'89	1.894	08/03/89	0 38	25	08/03/89
'89 -'90	1.861	22/12/89	0 23	21	23/12/89
'90 -'91	1.894	29/12/90	0 41	29	30/12/90
'91 -'92	2 028	09/06/92	0 29	20	09/06/92
'92 -'93	2 131	22/01/93	0 55	26	23/01/93
'93 -'94	1.894	26/09/93	0 51	36	26/09/93
'94 -'95	1.894	30/01/95	0 42	29	30/01/95
'95 -'96	1.961	29/08/96	1 15	70	30/08/96
Bergingen boven 0,8 · Qgem					
'85 -'86	2 236	28/03/86	0 54	30	28/03/86
'86 -'87	1.795	23/10/86	0 07	9	23/10/86
'87 -'88	1.861	10/05/88	0 18	17	10/05/88
'88 -'89	1.894	08/03/89	0 18	18	08/03/89
'89 -'90	1.861	22/12/89	0 10	13	22/12/89
'90 -'91	1.894	29/12/90	0 21	21	30/12/90
'91 -'92	2 028	09/06/92	0 17	11	09/06/92
'92 -'93	2 131	22/01/93	0 39	20	23/01/93
'93 -'94	1.894	26/09/93	0 28	23	26/09/93
'94 -'95	1.894	30/01/95	0 23	19	30/01/95
'95 -'96	1.961	29/08/96	0 66	52	30/08/96

Station 518 : Bosbeek / Opoeteren



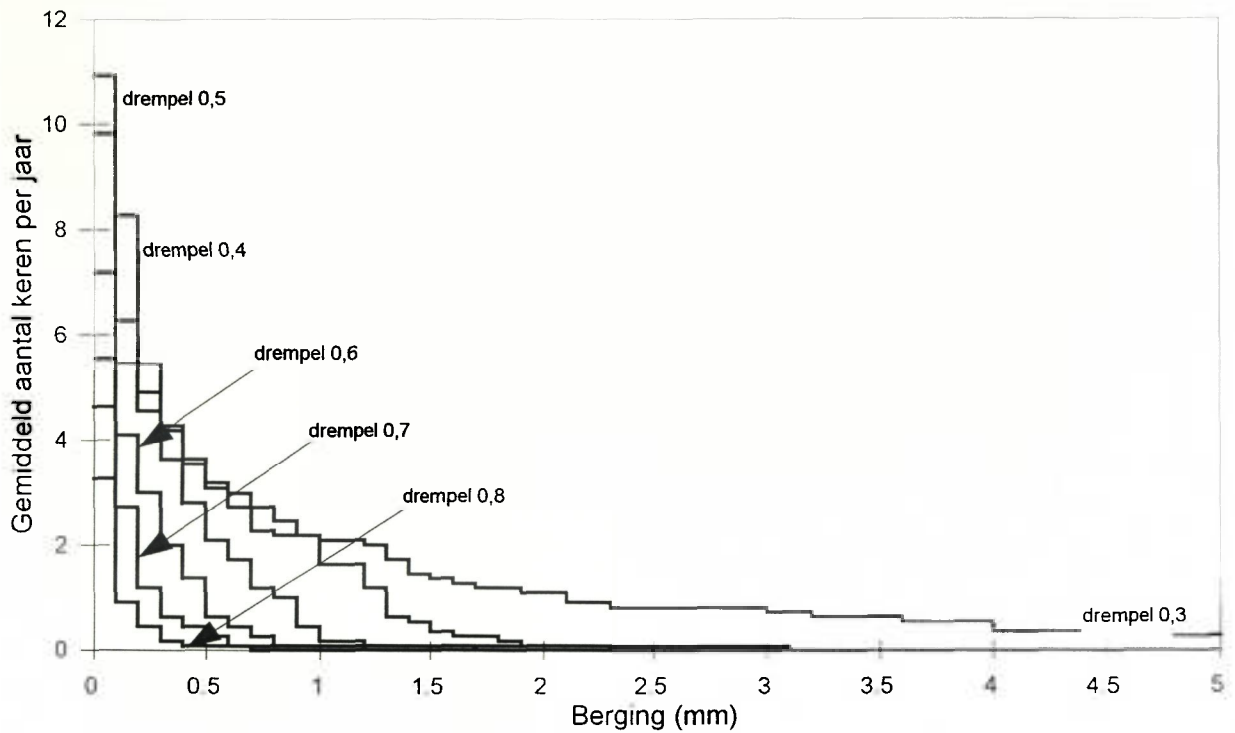
— doorlopend gemiddelde —■— Jaarmaxima —+— 5-jaargemiddelde

Station 518 : Bosbeek / Opoeteren



— doorlopend gemiddelde —■— Jaarmaxima —x— 5-jaargemiddelde

Station 518 - Bosbeek te Opoeteren



Station 518 - Bosbeek te Opoeteren

