

Unternehmen:	Hochwasserrückhaltebecken III bei Oberhaselbach
Unternehmensträger:	Gemeinde Tiefenbach
Entwurfsverfasser:	Roland Richter Ingenieur GmbH, Salzweg

Hydraulische Berechnung

**zum Wasserrechtsverfahren
vom 30.07.2025**

INHALTSVERZEICHNIS

1. Berechnungsgrundlagen
2. Abflussverhältnisse Haselbach
3. Drosselbauwerk mit Ökoschlucht

1. Berechnungsgrundlagen:

1.1 Bemessungsregen:

Zur Ermittlung der Hochwasserabflussspende für das jeweils betrachtete Gebiet wurden die Niederschlagshöhen gemäß KOSTRA Atlas herangezogen.

Anlage 1.1 (Auszug aus KOSTRA Atlas)

Anlage 1.2 Niederschlagsstatistik Haselbach 0 – 2 h

Anlage 1.3 Niederschlagsstatistik Haselbach 0 – 72 h

1.2 Nutzung und Bebauung des Einzugsgebietes:

Land- und forstwirtschaftliche Bodennutzung

Das Einzugsgebiet des Haselbaches wird im wesentlichen land- und forstwirtschaftlich genutzt. Im Niederschlagsgebiet des Haselbaches liegen neben dem größeren Ort Haselbach noch mehrere kleine Ortsteile der Gemeinden Tiefenbach, Ruderting und Neukirchen vorm Wald.

Anlage 1.4 Flächenbilanz

1.3 Topographische Planungsgrundlagen:

- Amtliche Topographische Karte M 1:25 000
des Landesamtes für Vermessung und Geoinformation Bayern
- Digitale Flurkarte des Vermessungsamtes Passau
- Rasterdaten der Höhenlinien 1:5000 des Landesamtes
für Vermessung und Geoinformation Bayern
- Erkundung der Verhältnisse vor Ort
durch den Entwurfsverfasser
- Topographische Vermessung des Geländes
durch den Entwurfsverfasser

Gebietskennwerte:

für das Hochwasserrückhaltebecken III bei Oberhaselbach

Länge des Gewässers von der Wasserscheide
bis zum Betrachtungspunkt L = 3,65 km

Höhe der Wasserscheide	409,50 müNN
Höhe der Betrachtungspunkte	345,73 müNN

Höhenunterschied	63,77 müNN

Retentionseigenschaften des Einzugsgebietes:

Mischung von Wald-, Acker – und Wiesenfläche bei geringer Bebauung.

Faktor für die Ablaufzeit $F = 1,5$

1.4 Hydrologische Planungsgrundlagen:

Mit den Gebietskennwerten wurde nach dem Schätzverfahren für Scheitelabflüsse an unbeobachteten Gewässerquerschnitten in kleinen Einzugsgebieten die maßgebenden Abflüsse ermittelt.

Hochwasserrückhaltebecken III
bei Oberhaselbach.

$A_{(EO)} = 5,6 \text{ km}^2$
 $MQ = \text{rd. } 50 \text{ l/s}$

$HQ_1 =$	$1,5 \text{ m}^3/\text{s}$	$+ 15 \% =$	$1,7 \text{ m}^3/\text{s}$
$HQ_5 =$	$3,7 \text{ m}^3/\text{s}$	Klima -	$= 4,3 \text{ m}^3/\text{s}$
$HQ_{10} =$	$4,8 \text{ m}^3/\text{s}$	änderungs-	$= 5,5 \text{ m}^3/\text{s}$
$HQ_{20} =$	$5,9 \text{ m}^3/\text{s}$	faktor	$= 6,8 \text{ m}^3/\text{s}$
$HQ_{50} =$	$7,7 \text{ m}^3/\text{s}$		$= 8,8 \text{ m}^3/\text{s}$
$HQ_{100} =$	$9,1 \text{ m}^3/\text{s}$		$= 10,5 \text{ m}^3/\text{s}$
$HQ_{500} =$	$12,6 \text{ m}^3/\text{s}$		
$HQ_{5000} =$	$17,6 \text{ m}^3/\text{s}$		

2. Teilgebiet oberhalb der Brücke Haselbach - St 2126

2.1 Zusammenstellung der Parameter

(Anhang 2.1)

2.2 Berechnung des Abflussbeiwertes nach der Curve-Number-Methode des SCS

(Anhang 2.2)

2.3 Berechnung des Abflussbeiwertes nach dem Verfahren von Lutz

(Anhang 2.3)

2.4 Ermittlung des gewogenen Gefälles

(Anhang 2.4)

2.5 Abschätzung von Hochwasserscheitelabflüssen in kleinen Einzugsgebieten

(Anhang 2.5)

2.6 Abflussganglinie HQ_{100}

(Anhang 2.6)

2.7 Abflussganglinie HQ_{5000}

(Anhang 2.7)

2.8 Speichervolumen, Drosselabfluss und Hochwasserentlastung Hochwasserrückhaltebecken HQ_{100} und HQ_{5000}

(Anhang 2.8, Seite 1 - 3)

2.9 Speicherganglinie HQ_{100}

(Anhang 2.9)

2.10 Speicherganglinie HQ_{5000}

(Anhang 2.10)

HW Entlastung Haselbach HWRB III bei Oberhaselbach

Definition der Bodentypen:

Schotter, Kies, Sand (kleinster Abfluss)	A
Feinsand, Löß, leicht tonige Sande	B
Bindige Böden mit Sand, Mischböden wie lehmiger Mehlsand, sandiger Lehm, tonig-lehmiger Sand	C
Ton, Lehm, dichter Fels, stauender Untergrund (größter Abfluss)	D

Berechnungsgrundlage der Parameter c, A_v und c2 nach Lutz bzw. CN nach SCS-Verfahren

Landnutzung	Bodentyp			
	A	B	C	D
Laubwald				16
Nadelwald				17
bebauter Anteil				3
Ödland				
Reihenkultur (Hackfrüchte, Weinbau, u.ä.)				
Getreideanbau				21
Leguminosen (Klee, Luzerne, u.ä.)				
Weideland				4
Dauerwiese				39
Haine, Obstanlagen, u.ä.				
Flächensumme (%)				100

Zur Berechnung der Parameter c, A_v und c2 bzw. CN sind die Flächenanteile in % anzugeben.

Grobe Abschätzungen sind ausreichend. Bebaute, unversiegelte Fläche wird wie (Nadel)wald behandelt.

c maximaler Endabflussbeiwert 0,74

A_v Anfangsverlust unversiegelte Fläche 1,85

c2 Parameter Jahreszeiteinfluss 3,08

CN Curve-Number Bodenfeuchtezustand II 77

Parameter des Lutzverfahrens

maximaler Endabflussbeiwert, Parameter c:

Landnutzung	Bodentyp			
	A	B	C	D
Waldgebiet	0,17	0,48	0,62	0,70
Ödland	0,71	0,83	0,89	0,93
Reihenkultur (Hackfrüchte, Weinbau, u.ä.)	0,62	0,75	0,84	0,88
Getreideanbau	0,54	0,70	0,80	0,85
Leguminosen (Klee, Luzerne, u.ä.)	0,51	0,68	0,79	0,84
Weideland	0,34	0,60	0,74	0,80
Dauerwiese	0,10	0,46	0,63	0,72
Haine, Obstanlagen, u.ä.	0,17	0,48	0,66	0,77

Anfangsverluste der unversiegelten Flächen, Parameter A_v:

Landnutzung	Bodentyp			
	A	B	C	D
landwirtschaftliche Flächen	7,0	4,0	2,0	1,5
Wald	8,0	5,0	3,0	2,5

Parameter Jahreszeiteinfluss, Parameter c2

Landnutzung	Bodentyp			
	A	B	C	D
Bebauung, Nadelwald, Wiesen				2,0
landwirtschaftliche Flächen, Laubwald				4,62

Parameter des SCS-Verfahrens

CN-WERT nach SCS für Bodenfeuchtezustand II

Landnutzung	Bodentyp			
	A	B	C	D
Ödland	77	86	91	94
Hackfrüchte	62 bis 72	71 bis 81	78 bis 88	81 bis 91
Getreide	59 bis 66	70 bis 76	78 bis 84	81 bis 88
Leguminosen oder Grünland	51 bis 66	67 bis 77	76 bis 85	80 bis 89
Weide oder natürliches Grünland	6 bis 68	35 bis 79	70 bis 86	79 bis 89
Dauerwiese	30	58	71	78
Buschwald (meist beweidet)	25 bis 45	55 bis 66	70 bis 77	77 bis 83
Wald	15 bis 56	44 bis 75	54 bis 86	61 bis 91
Gehöfte	59	74	82	86
Erd- und Schotterstr.	72	82	87	89
Str. mit fester Oberfläche	74	84	90	92

Die Schwankungsbreite der CN-Werte resultiert aus dem hydrologischen Zustand und der Anbauart (senkrecht zum Hang, hangparallel oder terrassiert)

CN-WERT für Berechnung gewählt (Bodenfeuchtezustand II)

Landnutzung	Bodentyp			
	A	B	C	D
Wald (guter hydrologischer Zustand)	26	52	62	69
Ödland	77	86	91	94
Reihenkulturen (mittlerer hydrologischer Zustand)	70	80	87	90
Getreide (schlechter hydrologischer Zustand)	64	76	84	88
Leguminosen (guter hydrologischer Zustand)	57	71	80	84
Weide (mittlerer hydrologischer Zustand)	49	69	79	84
Dauerwiese	30	58	71	78
Haine, Obstanlagen, u.ä. (guter hydr. Zustand)	25	55	70	77
undurchlässige Flächen	100	100	100	100

Bodenfeuchtezustand nach SCS

Bodenfeuchtezustand	Niederschlagssumme der letzten 5 Tage	
	während Wachstumsperiode	außerhalb Wachstumsperiode
I	≤ 12,5 mm	≤ 35 mm
II	12,5 - 28 mm	35 - 53 mm
III	≥ 28 mm	≥ 53 mm

$$CN_I = 0,000001187 \cdot CN_{II}^4 - 0,0001914 \cdot CN_{II}^3 + 0,01546 \cdot CN_{II}^2 + 0,1582 \cdot CN_{II} + 0,5886$$

$$CN_{III} = -0,000001018 \cdot CN_{II}^4 + 0,0002545 \cdot CN_{II}^3 - 0,02801 \cdot CN_{II}^2 + 2,257 \cdot CN_{II} + 1,235$$

Berechnung des Abflussbeiwertes nach der Curve-Number-Methode des SCS

Anlage 2.2

Projekt:

HW Entlastung Haselbach HWRB III bei Oberhaselbach

Parameter			Zeichen	Dimension	Wert	Default	weitere Niederschlagswerte										Bemerkung
Name																	
HQ-Jährlichkeit					100		1	5	10	20	50	100	200	500	1000	5000	
Niederschlagshöhe		h_N	mm		62,7		23,6	37,3	43,1	49	56,8	62,7	68,8	76,9	82,8	96,9	eine Eingabe erforderlich
CN-Wert Bodenfeuchtezustand II		CN_{II}	--		77	77	Wird aus Arbeitsblatt Parameter übernommen, direkte Eingabe möglich										
Bodenfeuchtezustand		B_F	--		II	II	Eingabe möglich, Definition der Klassen siehe Tabelle im Arbeitsblatt										
CN-Wert		CN	--		77												Berechnungsergebnis
Anfangsverlust		I_a	--		0,05	0,2	Eingabe möglich (für Südbayern wurde I_a zu 0,05 ermittelt)										
Abflusshöhe Gesamtgebiet		h_A	mm		26,1		4,2	10,5	13,7	17,2	22,1	26,1	30,4	36,3	40,8	51,9	Berechnungsergebnis
Abflussbeiwert		PSI	--		0,42		0,18	0,28	0,32	0,35	0,39	0,42	0,44	0,47	0,49	0,54	Berechnungsergebnis

Hinweis: Die grau unterlegten Zellen sind Eingabefelder für Projektangaben und Erläuterungen.

Beschreibung s.a. Loseblattsammlung hydrologische Planungsgrundlagen, Kap. 5.4, Anlage 13.

Berechnung des Abflussbeiwertes nach dem Verfahren von Lutz

Anlage 2.3

Projekt:

HW Entlastung Haselbach HWRB III bei Oberhaselbach

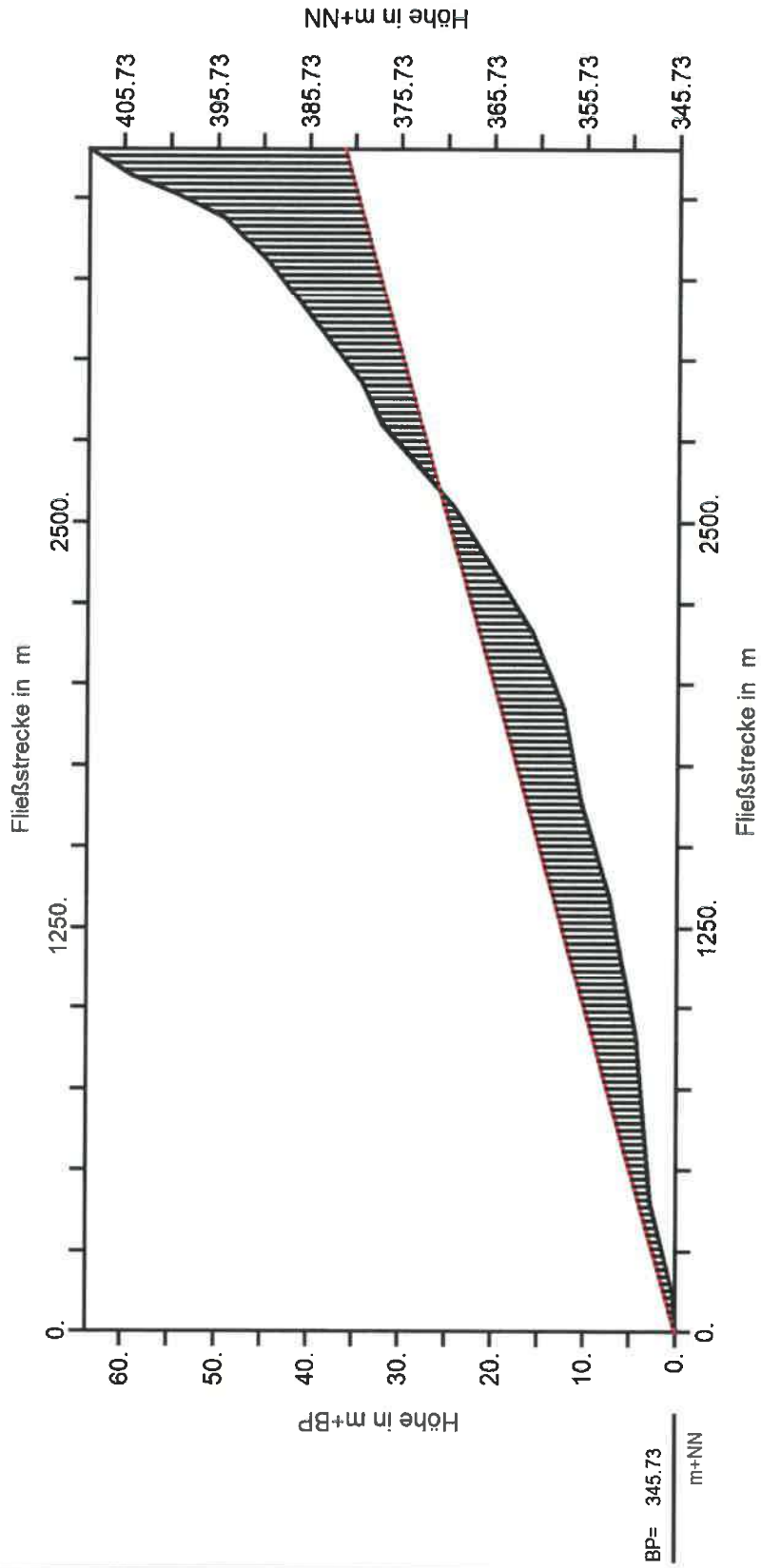
Parameter		Dimen- sion	Wert	Default	weitere Niederschlagswerte										Bemerkung
Name	Zeichen				1	5	10	20	50	100	200	500	1000	5000	
HQ-Jährlichkeit			100		23,6	37,3	43,1	49	56,8	62,7	68,8	76,9	82,8	96,9	keine Eingabe erforderlich
Niederschlagshöhe	h_N	mm	62,7												
bebauter Anteil	A_b	%	3	3											
Versiegelungsgrad	V_A	%	30	30											
Anfangsverlust versiegelte Flächen	A_v	mm	1	1,0											
Abflussbeiwert versiegelte Fläche	PSI_s	--	1	1,0											
maximaler Endabflussbeiwert	c	--	0,74	0,74											
Anfangsverlust unversiegelte Fläche	A_v	mm	1,9	1,9											
Eichparameter	$c1$		0,05	0,02											
Parameter Jahreszeiteinfluss	$c2$		3,1	3,1											
Wochennummer	WN														
Wochenzahl	WZ			10											
Parameter Vorregen	$c3$		2	2											
Basisabflussspende	q_B	l/s/km ²	10	10											
Parameter Niederschlagsdauer	$c4$		0	0											
Niederschlagsdauer	D	h													
Proportionalitätsfaktor	a	1/mm	0,030												
Abflusshöhe versiegelte Fläche	$h_{A,s}$	mm	0,6												
Abflusshöhe unversiegelte Fläche	$h_{A,u}$	mm	24,3												
Abflusshöhe Gesamtgebiet	h_A	mm	24,8												
Abflussbeiwert	PSI	--	0,40												
					0,2	0,3	0,4	0,4	0,5	0,6	0,6	0,7	0,7	0,9	Zwischenergebnis
					4,3	10,1	13,0	16,2	20,7	24,3	28,1	33,4	37,3	46,9	Berechnungsergebnis
					4,5	10,4	13,4	16,6	21,2	24,8	28,7	34,1	38,0	47,8	Berechnungsergebnis
					0,19	0,28	0,31	0,34	0,37	0,40	0,42	0,44	0,46	0,49	Berechnungsergebnis

Hinweis: Die grau unterlegten Zellen sind Eingabefelder für Projektangaben und Erläuterungen.
Beschreibung s.a. Loseblattsammlung hydrologische Planungsgrundlagen, Kap. 5.4, Anlage 13.

GEWOGENES GEFÄLLE

Gewässer	Haselbach
Bezugspunkt	HWRB III
Bemerkung	bei Oberhaselbach
Gewogenes Gefälle	0.99 Prozent
max. Fließstrecke	3650.0 m
Höhendifferenz	63.77 m
Bezugspunkthöhe	345.73 m+NN

Legende:	
	Gewässerlängsschnitt
	gewogenes Gefälle
	Ausgleichsfläche



BP= 345.73

m+NN

HW - Entlastung Haselbach HWRB III bei Oberhaselbach Tiefenbach

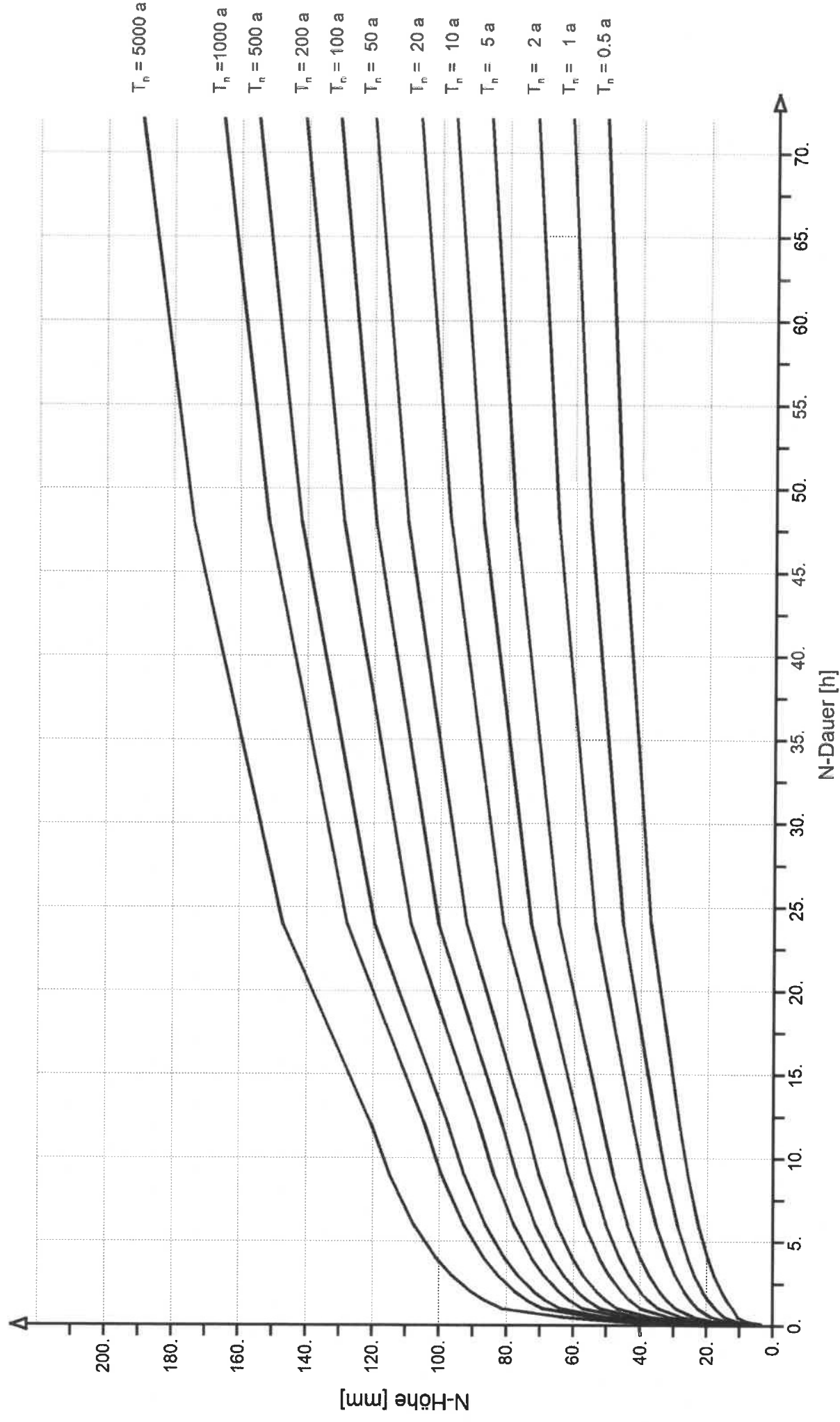
Anlage 2.5

Abschätzung von Hochwasserscheitelabflüssen in kleinen Einzugsgebieten															Erläuterungen
Projektbezeichnung		HW Entlastung Haselbach HWRB III bei Oberhaselbach													
Gemeinde		Tiefenbach													
Landkreis		Passau													
Wasserwirtschaftsamt		Deggendorf, Servicestelle Passau													
Gewässer		Haselbach													
Gesuchte HQ-Jährlichkeit		5000	1000	500	200	100	50	20	10	5	1				
Einzugsgebietsparameter															
A_{Ez} Einzugsgebiet [km ²]		5,6	5,6	5,6	5,6	5,6	5,6	5,6	5,6	5,6	5,6				
L Max. Fließweglänge in [km]		3,65	3,65	3,65	3,65	3,65	3,65	3,65	3,65	3,65	3,65				
Δh Höhendifferenz in [m]		63,77	63,77	63,77	63,77	63,77	63,77	63,77	63,77	63,77	63,77				
ermittelte Anlaufzeit t_{An} in [min]		205	205	205	205	205	205	205	205	205	205				
gewählte Anlaufzeit t_{An} in [min]		210	210	210	210	210	210	210	210	210	210				
Ablaufaktor F		1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5				
Ablaufzeit t_{Ab} in [min]		315	315	315	315	315	315	315	315	315	315				
Niederschlagsereignis															
Jährlichkeit		5000	1000	500	200	100	50	20	10	5	1				
Niederschlagsdauer in [min]		210	210	210	210	210	210	210	210	210	210				
Niederschlagshöhe h_N in [mm]		96,9	82,8	76,9	68,8	62,7	56,8	49,0	43,1	37,3	23,6				
Gesamtabflußbeiwert ψ_m		0,51	0,48	0,46	0,43	0,41	0,38	0,34	0,31	0,28	0,18				
Geschätzter Scheitelabfluß HQ_T in [m ³ /s]															
Scheitelabflußspende in [l/(s km ²)]		17,6	14,1	12,6	10,5	9,1	7,7	5,9	4,8	3,7	1,5				
Zuschlag Klimaänderungsfaktor		0%	0%	0%	8%	15%	15%	15%	15%	15%	15%				
Gewählter Scheitelabfluß HQ_T in [m ³ /s]		17,6	14,1	12,6	11,3	10,5	8,8	6,8	5,5	4,3	1,7				

Hinweis: Die grau unterlegten Zellen sind Eingabefelder für Projektangaben und Erläuterungen.

Niederschlagsstatistik für:

HWRB III bei Oberhaselbach



HASELBACH.KOS

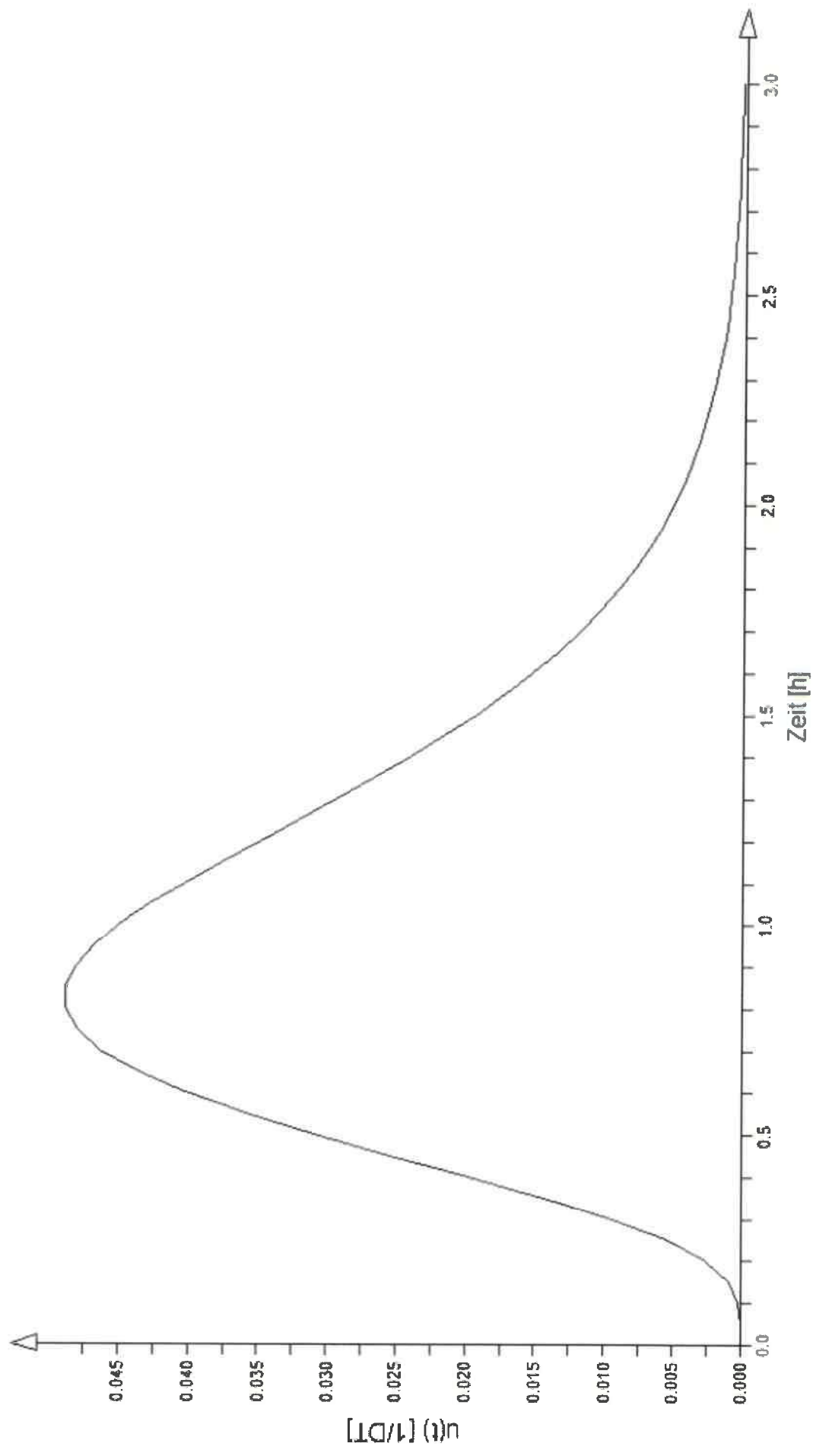
KOSTRA00

Tiefenbach / Haselbach

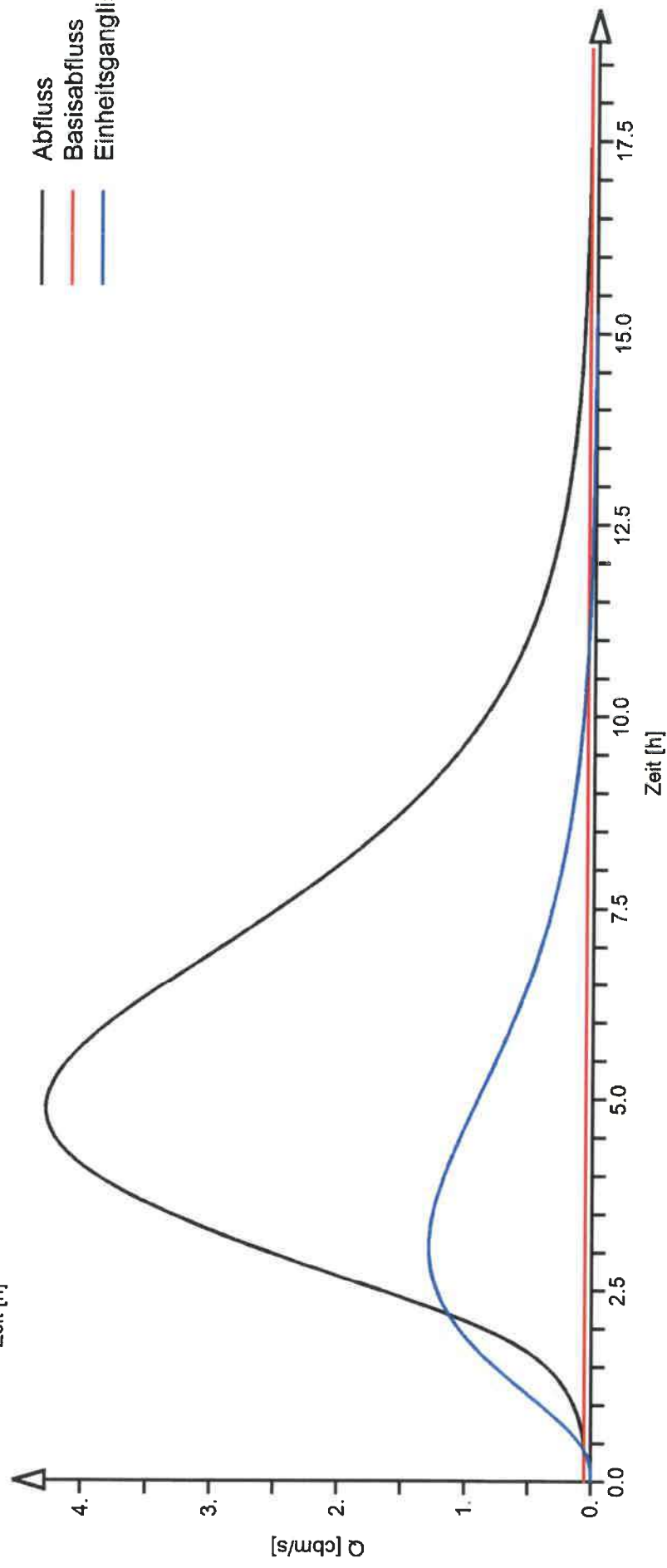
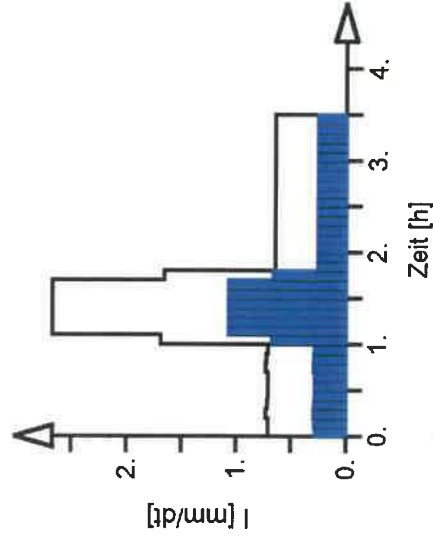
0.25	10.90	31.20						
1.00	17.20	51.80						
12.00	35.20	81.20						
24.00	45.30	100.30						
48.00	55.40	119.50						
72.00	61.30	130.70						
12	16							
0.50	1.00	2.00	5.00	10.00	20.00	50.00	100.00	
200.00	500.00							
1000.00	5000.00							
-5.00	-10.00	-15.00	-30.00	-60.00	-90.00	2.00	3.00	
4.00	6.00							
9.00	12.00	18.00	24.00	48.00	72.00			
0	0	0.000	0.000					

HWRB III bei Oberhaselbach

Zeitschritt $\Delta T = 0.05$ [h]



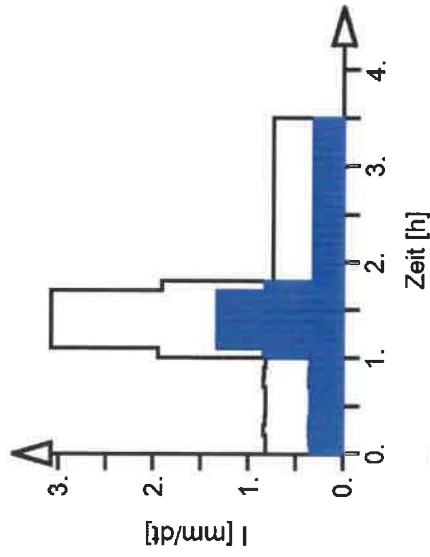
Haselbach HQ 5 bei Oberhaselbach



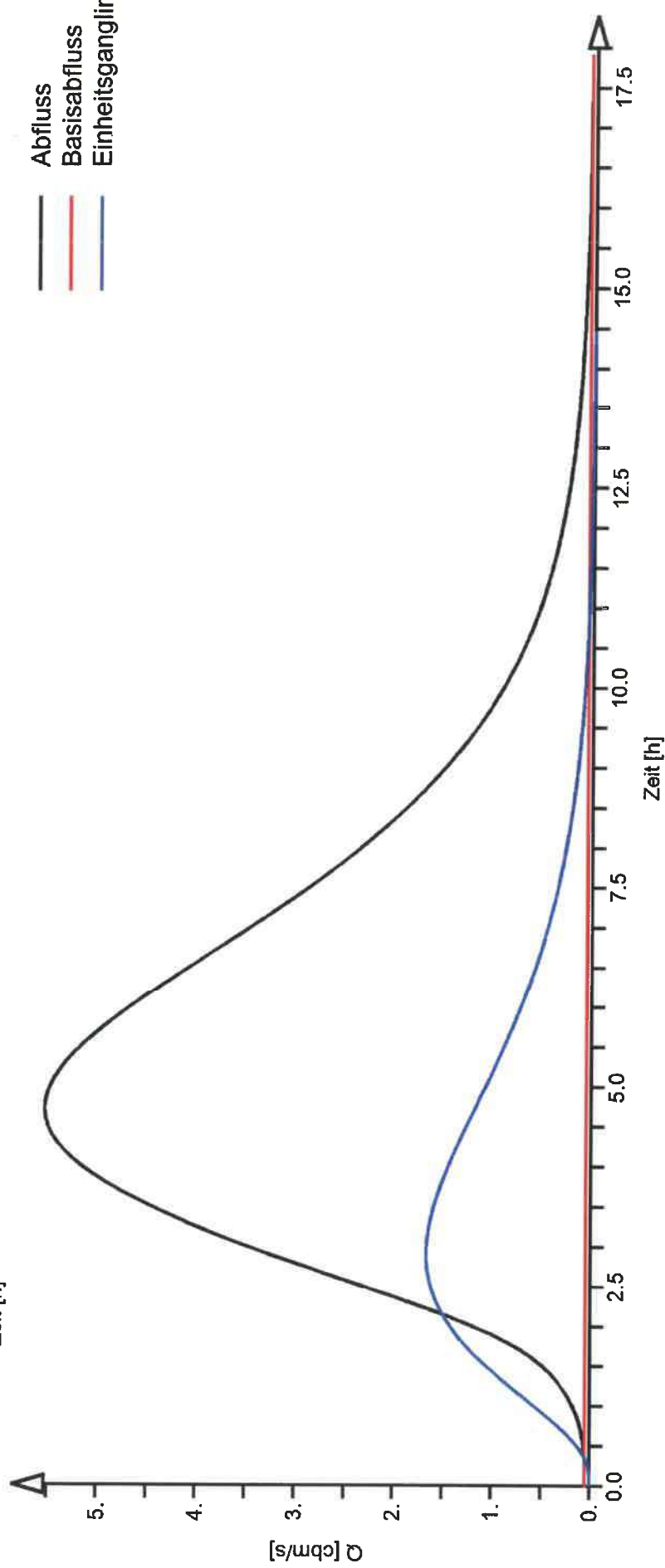
HWRBIIHQ5.WEL

WELLE							
Haselbach	bei Oberhaselbach			HQ 5			
187 0.1000							
0.050	0.050	0.050	0.051	0.053	0.057	0.065	0.076
0.092	0.112	0.136	0.166	0.201	0.242	0.291	0.350
0.421	0.506	0.606	0.721	0.852	0.997	1.153	1.318
1.490	1.665	1.843	2.022	2.199	2.373	2.544	2.710
2.870	3.024	3.171	3.311	3.443	3.567	3.683	3.790
3.887	3.974	4.050	4.115	4.169	4.212	4.244	4.266
4.277	4.278	4.269	4.251	4.225	4.191	4.149	4.101
4.046	3.985	3.920	3.849	3.775	3.697	3.616	3.532
3.446	3.358	3.269	3.179	3.088	2.997	2.906	2.815
2.725	2.635	2.547	2.459	2.373	2.288	2.204	2.123
2.043	1.965	1.888	1.814	1.742	1.671	1.603	1.537
1.472	1.410	1.350	1.292	1.236	1.182	1.130	1.080
1.032	0.986	0.941	0.898	0.857	0.818	0.780	0.744
0.710	0.677	0.645	0.615	0.586	0.559	0.533	0.508
0.484	0.461	0.439	0.419	0.399	0.380	0.363	0.346
0.330	0.315	0.300	0.286	0.273	0.261	0.249	0.238
0.228	0.218	0.208	0.199	0.191	0.183	0.175	0.168
0.161	0.155	0.149	0.143	0.138	0.133	0.128	0.123
0.119	0.115	0.111	0.108	0.104	0.101	0.098	0.095
0.092	0.089	0.087	0.084	0.082	0.080	0.078	0.076
0.074	0.072	0.070	0.068	0.066	0.064	0.062	0.060
0.059	0.058	0.057	0.056	0.056	0.055	0.054	0.054
0.053	0.053	0.053	0.052	0.052	0.051	0.051	0.051
0.051	0.050	0.050					

Haselbach HQ 10 bei Oberhaselbach



Niederschlag
eff. Niederschlag

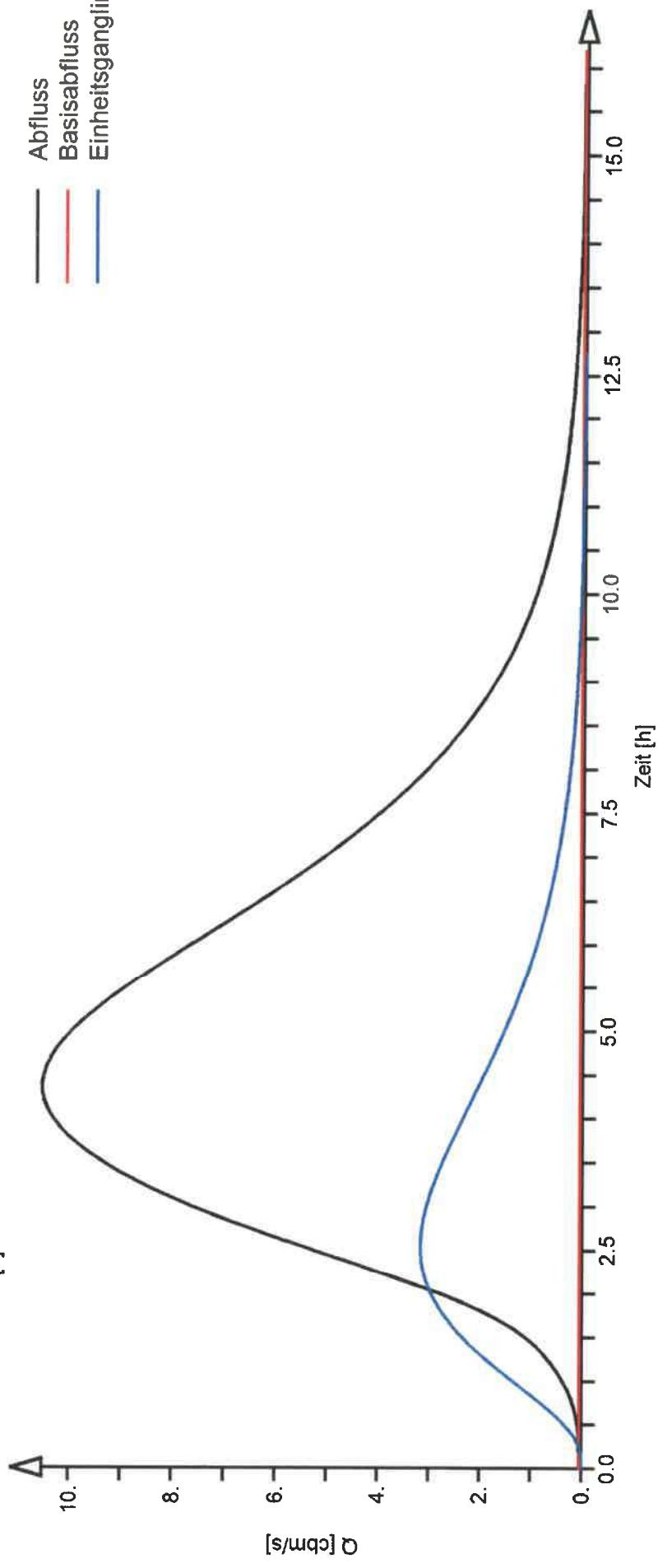
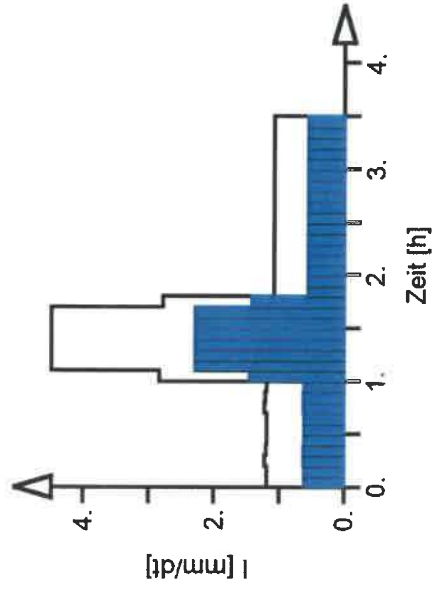


Abfluss
Basisabfluss
Einheitganglinie

HWRBIII10.WEL

WELLE							
Haselbach	bei Oberhaselbach			HQ 10			
179 0.1000							
0.050	0.050	0.050	0.051	0.054	0.061	0.072	0.089
0.111	0.140	0.176	0.218	0.268	0.327	0.396	0.480
0.580	0.700	0.841	1.004	1.188	1.390	1.607	1.835
2.071	2.310	2.551	2.791	3.027	3.258	3.482	3.697
3.903	4.100	4.285	4.460	4.623	4.775	4.915	5.041
5.154	5.252	5.335	5.403	5.456	5.493	5.516	5.525
5.520	5.501	5.470	5.428	5.375	5.312	5.240	5.159
5.071	4.976	4.875	4.769	4.659	4.545	4.428	4.309
4.188	4.065	3.942	3.818	3.695	3.571	3.449	3.328
3.208	3.091	2.975	2.861	2.749	2.640	2.534	2.430
2.329	2.231	2.135	2.043	1.954	1.867	1.784	1.703
1.625	1.550	1.478	1.409	1.343	1.279	1.218	1.159
1.103	1.049	0.998	0.949	0.902	0.857	0.814	0.774
0.735	0.698	0.663	0.629	0.598	0.567	0.539	0.512
0.486	0.461	0.438	0.416	0.395	0.375	0.357	0.339
0.322	0.306	0.291	0.277	0.264	0.251	0.239	0.228
0.217	0.207	0.198	0.189	0.181	0.173	0.165	0.158
0.152	0.145	0.139	0.134	0.129	0.124	0.119	0.115
0.111	0.106	0.102	0.099	0.095	0.092	0.089	0.086
0.084	0.081	0.078	0.075	0.072	0.069	0.067	0.064
0.062	0.061	0.060	0.059	0.058	0.057	0.056	0.055
0.055	0.054	0.054	0.053	0.052	0.052	0.052	0.051
0.051	0.050	0.050					

Haselbach HQ 100 bei Oberhaselbach



HWRBIII HQ100.WEL

WELLE

Haselbach

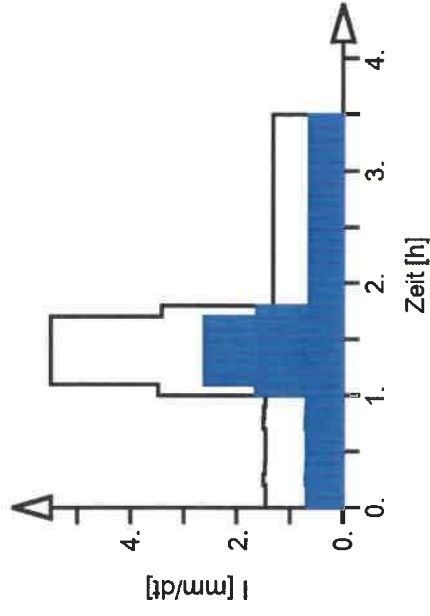
bei Oberhaselbach

HQ 100

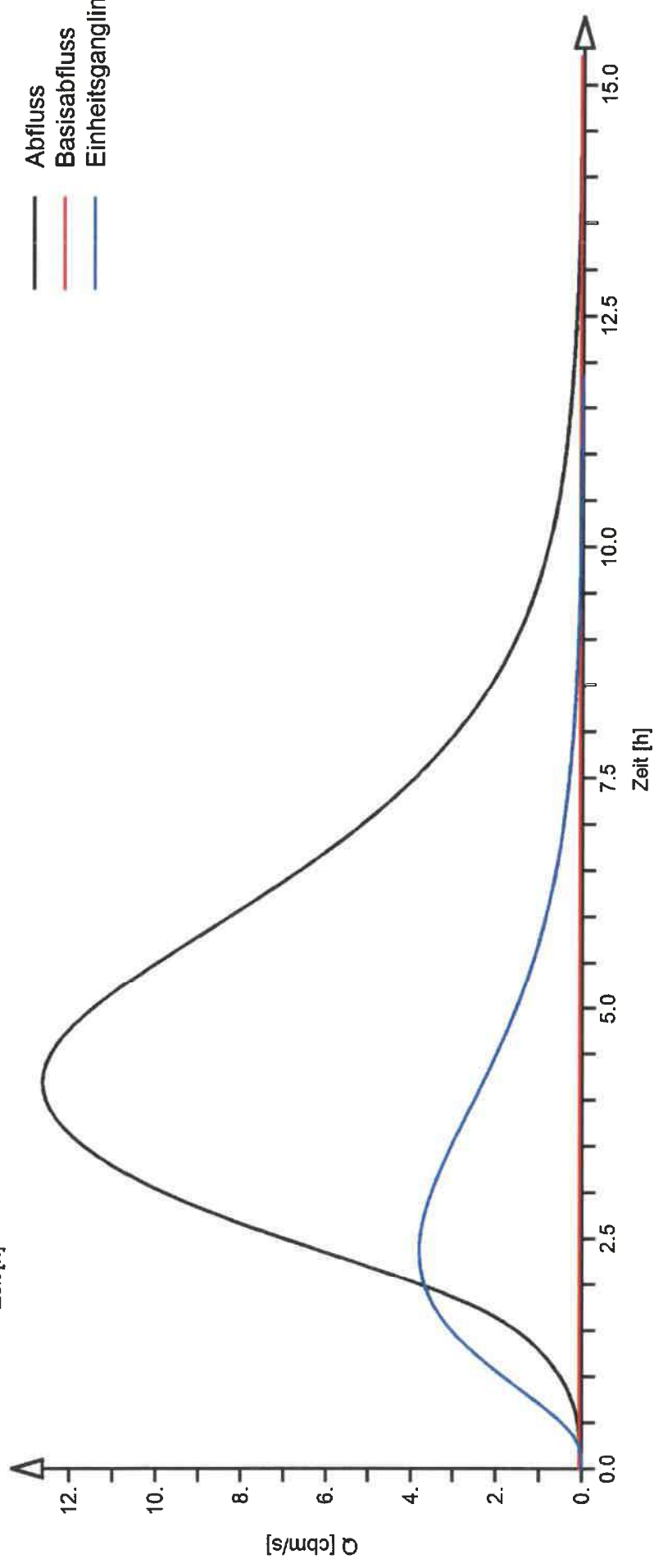
162 0.1000

0.050	0.050	0.050	0.053	0.062	0.081	0.110	0.154
0.211	0.285	0.374	0.479	0.601	0.741	0.907	1.108
1.349	1.635	1.969	2.352	2.782	3.248	3.741	4.249
4.764	5.278	5.783	6.274	6.747	7.197	7.622	8.020
8.390	8.732	9.043	9.326	9.581	9.808	10.005	10.172
10.307	10.408	10.477	10.512	10.515	10.488	10.430	10.345
10.234	10.098	9.941	9.764	9.570	9.360	9.137	8.902
8.658	8.406	8.148	7.885	7.620	7.353	7.086	6.820
6.555	6.294	6.035	5.781	5.532	5.288	5.050	4.819
4.594	4.375	4.164	3.959	3.762	3.572	3.389	3.214
3.045	2.884	2.730	2.582	2.441	2.306	2.178	2.056
1.940	1.830	1.725	1.626	1.532	1.443	1.358	1.278
1.203	1.132	1.064	1.001	0.941	0.884	0.831	0.781
0.734	0.690	0.648	0.609	0.572	0.538	0.506	0.475
0.447	0.420	0.395	0.372	0.350	0.330	0.311	0.293
0.276	0.261	0.246	0.232	0.220	0.208	0.197	0.186
0.176	0.166	0.157	0.149	0.141	0.134	0.127	0.121
0.115	0.109	0.102	0.096	0.090	0.085	0.080	0.075
0.072	0.070	0.067	0.066	0.064	0.062	0.061	0.059
0.058	0.057	0.056	0.055	0.054	0.053	0.052	0.051
0.051	0.050						

Haselbach HQ 500 bei Oberhaselbach



Niederschlag
eff. Niederschlag



Abfluss
Basisabfluss
Einheitsganglinie

HWRBIII500.WEL

WELLE

Haselbach

bei Oberhaselbach

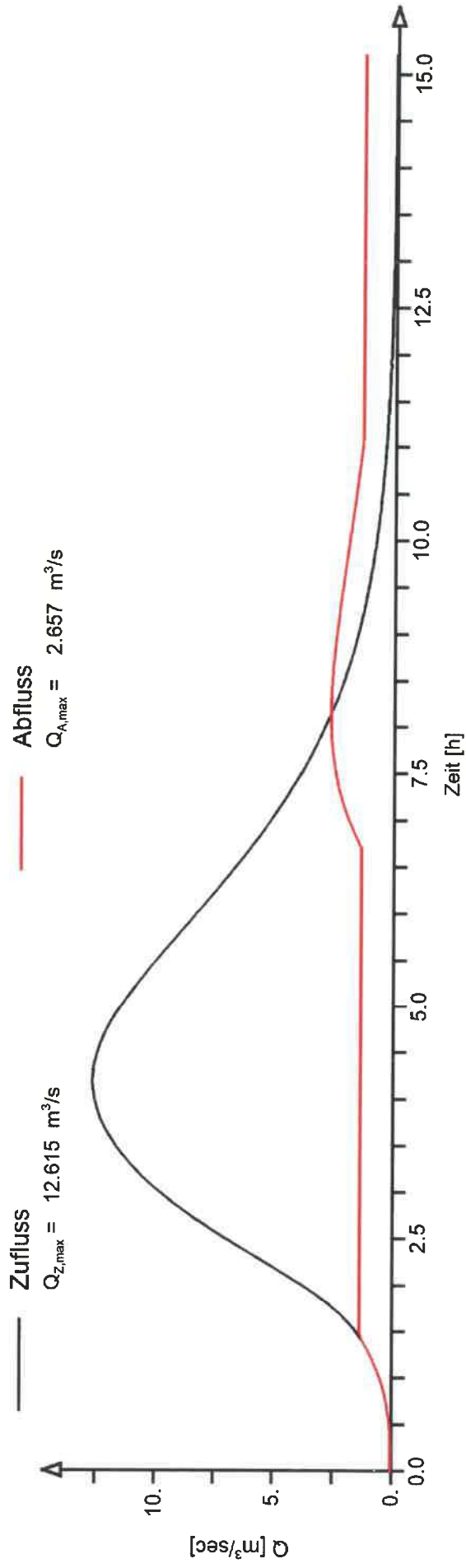
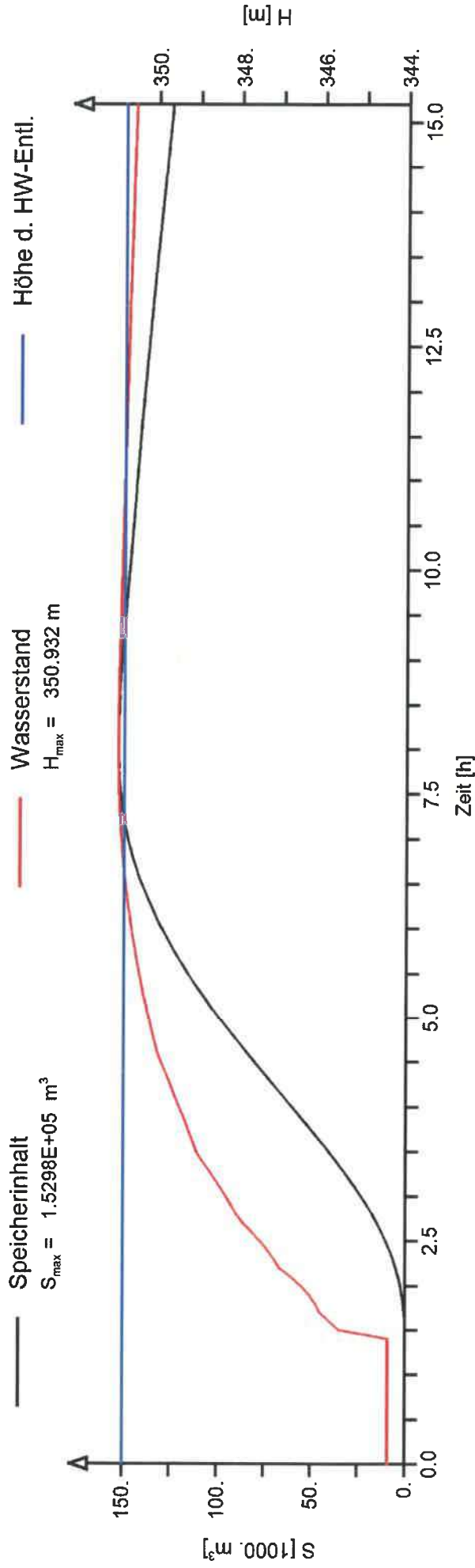
HQ 500

153 0.1000

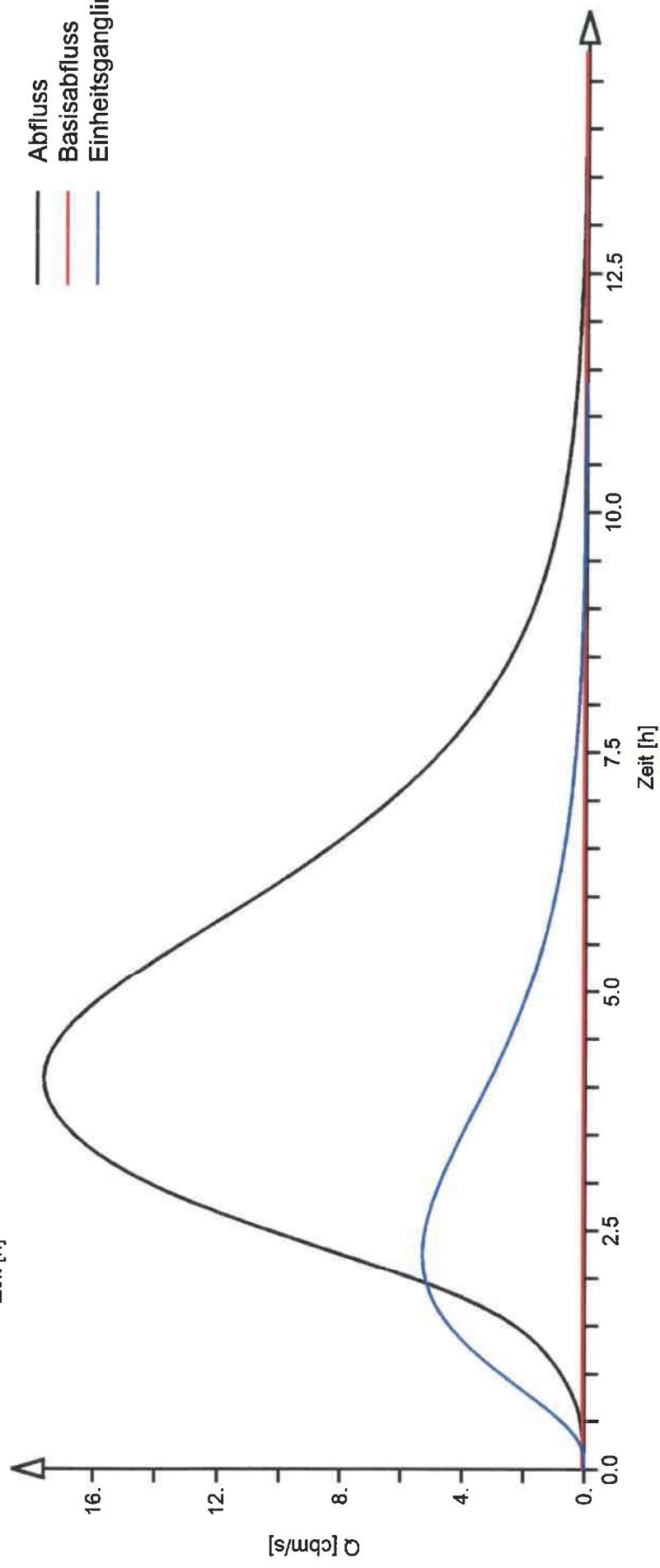
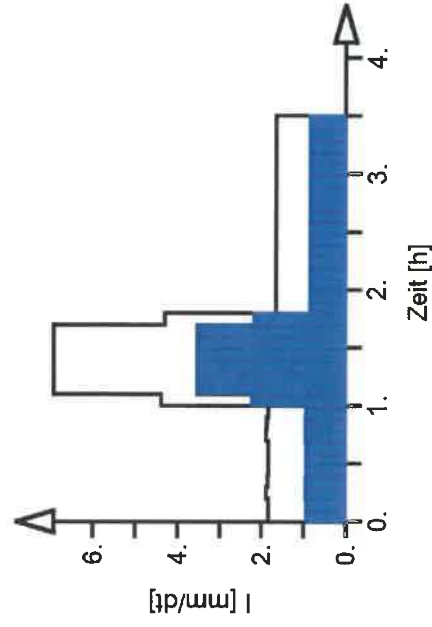
0.050	0.050	0.050	0.055	0.069	0.095	0.138	0.200
0.282	0.384	0.508	0.652	0.817	1.007	1.232	1.503
1.829	2.215	2.664	3.178	3.750	4.366	5.010	5.666
6.324	6.970	7.597	8.198	8.766	9.299	9.793	10.246
10.659	11.030	11.361	11.653	11.907	12.124	12.304	12.445
12.543	12.600	12.615	12.590	12.525	12.422	12.285	12.115
11.915	11.689	11.439	11.169	10.880	10.577	10.262	9.936
9.604	9.266	8.926	8.584	8.243	7.904	7.568	7.237
6.912	6.593	6.282	5.979	5.684	5.398	5.122	4.855
4.598	4.351	4.114	3.887	3.669	3.461	3.263	3.074
2.894	2.723	2.560	2.406	2.260	2.122	1.991	1.868
1.751	1.641	1.538	1.440	1.349	1.262	1.181	1.105
1.033	0.966	0.904	0.845	0.790	0.738	0.690	0.645
0.603	0.564	0.527	0.493	0.461	0.431	0.404	0.378
0.354	0.332	0.311	0.292	0.274	0.257	0.241	0.226
0.212	0.199	0.187	0.176	0.165	0.156	0.147	0.138
0.130	0.120	0.112	0.104	0.097	0.090	0.084	0.079
0.076	0.073	0.071	0.068	0.066	0.064	0.062	0.061
0.059	0.057	0.056	0.055	0.054	0.053	0.052	0.051
0.050							

HWRB III bei Oberhaselbach

Ereignis: HQ 500



Haselbach HQ 5000 bei Oberhaselbach



HWRBIII5000.WEL

WELLE

Haselbach

bei Oberhaselbach

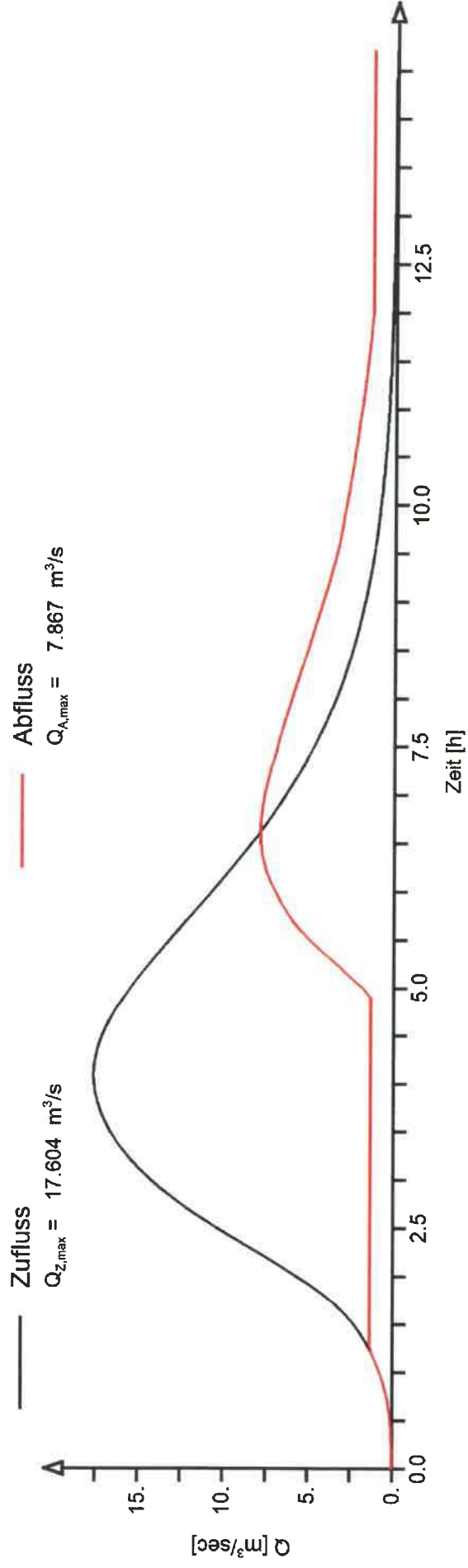
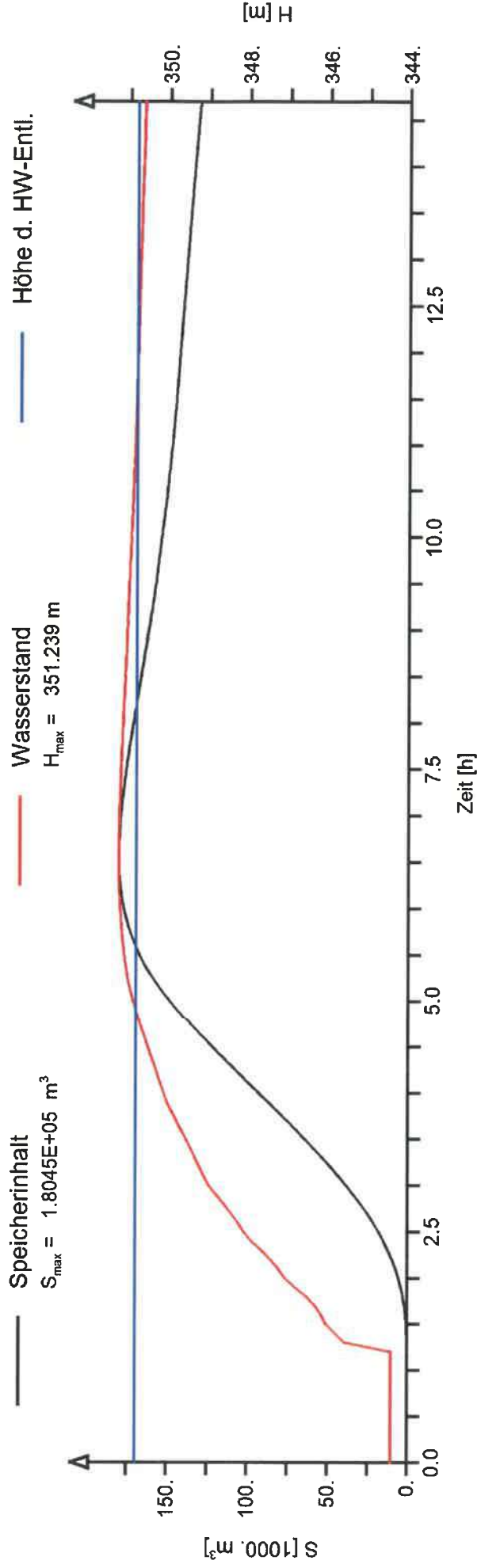
HQ 5000

148 0.1000

0.050	0.050	0.051	0.058	0.080	0.121	0.189	0.284
0.411	0.568	0.757	0.976	1.224	1.509	1.848	2.255
2.744	3.323	3.996	4.764	5.615	6.526	7.472	8.429
9.379	10.306	11.195	12.038	12.826	13.556	14.223	14.827
15.367	15.845	16.261	16.620	16.922	17.173	17.369	17.507
17.586	17.604	17.564	17.466	17.312	17.107	16.855	16.558
16.223	15.852	15.452	15.026	14.579	14.115	13.637	13.150
12.656	12.160	11.663	11.168	10.678	10.194	9.719	9.253
8.798	8.356	7.926	7.510	7.108	6.720	6.347	5.990
5.647	5.319	5.007	4.708	4.424	4.155	3.898	3.656
3.426	3.208	3.003	2.809	2.627	2.454	2.293	2.140
1.997	1.863	1.738	1.620	1.509	1.406	1.310	1.219
1.135	1.057	0.983	0.915	0.852	0.792	0.737	0.686
0.638	0.594	0.553	0.515	0.479	0.447	0.416	0.388
0.362	0.336	0.313	0.291	0.271	0.253	0.236	0.220
0.205	0.192	0.179	0.166	0.152	0.140	0.128	0.118
0.108	0.099	0.092	0.088	0.083	0.080	0.076	0.073
0.070	0.067	0.065	0.063	0.061	0.059	0.057	0.055
0.054	0.052	0.051	0.050				

HWRB III bei Oberhaselbach

Ereignis: HQ 5000



2.11 Notentlastung

Zufluss:

Hochwasserbemessungsanfall 1	BHQ ₁ (T= 500 a)	12,6 m ³ /s
Hochwasserbemessungsanfall 2	BHQ ₂ (T= 5000 a)	17,6 m ³ /s

Die Notentlastung erfolgt über die Überlaufschwelle am Drosselbauwerk mit einer Breite von 7,70 m und einer Dammscharte von 10,0 m Breite.

Gemäß nachfolgender Berechnung betragen die

	Überlaufhöhe	Überlaufhöhe in der Spitze
BHQ ₁	0,13 m	2,81 m ³ /s
BHQ ₂	0,41 m	8,27 m ³ /s

Nachweis der Hochwassersicherheit bei Vollstau des HWRB III ohne Betriebssichtung des außergewöhnlichen Hochwasserrückhalteraus

BHQ₁

$$\begin{aligned} \text{Hü} &= [3 \times 12,6 \text{ m}^3/\text{s} / (2 \times 17,7 \times 0,55 \times 4,43)]^{2/3} \\ &= 0,57 \text{ m} \end{aligned}$$

BHQ₂

$$\begin{aligned} \text{Hü} &= [3 \times 17,6 \text{ m}^3/\text{s} / (2 \times 17,7 \times 0,55 \times 4,43)]^{2/3} \\ &= 0,72 \text{ m} \end{aligned}$$

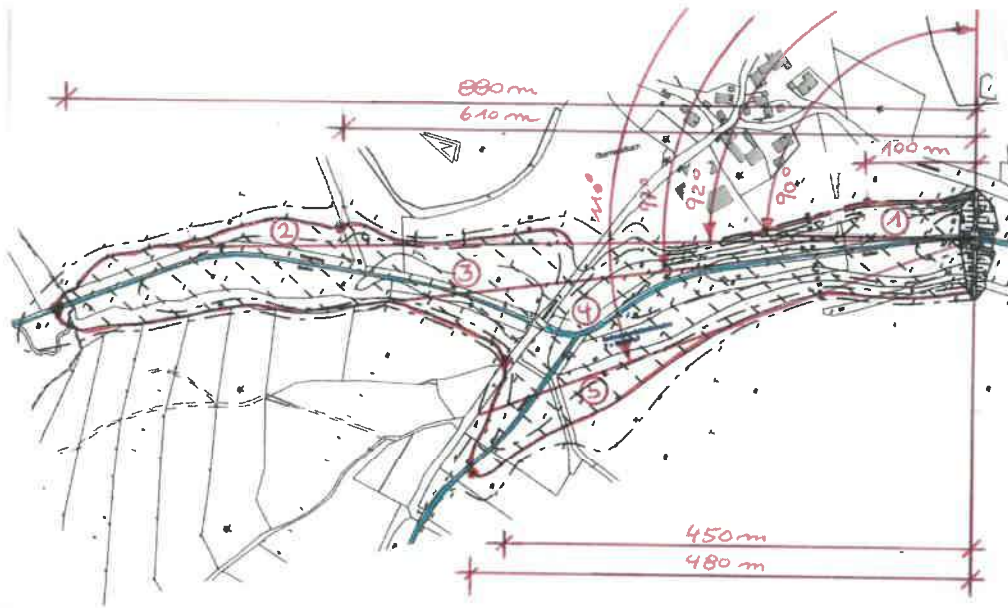
2.12 Freibordbemessung nach DVWK-M 246 / 1997

Windgeschwindigkeit W_{10}
nach Tabelle 1
Höhe 350 mÜNN, normale Lage
 W_{10} gewählt 22 m/s

Umrechnung des Stundenmittels der Windgeschwindigkeit nach Tabelle 2

Faktor 1,14 (Streichlänge 880 m)
 $W_{10} = 22 \text{ m/s} \times 1,1 = 24,2$
gewählt 25 m/s

Stauoberfläche und Streichlänge:



Ermittlung der Wellenparameter:

Überschreitungswahrscheinlichkeit nach Tabelle 96 für Erddamm

$$x(\%) = 1; \quad k_x = 2,4$$

Böschungsrauheit nach Tabelle 5

Pflaster / Rasen $k_D \times k_R$ gewählt 0,80

Für den Windstau wird pauschal ein Betrag von $h_{Wi} = 0,05 \text{ m}$ angesetzt

Ermittlung der Wellenparameter

$$W_{10,5\min} = 25$$

Sektor	Grad	a_i^*	a_i	S_i	d_i [m] 2,5 $h_{We,i}$ m	$a_i * h_{We,i}^2$ m ²
1	0	0,0000	0,4997	100	0,15	0,0112
2	90	0,4997	0,0222	610	0,32	0,0023
3	92	0,5220	0,0552	880	0,35	0,0068
4	97	0,5771	0,1361	450	0,29	0,0114
5	110	0,7132	0,2873	480	0,3	0,0259
	180	1,0005				
Summe					0,0576	
h_{We} [m]					0,24	
T_{We} [s]					1,52	
l_{We} [m]					3,61	
Böschungsrauheit $k_D * k_R$					0,80	
Überschreitungswahrscheinlichkeit k_x					2,40	
tan					0,50	
Auflaufhöhe der Welle					$h_{Au,1\%}$ [m]	0,89 m
Windstau					h_{Wi}	0,05 m
Wellenhöhe						0,94 m

Der Sicherheitszuschlag f_{si} nach DVWK – M 202 / 1991 für ein mittleres Hochwasserrückhaltebecken darf 0,5 m nicht unterschreiten.

Freibord im Normalfall

Stauziel	350,80 müNN
Überfallhöhe BHQ1	0,57 m
Wellenhöhe	0,94 m
Sicherheitszuschlag	0,50 m
	352,81 müNN

Tiefenbach HWRB III bei Oberhaselbach

Hochwasserentlastung Kennwerte der Entlastungsanlage

Überfallwehr Bach usw. nach Weißbach

	Q =	0,000 m3/s	2,311 m3/s	6,536 m3/s	12,007 m3/s	18,487 m3/s
Überfallmenge	$\mu =$	0,50	0,50	0,50	0,50	0,50
Überfallbeiwert	$b =$	17,50 m	17,50 m	17,50 m	17,50 m	17,50 m
Breite	$H_{wsp} =$	350,80 müNN	351,00 müNN	351,20 müNN	351,40 müNN	351,60 müNN
Höhe Wasserspiegel	$H_{Krone} =$	350,80 müNN	350,80 müNN	350,80 müNN	350,80 müNN	350,80 müNN
Höhe Überfallkrone	$H_{\ddot{u}} =$	0,000 m	0,200 m	0,400 m	0,600 m	0,800 m
Überfallhöhe	$h_v =$	0,00	0,00	0,00	0,00	0,00
	$v_o =$	0,00 m/s	0,00 m/s	0,00 m/s	0,00 m/s	0,00 m/s

= Eingabefeld

Station/Gebiet: HWRB III bei Oberhaselbach

Eingabewerte:

Dauer [h]	N-1 [mm]	N-100 [mm]	u [-]	w [-]
0.25	10.9	31.2	10.9	4.408
1.00	17.2	51.8	17.2	7.513
12.00	35.2	81.2	35.2	9.989
24.00	45.3	100.3	45.3	11.943
48.00	55.4	119.5	55.4	13.919
72.00	61.3	130.7	61.3	15.070

Niederschlagsstatistik für: HWRB III bei Oberhaselbach

[illegible]

KOSTRA.OUT																										
I	18 h	I	32.6	5.0	I	40.2	6.2	I	47.9	7.4	I	57.9	8.9	I	65.5	10.1	I	73.1	11.3	I	83.1	12.8	I	90.8	14.0	I
I	24 h	I	37.0	4.3	I	45.3	5.2	I	53.6	6.2	I	64.5	7.5	I	72.8	8.4	I	81.1	9.4	I	92.0	10.7	I	100.3	11.6	I
I	48 h	I	45.8	2.6	I	55.4	3.2	I	65.0	3.8	I	77.8	4.5	I	87.5	5.1	I	97.1	5.6	I	109.9	6.4	I	119.5	6.9	I
I	72 h	I	50.9	2.0	I	61.3	2.4	I	71.7	2.8	I	85.6	3.3	I	96.0	3.7	I	106.4	4.1	I	120.3	4.6	I	130.7	5.0	I
I	-----I	I	-----I	I	-----I	I	-----I	I	-----I	I	-----I	I	-----I	I	-----I	I	-----I	I	-----I	I	-----I	I	-----I	I	-----I	

Station/Gebiet: HWRB III bei Oberhaselbach

Eingabewerte:

Dauer	N-1	N-100	u	w
[h]	[mm]	[mm]	[-]	[-]
0.25	10.9	31.2	10.9	4.408
1.00	17.2	51.8	17.2	7.513
12.00	35.2	81.2	35.2	9.989
24.00	45.3	100.3	45.3	11.943
48.00	55.4	119.5	55.4	13.919
72.00	61.3	130.7	61.3	15.070

Niederschlagsstatistik für: HWRB III bei Oberhaselbach

I	-----I	I	-----I	I	-----I	I	-----I	I	-----I	I	-----I	I	-----I	I	-----I	I	-----I	I	-----I	I	-----I	I	-----I	I	-----I	I	-----I
I	Tn	in	a	I	200.0	I	500.0	I	1000.0	I	5000.0	I	5000.0	I	5000.0	I	5000.0	I	5000.0	I	5000.0	I	5000.0	I	5000.0	I	5000.0
I	-----I	I	-----I	I	-----I	I	-----I	I	-----I	I	-----I	I	-----I	I	-----I	I	-----I	I	-----I	I	-----I	I	-----I	I	-----I	I	-----I
I	TD	I	hN	I	RN	I	hN	I	RN	I	hN	I	RN	I	hN	I	RN	I	hN	I	RN	I	hN	I	RN	I	hN
I	-----I	I	-----I	I	-----I	I	-----I	I	-----I	I	-----I	I	-----I	I	-----I	I	-----I	I	-----I	I	-----I	I	-----I	I	-----I	I	-----I
I	5 min	I	20.8	I	694.0	I	23.5	I	782.2	I	25.5	I	849.0	I	30.1	I	1004.0	I	30.1	I	1004.0	I	30.1	I	1004.0	I	30.1
I	10 min	I	28.7	I	479.1	I	32.2	I	536.7	I	34.8	I	580.2	I	40.9	I	681.4	I	40.9	I	681.4	I	40.9	I	681.4	I	40.9
I	15 min	I	34.3	I	380.6	I	38.3	I	425.5	I	41.4	I	459.4	I	48.4	I	538.3	I	48.4	I	538.3	I	48.4	I	538.3	I	48.4
I	30 min	I	44.9	I	249.5	I	50.2	I	278.8	I	54.2	I	301.0	I	63.4	I	352.4	I	63.4	I	352.4	I	63.4	I	352.4	I	63.4
I	60 min	I	57.0	I	158.4	I	63.9	I	177.5	I	69.1	I	191.9	I	81.2	I	225.5	I	81.2	I	225.5	I	81.2	I	225.5	I	81.2
I	-----I	I	-----I	I	-----I	I	-----I	I	-----I	I	-----I	I	-----I	I	-----I	I	-----I	I	-----I	I	-----I	I	-----I	I	-----I	I	-----I
I	90 min	I	61.0	I	113.0	I	68.2	I	126.4	I	73.7	I	136.5	I	86.4	I	159.9	I	86.4	I	159.9	I	86.4	I	159.9	I	86.4
I	2 h	I	64.1	I	89.0	I	71.6	I	99.4	I	77.2	I	107.2	I	90.3	I	125.4	I	90.3	I	125.4	I	90.3	I	125.4	I	90.3

KOSTRA.OUT

I	3	h	I	68.8	63.7	I	76.6	70.9	I	82.5	76.4	I	96.2	89.1	I
I	4	h	I	72.3	50.2	I	80.4	55.8	I	86.5	60.1	I	100.7	69.9	I
I	6	h	I	77.7	36.0	I	86.2	39.9	I	92.6	42.9	I	107.4	49.7	I
I	9	h	I	83.6	25.8	I	92.5	28.5	I	99.2	30.6	I	114.7	35.4	I
I	12	h	I	88.1	20.4	I	97.3	22.5	I	104.2	24.1	I	120.3	27.8	I
I			I			I			I			I			I
I	18	h	I	98.4	15.2	I	108.4	16.7	I	116.0	17.9	I	133.6	20.6	I
I	24	h	I	108.6	12.6	I	119.5	13.8	I	127.8	14.8	I	147.0	17.0	I
I	48	h	I	129.1	7.5	I	141.9	8.2	I	151.6	8.8	I	174.0	10.1	I
I	72	h	I	141.1	5.4	I	155.0	6.0	I	165.4	6.4	I	189.7	7.3	I
I			I			I			I			I			I

Freibord im Außergewöhnlichen Lastfall

Stauziel	350,80 müNN
Überfallhöhe BHQ1	0,72 m
Wellenhöhe	0,94 m
Sicherheitszuschlag 0,50 m x 10%	0,05 m
	352,51 müNN

Die Dammoberkante wird mit 352,81 müNN festgelegt was einer Freibordhöhe von 2,01 m entspricht.

Tosbeckenlänge (nach Angerholzer)

a) für Betriebsauslass bei Vollstau (350,80 müNN)

$V = 6,59 \text{ m/s}$ mittlere Geschwindigkeit des ankommenden Wassers

$A = 1,05 \text{ m}$ Absturzhöhe

$H = 0,25 \text{ m}$ Abflusshöhe

$$L_T = (6,59 + \sqrt{2 \times 9,81 \times 0,25}) \times \sqrt{\frac{1,05}{9,81}} + 0,21$$

$$= 4,72 \text{ m}$$

b) für Entlastungsanlage BHQ₁

$V = 1,24 \text{ m/s}$

$A = 6,80 \text{ m}$

$h = 0,57 \text{ m}$

$$L_T = (1,24 + \sqrt{2 \times 9,81 \times 0,57}) \times \sqrt{\frac{6,80}{9,81}} + 0,57$$

$$= 6,42 \text{ m}$$

c) für Entlastungsanlage BHQ₂

$V = 1,38 \text{ m/s}$

$A = 6,80 \text{ m}$

$h = 0,72 \text{ m}$

$$L_T = (1,38 + \sqrt{2 \times 9,81 \times 0,72}) \times \sqrt{\frac{6,80}{9,81}} + 0,72$$

$$= 7,98 \text{ m}$$

Störkörper:

Höhe	=	1,55 m
Seitenlänge	=	0,40 m
Abstand quer	=	0,50 m
Abstand längs	=	0,60 m

5. Drosselbauwerk mit Ökoschlucht

Ausführung und Steuerung der Betriebseinrichtungen:

Die Steuerung des Abflusses erfolgt vollautomatisch über eine Wasserstandsmessung und zwei elektrisch angetriebene Spindelschieber. Die Steuerung, sowie die Antriebe für die Spindelschieber werden in Schaltschränke auf eine Überbauplatte des Drosselbauwerks untergebracht. Hierfür ist ein Stromanschluss durch das EVU neu herzustellen.

Die automatische Steuerung wird entsprechend der nachfolgenden Schaltpunkte programmiert:

Anlauf der Hochwasserwelle:

- Stauwasserkote 345,05 müNN
- Grundablass (Gewässerdurchlass schließt)
 - Betriesbausslass öffnet

Schieberstellung:

$Q_{ab \max} = 1,35 \text{ m}^3/\text{s}$ (bei Einstau bis OK-Damm)

Sohle Drosselschieber 345,05 müNN

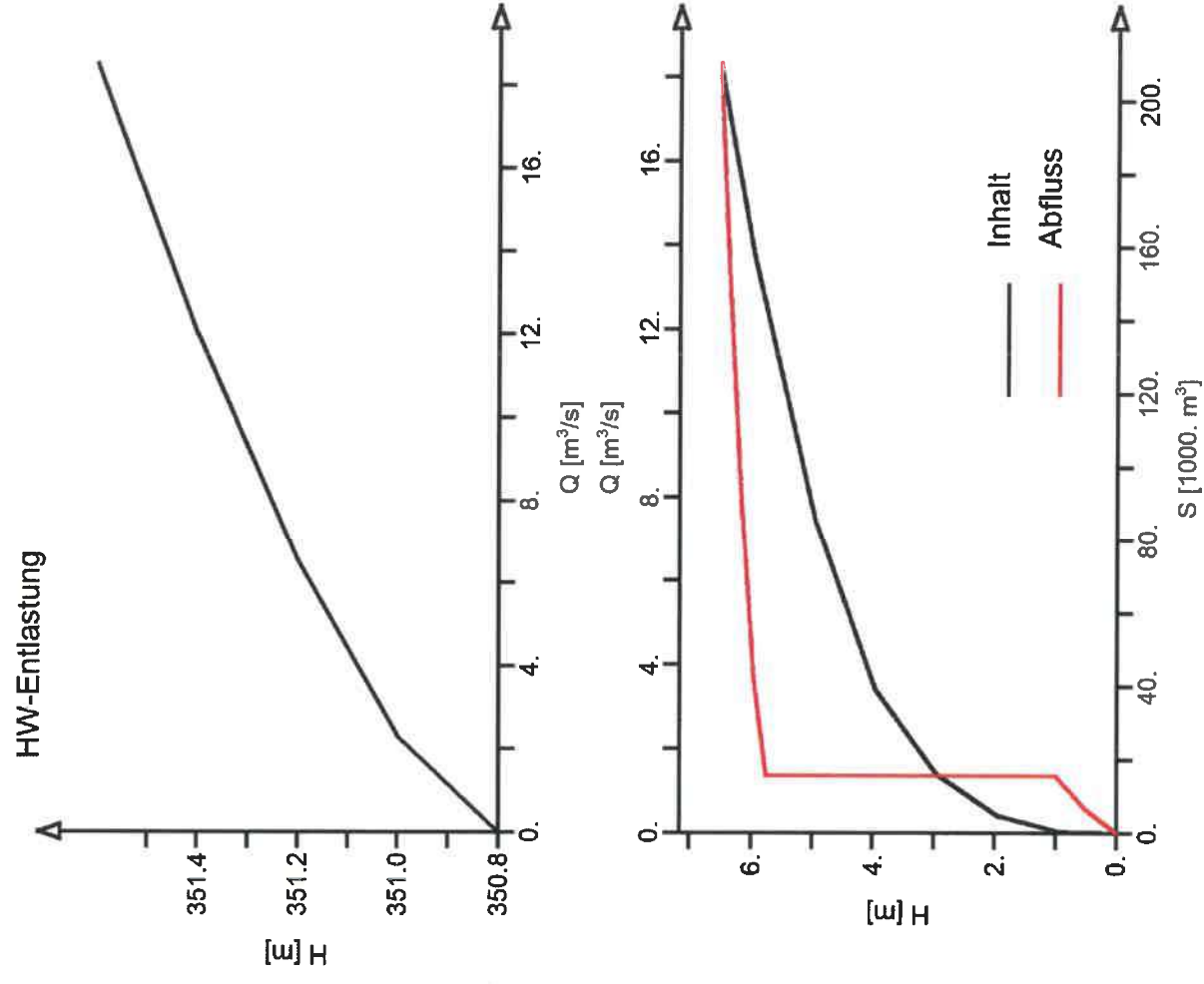
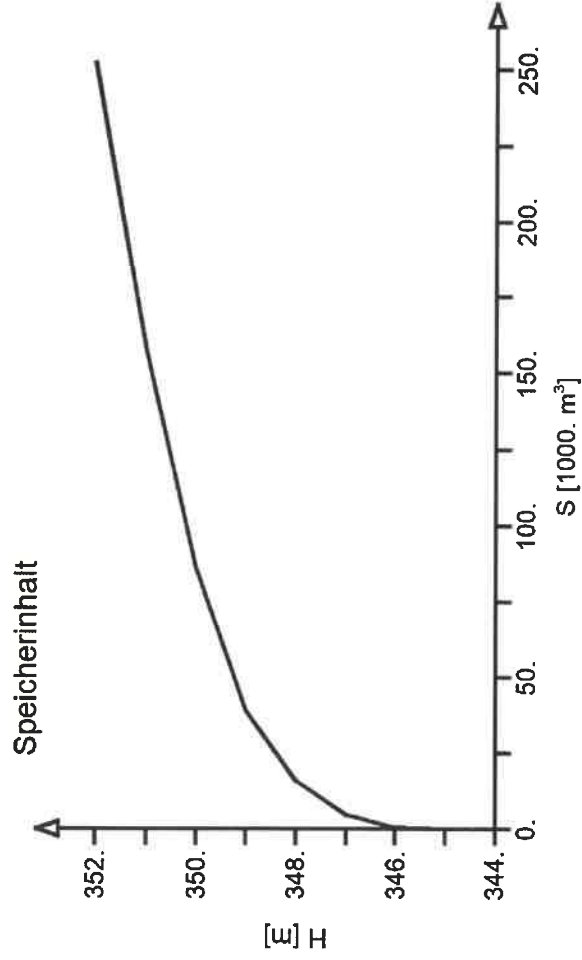
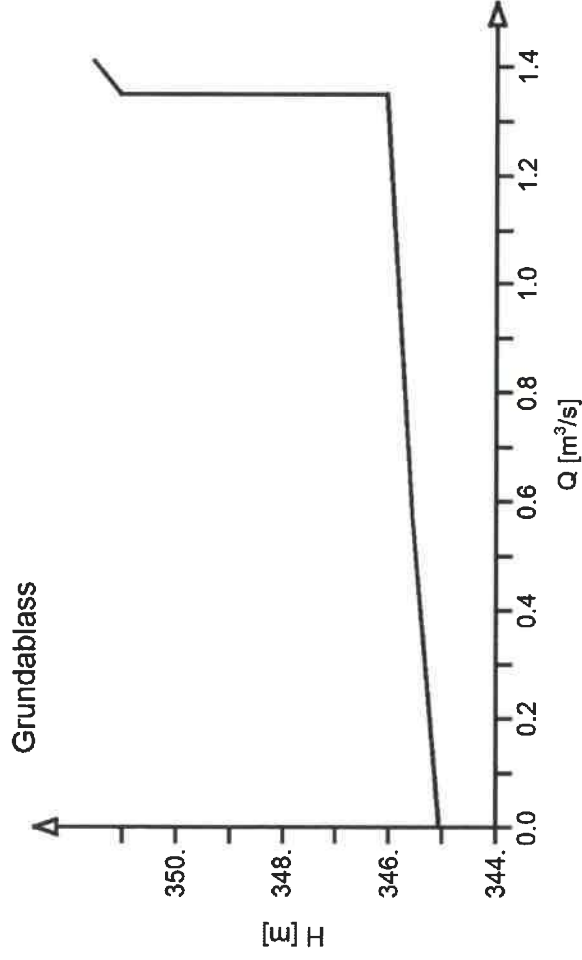
Stauhöhe müNN / m	Öffnungshöhe m	Durchfluss in m^3/s
345,05 / 0,00	0	0
345,55 / 0,50	0,50	0,56
346,05 / 1,00	0,77	1,35
346,55 / 1,50	0,55	1,36
347,05 / 2,00	0,45	1,34
347,55 / 2,50	0,40	1,35
348,05 / 3,00	0,36	1,35
348,55 / 3,50	0,33	1,35
349,05 / 4,00	0,25	1,36
349,55 / 4,50	0,23	1,35
350,05 / 5,00	0,22	1,33
350,55 / 5,50	0,21	1,35
350,80 / 5,75	0,20	1,32
351,20 / 6,15	0,20	1,37
351,55 / 6,50	0,20	1,41

Drosselöffnung HWRB III bei Oberhaselbach

Breite	m	0,80	0,80	0,80	0,80	0,80	0,80	0,80	0,80
Höhe	m	0,50	0,77	0,55	0,45	0,40	0,36	0,33	0,30
Fläche	m²	0,40	0,62	0,44	0,36	0,32	0,29	0,26	0,24
Geschwindigkeit		1,40	2,19	3,09	3,72	4,23	4,69	5,10	5,50
Wsp.	müNN	345,55	346,05	346,55	347,05	347,55	348,05	348,55	349,05
Sohle Drosselschieber	müNN	345,05	345,05	345,05	345,05	345,05	345,05	345,05	345,05
Einstauhöhe	m	0,50	1,00	1,50	2,00	2,50	3,00	3,50	4,00
Beiwert		0,63	0,63	0,63	0,63	0,63	0,63	0,63	0,63
Abfluss	m³/s	0,56	1,35	1,36	1,34	1,35	1,35	1,35	1,35
Breite	m	0,80	0,80	0,80	0,80	0,80	0,80	0,80	0,80
Höhe	m	0,31	0,29	0,27	0,26	0,25	0,25	0,25	0,25
Fläche	m²	0,25	0,23	0,22	0,21	0,20	0,20	0,20	0,20
Geschwindigkeit		5,47	5,82	6,16	6,47	6,62	6,85	7,05	7,25
Wsp.	müNN	349,05	349,55	350,05	350,55	350,80	351,20	351,55	351,85
Sohle Drosselschieber	müNN	345,05	345,05	345,05	345,05	345,05	345,05	345,05	345,05
Einstauhöhe	m	4,00	4,50	5,00	5,50	5,75	6,15	6,50	6,85
Beiwert		0,63	0,63	0,63	0,63	0,63	0,63	0,63	0,63
Abfluss	m³/s	1,36	1,35	1,33	1,35	1,32	1,37	1,41	1,44

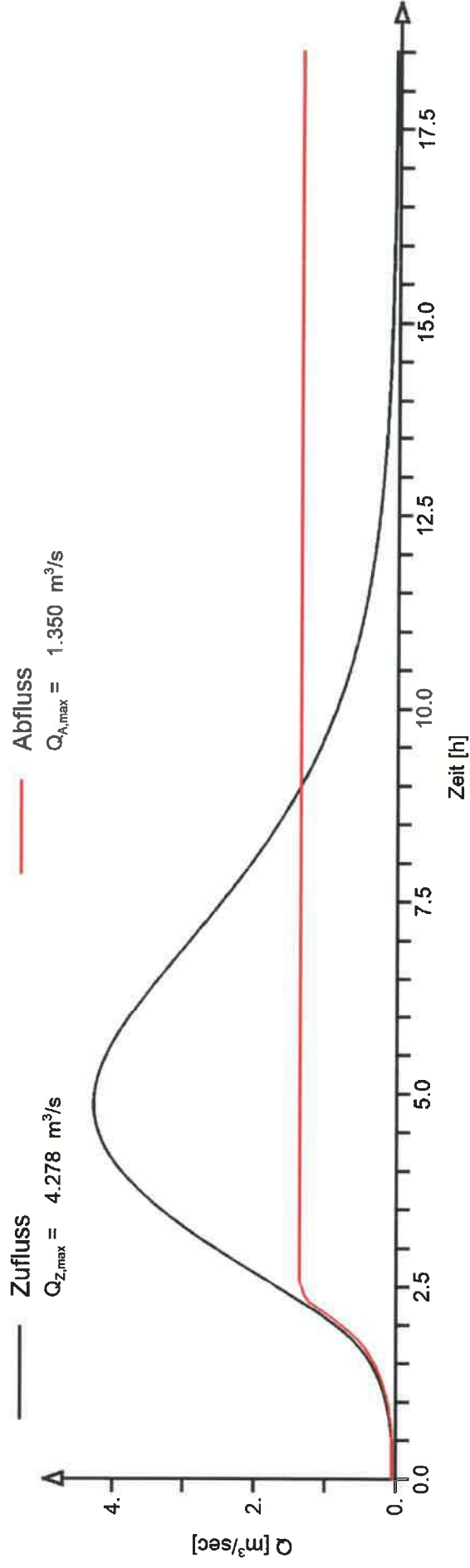
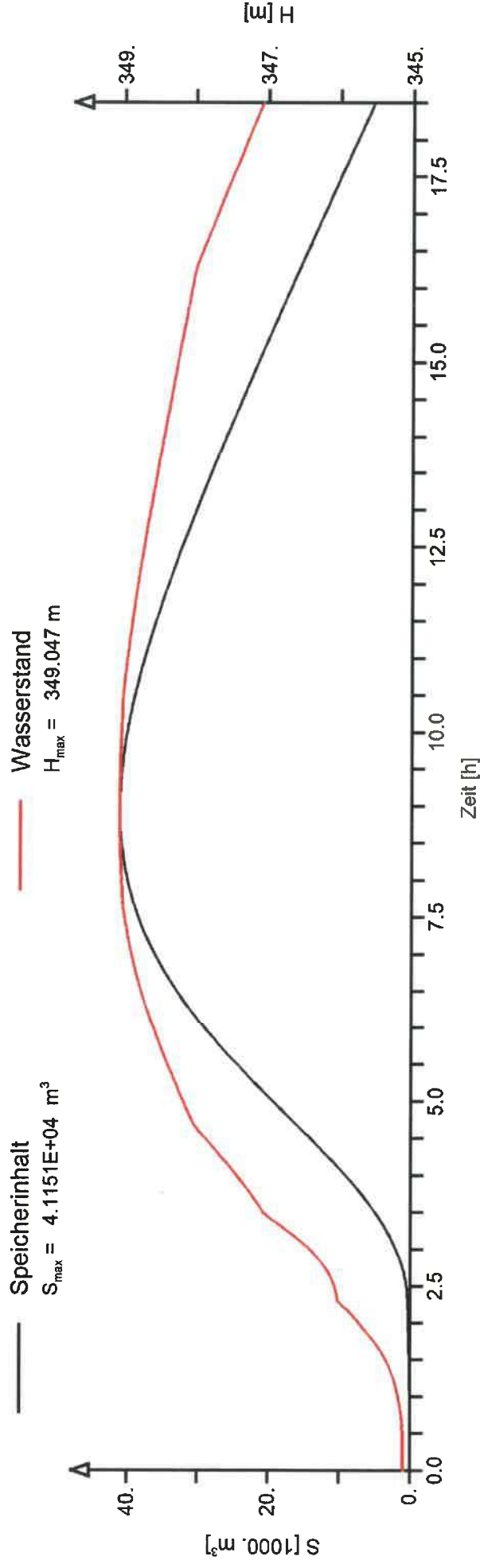
Speicherkennlinien:

HWRB III bei Oberhaselbach



HWRB III bei Oberhaselbach

Ereignis: HQ 5



* Hochwasseranalyse - Programm: S E R E T Version: 7.0 IWG - Hydrologie am KIT *
* Datensatz: HWRBIII.SEE HWRB III bei Oberhaselbach Berechnet am: 2. Apr 2020 um: 07:17:49 *
* \$\$ *****

Speicherkenndaten: HWRB III bei Oberhaselbach

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Speicherinhaltslinie:

Anzahl der Stuetzstellen fuer Inhaltslinie NST = 8

345.05	0.000	;	346.00	350.0	;	347.00	4685.	;	348.00	0.1589E+05;	349.00	0.3897E+05;
350.00	0.8555E+05;		351.00	0.1579E+06;		352.00	0.2522E+06;					

Kennwerte des Grundablasses:

Hoehenmarke der Unterkante: HGU = 345.050

Anzahl der Stuetzstellen fuer Abflusskurve: NG = 5

Stuetzstellen fuer Abflusskurve : Hoehenmarken und Abfluesse

345.05	0.000;	345.55	0.560;	346.05	1.350;	351.05	1.350;	351.55	1.410;
--------	--------	--------	--------	--------	--------	--------	--------	--------	--------

Kennwerte der Entlastungsanlage:

Hoehenmarke der Ueberfallkrone: HWE = 350.800

Anzahl der Stuetzstellen fuer Abflusskurve: NEL = 5

Stuetzstellen fuer Abflusskurve : Hoehenmarken und Abfluesse

350.80	0.000;	351.00	2.311;	351.20	6.536;	351.40	12.007;	351.60	18.487;
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Anfangswasserstand : HANF = 345.050

* Hochwasseranalyse - Programm: S E R E T Version: 7.0 IWG - Hydrologie am KIT *
* Datensatz: HWRBIII.SEE und HWRBIIIHQ5.WEL Berechnet am: 2. Apr 2020 um: 07:17:49 *

Anfangs-Wasserstand	[m] :	345.050
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Seite 2

SECRET.OUT

2.40	1.490	1.285	346.02	68.47	417.4
2.50	1.665	1.321	346.04	119.1	536.5
2.60	1.843	1.350	346.08	171.6	708.1
2.70	2.022	1.350	346.14	235.5	943.6
2.80	2.199	1.350	346.21	299.3	1243.
2.90	2.373	1.350	346.29	362.0	1605.
3.00	2.544	1.350	346.39	423.7	2029.
3.10	2.710	1.350	346.50	483.6	2512.
3.20	2.870	1.350	346.62	541.4	3054.
3.30	3.024	1.350	346.76	597.1	3651.
3.40	3.171	1.350	346.91	650.3	4301.
3.50	3.311	1.350	347.03	700.9	5002.
3.60	3.443	1.350	347.10	748.7	5751.
3.70	3.567	1.350	347.17	793.7	6544.
3.80	3.683	1.350	347.24	835.7	7380.
3.90	3.790	1.350	347.32	874.5	8255.
4.00	3.887	1.350	347.40	909.8	9164.
4.10	3.974	1.350	347.48	941.5	1.0106E+04
4.20	4.050	1.350	347.57	969.3	1.1075E+04
4.30	4.115	1.350	347.66	993.1	1.2068E+04
4.40	4.169	1.350	347.75	1013.	1.3081E+04
4.50	4.212	1.350	347.84	1029.	1.4110E+04
4.60	4.244	1.350	347.93	1041.	1.5151E+04
4.70	4.266	1.350	348.01	1049.	1.6199E+04
4.80	4.277	1.350	348.06	1053.	1.7253E+04
4.90	4.278	1.350	348.10	1054.	1.8307E+04
5.00	4.269	1.350	348.15	1051.	1.9358E+04
5.10	4.251	1.350	348.20	1045.	2.0403E+04
5.20	4.225	1.350	348.24	1036.	2.1439E+04
5.30	4.191	1.350	348.28	1024.	2.2463E+04
5.40	4.149	1.350	348.33	1009.	2.3472E+04
5.50	4.101	1.350	348.37	992.1	2.4464E+04
5.60	4.046	1.350	348.41	972.5	2.5437E+04
5.70	3.985	1.350	348.45	950.8	2.6388E+04
5.80	3.920	1.350	348.50	927.5	2.7315E+04
5.90	3.849	1.350	348.53	902.2	2.8217E+04
6.00	3.775	1.350	348.57	875.7	2.9093E+04
6.10	3.697	1.350	348.61	847.7	2.9941E+04
6.20	3.616	1.350	348.64	818.7	3.0759E+04

6.30	3.532	1.350	348.68	788.5	3.1548E+04
6.40	3.446	1.350	348.71	757.7	3.2306E+04
6.50	3.358	1.350	348.74	726.0	3.3032E+04
6.60	3.269	1.350	348.77	694.0	3.3726E+04
6.70	3.179	1.350	348.80	661.7	3.4387E+04
6.80	3.088	1.350	348.83	629.0	3.5016E+04
6.90	2.997	1.350	348.85	596.2	3.5612E+04
7.00	2.906	1.350	348.88	563.4	3.6176E+04
7.10	2.815	1.350	348.90	530.7	3.6707E+04
7.20	2.725	1.350	348.92	498.2	3.7205E+04
7.30	2.635	1.350	348.94	465.8	3.7671E+04
7.40	2.547	1.350	348.96	434.1	3.8105E+04
7.50	2.459	1.350	348.98	402.4	3.8507E+04
7.60	2.373	1.350	349.00	371.4	3.8879E+04
7.70	2.288	1.350	349.01	340.7	3.9219E+04
7.80	2.204	1.350	349.01	310.5	3.9530E+04
7.90	2.123	1.350	349.02	281.2	3.9811E+04
8.00	2.043	1.350	349.02	252.4	4.0063E+04
8.10	1.965	1.350	349.03	224.2	4.0287E+04
8.20	1.888	1.350	349.03	196.4	4.0484E+04
8.30	1.814	1.350	349.04	169.7	4.0654E+04
8.40	1.742	1.350	349.04	143.7	4.0797E+04
8.50	1.671	1.350	349.04	118.1	4.0915E+04
8.60	1.603	1.350	349.04	93.52	4.1009E+04
8.70	1.537	1.350	349.05	69.70	4.1079E+04
8.80	1.472	1.350	349.05	46.27	4.1125E+04
8.90	1.410	1.350	349.05	23.83	4.1149E+04
9.00	1.350	1.350	349.05	2.160	4.1151E+04
9.10	1.292	1.350	349.05	-18.79	4.1132E+04
9.20	1.236	1.350	349.05	-39.02	4.1093E+04
9.30	1.182	1.350	349.04	-58.54	4.1035E+04
9.40	1.130	1.350	349.04	-77.33	4.0957E+04
9.50	1.080	1.350	349.04	-95.41	4.0862E+04
9.60	1.032	1.350	349.04	-112.7	4.0749E+04
9.70	0.986	1.350	349.04	-129.4	4.0620E+04
9.80	0.941	1.350	349.03	-145.6	4.0474E+04
9.90	0.898	1.350	349.03	-161.2	4.0313E+04
10.00	0.857	1.350	349.03	-176.0	4.0137E+04
10.10	0.818	1.350	349.02	-190.1	3.9947E+04

SEERET.OUT

SEERET.OUT

10.20	0.780	1.350	349.02	-203.8	3.9743E+04
10.30	0.744	1.350	349.01	-216.9	3.9526E+04
10.40	0.710	1.350	349.01	-229.2	3.9297E+04
10.50	0.677	1.350	349.00	-241.1	3.9056E+04
10.60	0.645	1.350	348.99	-252.7	3.8803E+04
10.70	0.615	1.350	348.98	-263.5	3.8540E+04
10.80	0.586	1.350	348.97	-274.0	3.8266E+04
10.90	0.559	1.350	348.96	-283.8	3.7982E+04
11.00	0.533	1.350	348.94	-293.2	3.7689E+04
11.10	0.508	1.350	348.93	-302.2	3.7386E+04
11.20	0.484	1.350	348.92	-310.9	3.7076E+04
11.30	0.461	1.350	348.90	-319.2	3.6756E+04
11.40	0.439	1.350	348.89	-327.2	3.6429E+04
11.50	0.419	1.350	348.88	-334.4	3.6095E+04
11.60	0.399	1.350	348.86	-341.6	3.5753E+04
11.70	0.380	1.350	348.85	-348.5	3.5405E+04
11.80	0.363	1.350	348.83	-354.7	3.5050E+04
11.90	0.346	1.350	348.81	-360.8	3.4689E+04
12.00	0.330	1.350	348.80	-366.6	3.4322E+04
12.10	0.315	1.350	348.78	-372.1	3.3950E+04
12.20	0.300	1.350	348.77	-377.5	3.3573E+04
12.30	0.286	1.350	348.75	-382.5	3.3190E+04
12.40	0.273	1.350	348.73	-387.2	3.2803E+04
12.50	0.261	1.350	348.72	-391.6	3.2412E+04
12.60	0.249	1.350	348.70	-395.9	3.2016E+04
12.70	0.238	1.350	348.68	-399.9	3.1616E+04
12.80	0.228	1.350	348.66	-403.6	3.1212E+04
12.90	0.218	1.350	348.65	-407.2	3.0805E+04
13.00	0.208	1.350	348.63	-410.8	3.0394E+04
13.10	0.199	1.350	348.61	-414.0	2.9980E+04
13.20	0.191	1.350	348.59	-416.9	2.9563E+04
13.30	0.183	1.350	348.57	-419.8	2.9143E+04
13.40	0.175	1.350	348.56	-422.7	2.8721E+04
13.50	0.168	1.350	348.54	-425.3	2.8295E+04
13.60	0.161	1.350	348.52	-427.8	2.7868E+04
13.70	0.155	1.350	348.50	-430.0	2.7438E+04
13.80	0.149	1.350	348.48	-432.1	2.7005E+04
13.90	0.143	1.350	348.46	-434.3	2.6571E+04
14.00	0.138	1.350	348.44	-436.1	2.6135E+04

14.10	0.133	1.350	348.42	SEERET.OUT	-437.9	2.5697E+04
14.20	0.128	1.350	348.41		-439.7	2.5257E+04
14.30	0.123	1.350	348.39		-441.5	2.4816E+04
14.40	0.119	1.350	348.37		-443.0	2.4373E+04
14.50	0.115	1.350	348.35		-444.5	2.3928E+04
14.60	0.111	1.350	348.33		-445.9	2.3482E+04
14.70	0.108	1.350	348.31		-447.0	2.3035E+04
14.80	0.104	1.350	348.29		-448.4	2.2587E+04
14.90	0.101	1.350	348.27		-449.5	2.2137E+04
15.00	0.098	1.350	348.25		-450.6	2.1687E+04
15.10	0.095	1.350	348.23		-451.7	2.1235E+04
15.20	0.092	1.350	348.21		-452.8	2.0782E+04
15.30	0.089	1.350	348.19		-453.9	2.0329E+04
15.40	0.087	1.350	348.17		-454.6	1.9874E+04
15.50	0.084	1.350	348.15		-455.7	1.9418E+04
15.60	0.082	1.350	348.13		-456.4	1.8962E+04
15.70	0.080	1.350	348.11		-457.1	1.8505E+04
15.80	0.078	1.350	348.09		-457.8	1.8047E+04
15.90	0.076	1.350	348.07		-458.6	1.7588E+04
16.00	0.074	1.350	348.05		-459.3	1.7129E+04
16.10	0.072	1.350	348.03		-460.0	1.6669E+04
16.20	0.070	1.350	348.01		-460.7	1.6208E+04
16.30	0.068	1.350	347.99		-461.4	1.5747E+04
16.40	0.066	1.350	347.95		-462.2	1.5285E+04
16.50	0.064	1.350	347.90		-462.9	1.4822E+04
16.60	0.062	1.350	347.86		-463.6	1.4358E+04
16.70	0.060	1.350	347.82		-464.3	1.3894E+04
16.80	0.059	1.350	347.78		-464.7	1.3429E+04
16.90	0.058	1.350	347.74		-465.1	1.2964E+04
17.00	0.057	1.350	347.70		-465.4	1.2499E+04
17.10	0.056	1.350	347.66		-465.8	1.2033E+04
17.20	0.056	1.350	347.61		-465.8	1.1567E+04
17.30	0.055	1.350	347.57		-466.2	1.1101E+04
17.40	0.054	1.350	347.53		-466.5	1.0634E+04
17.50	0.054	1.350	347.49		-466.6	1.0168E+04
17.60	0.053	1.350	347.45		-466.9	9701.
17.70	0.053	1.350	347.41		-466.9	9234.
17.80	0.053	1.350	347.36		-466.9	8767.
17.90	0.052	1.350	347.32		-467.2	8300.

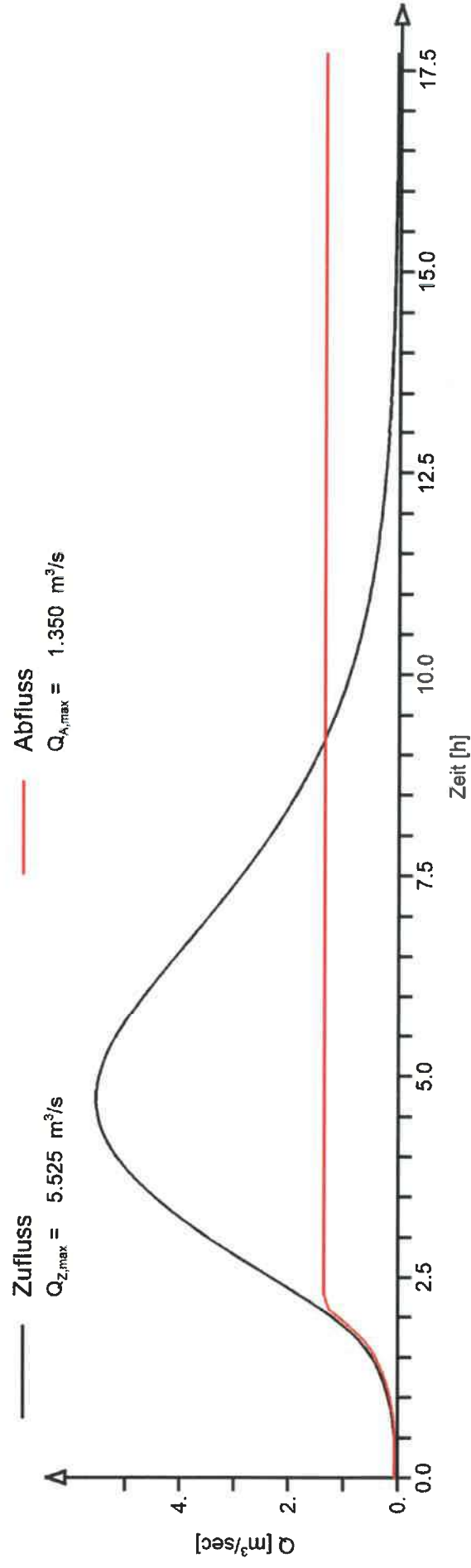
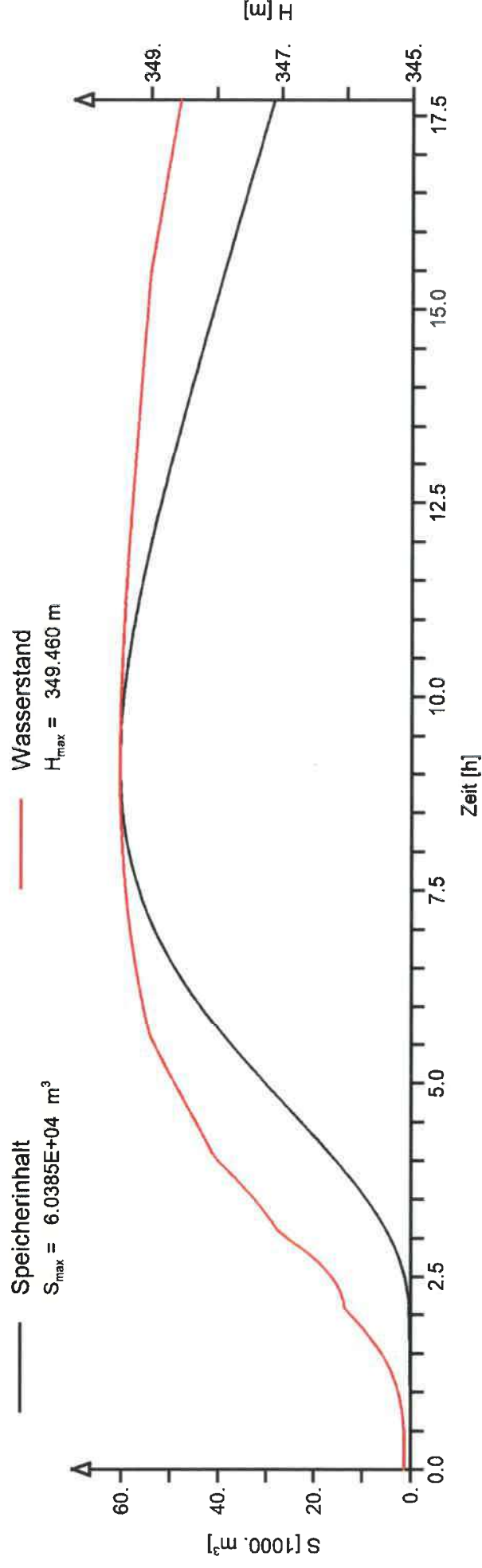
18.00	0.052	1.350	347.28	SEERET.OUT	7832.
18.10	0.051	1.350	347.24	-467.3	7365.
18.20	0.051	1.350	347.20	-467.6	6897.
18.30	0.051	1.350	347.16	-467.6	6430.
18.40	0.051	1.350	347.11	-467.6	5962.
18.50	0.050	1.350	347.07	-468.0	5494.
18.60	0.050	1.350	347.03	-468.0	5026.
18.70	0.050	1.350	346.97	-468.0	4558.
18.80	0.050	1.350	346.86	-468.0	4090.
18.90	0.050	1.350	346.75	-468.0	3622.
19.00	0.050	1.350	346.65	-468.0	3154.
19.10	0.050	1.350	346.54	-468.0	2686.
19.20	0.050	1.350	346.43	-468.0	2218.
19.30	0.050	1.350	346.32	-468.0	1750.
19.40	0.050	1.350	346.21	-468.0	1282.
19.50	0.050	1.350	346.11	-468.0	814.0
19.60	0.050	1.323	346.00	-461.1	352.9
19.70	0.050	0.604	345.38	-232.1	120.7
19.80	0.050	0.222	345.19	-69.53	51.19
19.90	0.050	0.107	345.13	-23.19	28.00
20.00	0.050	0.069	345.11	-7.651	20.34
20.10	0.050	0.056	345.10	-2.597	17.75
20.20	0.050	0.052	345.10	-0.8683	16.88
20.30	0.050	0.051	345.10	-0.2871	16.59
20.40	0.050	0.050	345.09	-9.6521E-02	16.50
20.50	0.050	0.050	345.09	-3.5095E-02	16.46
20.60	0.050	0.050	345.09	-1.3924E-02	16.45
20.70	0.050	0.050	345.09	0.000	16.45

Zuflussumme: SUMZ = 0.8729E+05
 Abflussumme: SUMA = 0.8729E+05
 Anfangsuehlung: SANF = 16.45
 Fuehlung am Ende : SEND = 16.45
 Differenz : SEND - SANF = 0.000

Wasserstand: HANF = 345.09
 HMAX = 349.05
 HEND = 345.09
 Volumen: SMAX = 4.1151E+04

HWRB III bei Oberhaselbach

Ereignis: HQ 10



* Hochwasseranalyse - Programm: S E E R E T Version: 7.0 IWG - Hydrologie am KIT *****
* Datensatz: HWRBIII.SEE HWRB III bei Oberhaselbach Berechnet am: 1. Apr 2020 um: 16:06:45 *
* \$\$ *****

Speicherkenndaten: HWRB III bei Oberhaselbach

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Speicherinhaltslinie:

Anzahl der Stuetzstellen fuer Inhaltslinie NST = 8

345.05	0.000	;	346.00	350.0	;	347.00	4685.	;	348.00	0.1589E+05;	349.00	0.3897E+05;
350.00	0.8555E+05;		351.00	0.1579E+06;		352.00	0.2522E+06;					

Kennwerte des Grundablasses:

Hoehenmarke der Unterkante:

HGU = 345.050

Anzahl der Stuetzstellen fuer Abflusskurve: NG = 5

Stuetzstellen fuer Abflusskurve : Hoehenmarken und Abfluesse

345.05	0.000;	345.55	0.560;	346.05	1.350;	351.05	1.350;	351.55	1.410;
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Kennwerte der Entlastungsanlage:

Hoehenmarke der Ueberfallkrone:

HWE = 350.800

Anzahl der Stuetzstellen fuer Abflusskurve: NEL = 5

Stuetzstellen fuer Abflusskurve : Hoehenmarken und Abfluesse

350.80	0.000;	351.00	2.311;	351.20	6.536;	351.40	12.007;	351.60	18.487;
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Anfangswasserstand : HANF = 345.050

Zuflussganglinie: Gewaesser : Haselbach

Gewaesserstelle : bei Oberhaselbach
 Ereignis : HQ 10
 Zeitschritt [h] : 0.100

Anfangs-Wasserstand [m] : 345.050

Zeit [h]	QZ [cbm/sec]	QA [cbm/sec]	QHW [cbm/sec]	H [m]	DS [cbm]	S [cbm]
0.00	0.050	0.050		345.09		16.45
0.10	0.050	0.050		345.09	0.000	16.45
0.20	0.050	0.050		345.09	0.000	16.45
0.30	0.051	0.050		345.10	0.2074	16.65
0.40	0.054	0.052		345.10	0.6973	17.35
0.50	0.061	0.056		345.10	1.730	19.08
0.60	0.072	0.064		345.11	2.918	22.00
0.70	0.089	0.076		345.12	4.580	26.58
0.80	0.111	0.093		345.14	6.283	32.86
0.90	0.140	0.116		345.16	8.406	41.27
1.00	0.176	0.146		345.19	10.63	51.90
1.10	0.218	0.183		345.23	12.68	64.57
1.20	0.268	0.226		345.27	14.99	79.57
1.30	0.327	0.277		345.31	17.87	97.44
1.40	0.396	0.337		345.37	20.95	118.4
1.50	0.480	0.409		345.44	25.19	143.6
1.60	0.580	0.495		345.52	30.13	173.7
1.70	0.700	0.610		345.61	32.80	206.5
1.80	0.841	0.750		345.70	32.83	239.3
1.90	1.004	0.901		345.80	36.71	276.1
2.00	1.188	1.073		345.91	41.34	317.4
2.10	1.390	1.246		346.00	49.68	367.1
2.20	1.607	1.299		346.03	104.3	471.3
2.30	1.835	1.343		346.07	170.2	641.5
2.40	2.071	1.350		346.13	251.1	892.6
2.50	2.310	1.350		346.20	337.0	1230.
2.60	2.551	1.350		346.30	423.7	1653.
2.70	2.791	1.350		346.42	510.1	2163.
2.80	3.027	1.350		346.56	595.2	2759.

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2.90	3.258	1.350	346.71	678.6	3437.
3.00	3.482	1.350	346.89	759.5	4197.
3.10	3.697	1.350	347.03	837.2	5034.
3.20	3.903	1.350	347.11	911.7	5945.
3.30	4.100	1.350	347.20	982.9	6928.
3.40	4.285	1.350	347.29	1050.	7978.
3.50	4.460	1.350	347.39	1113.	9092.
3.60	4.623	1.350	347.50	1172.	1.0264E+04
3.70	4.775	1.350	347.61	1228.	1.1492E+04
3.80	4.915	1.350	347.72	1278.	1.2770E+04
3.90	5.041	1.350	347.84	1324.	1.4094E+04
4.00	5.154	1.350	347.96	1365.	1.5460E+04
4.10	5.252	1.350	348.04	1401.	1.6861E+04
4.20	5.335	1.350	348.10	1432.	1.8292E+04
4.30	5.403	1.350	348.17	1457.	1.9749E+04
4.40	5.456	1.350	348.23	1476.	2.1225E+04
4.50	5.493	1.350	348.30	1490.	2.2715E+04
4.60	5.516	1.350	348.36	1499.	2.4214E+04
4.70	5.525	1.350	348.43	1503.	2.5717E+04
4.80	5.520	1.350	348.49	1501.	2.7218E+04
4.90	5.501	1.350	348.56	1495.	2.8713E+04
5.00	5.470	1.350	348.62	1484.	3.0198E+04
5.10	5.428	1.350	348.68	1470.	3.1667E+04
5.20	5.375	1.350	348.75	1451.	3.3118E+04
5.30	5.312	1.350	348.81	1429.	3.4547E+04
5.40	5.240	1.350	348.87	1403.	3.5950E+04
5.50	5.159	1.350	348.93	1374.	3.7324E+04
5.60	5.071	1.350	348.99	1343.	3.8667E+04
5.70	4.976	1.350	349.02	1309.	3.9975E+04
5.80	4.875	1.350	349.05	1273.	4.1248E+04
5.90	4.769	1.350	349.08	1235.	4.2483E+04
6.00	4.659	1.350	349.10	1195.	4.3678E+04
6.10	4.545	1.350	349.13	1154.	4.4832E+04
6.20	4.428	1.350	349.15	1112.	4.5945E+04
6.30	4.309	1.350	349.17	1070.	4.7014E+04
6.40	4.188	1.350	349.20	1026.	4.8040E+04
6.50	4.065	1.350	349.22	981.8	4.9022E+04
6.60	3.942	1.350	349.24	937.6	4.9959E+04
6.70	3.818	1.350	349.26	892.9	5.0852E+04

6.80	3.695	1.350	349.27	848.6	5.1701E+04
6.90	3.571	1.350	349.29	804.0	5.2505E+04
7.00	3.449	1.350	349.31	760.0	5.3265E+04
7.10	3.328	1.350	349.32	716.4	5.3982E+04
7.20	3.208	1.350	349.34	673.2	5.4655E+04
7.30	3.091	1.350	349.35	631.0	5.5286E+04
7.40	2.975	1.350	349.36	589.2	5.5875E+04
7.50	2.861	1.350	349.38	548.1	5.6423E+04
7.60	2.749	1.350	349.39	507.7	5.6931E+04
7.70	2.640	1.350	349.40	468.3	5.7399E+04
7.80	2.534	1.350	349.41	430.0	5.7829E+04
7.90	2.430	1.350	349.41	392.6	5.8222E+04
8.00	2.329	1.350	349.42	356.1	5.8578E+04
8.10	2.231	1.350	349.43	320.7	5.8898E+04
8.20	2.135	1.350	349.43	286.1	5.9184E+04
8.30	2.043	1.350	349.44	252.8	5.9437E+04
8.40	1.954	1.350	349.44	220.6	5.9658E+04
8.50	1.867	1.350	349.45	189.2	5.9847E+04
8.60	1.784	1.350	349.45	159.2	6.0006E+04
8.70	1.703	1.350	349.46	130.0	6.0136E+04
8.80	1.625	1.350	349.46	101.8	6.0238E+04
8.90	1.550	1.350	349.46	74.70	6.0313E+04
9.00	1.478	1.350	349.46	48.67	6.0361E+04
9.10	1.409	1.350	349.46	23.71	6.0385E+04
9.20	1.343	1.350	349.46	-0.1445	6.0385E+04
9.30	1.279	1.350	349.46	-23.26	6.0362E+04
9.40	1.218	1.350	349.46	-45.32	6.0316E+04
9.50	1.159	1.350	349.46	-66.64	6.0250E+04
9.60	1.103	1.350	349.46	-86.91	6.0163E+04
9.70	1.049	1.350	349.45	-106.4	6.0056E+04
9.80	0.998	1.350	349.45	-124.9	5.9932E+04
9.90	0.949	1.350	349.45	-142.6	5.9789E+04
10.00	0.902	1.350	349.44	-159.6	5.9629E+04
10.10	0.857	1.350	349.44	-175.9	5.9453E+04
10.20	0.814	1.350	349.44	-191.4	5.9262E+04
10.30	0.774	1.350	349.43	-205.9	5.9056E+04
10.40	0.735	1.350	349.43	-220.0	5.8836E+04
10.50	0.698	1.350	349.42	-233.4	5.8603E+04
10.60	0.663	1.350	349.42	-246.1	5.8357E+04

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10.70	0.629	1.350	349.41	-258.3	5.8098E+04
10.80	0.598	1.350	349.41	-269.6	5.7829E+04
10.90	0.567	1.350	349.40	-280.8	5.7548E+04
11.00	0.539	1.350	349.39	-290.9	5.7257E+04
11.10	0.512	1.350	349.39	-300.7	5.6956E+04
11.20	0.486	1.350	349.38	-310.1	5.6646E+04
11.30	0.461	1.350	349.37	-319.1	5.6327E+04
11.40	0.438	1.350	349.37	-327.5	5.6000E+04
11.50	0.416	1.350	349.36	-335.4	5.5664E+04
11.60	0.395	1.350	349.35	-343.1	5.5321E+04
11.70	0.375	1.350	349.34	-350.3	5.4971E+04
11.80	0.357	1.350	349.34	-356.8	5.4614E+04
11.90	0.339	1.350	349.33	-363.3	5.4251E+04
12.00	0.322	1.350	349.32	-369.5	5.3881E+04
12.10	0.306	1.350	349.31	-375.3	5.3506E+04
12.20	0.291	1.350	349.30	-380.7	5.3125E+04
12.30	0.277	1.350	349.30	-385.8	5.2739E+04
12.40	0.264	1.350	349.29	-390.5	5.2349E+04
12.50	0.251	1.350	349.28	-395.2	5.1954E+04
12.60	0.239	1.350	349.27	-399.5	5.1554E+04
12.70	0.228	1.350	349.26	-403.5	5.1151E+04
12.80	0.217	1.350	349.25	-407.5	5.0743E+04
12.90	0.207	1.350	349.24	-411.1	5.0332E+04
13.00	0.198	1.350	349.24	-414.4	4.9918E+04
13.10	0.189	1.350	349.23	-417.6	4.9500E+04
13.20	0.181	1.350	349.22	-420.6	4.9080E+04
13.30	0.173	1.350	349.21	-423.4	4.8656E+04
13.40	0.165	1.350	349.20	-426.3	4.8230E+04
13.50	0.158	1.350	349.19	-428.9	4.7801E+04
13.60	0.152	1.350	349.18	-431.1	4.7370E+04
13.70	0.145	1.350	349.17	-433.6	4.6936E+04
13.80	0.139	1.350	349.16	-435.7	4.6501E+04
13.90	0.134	1.350	349.15	-437.6	4.6063E+04
14.00	0.129	1.350	349.14	-439.4	4.5624E+04
14.10	0.124	1.350	349.13	-441.2	4.5182E+04
14.20	0.119	1.350	349.12	-443.0	4.4739E+04
14.30	0.115	1.350	349.11	-444.5	4.4295E+04
14.40	0.111	1.350	349.10	-445.9	4.3849E+04
14.50	0.106	1.350	349.10	-447.7	4.3401E+04

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14.60	0.102	1.350	349.09	-449.1	4.2952E+04
14.70	0.099	1.350	349.08	-450.2	4.2502E+04
14.80	0.095	1.350	349.07	-451.7	4.2050E+04
14.90	0.092	1.350	349.06	-452.8	4.1598E+04
15.00	0.089	1.350	349.05	-453.9	4.1144E+04
15.10	0.086	1.350	349.04	-454.9	4.0689E+04
15.20	0.084	1.350	349.03	-455.7	4.0233E+04
15.30	0.081	1.350	349.02	-456.7	3.9776E+04
15.40	0.078	1.350	349.01	-457.8	3.9319E+04
15.50	0.075	1.350	348.99	-458.9	3.8860E+04
15.60	0.072	1.350	348.98	-460.0	3.8400E+04
15.70	0.069	1.350	348.96	-461.0	3.7939E+04
15.80	0.067	1.350	348.94	-461.8	3.7477E+04
15.90	0.064	1.350	348.92	-462.9	3.7014E+04
16.00	0.062	1.350	348.90	-463.6	3.6550E+04
16.10	0.061	1.350	348.88	-464.0	3.6086E+04
16.20	0.060	1.350	348.85	-464.4	3.5622E+04
16.30	0.059	1.350	348.83	-464.7	3.5157E+04
16.40	0.058	1.350	348.81	-465.1	3.4692E+04
16.50	0.057	1.350	348.79	-465.4	3.4227E+04
16.60	0.056	1.350	348.77	-465.8	3.3761E+04
16.70	0.055	1.350	348.75	-466.2	3.3295E+04
16.80	0.055	1.350	348.73	-466.2	3.2829E+04
16.90	0.054	1.350	348.71	-466.5	3.2362E+04
17.00	0.054	1.350	348.69	-466.6	3.1896E+04
17.10	0.053	1.350	348.67	-466.9	3.1429E+04
17.20	0.052	1.350	348.65	-467.2	3.0961E+04
17.30	0.052	1.350	348.63	-467.3	3.0494E+04
17.40	0.052	1.350	348.61	-467.3	3.0027E+04
17.50	0.051	1.350	348.59	-467.6	2.9559E+04
17.60	0.051	1.350	348.57	-467.6	2.9092E+04
17.70	0.050	1.350	348.55	-468.0	2.8624E+04
17.80	0.050	1.350	348.53	-468.0	2.8156E+04
17.90	0.050	1.350	348.51	-468.0	2.7688E+04
18.00	0.050	1.350	348.49	-468.0	2.7220E+04
18.10	0.050	1.350	348.47	-468.0	2.6752E+04
18.20	0.050	1.350	348.45	-468.0	2.6284E+04
18.30	0.050	1.350	348.43	-468.0	2.5816E+04
18.40	0.050	1.350	348.41	-468.0	2.5348E+04

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18.50	0.050	1.350	348.39	-468.0	2.4880E+04
18.60	0.050	1.350	348.37	-468.0	2.4412E+04
18.70	0.050	1.350	348.35	-468.0	2.3944E+04
18.80	0.050	1.350	348.33	-468.0	2.3476E+04
18.90	0.050	1.350	348.31	-468.0	2.3008E+04
19.00	0.050	1.350	348.29	-468.0	2.2540E+04
19.10	0.050	1.350	348.27	-468.0	2.2072E+04
19.20	0.050	1.350	348.25	-468.0	2.1604E+04
19.30	0.050	1.350	348.23	-468.0	2.1136E+04
19.40	0.050	1.350	348.21	-468.0	2.0668E+04
19.50	0.050	1.350	348.19	-468.0	2.0200E+04
19.60	0.050	1.350	348.17	-468.0	1.9732E+04
19.70	0.050	1.350	348.15	-468.0	1.9264E+04
19.80	0.050	1.350	348.13	-468.0	1.8796E+04
19.90	0.050	1.350	348.11	-468.0	1.8328E+04
20.00	0.050	1.350	348.09	-468.0	1.7860E+04
20.10	0.050	1.350	348.07	-468.0	1.7392E+04
20.20	0.050	1.350	348.04	-468.0	1.6924E+04
20.30	0.050	1.350	348.02	-468.0	1.6456E+04
20.40	0.050	1.350	348.00	-468.0	1.5988E+04
20.50	0.050	1.350	347.97	-468.0	1.5520E+04
20.60	0.050	1.350	347.93	-468.0	1.5052E+04
20.70	0.050	1.350	347.88	-468.0	1.4584E+04
20.80	0.050	1.350	347.84	-468.0	1.4116E+04
20.90	0.050	1.350	347.80	-468.0	1.3648E+04
21.00	0.050	1.350	347.76	-468.0	1.3180E+04
21.10	0.050	1.350	347.72	-468.0	1.2712E+04
21.20	0.050	1.350	347.67	-468.0	1.2244E+04
21.30	0.050	1.350	347.63	-468.0	1.1776E+04
21.40	0.050	1.350	347.59	-468.0	1.1308E+04
21.50	0.050	1.350	347.55	-468.0	1.0840E+04
21.60	0.050	1.350	347.51	-468.0	1.0372E+04
21.70	0.050	1.350	347.47	-468.0	9904.
21.80	0.050	1.350	347.42	-468.0	9436.
21.90	0.050	1.350	347.38	-468.0	8968.
22.00	0.050	1.350	347.34	-468.0	8500.
22.10	0.050	1.350	347.30	-468.0	8032.
22.20	0.050	1.350	347.26	-468.0	7564.
22.30	0.050	1.350	347.22	-468.0	7096.

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22.40	0.050	1.350	347.17	-468.0	6628.
22.50	0.050	1.350	347.13	-468.0	6160.
22.60	0.050	1.350	347.09	-468.0	5692.
22.70	0.050	1.350	347.05	-468.0	5224.
22.80	0.050	1.350	347.01	-468.0	4756.
22.90	0.050	1.350	346.91	-468.0	4288.
23.00	0.050	1.350	346.80	-468.0	3820.
23.10	0.050	1.350	346.69	-468.0	3352.
23.20	0.050	1.350	346.58	-468.0	2884.
23.30	0.050	1.350	346.48	-468.0	2416.
23.40	0.050	1.350	346.37	-468.0	1948.
23.50	0.050	1.350	346.26	-468.0	1480.
23.60	0.050	1.350	346.15	-468.0	1012.
23.70	0.050	1.348	346.04	-467.7	544.1
23.80	0.050	0.974	345.55	-361.1	183.0
23.90	0.050	0.325	345.25	-111.1	71.98
24.00	0.050	0.142	345.14	-37.02	34.96
24.10	0.050	0.080	345.11	-12.31	22.65
24.20	0.050	0.060	345.10	-4.167	18.48
24.30	0.050	0.053	345.10	-1.371	17.11
24.40	0.050	0.051	345.10	-0.4436	16.67
24.50	0.050	0.050	345.09	-0.1459	16.52
24.60	0.050	0.050	345.09	-4.9839E-02	16.47
24.70	0.050	0.050	345.09	-1.8341E-02	16.45
24.80	0.050	0.050	345.09	-2.5864E-03	16.45

Zuflussumme: SUMZ = 0.1083E+06
Abflussumme: SUMA = 0.1083E+06
Anfangsueuung: SANF = 16.45
ueuung am Ende : SEND = 16.45
Differenz : SEND - SANF = 3.3092E-03

Wasserstand: HANF = 345.09
HMAX = 349.46
HEND = 345.09
Volumen: SMAX = 6.0385E+04

* Hochwasseranalyse - Programm: S E E R E T
* Datensatz: HWRBIII.SEE und HWRBIII10.WEL

* \$\$

Version: 7.0

IWG - Hydrologie am KIT

Berechnet am: 1. Apr 2020 um: 16:06:45

Zuflussganglinie: Gewaesser : Haselbach
 Gewaesserstelle : bei Oberhaselbach
 Ereignis : HQ 10
 Zeitschritt [h] : 0.100

Anfangs-Wasserstand [m] : 345.050

Zeit [h]	QZ [cbm/sec]	QA [cbm/sec]	QHW [cbm/sec]	H [m]	DS [cbm]	S [cbm]
0.00	0.050	0.050		345.09		16.45
0.10	0.050	0.050		345.09	0.000	16.45
0.20	0.050	0.050		345.09	0.000	16.45
0.30	0.051	0.050		345.10	0.2074	16.65
0.40	0.054	0.052		345.10	0.6973	17.35
0.50	0.061	0.056		345.10	1.730	19.08
0.60	0.072	0.064		345.11	2.918	22.00
0.70	0.089	0.076		345.12	4.580	26.58
0.80	0.111	0.093		345.14	6.283	32.86
0.90	0.140	0.116		345.16	8.406	41.27
1.00	0.176	0.146		345.19	10.63	51.90
1.10	0.218	0.183		345.23	12.68	64.57
1.20	0.268	0.226		345.27	14.99	79.57
1.30	0.327	0.277		345.31	17.87	97.44
1.40	0.396	0.337		345.37	20.95	118.4
1.50	0.480	0.409		345.44	25.19	143.6
1.60	0.580	0.495		345.52	30.13	173.7
1.70	0.700	0.610		345.61	32.80	206.5
1.80	0.841	0.750		345.70	32.83	239.3
1.90	1.004	0.901		345.80	36.71	276.1
2.00	1.188	1.073		345.91	41.34	317.4
2.10	1.390	1.246		346.00	49.68	367.1
2.20	1.607	1.299		346.03	104.3	471.3
2.30	1.835	1.343		346.07	170.2	641.5
2.40	2.071	1.350		346.13	251.1	892.6
2.50	2.310	1.350		346.20	337.0	1230.
2.60	2.551	1.350		346.30	423.7	1653.
2.70	2.791	1.350		346.42	510.1	2163.

SEERETHQ10.OUT.txt

2.80	3.027	1.350	346.56	595.2	2759.
2.90	3.258	1.350	346.71	678.6	3437.
3.00	3.482	1.350	346.89	759.5	4197.
3.10	3.697	1.350	347.03	837.2	5034.
3.20	3.903	1.350	347.11	911.7	5945.
3.30	4.100	1.350	347.20	982.9	6928.
3.40	4.285	1.350	347.29	1050.	7978.
3.50	4.460	1.350	347.39	1113.	9092.
3.60	4.623	1.350	347.50	1172.	1.0264E+04
3.70	4.775	1.350	347.61	1228.	1.1492E+04
3.80	4.915	1.350	347.72	1278.	1.2770E+04
3.90	5.041	1.350	347.84	1324.	1.4094E+04
4.00	5.154	1.350	347.96	1365.	1.5460E+04
4.10	5.252	1.350	348.04	1401.	1.6861E+04
4.20	5.335	1.350	348.10	1432.	1.8292E+04
4.30	5.403	1.350	348.17	1457.	1.9749E+04
4.40	5.456	1.350	348.23	1476.	2.1225E+04
4.50	5.493	1.350	348.30	1490.	2.2715E+04
4.60	5.516	1.350	348.36	1499.	2.4214E+04
4.70	5.525	1.350	348.43	1503.	2.5717E+04
4.80	5.520	1.350	348.49	1501.	2.7218E+04
4.90	5.501	1.350	348.56	1495.	2.8713E+04
5.00	5.470	1.350	348.62	1484.	3.0198E+04
5.10	5.428	1.350	348.68	1470.	3.1667E+04
5.20	5.375	1.350	348.75	1451.	3.3118E+04
5.30	5.312	1.350	348.81	1429.	3.4547E+04
5.40	5.240	1.350	348.87	1403.	3.5950E+04
5.50	5.159	1.350	348.93	1374.	3.7324E+04
5.60	5.071	1.350	348.99	1343.	3.8667E+04
5.70	4.976	1.350	349.02	1309.	3.9975E+04
5.80	4.875	1.350	349.05	1273.	4.1248E+04
5.90	4.769	1.350	349.08	1235.	4.2483E+04
6.00	4.659	1.350	349.10	1195.	4.3678E+04
6.10	4.545	1.350	349.13	1154.	4.4832E+04
6.20	4.428	1.350	349.15	1112.	4.5945E+04
6.30	4.309	1.350	349.17	1070.	4.7014E+04
6.40	4.188	1.350	349.20	1026.	4.8040E+04
6.50	4.065	1.350	349.22	981.8	4.9022E+04
6.60	3.942	1.350	349.24	937.6	4.9959E+04

6.70	3.818	1.350	349.26	892.9	5.0852E+04
6.80	3.695	1.350	349.27	848.6	5.1701E+04
6.90	3.571	1.350	349.29	804.0	5.2505E+04
7.00	3.449	1.350	349.31	760.0	5.3265E+04
7.10	3.328	1.350	349.32	716.4	5.3982E+04
7.20	3.208	1.350	349.34	673.2	5.4655E+04
7.30	3.091	1.350	349.35	631.0	5.5286E+04
7.40	2.975	1.350	349.36	589.2	5.5875E+04
7.50	2.861	1.350	349.38	548.1	5.6423E+04
7.60	2.749	1.350	349.39	507.7	5.6931E+04
7.70	2.640	1.350	349.40	468.3	5.7399E+04
7.80	2.534	1.350	349.41	430.0	5.7829E+04
7.90	2.430	1.350	349.41	392.6	5.8222E+04
8.00	2.329	1.350	349.42	356.1	5.8578E+04
8.10	2.231	1.350	349.43	320.7	5.8898E+04
8.20	2.135	1.350	349.43	286.1	5.9184E+04
8.30	2.043	1.350	349.44	252.8	5.9437E+04
8.40	1.954	1.350	349.44	220.6	5.9658E+04
8.50	1.867	1.350	349.45	189.2	5.9847E+04
8.60	1.784	1.350	349.45	159.2	6.0006E+04
8.70	1.703	1.350	349.46	130.0	6.0136E+04
8.80	1.625	1.350	349.46	101.8	6.0238E+04
8.90	1.550	1.350	349.46	74.70	6.0313E+04
9.00	1.478	1.350	349.46	48.67	6.0361E+04
9.10	1.409	1.350	349.46	23.71	6.0385E+04
9.20	1.343	1.350	349.46	-0.1445	6.0385E+04
9.30	1.279	1.350	349.46	-23.26	6.0362E+04
9.40	1.218	1.350	349.46	-45.32	6.0316E+04
9.50	1.159	1.350	349.46	-66.64	6.0250E+04
9.60	1.103	1.350	349.46	-86.91	6.0163E+04
9.70	1.049	1.350	349.45	-106.4	6.0056E+04
9.80	0.998	1.350	349.45	-124.9	5.9932E+04
9.90	0.949	1.350	349.45	-142.6	5.9789E+04
10.00	0.902	1.350	349.44	-159.6	5.9629E+04
10.10	0.857	1.350	349.44	-175.9	5.9453E+04
10.20	0.814	1.350	349.44	-191.4	5.9262E+04
10.30	0.774	1.350	349.43	-205.9	5.9056E+04
10.40	0.735	1.350	349.43	-220.0	5.8836E+04
10.50	0.698	1.350	349.42	-233.4	5.8603E+04

SEERETHQ10.OUT.txt

10.60	0.663	1.350	349.42	-246.1	5.8357E+04
10.70	0.629	1.350	349.41	-258.3	5.8098E+04
10.80	0.598	1.350	349.41	-269.6	5.7829E+04
10.90	0.567	1.350	349.40	-280.8	5.7548E+04
11.00	0.539	1.350	349.39	-290.9	5.7257E+04
11.10	0.512	1.350	349.39	-300.7	5.6956E+04
11.20	0.486	1.350	349.38	-310.1	5.6646E+04
11.30	0.461	1.350	349.37	-319.1	5.6327E+04
11.40	0.438	1.350	349.37	-327.5	5.6000E+04
11.50	0.416	1.350	349.36	-335.4	5.5664E+04
11.60	0.395	1.350	349.35	-343.1	5.5321E+04
11.70	0.375	1.350	349.34	-350.3	5.4971E+04
11.80	0.357	1.350	349.34	-356.8	5.4614E+04
11.90	0.339	1.350	349.33	-363.3	5.4251E+04
12.00	0.322	1.350	349.32	-369.5	5.3881E+04
12.10	0.306	1.350	349.31	-375.3	5.3506E+04
12.20	0.291	1.350	349.30	-380.7	5.3125E+04
12.30	0.277	1.350	349.30	-385.8	5.2739E+04
12.40	0.264	1.350	349.29	-390.5	5.2349E+04
12.50	0.251	1.350	349.28	-395.2	5.1954E+04
12.60	0.239	1.350	349.27	-399.5	5.1554E+04
12.70	0.228	1.350	349.26	-403.5	5.1151E+04
12.80	0.217	1.350	349.25	-407.5	5.0743E+04
12.90	0.207	1.350	349.24	-411.1	5.0332E+04
13.00	0.198	1.350	349.24	-414.4	4.9918E+04
13.10	0.189	1.350	349.23	-417.6	4.9500E+04
13.20	0.181	1.350	349.22	-420.6	4.9080E+04
13.30	0.173	1.350	349.21	-423.4	4.8656E+04
13.40	0.165	1.350	349.20	-426.3	4.8230E+04
13.50	0.158	1.350	349.19	-428.9	4.7801E+04
13.60	0.152	1.350	349.18	-431.1	4.7370E+04
13.70	0.145	1.350	349.17	-433.6	4.6936E+04
13.80	0.139	1.350	349.16	-435.7	4.6501E+04
13.90	0.134	1.350	349.15	-437.6	4.6063E+04
14.00	0.129	1.350	349.14	-439.4	4.5624E+04
14.10	0.124	1.350	349.13	-441.2	4.5182E+04
14.20	0.119	1.350	349.12	-443.0	4.4739E+04
14.30	0.115	1.350	349.11	-444.5	4.4295E+04
14.40	0.111	1.350	349.10	-445.9	4.3849E+04

SEERETHQ10.OUT.txt

14.50	0.106	1.350	349.10	-447.7	4.3401E+04
14.60	0.102	1.350	349.09	-449.1	4.2952E+04
14.70	0.099	1.350	349.08	-450.2	4.2502E+04
14.80	0.095	1.350	349.07	-451.7	4.2050E+04
14.90	0.092	1.350	349.06	-452.8	4.1598E+04
15.00	0.089	1.350	349.05	-453.9	4.1144E+04
15.10	0.086	1.350	349.04	-454.9	4.0689E+04
15.20	0.084	1.350	349.03	-455.7	4.0233E+04
15.30	0.081	1.350	349.02	-456.7	3.9776E+04
15.40	0.078	1.350	349.01	-457.8	3.9319E+04
15.50	0.075	1.350	348.99	-458.9	3.8860E+04
15.60	0.072	1.350	348.98	-460.0	3.8400E+04
15.70	0.069	1.350	348.96	-461.0	3.7939E+04
15.80	0.067	1.350	348.94	-461.8	3.7477E+04
15.90	0.064	1.350	348.92	-462.9	3.7014E+04
16.00	0.062	1.350	348.90	-463.6	3.6550E+04
16.10	0.061	1.350	348.88	-464.0	3.6086E+04
16.20	0.060	1.350	348.85	-464.4	3.5622E+04
16.30	0.059	1.350	348.83	-464.7	3.5157E+04
16.40	0.058	1.350	348.81	-465.1	3.4692E+04
16.50	0.057	1.350	348.79	-465.4	3.4227E+04
16.60	0.056	1.350	348.77	-465.8	3.3761E+04
16.70	0.055	1.350	348.75	-466.2	3.3295E+04
16.80	0.055	1.350	348.73	-466.2	3.2829E+04
16.90	0.054	1.350	348.71	-466.5	3.2362E+04
17.00	0.054	1.350	348.69	-466.6	3.1896E+04
17.10	0.053	1.350	348.67	-466.9	3.1429E+04
17.20	0.052	1.350	348.65	-467.2	3.0961E+04
17.30	0.052	1.350	348.63	-467.3	3.0494E+04
17.40	0.052	1.350	348.61	-467.3	3.0027E+04
17.50	0.051	1.350	348.59	-467.6	2.9559E+04
17.60	0.051	1.350	348.57	-467.6	2.9092E+04
17.70	0.050	1.350	348.55	-468.0	2.8624E+04
17.80	0.050	1.350	348.53	-468.0	2.8156E+04
17.90	0.050	1.350	348.51	-468.0	2.7688E+04
18.00	0.050	1.350	348.49	-468.0	2.7220E+04
18.10	0.050	1.350	348.47	-468.0	2.6752E+04
18.20	0.050	1.350	348.45	-468.0	2.6284E+04
18.30	0.050	1.350	348.43	-468.0	2.5816E+04

SEERETHQ10.OUT.txt

18.40	0.050	1.350	348.41	-468.0	2.5348E+04
18.50	0.050	1.350	348.39	-468.0	2.4880E+04
18.60	0.050	1.350	348.37	-468.0	2.4412E+04
18.70	0.050	1.350	348.35	-468.0	2.3944E+04
18.80	0.050	1.350	348.33	-468.0	2.3476E+04
18.90	0.050	1.350	348.31	-468.0	2.3008E+04
19.00	0.050	1.350	348.29	-468.0	2.2540E+04
19.10	0.050	1.350	348.27	-468.0	2.2072E+04
19.20	0.050	1.350	348.25	-468.0	2.1604E+04
19.30	0.050	1.350	348.23	-468.0	2.1136E+04
19.40	0.050	1.350	348.21	-468.0	2.0668E+04
19.50	0.050	1.350	348.19	-468.0	2.0200E+04
19.60	0.050	1.350	348.17	-468.0	1.9732E+04
19.70	0.050	1.350	348.15	-468.0	1.9264E+04
19.80	0.050	1.350	348.13	-468.0	1.8796E+04
19.90	0.050	1.350	348.11	-468.0	1.8328E+04
20.00	0.050	1.350	348.09	-468.0	1.7860E+04
20.10	0.050	1.350	348.07	-468.0	1.7392E+04
20.20	0.050	1.350	348.04	-468.0	1.6924E+04
20.30	0.050	1.350	348.02	-468.0	1.6456E+04
20.40	0.050	1.350	348.00	-468.0	1.5988E+04
20.50	0.050	1.350	347.97	-468.0	1.5520E+04
20.60	0.050	1.350	347.93	-468.0	1.5052E+04
20.70	0.050	1.350	347.88	-468.0	1.4584E+04
20.80	0.050	1.350	347.84	-468.0	1.4116E+04
20.90	0.050	1.350	347.80	-468.0	1.3648E+04
21.00	0.050	1.350	347.76	-468.0	1.3180E+04
21.10	0.050	1.350	347.72	-468.0	1.2712E+04
21.20	0.050	1.350	347.67	-468.0	1.2244E+04
21.30	0.050	1.350	347.63	-468.0	1.1776E+04
21.40	0.050	1.350	347.59	-468.0	1.1308E+04
21.50	0.050	1.350	347.55	-468.0	1.0840E+04
21.60	0.050	1.350	347.51	-468.0	1.0372E+04
21.70	0.050	1.350	347.47	-468.0	9904.
21.80	0.050	1.350	347.42	-468.0	9436.
21.90	0.050	1.350	347.38	-468.0	8968.
22.00	0.050	1.350	347.34	-468.0	8500.
22.10	0.050	1.350	347.30	-468.0	8032.
22.20	0.050	1.350	347.26	-468.0	7564.

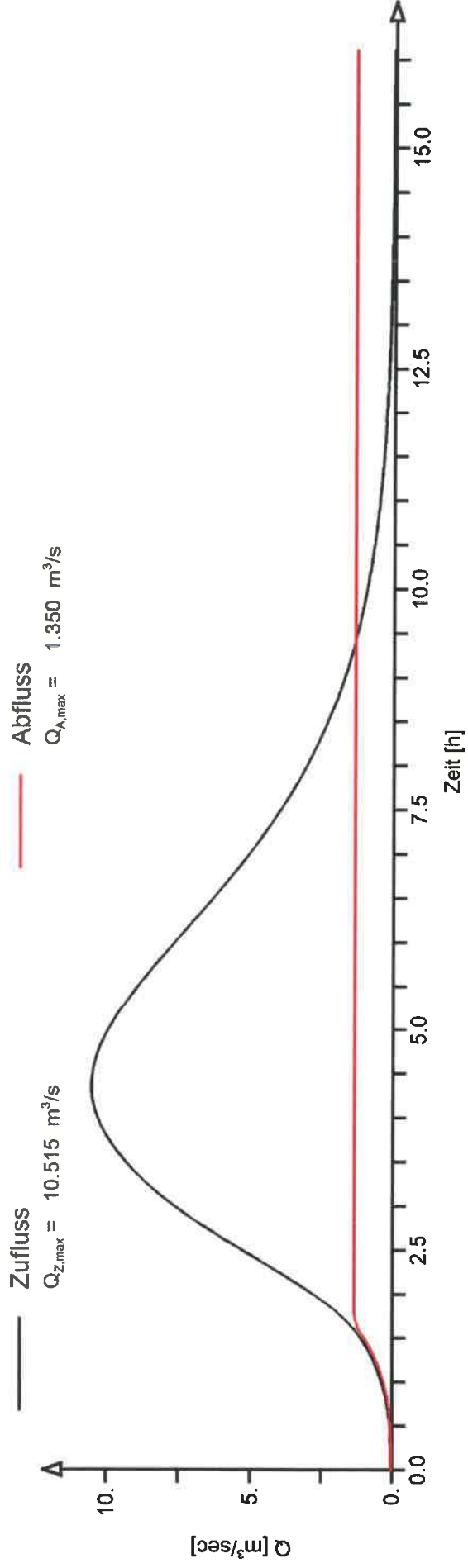
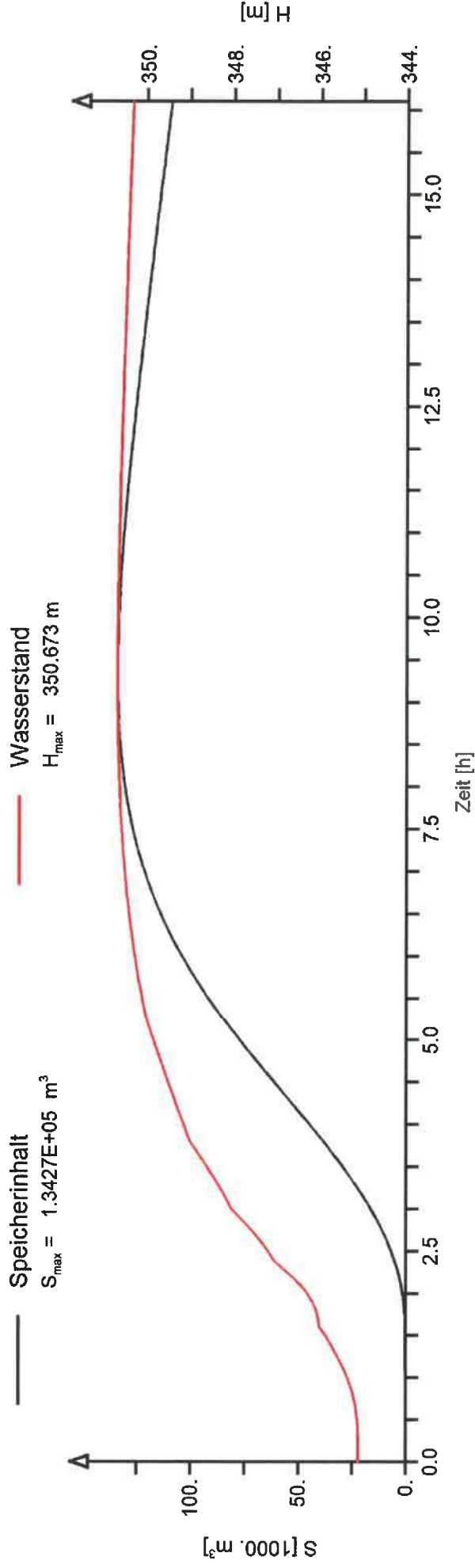
SEERETHQ10.OUT.txt

22.30	0.050	1.350	347.22	-468.0	7096.
22.40	0.050	1.350	347.17	-468.0	6628.
22.50	0.050	1.350	347.13	-468.0	6160.
22.60	0.050	1.350	347.09	-468.0	5692.
22.70	0.050	1.350	347.05	-468.0	5224.
22.80	0.050	1.350	347.01	-468.0	4756.
22.90	0.050	1.350	346.91	-468.0	4288.
23.00	0.050	1.350	346.80	-468.0	3820.
23.10	0.050	1.350	346.69	-468.0	3352.
23.20	0.050	1.350	346.58	-468.0	2884.
23.30	0.050	1.350	346.48	-468.0	2416.
23.40	0.050	1.350	346.37	-468.0	1948.
23.50	0.050	1.350	346.26	-468.0	1480.
23.60	0.050	1.350	346.15	-468.0	1012.
23.70	0.050	1.348	346.04	-467.7	544.1
23.80	0.050	0.974	345.55	-361.1	183.0
23.90	0.050	0.325	345.25	-111.1	71.98
24.00	0.050	0.142	345.14	-37.02	34.96
24.10	0.050	0.080	345.11	-12.31	22.65
24.20	0.050	0.060	345.10	-4.167	18.48
24.30	0.050	0.053	345.10	-1.371	17.11
24.40	0.050	0.051	345.10	-0.4436	16.67
24.50	0.050	0.050	345.09	-0.1459	16.52
24.60	0.050	0.050	345.09	-4.9839E-02	16.47
24.70	0.050	0.050	345.09	-1.8341E-02	16.45
24.80	0.050	0.050	345.09	-2.5864E-03	16.45

Zuflussumme:	SUMZ =	0.1083E+06	Wasserstand:	HANF =	345.09
Abflussumme:	SUMA =	0.1083E+06		HMAX =	349.46
Anfangsfuellung:	SANF =	16.45		HEND =	345.09
Fuellung am Ende :	SEND =	16.45		SMAX =	6.0385E+04
Differenz : SEND - SANF =		3.3092E-03			

HWRB III bei Oberhaselbach

Ereignis: HQ 100





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* Hochwasseranalyse - Programm: S E E R E T      Version: 7.0      IWG - Hydrologie am KIT
*
* Datensatz: HWRBIII.SEE  HWRB III bei Oberhaselbach      Berechnet am: 31. Jul 2019  um:
08:35:51 *
* $$
*
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Speicherkenndaten: HWRB III bei Oberhaselbach

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Speicherinhaltslinie:

Anzahl der Stuetzstellen fuer Inhaltslinie	NST =	9			
345.05	0.000	;	346.55	0.000	;
350.05	0.3897E+05;		351.05	0.8555E+05;	
			347.05	350.0	;
			352.05	0.1579E+06;	
			348.05	4685.	;
			353.05	0.2522E+06;	
			349.05	0.1589E+05;	

Kennwerte des Grundablasses:

Hoehenmarke der Unterkante: HGU = 345.050

Anzahl der Stuetzstellen fuer Abflusskurve: NG = 5

Stuetzstellen fuer Abflusskurve : Hoehenmarken und Abfluesse

345.05	0.000;	345.55	0.560;	346.05	1.350;	351.05	1.350;	351.55	1.410;
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Kennwerte der Entlastungsanlage:

SEERETHQ100.OUT

Hoehenmarke der Ueberfallkrone:

HWE = 350.800

Anzahl der Stuetzstellen fuer Abflusskurve: NEL = 5

Stuetzstellen fuer Abflusskurve : Hoehenmarken und Abfluesse

350.80 0.000; 351.00 2.311; 351.20 6.536; 351.40 12.007; 351.60 18.487;

Anfangswasserstand : HANF = 345.050

Zuflussganglinie: Gewaesser : Haselbach

Gewaesserstelle : bei Oberhaselbach

Ereignis : HQ 100

Zeitschritt [h] : 0.100

Anfangs-Wasserstand [m] : 345.050

Zeit [h]	QZ [cbm/sec]	QA [cbm/sec]	QHW [cbm/sec]	H [m]	DS [cbm]	S [cbm]
0.00	0.050	0.050		345.09		16.45
0.10	0.050	0.050		345.09	0.000	16.45
0.20	0.050	0.050		345.09	0.000	16.45
0.30	0.053	0.051		345.10	0.6145	17.06
0.40	0.062	0.056		345.10	2.108	19.17
0.50	0.081	0.067		345.11	4.768	23.94
0.60	0.110	0.088		345.14	7.775	31.71
0.70	0.154	0.120		345.17	12.04	43.75
0.80	0.211	0.165		345.21	16.34	60.09
0.90	0.285	0.225		345.27	21.45	81.54
1.00	0.374	0.300		345.34	26.42	108.0
1.10	0.479	0.390		345.43	31.66	139.6
1.20	0.601	0.497		345.53	37.08	176.7
1.30	0.741	0.637		345.63	37.83	214.5

SEERETHQ100.OUT

1.40	0.907	0.800	345.74	38.43	253.0
1.50	1.108	0.983	345.86	44.78	297.7
1.60	1.349	1.199	346.00	53.62	351.3
1.70	1.635	1.295	346.03	113.4	464.8
1.80	1.969	1.343	346.08	214.5	679.3
1.90	2.352	1.350	346.16	346.9	1026.
2.00	2.782	1.350	346.27	500.0	1526.
2.10	3.248	1.350	346.43	666.5	2193.
2.20	3.741	1.350	346.62	843.0	3036.
2.30	4.249	1.350	346.86	1025.	4061.
2.40	4.764	1.350	347.05	1211.	5272.
2.50	5.278	1.350	347.18	1396.	6667.
2.60	5.783	1.350	347.32	1578.	8245.
2.70	6.274	1.350	347.47	1755.	9.9999E+03
2.80	6.747	1.350	347.65	1926.	1.1926E+04
2.90	7.197	1.350	347.83	2089.	1.4014E+04
3.00	7.622	1.350	348.02	2243.	1.6257E+04
3.10	8.020	1.350	348.12	2387.	1.8644E+04
3.20	8.390	1.350	348.23	2521.	2.1165E+04
3.30	8.732	1.350	348.34	2645.	2.3810E+04
3.40	9.043	1.350	348.46	2758.	2.6569E+04
3.50	9.326	1.350	348.59	2861.	2.9430E+04
3.60	9.581	1.350	348.71	2954.	3.2384E+04
3.70	9.808	1.350	348.85	3037.	3.5420E+04
3.80	10.005	1.350	348.98	3109.	3.8529E+04
3.90	10.172	1.350	349.06	3170.	4.1699E+04
4.00	10.307	1.350	349.13	3220.	4.4919E+04
4.10	10.408	1.350	349.20	3257.	4.8176E+04
4.20	10.477	1.350	349.27	3283.	5.1459E+04
4.30	10.512	1.350	349.34	3297.	5.4756E+04
4.40	10.515	1.350	349.41	3299.	5.8055E+04
4.50	10.488	1.350	349.48	3291.	6.1346E+04
4.60	10.430	1.350	349.55	3271.	6.4617E+04
4.70	10.345	1.350	349.62	3241.	6.7858E+04
4.80	10.234	1.350	349.69	3202.	7.1061E+04

SEERETHQ100.OUT

4.90	10.098	1.350	349.76	3154.	7.4215E+04
5.00	9.941	1.350	349.82	3098.	7.7313E+04
5.10	9.764	1.350	349.89	3035.	8.0349E+04
5.20	9.570	1.350	349.95	2966.	8.3315E+04
5.30	9.360	1.350	350.01	2891.	8.6206E+04
5.40	9.137	1.350	350.05	2811.	8.9017E+04
5.50	8.902	1.350	350.09	2727.	9.1744E+04
5.60	8.658	1.350	350.12	2640.	9.4384E+04
5.70	8.406	1.350	350.16	2549.	9.6933E+04
5.80	8.148	1.350	350.19	2457.	9.9390E+04
5.90	7.885	1.350	350.22	2362.	1.0175E+05
6.00	7.620	1.350	350.26	2267.	1.0402E+05
6.10	7.353	1.350	350.29	2171.	1.0619E+05
6.20	7.086	1.350	350.31	2075.	1.0826E+05
6.30	6.820	1.350	350.34	1979.	1.1024E+05
6.40	6.555	1.350	350.37	1883.	1.1213E+05
6.50	6.294	1.350	350.39	1789.	1.1392E+05
6.60	6.035	1.350	350.42	1696.	1.1561E+05
6.70	5.781	1.350	350.44	1604.	1.1722E+05
6.80	5.532	1.350	350.46	1514.	1.1873E+05
6.90	5.288	1.350	350.48	1426.	1.2016E+05
7.00	5.050	1.350	350.50	1341.	1.2150E+05
7.10	4.819	1.350	350.51	1257.	1.2275E+05
7.20	4.594	1.350	350.53	1176.	1.2393E+05
7.30	4.375	1.350	350.55	1097.	1.2503E+05
7.40	4.164	1.350	350.56	1021.	1.2605E+05
7.50	3.959	1.350	350.57	946.6	1.2699E+05
7.60	3.762	1.350	350.58	875.4	1.2787E+05
7.70	3.572	1.350	350.60	806.8	1.2868E+05
7.80	3.389	1.350	350.61	740.6	1.2942E+05
7.90	3.214	1.350	350.62	677.4	1.3009E+05
8.00	3.045	1.350	350.62	616.3	1.3071E+05
8.10	2.884	1.350	350.63	558.0	1.3127E+05
8.20	2.730	1.350	350.64	502.3	1.3177E+05
8.30	2.582	1.350	350.64	448.8	1.3222E+05

SEERETHQ100.OUT

8.40	2.441	1.350	350.65	397.8	1.3262E+05
8.50	2.306	1.350	350.65	349.0	1.3297E+05
8.60	2.178	1.350	350.66	302.7	1.3327E+05
8.70	2.056	1.350	350.66	258.5	1.3353E+05
8.80	1.940	1.350	350.67	216.6	1.3374E+05
8.90	1.830	1.350	350.67	176.8	1.3392E+05
9.00	1.725	1.350	350.67	138.8	1.3406E+05
9.10	1.626	1.350	350.67	102.9	1.3416E+05
9.20	1.532	1.350	350.67	68.92	1.3423E+05
9.30	1.443	1.350	350.67	36.72	1.3427E+05
9.40	1.358	1.350	350.67	5.953	1.3427E+05
9.50	1.278	1.350	350.67	-23.05	1.3425E+05
9.60	1.203	1.350	350.67	-50.20	1.3420E+05
9.70	1.132	1.350	350.67	-75.95	1.3413E+05
9.80	1.064	1.350	350.67	-100.5	1.3402E+05
9.90	1.001	1.350	350.67	-123.4	1.3390E+05
10.00	0.941	1.350	350.67	-145.1	1.3376E+05
10.10	0.884	1.350	350.66	-165.7	1.3359E+05
10.20	0.831	1.350	350.66	-185.0	1.3341E+05
10.30	0.781	1.350	350.66	-203.0	1.3320E+05
10.40	0.734	1.350	350.66	-220.1	1.3298E+05
10.50	0.690	1.350	350.65	-236.0	1.3275E+05
10.60	0.648	1.350	350.65	-251.2	1.3250E+05
10.70	0.609	1.350	350.64	-265.4	1.3223E+05
10.80	0.572	1.350	350.64	-278.8	1.3195E+05
10.90	0.538	1.350	350.64	-291.1	1.3166E+05
11.00	0.506	1.350	350.63	-302.7	1.3136E+05
11.10	0.475	1.350	350.63	-313.9	1.3104E+05
11.20	0.447	1.350	350.62	-324.1	1.3072E+05
11.30	0.420	1.350	350.62	-333.8	1.3039E+05
11.40	0.395	1.350	350.61	-342.9	1.3004E+05
11.50	0.372	1.350	350.61	-351.2	1.2969E+05
11.60	0.350	1.350	350.60	-359.2	1.2933E+05
11.70	0.330	1.350	350.60	-366.5	1.2897E+05
11.80	0.311	1.350	350.59	-373.3	1.2859E+05

SEERETHQ100.OUT

11.90	0.293	1.350	350.59	-379.9	1.2821E+05
12.00	0.276	1.350	350.58	-386.0	1.2783E+05
12.10	0.261	1.350	350.58	-391.5	1.2744E+05
12.20	0.246	1.350	350.57	-396.9	1.2704E+05
12.30	0.232	1.350	350.57	-402.0	1.2664E+05
12.40	0.220	1.350	350.56	-406.4	1.2623E+05
12.50	0.208	1.350	350.56	-410.7	1.2582E+05
12.60	0.197	1.350	350.55	-414.7	1.2540E+05
12.70	0.186	1.350	350.54	-418.6	1.2499E+05
12.80	0.176	1.350	350.54	-422.3	1.2456E+05
12.90	0.166	1.350	350.53	-425.9	1.2414E+05
13.00	0.157	1.350	350.53	-429.2	1.2371E+05
13.10	0.149	1.350	350.52	-432.1	1.2328E+05
13.20	0.141	1.350	350.52	-434.9	1.2284E+05
13.30	0.134	1.350	350.51	-437.5	1.2240E+05
13.40	0.127	1.350	350.50	-440.0	1.2196E+05
13.50	0.121	1.350	350.50	-442.2	1.2152E+05
13.60	0.115	1.350	350.49	-444.4	1.2108E+05
13.70	0.109	1.350	350.48	-446.5	1.2063E+05
13.80	0.102	1.350	350.48	-449.0	1.2018E+05
13.90	0.096	1.350	350.47	-451.2	1.1973E+05
14.00	0.090	1.350	350.47	-453.4	1.1928E+05
14.10	0.085	1.350	350.46	-455.2	1.1882E+05
14.20	0.080	1.350	350.45	-457.0	1.1837E+05
14.30	0.075	1.350	350.45	-458.8	1.1791E+05
14.40	0.072	1.350	350.44	-460.0	1.1745E+05
14.50	0.070	1.350	350.43	-460.7	1.1699E+05
14.60	0.067	1.350	350.43	-461.8	1.1652E+05
14.70	0.066	1.350	350.42	-462.2	1.1606E+05
14.80	0.064	1.350	350.42	-462.9	1.1560E+05
14.90	0.062	1.350	350.41	-463.6	1.1514E+05
15.00	0.061	1.350	350.40	-464.0	1.1467E+05
15.10	0.059	1.350	350.40	-464.7	1.1421E+05
15.20	0.058	1.350	350.39	-465.1	1.1374E+05
15.30	0.057	1.350	350.38	-465.4	1.1328E+05

SEERETHQ100.OUT

15.40	0.056	1.350	350.38	-465.8	1.1281E+05
15.50	0.055	1.350	350.37	-466.2	1.1234E+05
15.60	0.054	1.350	350.36	-466.5	1.1188E+05
15.70	0.053	1.350	350.36	-466.9	1.1141E+05
15.80	0.052	1.350	350.35	-467.2	1.1094E+05
15.90	0.051	1.350	350.34	-467.6	1.1048E+05
16.00	0.051	1.350	350.34	-467.7	1.1001E+05
16.10	0.050	1.350	350.33	-468.0	1.0954E+05
16.20	0.050	1.350	350.32	-468.0	1.0907E+05
16.30	0.050	1.350	350.32	-468.0	1.0860E+05
16.40	0.050	1.350	350.31	-468.0	1.0814E+05
16.50	0.050	1.350	350.31	-468.0	1.0767E+05
16.60	0.050	1.350	350.30	-468.0	1.0720E+05
16.70	0.050	1.350	350.29	-468.0	1.0673E+05
16.80	0.050	1.350	350.29	-468.0	1.0626E+05
16.90	0.050	1.350	350.28	-468.0	1.0580E+05
17.00	0.050	1.350	350.27	-468.0	1.0533E+05
17.10	0.050	1.350	350.27	-468.0	1.0486E+05
17.20	0.050	1.350	350.26	-468.0	1.0439E+05
17.30	0.050	1.350	350.25	-468.0	1.0392E+05
17.40	0.050	1.350	350.25	-468.0	1.0346E+05
17.50	0.050	1.350	350.24	-468.0	1.0299E+05
17.60	0.050	1.350	350.23	-468.0	1.0252E+05
17.70	0.050	1.350	350.23	-468.0	1.0205E+05
17.80	0.050	1.350	350.22	-468.0	1.0158E+05
17.90	0.050	1.350	350.22	-468.0	1.0112E+05
18.00	0.050	1.350	350.21	-468.0	1.0065E+05
18.10	0.050	1.350	350.20	-468.0	1.0018E+05
18.20	0.050	1.350	350.20	-468.0	9.9712E+04
18.30	0.050	1.350	350.19	-468.0	9.9244E+04
18.40	0.050	1.350	350.18	-468.0	9.8776E+04
18.50	0.050	1.350	350.18	-468.0	9.8308E+04
18.60	0.050	1.350	350.17	-468.0	9.7840E+04
18.70	0.050	1.350	350.16	-468.0	9.7372E+04
18.80	0.050	1.350	350.16	-468.0	9.6904E+04

SEERETHQ100.OUT

18.90	0.050	1.350	350.15	-468.0	9.6436E+04
19.00	0.050	1.350	350.14	-468.0	9.5968E+04
19.10	0.050	1.350	350.14	-468.0	9.5500E+04
19.20	0.050	1.350	350.13	-468.0	9.5032E+04
19.30	0.050	1.350	350.12	-468.0	9.4564E+04
19.40	0.050	1.350	350.12	-468.0	9.4096E+04
19.50	0.050	1.350	350.11	-468.0	9.3628E+04
19.60	0.050	1.350	350.11	-468.0	9.3160E+04
19.70	0.050	1.350	350.10	-468.0	9.2692E+04
19.80	0.050	1.350	350.09	-468.0	9.2224E+04
19.90	0.050	1.350	350.09	-468.0	9.1756E+04
20.00	0.050	1.350	350.08	-468.0	9.1288E+04
20.10	0.050	1.350	350.07	-468.0	9.0820E+04
20.20	0.050	1.350	350.07	-468.0	9.0352E+04
20.30	0.050	1.350	350.06	-468.0	8.9884E+04
20.40	0.050	1.350	350.05	-468.0	8.9416E+04
20.50	0.050	1.350	350.05	-468.0	8.8948E+04
20.60	0.050	1.350	350.04	-468.0	8.8480E+04
20.70	0.050	1.350	350.03	-468.0	8.8012E+04
20.80	0.050	1.350	350.03	-468.0	8.7544E+04
20.90	0.050	1.350	350.02	-468.0	8.7076E+04
21.00	0.050	1.350	350.01	-468.0	8.6608E+04
21.10	0.050	1.350	350.01	-468.0	8.6140E+04
21.20	0.050	1.350	350.00	-468.0	8.5672E+04
21.30	0.050	1.350	349.99	-468.0	8.5204E+04
21.40	0.050	1.350	349.98	-468.0	8.4736E+04
21.50	0.050	1.350	349.97	-468.0	8.4268E+04
21.60	0.050	1.350	349.96	-468.0	8.3800E+04
21.70	0.050	1.350	349.95	-468.0	8.3332E+04
21.80	0.050	1.350	349.94	-468.0	8.2864E+04
21.90	0.050	1.350	349.93	-468.0	8.2396E+04
22.00	0.050	1.350	349.92	-468.0	8.1928E+04
22.10	0.050	1.350	349.91	-468.0	8.1460E+04
22.20	0.050	1.350	349.90	-468.0	8.0992E+04
22.30	0.050	1.350	349.89	-468.0	8.0524E+04

SEERETHQ100.OUT

22.40	0.050	1.350	349.88	-468.0	8.0056E+04
22.50	0.050	1.350	349.87	-468.0	7.9588E+04
22.60	0.050	1.350	349.86	-468.0	7.9120E+04
22.70	0.050	1.350	349.85	-468.0	7.8652E+04
22.80	0.050	1.350	349.84	-468.0	7.8184E+04
22.90	0.050	1.350	349.83	-468.0	7.7716E+04
23.00	0.050	1.350	349.82	-468.0	7.7248E+04
23.10	0.050	1.350	349.81	-468.0	7.6780E+04
23.20	0.050	1.350	349.80	-468.0	7.6312E+04
23.30	0.050	1.350	349.79	-468.0	7.5843E+04
23.40	0.050	1.350	349.78	-468.0	7.5375E+04
23.50	0.050	1.350	349.77	-468.0	7.4907E+04
23.60	0.050	1.350	349.76	-468.0	7.4439E+04
23.70	0.050	1.350	349.75	-468.0	7.3971E+04
23.80	0.050	1.350	349.74	-468.0	7.3503E+04
23.90	0.050	1.350	349.73	-468.0	7.3035E+04
24.00	0.050	1.350	349.72	-468.0	7.2567E+04
24.10	0.050	1.350	349.71	-468.0	7.2099E+04
24.20	0.050	1.350	349.70	-468.0	7.1631E+04
24.30	0.050	1.350	349.69	-468.0	7.1163E+04
24.40	0.050	1.350	349.68	-468.0	7.0695E+04
24.50	0.050	1.350	349.67	-468.0	7.0227E+04
24.60	0.050	1.350	349.66	-468.0	6.9759E+04
24.70	0.050	1.350	349.65	-468.0	6.9291E+04
24.80	0.050	1.350	349.64	-468.0	6.8823E+04
24.90	0.050	1.350	349.63	-468.0	6.8355E+04
25.00	0.050	1.350	349.62	-468.0	6.7887E+04
25.10	0.050	1.350	349.61	-468.0	6.7419E+04
25.20	0.050	1.350	349.60	-468.0	6.6951E+04
25.30	0.050	1.350	349.59	-468.0	6.6483E+04
25.40	0.050	1.350	349.58	-468.0	6.6015E+04
25.50	0.050	1.350	349.57	-468.0	6.5547E+04
25.60	0.050	1.350	349.56	-468.0	6.5079E+04
25.70	0.050	1.350	349.55	-468.0	6.4611E+04
25.80	0.050	1.350	349.54	-468.0	6.4143E+04

SEERETHQ100.OUT

25.90	0.050	1.350	349.53	-468.0	6.3675E+04
26.00	0.050	1.350	349.52	-468.0	6.3207E+04
26.10	0.050	1.350	349.51	-468.0	6.2739E+04
26.20	0.050	1.350	349.50	-468.0	6.2271E+04
26.30	0.050	1.350	349.49	-468.0	6.1803E+04
26.40	0.050	1.350	349.48	-468.0	6.1335E+04
26.50	0.050	1.350	349.47	-468.0	6.0867E+04
26.60	0.050	1.350	349.46	-468.0	6.0399E+04
26.70	0.050	1.350	349.45	-468.0	5.9931E+04
26.80	0.050	1.350	349.44	-468.0	5.9463E+04
26.90	0.050	1.350	349.43	-468.0	5.8995E+04
27.00	0.050	1.350	349.42	-468.0	5.8527E+04
27.10	0.050	1.350	349.41	-468.0	5.8059E+04
27.20	0.050	1.350	349.40	-468.0	5.7591E+04
27.30	0.050	1.350	349.39	-468.0	5.7123E+04
27.40	0.050	1.350	349.38	-468.0	5.6655E+04
27.50	0.050	1.350	349.37	-468.0	5.6187E+04
27.60	0.050	1.350	349.36	-468.0	5.5719E+04
27.70	0.050	1.350	349.35	-468.0	5.5251E+04
27.80	0.050	1.350	349.34	-468.0	5.4783E+04
27.90	0.050	1.350	349.33	-468.0	5.4315E+04
28.00	0.050	1.350	349.32	-468.0	5.3847E+04
28.10	0.050	1.350	349.31	-468.0	5.3379E+04
28.20	0.050	1.350	349.30	-468.0	5.2911E+04
28.30	0.050	1.350	349.29	-468.0	5.2443E+04
28.40	0.050	1.350	349.28	-468.0	5.1975E+04
28.50	0.050	1.350	349.27	-468.0	5.1507E+04
28.60	0.050	1.350	349.26	-468.0	5.1039E+04
28.70	0.050	1.350	349.25	-468.0	5.0571E+04
28.80	0.050	1.350	349.24	-468.0	5.0103E+04
28.90	0.050	1.350	349.23	-468.0	4.9635E+04
29.00	0.050	1.350	349.22	-468.0	4.9167E+04
29.10	0.050	1.350	349.21	-468.0	4.8699E+04
29.20	0.050	1.350	349.20	-468.0	4.8231E+04
29.30	0.050	1.350	349.19	-468.0	4.7763E+04

SEERETHQ100.OUT

29.40	0.050	1.350	349.18	-468.0	4.7295E+04
29.50	0.050	1.350	349.17	-468.0	4.6827E+04
29.60	0.050	1.350	349.16	-468.0	4.6359E+04
29.70	0.050	1.350	349.15	-468.0	4.5891E+04
29.80	0.050	1.350	349.14	-468.0	4.5423E+04
29.90	0.050	1.350	349.13	-468.0	4.4955E+04
30.00	0.050	1.350	349.12	-468.0	4.4487E+04
30.10	0.050	1.350	349.11	-468.0	4.4019E+04
30.20	0.050	1.350	349.10	-468.0	4.3551E+04
30.30	0.050	1.350	349.09	-468.0	4.3083E+04
30.40	0.050	1.350	349.08	-468.0	4.2615E+04
30.50	0.050	1.350	349.07	-468.0	4.2147E+04
30.60	0.050	1.350	349.06	-468.0	4.1679E+04
30.70	0.050	1.350	349.05	-468.0	4.1211E+04
30.80	0.050	1.350	349.04	-468.0	4.0743E+04
30.90	0.050	1.350	349.03	-468.0	4.0275E+04
31.00	0.050	1.350	349.02	-468.0	3.9807E+04
31.10	0.050	1.350	349.01	-468.0	3.9339E+04
31.20	0.050	1.350	349.00	-468.0	3.8871E+04
31.30	0.050	1.350	348.98	-468.0	3.8403E+04
31.40	0.050	1.350	348.96	-468.0	3.7935E+04
31.50	0.050	1.350	348.93	-468.0	3.7467E+04
31.60	0.050	1.350	348.91	-468.0	3.6999E+04
31.70	0.050	1.350	348.89	-468.0	3.6531E+04
31.80	0.050	1.350	348.87	-468.0	3.6063E+04
31.90	0.050	1.350	348.85	-468.0	3.5595E+04
32.00	0.050	1.350	348.83	-468.0	3.5127E+04
32.10	0.050	1.350	348.81	-468.0	3.4659E+04
32.20	0.050	1.350	348.79	-468.0	3.4191E+04
32.30	0.050	1.350	348.77	-468.0	3.3723E+04
32.40	0.050	1.350	348.75	-468.0	3.3255E+04
32.50	0.050	1.350	348.73	-468.0	3.2787E+04
32.60	0.050	1.350	348.71	-468.0	3.2319E+04
32.70	0.050	1.350	348.69	-468.0	3.1851E+04
32.80	0.050	1.350	348.67	-468.0	3.1383E+04

32.90	0.050	1.350	348.65	SEERETHQ100.OUT	3.0915E+04
33.00	0.050	1.350	348.63	-468.0	3.0447E+04
33.10	0.050	1.350	348.61	-468.0	2.9979E+04
33.20	0.050	1.350	348.59	-468.0	2.9511E+04
33.30	0.050	1.350	348.57	-468.0	2.9043E+04
33.40	0.050	1.350	348.55	-468.0	2.8575E+04
33.50	0.050	1.350	348.53	-468.0	2.8107E+04
33.60	0.050	1.350	348.51	-468.0	2.7639E+04
33.70	0.050	1.350	348.49	-468.0	2.7171E+04
33.80	0.050	1.350	348.47	-468.0	2.6703E+04
33.90	0.050	1.350	348.45	-468.0	2.6235E+04
34.00	0.050	1.350	348.43	-468.0	2.5767E+04
34.10	0.050	1.350	348.41	-468.0	2.5299E+04
34.20	0.050	1.350	348.39	-468.0	2.4831E+04
34.30	0.050	1.350	348.37	-468.0	2.4363E+04
34.40	0.050	1.350	348.35	-468.0	2.3895E+04
34.50	0.050	1.350	348.33	-468.0	2.3427E+04
34.60	0.050	1.350	348.31	-468.0	2.2959E+04
34.70	0.050	1.350	348.29	-468.0	2.2491E+04
34.80	0.050	1.350	348.27	-468.0	2.2023E+04
34.90	0.050	1.350	348.25	-468.0	2.1555E+04
35.00	0.050	1.350	348.23	-468.0	2.1087E+04
35.10	0.050	1.350	348.20	-468.0	2.0619E+04
35.20	0.050	1.350	348.18	-468.0	2.0151E+04
35.30	0.050	1.350	348.16	-468.0	1.9683E+04
35.40	0.050	1.350	348.14	-468.0	1.9215E+04
35.50	0.050	1.350	348.12	-468.0	1.8747E+04
35.60	0.050	1.350	348.10	-468.0	1.8279E+04
35.70	0.050	1.350	348.08	-468.0	1.7811E+04
35.80	0.050	1.350	348.06	-468.0	1.7343E+04
35.90	0.050	1.350	348.04	-468.0	1.6875E+04
36.00	0.050	1.350	348.02	-468.0	1.6407E+04
36.10	0.050	1.350	348.00	-468.0	1.5939E+04
36.20	0.050	1.350	347.96	-468.0	1.5471E+04
36.30	0.050	1.350	347.92	-468.0	1.5003E+04

SEERETHQ100.OUT

36.40	0.050	1.350	347.88	-468.0	1.4535E+04
36.50	0.050	1.350	347.84	-468.0	1.4067E+04
36.60	0.050	1.350	347.80	-468.0	1.3599E+04
36.70	0.050	1.350	347.75	-468.0	1.3131E+04
36.80	0.050	1.350	347.71	-468.0	1.2663E+04
36.90	0.050	1.350	347.67	-468.0	1.2195E+04
37.00	0.050	1.350	347.63	-468.0	1.1727E+04
37.10	0.050	1.350	347.59	-468.0	1.1259E+04
37.20	0.050	1.350	347.54	-468.0	1.0791E+04
37.30	0.050	1.350	347.50	-468.0	1.0323E+04
37.40	0.050	1.350	347.46	-468.0	9855.
37.50	0.050	1.350	347.42	-468.0	9387.
37.60	0.050	1.350	347.38	-468.0	8919.
37.70	0.050	1.350	347.34	-468.0	8451.
37.80	0.050	1.350	347.29	-468.0	7983.
37.90	0.050	1.350	347.25	-468.0	7515.
38.00	0.050	1.350	347.21	-468.0	7047.
38.10	0.050	1.350	347.17	-468.0	6579.
38.20	0.050	1.350	347.13	-468.0	6111.
38.30	0.050	1.350	347.09	-468.0	5643.
38.40	0.050	1.350	347.04	-468.0	5175.
38.50	0.050	1.350	347.00	-468.0	4707.
38.60	0.050	1.350	346.90	-468.0	4239.
38.70	0.050	1.350	346.79	-468.0	3771.
38.80	0.050	1.350	346.68	-468.0	3303.
38.90	0.050	1.350	346.57	-468.0	2835.
39.00	0.050	1.350	346.47	-468.0	2367.
39.10	0.050	1.350	346.36	-468.0	1899.
39.20	0.050	1.350	346.25	-468.0	1431.
39.30	0.050	1.350	346.14	-468.0	962.9
39.40	0.050	1.345	346.03	-467.1	495.8
39.50	0.050	0.886	345.50	-330.7	165.1
39.60	0.050	0.295	345.23	-99.09	65.98
39.70	0.050	0.132	345.14	-33.07	32.91
39.80	0.050	0.077	345.11	-10.96	21.95

SEERETHQ100.OUT

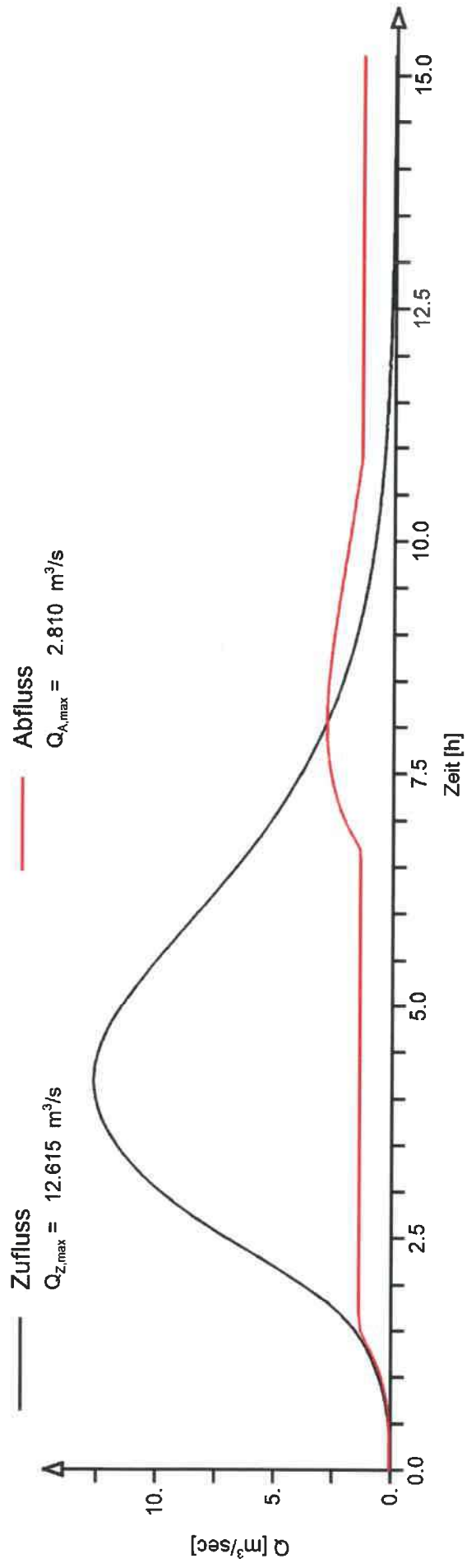
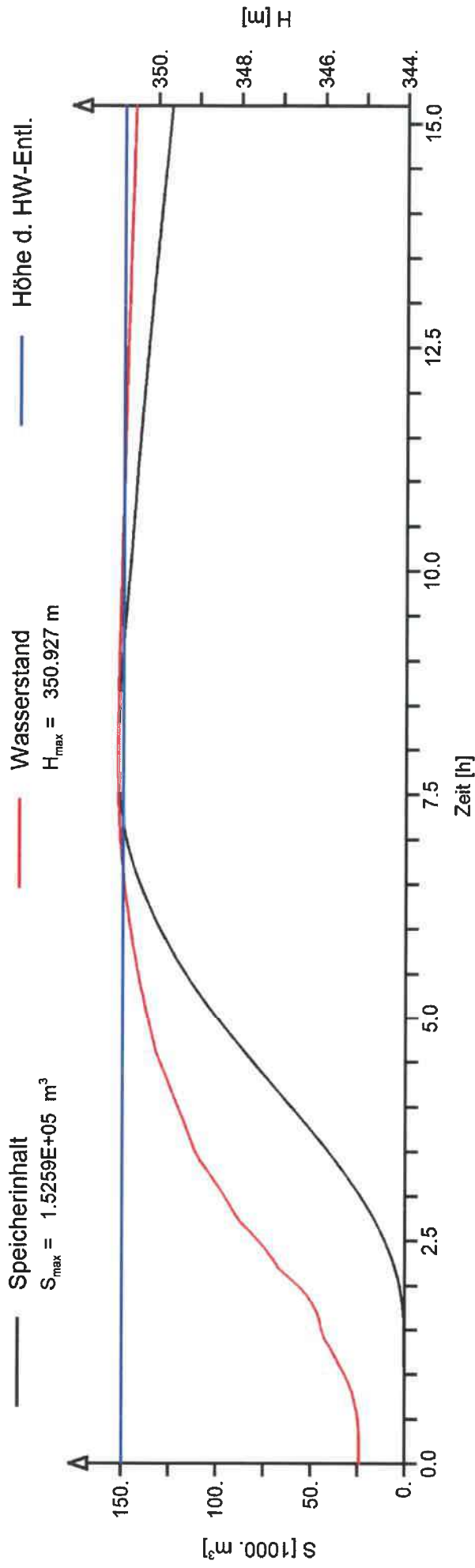
39.90	0.050	0.059	345.10	-3.610	18.34
40.00	0.050	0.053	345.10	-1.260	17.08
40.10	0.050	0.051	345.10	-0.4202	16.66
40.20	0.050	0.050	345.09	-0.1414	16.52
40.30	0.050	0.050	345.09	-4.5290E-02	16.47
40.40	0.050	0.050	345.09	-1.6941E-02	16.45
40.50	0.050	0.050	345.09	-5.8022E-03	16.45

Zuflussumme: SUMZ = 0.1864E+06
 Abflussumme: SUMA = 0.1864E+06
 Anfangsueuung: SANF = 16.45
 Fueuung am Ende : SEND = 16.45
 Differenz : SEND - SANF = 0.000

Wasserstand: HANF = 345.09
 HMAX = 350.67
 HEND = 345.09
 Volumen: SMAX = 1.3427E+05

HWRB III bei Oberhaselbach

Ereignis: HQ 500



SEERETHQ500.OUT

 * Hochwasseranalyse - Programm: S E E R E T
 * Datensatz: HWRBIII.SEE und HWRBIII500.WEL
 * \$\$

 Version: 7.0
 IWG - Hydrologie am KIT
 Berechnet am: 31. Jul 2019 um: 10:27:11

Zuflussganglinie: Gewaesser : Haselbach
 Gewaesserstelle : bei Oberhaselbach
 Ereignis : HQ 500
 Zeitschritt [h] : 0.100

Anfangs-Wasserstand [m] : 345.050

Zeit [h]	QZ [cbm/sec]	QA [cbm/sec]	QHW [cbm/sec]	H [m]	DS [cbm]	S [cbm]
0.00	0.050	0.050		345.09		16.45
0.10	0.050	0.050		345.09	0.000	16.45
0.20	0.050	0.050		345.09	0.000	16.45
0.30	0.055	0.052		345.10	1.029	17.48
0.40	0.069	0.059		345.11	3.293	20.77
0.50	0.095	0.076		345.12	6.638	27.41
0.60	0.138	0.105		345.16	11.44	38.85
0.70	0.200	0.151		345.20	17.13	55.97
0.80	0.282	0.216		345.27	23.43	79.40
0.90	0.384	0.300		345.35	29.96	109.4
1.00	0.508	0.404		345.45	36.83	146.2
1.10	0.652	0.531		345.56	43.40	189.6
1.20	0.817	0.703		345.68	41.55	231.1
1.30	1.007	0.886		345.80	43.50	274.6
1.40	1.232	1.091		345.93	50.26	324.9
1.50	1.503	1.270		346.01	78.83	403.7
1.60	1.829	1.326		346.05	171.4	575.1
1.70	2.215	1.350		346.12	297.5	872.6

1.80	2.664	1.350	346.23	SEERETHQ500.OUT	456.9	1329.
1.90	3.178	1.350	346.37		639.6	1969.
2.00	3.750	1.350	346.57		843.4	2812.
2.10	4.366	1.350	346.81		1064.	3876.
2.20	5.010	1.350	347.04		1294.	5170.
2.30	5.666	1.350	347.18		1530.	6701.
2.40	6.324	1.350	347.34		1767.	8468.
2.50	6.970	1.350	347.52		2000.	1.0468E+04
2.60	7.597	1.350	347.71		2226.	1.2694E+04
2.70	8.198	1.350	347.93		2444.	1.5137E+04
2.80	8.766	1.350	348.08		2649.	1.7787E+04
2.90	9.299	1.350	348.21		2842.	2.0629E+04
3.00	9.793	1.350	348.34		3022.	2.3651E+04
3.10	10.246	1.350	348.47		3186.	2.6837E+04
3.20	10.659	1.350	348.62		3336.	3.0174E+04
3.30	11.030	1.350	348.77		3471.	3.3645E+04
3.40	11.361	1.350	348.92		3592.	3.7237E+04
3.50	11.653	1.350	349.04		3699.	4.0936E+04
3.60	11.907	1.350	349.12		3791.	4.4727E+04
3.70	12.124	1.350	349.21		3871.	4.8598E+04
3.80	12.304	1.350	349.29		3937.	5.2535E+04
3.90	12.445	1.350	349.38		3989.	5.6524E+04
4.00	12.543	1.350	349.46		4026.	6.0550E+04
4.10	12.600	1.350	349.55		4048.	6.4598E+04
4.20	12.615	1.350	349.64		4055.	6.8653E+04
4.30	12.590	1.350	349.72		4047.	7.2700E+04
4.40	12.525	1.350	349.81		4025.	7.6725E+04
4.50	12.422	1.350	349.90		3990.	8.0715E+04
4.60	12.285	1.350	349.98		3942.	8.4656E+04
4.70	12.115	1.350	350.04		3882.	8.8538E+04
4.80	11.915	1.350	350.09		3811.	9.2349E+04
4.90	11.689	1.350	350.15		3730.	9.6079E+04
5.00	11.439	1.350	350.20		3641.	9.9720E+04
5.10	11.169	1.350	350.24		3545.	1.0326E+05
5.20	10.880	1.350	350.29		3441.	1.0671E+05
5.30	10.577	1.350	350.34		3333.	1.1004E+05
5.40	10.262	1.350	350.38		3220.	1.1326E+05

5.50	9.936	1.350	350.43	SEERETHQ500.OUT	3103.	1.1636E+05
5.60	9.604	1.350	350.47		2983.	1.1934E+05
5.70	9.266	1.350	350.51		2862.	1.2221E+05
5.80	8.926	1.350	350.54		2740.	1.2495E+05
5.90	8.584	1.350	350.58		2617.	1.2756E+05
6.00	8.243	1.350	350.61		2494.	1.3006E+05
6.10	7.904	1.350	350.65		2372.	1.3243E+05
6.20	7.568	1.350	350.68		2251.	1.3468E+05
6.30	7.237	1.350	350.71		2131.	1.3681E+05
6.40	6.912	1.350	350.74		2014.	1.3882E+05
6.50	6.593	1.350	350.76		1899.	1.4072E+05
6.60	6.282	1.350	350.79		1787.	1.4251E+05
6.70	5.979	1.392	350.81	0.127	1667.	1.4418E+05
6.80	5.684	1.611	350.83	0.347	1485.	1.4566E+05
6.90	5.398	1.833	350.85	0.564	1302.	1.4696E+05
7.00	5.122	2.024	350.86	0.745	1132.	1.4809E+05
7.10	4.855	2.190	350.88	0.901	974.7	1.4907E+05
7.20	4.598	2.333	350.89	1.033	829.5	1.4990E+05
7.30	4.351	2.451	350.90	1.144	696.9	1.5059E+05
7.40	4.114	2.551	350.91	1.236	574.5	1.5117E+05
7.50	3.887	2.630	350.91	1.310	463.5	1.5163E+05
7.60	3.669	2.695	350.92	1.368	360.4	1.5199E+05
7.70	3.461	2.745	350.92	1.410	266.8	1.5226E+05
7.80	3.263	2.778	350.92	1.439	182.6	1.5244E+05
7.90	3.074	2.800	350.93	1.456	106.0	1.5255E+05
8.00	2.894	2.810	350.93	1.462	36.80	1.5259E+05
8.10	2.723	2.810	350.93	1.458	-25.39	1.5256E+05
8.20	2.560	2.801	350.93	1.445	-81.27	1.5248E+05
8.30	2.406	2.783	350.92	1.424	-130.9	1.5235E+05
8.40	2.260	2.756	350.92	1.388	-174.6	1.5217E+05
8.50	2.122	2.728	350.92	1.362	-214.1	1.5196E+05
8.60	1.991	2.689	350.91	1.323	-247.8	1.5171E+05
8.70	1.868	2.647	350.91	1.284	-277.5	1.5143E+05
8.80	1.751	2.599	350.91	1.230	-303.1	1.5113E+05
8.90	1.641	2.549	350.90	1.178	-324.7	1.5081E+05
9.00	1.538	2.495	350.90	1.123	-343.0	1.5046E+05
9.10	1.440	2.439	350.89	1.066	-358.2	1.5010E+05

9.20	1.349	2.383	1.007	350.89	-370.9	1.4973E+05
9.30	1.262	2.320	0.946	350.88	-380.1	1.4935E+05
9.40	1.181	2.257	0.884	350.88	-386.8	1.4897E+05
9.50	1.105	2.197	0.822	350.87	-392.5	1.4857E+05
9.60	1.033	2.134	0.758	350.87	-395.9	1.4818E+05
9.70	0.966	2.070	0.694	350.86	-397.4	1.4778E+05
9.80	0.904	2.007	0.632	350.85	-397.0	1.4738E+05
9.90	0.845	1.945	0.568	350.85	-396.3	1.4699E+05
10.00	0.790	1.881	0.506	350.84	-392.9	1.4660E+05
10.10	0.738	1.817	0.443	350.84	-388.8	1.4621E+05
10.20	0.690	1.757	0.382	350.83	-384.4	1.4582E+05
10.30	0.645	1.696	0.322	350.83	-378.9	1.4544E+05
10.40	0.603	1.636	0.262	350.82	-372.4	1.4507E+05
10.50	0.564	1.576	0.204	350.82	-364.9	1.4471E+05
10.60	0.527	1.519	0.147	350.81	-358.0	1.4435E+05
10.70	0.493	1.464	0.091	350.81	-350.2	1.4400E+05
10.80	0.461	1.408	0.036	350.80	-341.7	1.4366E+05
10.90	0.431	1.360		350.80	-334.8	1.4332E+05
11.00	0.404	1.350		350.79	-339.6	1.4298E+05
11.10	0.378	1.350		350.79	-349.0	1.4263E+05
11.20	0.354	1.350		350.78	-357.7	1.4227E+05
11.30	0.332	1.350		350.78	-365.7	1.4191E+05
11.40	0.311	1.350		350.77	-373.3	1.4154E+05
11.50	0.292	1.350		350.77	-380.2	1.4116E+05
11.60	0.274	1.350		350.76	-386.7	1.4077E+05
11.70	0.257	1.350		350.76	-392.9	1.4038E+05
11.80	0.241	1.350		350.75	-398.6	1.3998E+05
11.90	0.226	1.350		350.75	-404.1	1.3957E+05
12.00	0.212	1.350		350.74	-409.2	1.3916E+05
12.10	0.199	1.350		350.73	-413.9	1.3875E+05
12.20	0.187	1.350		350.73	-418.2	1.3833E+05
12.30	0.176	1.350		350.72	-422.2	1.3791E+05
12.40	0.165	1.350		350.72	-426.2	1.3748E+05
12.50	0.156	1.350		350.71	-429.5	1.3705E+05
12.60	0.147	1.350		350.71	-432.7	1.3662E+05
12.70	0.138	1.350		350.70	-436.0	1.3619E+05
12.80	0.130	1.350		350.69	-438.9	1.3575E+05

SEERETHQ500.OUT

12.90	0.120	1.350	350.69	SEERETHQ500.OUT	-442.5	1.3530E+05
13.00	0.112	1.350	350.68		-445.4	1.3486E+05
13.10	0.104	1.350	350.67		-448.3	1.3441E+05
13.20	0.097	1.350	350.67		-450.8	1.3396E+05
13.30	0.090	1.350	350.66		-453.3	1.3351E+05
13.40	0.084	1.350	350.66		-455.6	1.3305E+05
13.50	0.079	1.350	350.65		-457.4	1.3259E+05
13.60	0.076	1.350	350.64		-458.6	1.3213E+05
13.70	0.073	1.350	350.64		-459.6	1.3167E+05
13.80	0.071	1.350	350.63		-460.4	1.3121E+05
13.90	0.068	1.350	350.62		-461.4	1.3075E+05
14.00	0.066	1.350	350.62		-462.2	1.3029E+05
14.10	0.064	1.350	350.61		-462.9	1.2983E+05
14.20	0.062	1.350	350.61		-463.6	1.2936E+05
14.30	0.061	1.350	350.60		-464.0	1.2890E+05
14.40	0.059	1.350	350.59		-464.7	1.2844E+05
14.50	0.057	1.350	350.59		-465.4	1.2797E+05
14.60	0.056	1.350	350.58		-465.8	1.2750E+05
14.70	0.055	1.350	350.57		-466.2	1.2704E+05
14.80	0.054	1.350	350.57		-466.5	1.2657E+05
14.90	0.053	1.350	350.56		-466.9	1.2610E+05
15.00	0.052	1.350	350.55		-467.2	1.2564E+05
15.10	0.051	1.350	350.55		-467.6	1.2517E+05
15.20	0.050	1.350	350.54		-468.0	1.2470E+05
15.30	0.050	1.350	350.53		-468.0	1.2423E+05
15.40	0.050	1.350	350.53		-468.0	1.2377E+05
15.50	0.050	1.350	350.52		-468.0	1.2330E+05
15.60	0.050	1.350	350.51		-468.0	1.2283E+05
15.70	0.050	1.350	350.51		-468.0	1.2236E+05
15.80	0.050	1.350	350.50		-468.0	1.2189E+05
15.90	0.050	1.350	350.50		-468.0	1.2143E+05
16.00	0.050	1.350	350.49		-468.0	1.2096E+05
16.10	0.050	1.350	350.48		-468.0	1.2049E+05
16.20	0.050	1.350	350.48		-468.0	1.2002E+05
16.30	0.050	1.350	350.47		-468.0	1.1955E+05
16.40	0.050	1.350	350.46		-468.0	1.1909E+05
16.50	0.050	1.350	350.46		-468.0	1.1862E+05

16.60	0.050	1.350	350.45	SEERETHQ500.OUT	-468.0	1.1815E+05
16.70	0.050	1.350	350.44		-468.0	1.1768E+05
16.80	0.050	1.350	350.44		-468.0	1.1721E+05
16.90	0.050	1.350	350.43		-468.0	1.1675E+05
17.00	0.050	1.350	350.42		-468.0	1.1628E+05
17.10	0.050	1.350	350.42		-468.0	1.1581E+05
17.20	0.050	1.350	350.41		-468.0	1.1534E+05
17.30	0.050	1.350	350.41		-468.0	1.1487E+05
17.40	0.050	1.350	350.40		-468.0	1.1441E+05
17.50	0.050	1.350	350.39		-468.0	1.1394E+05
17.60	0.050	1.350	350.39		-468.0	1.1347E+05
17.70	0.050	1.350	350.38		-468.0	1.1300E+05
17.80	0.050	1.350	350.37		-468.0	1.1253E+05
17.90	0.050	1.350	350.37		-468.0	1.1207E+05
18.00	0.050	1.350	350.36		-468.0	1.1160E+05
18.10	0.050	1.350	350.35		-468.0	1.1113E+05
18.20	0.050	1.350	350.35		-468.0	1.1066E+05
18.30	0.050	1.350	350.34		-468.0	1.1019E+05
18.40	0.050	1.350	350.33		-468.0	1.0973E+05
18.50	0.050	1.350	350.33		-468.0	1.0926E+05
18.60	0.050	1.350	350.32		-468.0	1.0879E+05
18.70	0.050	1.350	350.31		-468.0	1.0832E+05
18.80	0.050	1.350	350.31		-468.0	1.0785E+05
18.90	0.050	1.350	350.30		-468.0	1.0739E+05
19.00	0.050	1.350	350.30		-468.0	1.0692E+05
19.10	0.050	1.350	350.29		-468.0	1.0645E+05
19.20	0.050	1.350	350.28		-468.0	1.0598E+05
19.30	0.050	1.350	350.28		-468.0	1.0551E+05
19.40	0.050	1.350	350.27		-468.0	1.0505E+05
19.50	0.050	1.350	350.26		-468.0	1.0458E+05
19.60	0.050	1.350	350.26		-468.0	1.0411E+05
19.70	0.050	1.350	350.25		-468.0	1.0364E+05
19.80	0.050	1.350	350.24		-468.0	1.0317E+05
19.90	0.050	1.350	350.24		-468.0	1.0271E+05
20.00	0.050	1.350	350.23		-468.0	1.0224E+05
20.10	0.050	1.350	350.22		-468.0	1.0177E+05
20.20	0.050	1.350	350.22		-468.0	1.0130E+05

20.30	0.050	1.350	350.21	SEERETHQ500.OUT	-468.0	1.0083E+05
20.40	0.050	1.350	350.20		-468.0	1.0037E+05
20.50	0.050	1.350	350.20		-468.0	9.9898E+04
20.60	0.050	1.350	350.19		-468.0	9.9430E+04
20.70	0.050	1.350	350.19		-468.0	9.8962E+04
20.80	0.050	1.350	350.18		-468.0	9.8494E+04
20.90	0.050	1.350	350.17		-468.0	9.8026E+04
21.00	0.050	1.350	350.17		-468.0	9.7558E+04
21.10	0.050	1.350	350.16		-468.0	9.7090E+04
21.20	0.050	1.350	350.15		-468.0	9.6622E+04
21.30	0.050	1.350	350.15		-468.0	9.6154E+04
21.40	0.050	1.350	350.14		-468.0	9.5686E+04
21.50	0.050	1.350	350.13		-468.0	9.5218E+04
21.60	0.050	1.350	350.13		-468.0	9.4750E+04
21.70	0.050	1.350	350.12		-468.0	9.4282E+04
21.80	0.050	1.350	350.11		-468.0	9.3814E+04
21.90	0.050	1.350	350.11		-468.0	9.3346E+04
22.00	0.050	1.350	350.10		-468.0	9.2878E+04
22.10	0.050	1.350	350.09		-468.0	9.2410E+04
22.20	0.050	1.350	350.09		-468.0	9.1942E+04
22.30	0.050	1.350	350.08		-468.0	9.1474E+04
22.40	0.050	1.350	350.08		-468.0	9.1006E+04
22.50	0.050	1.350	350.07		-468.0	9.0538E+04
22.60	0.050	1.350	350.06		-468.0	9.0070E+04
22.70	0.050	1.350	350.06		-468.0	8.9602E+04
22.80	0.050	1.350	350.05		-468.0	8.9134E+04
22.90	0.050	1.350	350.04		-468.0	8.8666E+04
23.00	0.050	1.350	350.04		-468.0	8.8198E+04
23.10	0.050	1.350	350.03		-468.0	8.7730E+04
23.20	0.050	1.350	350.02		-468.0	8.7262E+04
23.30	0.050	1.350	350.02		-468.0	8.6794E+04
23.40	0.050	1.350	350.01		-468.0	8.6326E+04
23.50	0.050	1.350	350.00		-468.0	8.5858E+04
23.60	0.050	1.350	350.00		-468.0	8.5390E+04
23.70	0.050	1.350	349.99		-468.0	8.4922E+04
23.80	0.050	1.350	349.98		-468.0	8.4454E+04
23.90	0.050	1.350	349.97		-468.0	8.3986E+04

24.00	0.050	1.350	349.96	-468.0	SEERETHQ500.OUT	8.3517E+04
24.10	0.050	1.350	349.95	-468.0		8.3049E+04
24.20	0.050	1.350	349.94	-468.0		8.2581E+04
24.30	0.050	1.350	349.93	-468.0		8.2113E+04
24.40	0.050	1.350	349.92	-468.0		8.1645E+04
24.50	0.050	1.350	349.91	-468.0		8.1177E+04
24.60	0.050	1.350	349.90	-468.0		8.0709E+04
24.70	0.050	1.350	349.89	-468.0		8.0241E+04
24.80	0.050	1.350	349.88	-468.0		7.9773E+04
24.90	0.050	1.350	349.87	-468.0		7.9305E+04
25.00	0.050	1.350	349.86	-468.0		7.8837E+04
25.10	0.050	1.350	349.85	-468.0		7.8369E+04
25.20	0.050	1.350	349.84	-468.0		7.7901E+04
25.30	0.050	1.350	349.83	-468.0		7.7433E+04
25.40	0.050	1.350	349.82	-468.0		7.6965E+04
25.50	0.050	1.350	349.81	-468.0		7.6497E+04
25.60	0.050	1.350	349.80	-468.0		7.6029E+04
25.70	0.050	1.350	349.79	-468.0		7.5561E+04
25.80	0.050	1.350	349.78	-468.0		7.5093E+04
25.90	0.050	1.350	349.77	-468.0		7.4625E+04
26.00	0.050	1.350	349.76	-468.0		7.4157E+04
26.10	0.050	1.350	349.75	-468.0		7.3689E+04
26.20	0.050	1.350	349.74	-468.0		7.3221E+04
26.30	0.050	1.350	349.73	-468.0		7.2753E+04
26.40	0.050	1.350	349.72	-468.0		7.2285E+04
26.50	0.050	1.350	349.71	-468.0		7.1817E+04
26.60	0.050	1.350	349.70	-468.0		7.1349E+04
26.70	0.050	1.350	349.69	-468.0		7.0881E+04
26.80	0.050	1.350	349.68	-468.0		7.0413E+04
26.90	0.050	1.350	349.67	-468.0		6.9945E+04
27.00	0.050	1.350	349.66	-468.0		6.9477E+04
27.10	0.050	1.350	349.65	-468.0		6.9009E+04
27.20	0.050	1.350	349.64	-468.0		6.8541E+04
27.30	0.050	1.350	349.63	-468.0		6.8073E+04
27.40	0.050	1.350	349.62	-468.0		6.7605E+04
27.50	0.050	1.350	349.61	-468.0		6.7137E+04
27.60	0.050	1.350	349.60	-468.0		6.6669E+04

27.70	0.050	1.350	349.59	-468.0	SEERETHQ500.OUT	6.6201E+04
27.80	0.050	1.350	349.58	-468.0		6.5733E+04
27.90	0.050	1.350	349.57	-468.0		6.5265E+04
28.00	0.050	1.350	349.56	-468.0		6.4797E+04
28.10	0.050	1.350	349.55	-468.0		6.4329E+04
28.20	0.050	1.350	349.54	-468.0		6.3861E+04
28.30	0.050	1.350	349.52	-468.0		6.3393E+04
28.40	0.050	1.350	349.51	-468.0		6.2925E+04
28.50	0.050	1.350	349.50	-468.0		6.2457E+04
28.60	0.050	1.350	349.49	-468.0		6.1989E+04
28.70	0.050	1.350	349.48	-468.0		6.1521E+04
28.80	0.050	1.350	349.47	-468.0		6.1053E+04
28.90	0.050	1.350	349.46	-468.0		6.0585E+04
29.00	0.050	1.350	349.45	-468.0		6.0117E+04
29.10	0.050	1.350	349.44	-468.0		5.9649E+04
29.20	0.050	1.350	349.43	-468.0		5.9181E+04
29.30	0.050	1.350	349.42	-468.0		5.8713E+04
29.40	0.050	1.350	349.41	-468.0		5.8245E+04
29.50	0.050	1.350	349.40	-468.0		5.7777E+04
29.60	0.050	1.350	349.39	-468.0		5.7309E+04
29.70	0.050	1.350	349.38	-468.0		5.6841E+04
29.80	0.050	1.350	349.37	-468.0		5.6373E+04
29.90	0.050	1.350	349.36	-468.0		5.5905E+04
30.00	0.050	1.350	349.35	-468.0		5.5437E+04
30.10	0.050	1.350	349.34	-468.0		5.4969E+04
30.20	0.050	1.350	349.33	-468.0		5.4501E+04
30.30	0.050	1.350	349.32	-468.0		5.4033E+04
30.40	0.050	1.350	349.31	-468.0		5.3565E+04
30.50	0.050	1.350	349.30	-468.0		5.3097E+04
30.60	0.050	1.350	349.29	-468.0		5.2629E+04
30.70	0.050	1.350	349.28	-468.0		5.2161E+04
30.80	0.050	1.350	349.27	-468.0		5.1693E+04
30.90	0.050	1.350	349.26	-468.0		5.1225E+04
31.00	0.050	1.350	349.25	-468.0		5.0757E+04
31.10	0.050	1.350	349.24	-468.0		5.0289E+04
31.20	0.050	1.350	349.23	-468.0		4.9821E+04
31.30	0.050	1.350	349.22	-468.0		4.9353E+04

31.40	0.050	1.350	349.21	-468.0	SEERETHQ500.OUT	4.8885E+04
31.50	0.050	1.350	349.20	-468.0		4.8417E+04
31.60	0.050	1.350	349.19	-468.0		4.7949E+04
31.70	0.050	1.350	349.18	-468.0		4.7481E+04
31.80	0.050	1.350	349.17	-468.0		4.7013E+04
31.90	0.050	1.350	349.16	-468.0		4.6545E+04
32.00	0.050	1.350	349.15	-468.0		4.6077E+04
32.10	0.050	1.350	349.14	-468.0		4.5609E+04
32.20	0.050	1.350	349.13	-468.0		4.5141E+04
32.30	0.050	1.350	349.12	-468.0		4.4673E+04
32.40	0.050	1.350	349.11	-468.0		4.4205E+04
32.50	0.050	1.350	349.10	-468.0		4.3737E+04
32.60	0.050	1.350	349.09	-468.0		4.3269E+04
32.70	0.050	1.350	349.08	-468.0		4.2801E+04
32.80	0.050	1.350	349.07	-468.0		4.2333E+04
32.90	0.050	1.350	349.06	-468.0		4.1865E+04
33.00	0.050	1.350	349.05	-468.0		4.1397E+04
33.10	0.050	1.350	349.04	-468.0		4.0929E+04
33.20	0.050	1.350	349.03	-468.0		4.0461E+04
33.30	0.050	1.350	349.02	-468.0		3.9993E+04
33.40	0.050	1.350	349.01	-468.0		3.9525E+04
33.50	0.050	1.350	349.00	-468.0		3.9057E+04
33.60	0.050	1.350	348.98	-468.0		3.8589E+04
33.70	0.050	1.350	348.96	-468.0		3.8121E+04
33.80	0.050	1.350	348.94	-468.0		3.7653E+04
33.90	0.050	1.350	348.92	-468.0		3.7185E+04
34.00	0.050	1.350	348.90	-468.0		3.6717E+04
34.10	0.050	1.350	348.88	-468.0		3.6249E+04
34.20	0.050	1.350	348.86	-468.0		3.5781E+04
34.30	0.050	1.350	348.84	-468.0		3.5313E+04
34.40	0.050	1.350	348.82	-468.0		3.4845E+04
34.50	0.050	1.350	348.80	-468.0		3.4377E+04
34.60	0.050	1.350	348.78	-468.0		3.3909E+04
34.70	0.050	1.350	348.76	-468.0		3.3441E+04
34.80	0.050	1.350	348.74	-468.0		3.2973E+04
34.90	0.050	1.350	348.72	-468.0		3.2505E+04
35.00	0.050	1.350	348.70	-468.0		3.2037E+04

35.10	0.050	1.350	348.68	SEERETHQ500.OUT	-468.0	3.1569E+04
35.20	0.050	1.350	348.66		-468.0	3.1101E+04
35.30	0.050	1.350	348.64		-468.0	3.0633E+04
35.40	0.050	1.350	348.62		-468.0	3.0165E+04
35.50	0.050	1.350	348.60		-468.0	2.9697E+04
35.60	0.050	1.350	348.58		-468.0	2.9229E+04
35.70	0.050	1.350	348.56		-468.0	2.8761E+04
35.80	0.050	1.350	348.54		-468.0	2.8293E+04
35.90	0.050	1.350	348.52		-468.0	2.7825E+04
36.00	0.050	1.350	348.50		-468.0	2.7357E+04
36.10	0.050	1.350	348.48		-468.0	2.6889E+04
36.20	0.050	1.350	348.46		-468.0	2.6421E+04
36.30	0.050	1.350	348.44		-468.0	2.5953E+04
36.40	0.050	1.350	348.42		-468.0	2.5485E+04
36.50	0.050	1.350	348.40		-468.0	2.5017E+04
36.60	0.050	1.350	348.38		-468.0	2.4549E+04
36.70	0.050	1.350	348.35		-468.0	2.4081E+04
36.80	0.050	1.350	348.33		-468.0	2.3613E+04
36.90	0.050	1.350	348.31		-468.0	2.3145E+04
37.00	0.050	1.350	348.29		-468.0	2.2677E+04
37.10	0.050	1.350	348.27		-468.0	2.2209E+04
37.20	0.050	1.350	348.25		-468.0	2.1741E+04
37.30	0.050	1.350	348.23		-468.0	2.1273E+04
37.40	0.050	1.350	348.21		-468.0	2.0805E+04
37.50	0.050	1.350	348.19		-468.0	2.0337E+04
37.60	0.050	1.350	348.17		-468.0	1.9869E+04
37.70	0.050	1.350	348.15		-468.0	1.9401E+04
37.80	0.050	1.350	348.13		-468.0	1.8933E+04
37.90	0.050	1.350	348.11		-468.0	1.8465E+04
38.00	0.050	1.350	348.09		-468.0	1.7997E+04
38.10	0.050	1.350	348.07		-468.0	1.7529E+04
38.20	0.050	1.350	348.05		-468.0	1.7061E+04
38.30	0.050	1.350	348.03		-468.0	1.6593E+04
38.40	0.050	1.350	348.01		-468.0	1.6125E+04
38.50	0.050	1.350	347.98		-468.0	1.5657E+04
38.60	0.050	1.350	347.94		-468.0	1.5189E+04
38.70	0.050	1.350	347.90		-468.0	1.4721E+04

38.80	0.050	1.350	347.85	SEERETHQ500.OUT	-468.0	1.4253E+04
38.90	0.050	1.350	347.81		-468.0	1.3785E+04
39.00	0.050	1.350	347.77		-468.0	1.3317E+04
39.10	0.050	1.350	347.73		-468.0	1.2849E+04
39.20	0.050	1.350	347.69		-468.0	1.2381E+04
39.30	0.050	1.350	347.65		-468.0	1.1913E+04
39.40	0.050	1.350	347.60		-468.0	1.1445E+04
39.50	0.050	1.350	347.56		-468.0	1.0977E+04
39.60	0.050	1.350	347.52		-468.0	1.0509E+04
39.70	0.050	1.350	347.48		-468.0	1.0041E+04
39.80	0.050	1.350	347.44		-468.0	9573.
39.90	0.050	1.350	347.39		-468.0	9105.
40.00	0.050	1.350	347.35		-468.0	8637.
40.10	0.050	1.350	347.31		-468.0	8169.
40.20	0.050	1.350	347.27		-468.0	7701.
40.30	0.050	1.350	347.23		-468.0	7233.
40.40	0.050	1.350	347.19		-468.0	6765.
40.50	0.050	1.350	347.14		-468.0	6297.
40.60	0.050	1.350	347.10		-468.0	5829.
40.70	0.050	1.350	347.06		-468.0	5361.
40.80	0.050	1.350	347.02		-468.0	4893.
40.90	0.050	1.350	346.94		-468.0	4425.
41.00	0.050	1.350	346.83		-468.0	3957.
41.10	0.050	1.350	346.72		-468.0	3489.
41.20	0.050	1.350	346.62		-468.0	3021.
41.30	0.050	1.350	346.51		-468.0	2553.
41.40	0.050	1.350	346.40		-468.0	2085.
41.50	0.050	1.350	346.29		-468.0	1617.
41.60	0.050	1.350	346.18		-468.0	1149.
41.70	0.050	1.350	346.08		-468.0	680.7
41.80	0.050	1.191	345.73		-428.9	251.9
41.90	0.050	0.434	345.30		-158.8	93.09
42.00	0.050	0.176	345.16		-51.04	42.05
42.10	0.050	0.092	345.12		-17.09	24.97
42.20	0.050	0.064	345.10		-5.683	19.29
42.30	0.050	0.055	345.10		-1.902	17.38
42.40	0.050	0.052	345.10		-0.6246	16.76

SEERETHQ500.OUT

345.09	-0.2056	16.55
345.09	-7.1751E-02	16.48
345.09	-2.4500E-02	16.46
345.09	-5.6000E-03	16.45

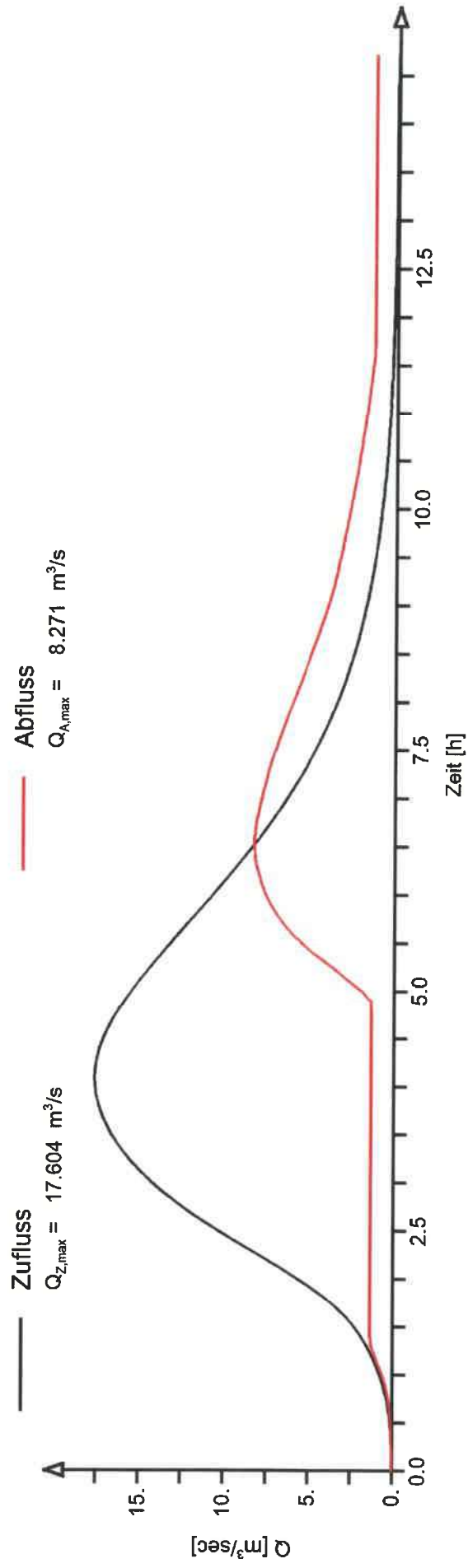
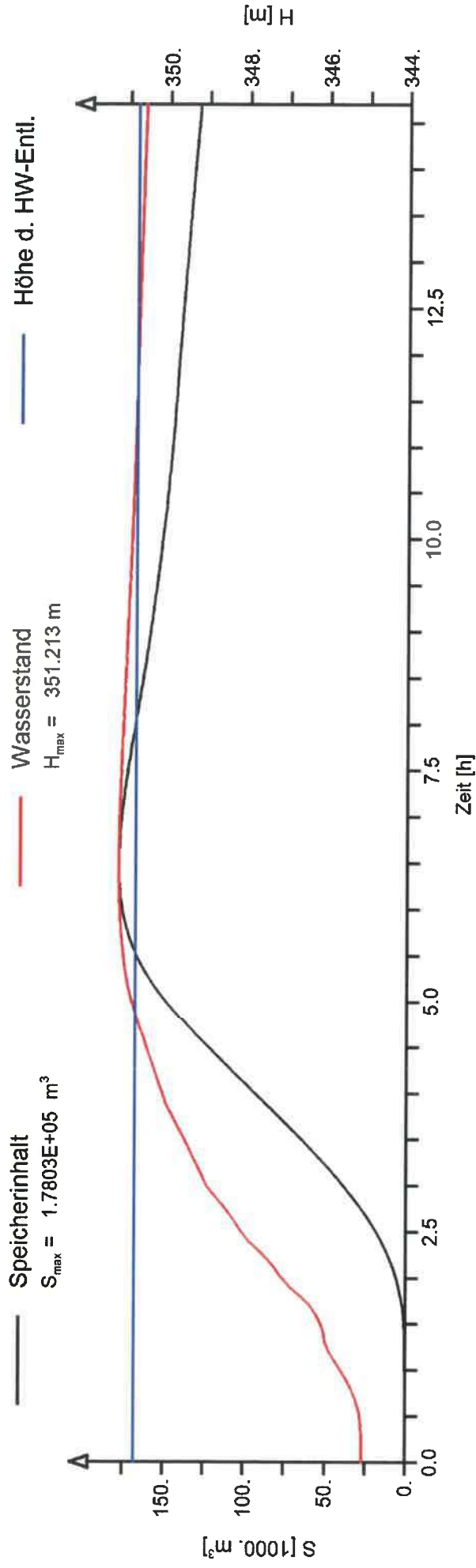
Wasserstand: HANF = 345.09
 HMAX = 350.93
 HEND = 345.09
 Volumen: SMAX = 1.5259E+05

42.50	0.050	0.051
42.60	0.050	0.050
42.70	0.050	0.050
42.80	0.050	0.050

Zuflussumme: SUMZ = 0.2118E+06
 Abflussumme: SUMA = 0.2118E+06
 Anfangsfuellung: SANF = 16.45
 Fuellung am Ende : SEND = 16.45
 Differenz : SEND - SANF = 5.4169E-03

HWRB III bei Oberhaselbach

Ereignis: HQ 5000



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*****
* Hochwasseranalyse - Programm: S E R E T                               Version: 7.0      IWG - Hydrologie am KIT      *
* Datensatz: HWRBIII.SEE  HWRB III bei Oberhaselbach                    Berechnet am: 31. Jul 2019   um: 10:38:00 *
* $$                                                                    *****
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Speicherkerndaten: HWRB III bei Oberhaselbach

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Speicherinhaltslinie:

Anzahl der Stuetzstellen fuer Inhaltslinie NST = 8

```

345.05  0.000 ; 346.00  350.0 ; 347.00  4685. ; 348.00  0.1589E+05; 349.00  0.3897E+05;
350.00  0.8555E+05; 351.00  0.1579E+06; 352.00  0.2522E+06;

```

Kennwerte des Grundablasses:

Hoehenmarke der Unterkante:

Anzahl der Stuetzstellen fuer Abflusskurve: NG = 5

HGU = 345.050

Stuetzstellen fuer Abflusskurve : Hoehenmarken und Abfluesse

```

345.05  0.000; 345.55  0.560; 346.05  1.350; 351.05  1.350; 351.55  1.410;

```

Kennwerte der Entlastungsanlage:

Hoehenmarke der Ueberfallkrone:

Anzahl der Stuetzstellen fuer Abflusskurve: NEL = 5

HWE = 350.800

Stuetzstellen fuer Abflusskurve : Hoehenmarken und Abfluesse

```

350.80  0.000; 351.00  2.311; 351.20  6.536; 351.40  12.007; 351.60  18.487;

```

Anfangswasserstand : HANF = 345.050

Zuflussganglinie: Gewaesser : Haselbach
 Gewaesserstelle : bei Oberhaselbach
 Ereignis : HQ 5000
 Zeitschritt [h] : 0.100

Anfangs-Wasserstand [m] : 345.050

Zeit [h]	QZ [cbm/sec]	QA [cbm/sec]	QHW [cbm/sec]	H [m]	DS [cbm]	S [cbm]
0.00	0.050	0.050		345.09		16.45
0.10	0.050	0.050		345.09	0.000	16.45
0.20	0.051	0.050		345.10	0.2074	16.65
0.30	0.058	0.054		345.10	1.522	18.18
0.40	0.080	0.065		345.11	5.130	23.31
0.50	0.121	0.091		345.14	10.45	33.75
0.60	0.189	0.138		345.19	18.04	51.79
0.70	0.284	0.209		345.26	26.48	78.27
0.80	0.411	0.309		345.36	36.26	114.5
0.90	0.568	0.438		345.49	46.10	160.6
1.00	0.757	0.612		345.63	52.57	213.2
1.10	0.976	0.833		345.77	51.64	264.8
1.20	1.224	1.067		345.92	56.31	321.2
1.30	1.509	1.267		346.01	82.13	403.3
1.40	1.848	1.327		346.05	177.5	580.8
1.50	2.255	1.350		346.12	311.1	891.9
1.60	2.744	1.350		346.24	484.2	1376.
1.70	3.323	1.350		346.40	689.4	2066.
1.80	3.996	1.350		346.61	928.3	2994.
1.90	4.764	1.350		346.89	1201.	4195.
2.00	5.615	1.350		347.09	1505.	5700.
2.10	6.526	1.350		347.25	1831.	7531.
2.20	7.472	1.350		347.45	2170.	9701.
2.30	8.429	1.350		347.67	2514.	1.2215E+04
2.40	9.379	1.350		347.93	2856.	1.5071E+04

2.50	10.306	1.350	348.10	SEERETHQ5000.OUT	1.8262E+04
2.60	11.195	1.350	348.25		2.1774E+04
2.70	12.038	1.350	348.42		2.5591E+04
2.80	12.826	1.350	348.60		2.9694E+04
2.90	13.556	1.350	348.79		3.4062E+04
3.00	14.223	1.350	348.99		3.8672E+04
3.10	14.827	1.350	349.10		4.3502E+04
3.20	15.367	1.350	349.21		4.8529E+04
3.30	15.845	1.350	349.32		5.3730E+04
3.40	16.261	1.350	349.43		5.9083E+04
3.50	16.620	1.350	349.55		6.4567E+04
3.60	16.922	1.350	349.67		7.0162E+04
3.70	17.173	1.350	349.79		7.5849E+04
3.80	17.369	1.350	349.92		8.1609E+04
3.90	17.507	1.350	350.03		8.7421E+04
4.00	17.586	1.350	350.11		9.3263E+04
4.10	17.604	1.350	350.19		9.9114E+04
4.20	17.564	1.350	350.27		1.0495E+05
4.30	17.466	1.350	350.35		1.1076E+05
4.40	17.312	1.350	350.43		1.1651E+05
4.50	17.107	1.350	350.51		1.2219E+05
4.60	16.855	1.350	350.58		1.2778E+05
4.70	16.558	1.350	350.66		1.3327E+05
4.80	16.223	1.350	350.73		1.3863E+05
4.90	15.852	1.364	350.81		1.4386E+05
5.00	15.452	1.896	350.87	0.069	1.4879E+05
5.10	15.026	2.641	350.94	0.856	1.5329E+05
5.20	14.579	3.322	350.99	1.574	1.5738E+05
5.30	14.115	4.043	351.03	2.228	1.6105E+05
5.40	13.637	4.810	351.07	3.017	1.6427E+05
5.50	13.150	5.475	351.10	3.738	1.6707E+05
5.60	12.656	6.053	351.12	4.366	1.6949E+05
5.70	12.160	6.551	351.14	4.907	1.7154E+05
5.80	11.663	6.965	351.16	5.367	1.7326E+05
5.90	11.168	7.312	351.18	5.753	1.7468E+05
6.00	10.678	7.596	351.19	6.070	1.7582E+05
6.10	10.194	7.810	351.20	6.324	1.7670E+05
				6.516	

6.20	9.719	7.998	6.701	351.21	643.2	1.7734E+05
6.30	9.253	8.148	6.820	351.21	419.0	1.7776E+05
6.40	8.798	8.238	6.891	351.21	220.6	1.7798E+05
6.50	8.356	8.271	6.905	351.21	47.09	1.7803E+05
6.60	7.926	8.257	6.874	351.21	-104.9	1.7793E+05
6.70	7.510	8.201	6.805	351.21	-236.1	1.7769E+05
6.80	7.108	8.112	6.700	351.21	-350.6	1.7734E+05
6.90	6.720	7.988	6.565	351.20	-447.3	1.7689E+05
7.00	6.347	7.854	6.442	351.20	-533.8	1.7636E+05
7.10	5.990	7.728	6.307	351.19	-617.8	1.7574E+05
7.20	5.647	7.581	6.153	351.18	-689.5	1.7505E+05
7.30	5.319	7.416	5.985	351.17	-749.2	1.7430E+05
7.40	5.007	7.241	5.806	351.17	-799.5	1.7350E+05
7.50	4.708	7.056	5.618	351.16	-841.2	1.7266E+05
7.60	4.424	6.864	5.422	351.15	-875.1	1.7179E+05
7.70	4.155	6.661	5.220	351.14	-899.9	1.7089E+05
7.80	3.898	6.456	5.014	351.13	-919.0	1.6997E+05
7.90	3.656	6.248	4.805	351.12	-932.0	1.6904E+05
8.00	3.426	6.037	4.595	351.11	-939.3	1.6810E+05
8.10	3.208	5.824	4.384	351.10	-941.4	1.6715E+05
8.20	3.003	5.612	4.174	351.09	-939.3	1.6622E+05
8.30	2.809	5.402	3.965	351.08	-933.9	1.6528E+05
8.40	2.627	5.192	3.758	351.07	-924.2	1.6436E+05
8.50	2.454	4.988	3.553	351.06	-913.4	1.6344E+05
8.60	2.293	4.778	3.352	351.05	-896.1	1.6255E+05
8.70	2.140	4.583	3.155	351.04	-881.1	1.6167E+05
8.80	1.997	4.390	2.970	351.03	-862.9	1.6080E+05
8.90	1.863	4.197	2.773	351.02	-842.6	1.5996E+05
9.00	1.738	4.011	2.589	351.01	-820.5	1.5914E+05
9.10	1.620	3.831	2.410	351.00	-798.1	1.5834E+05
9.20	1.509	3.662	2.258	351.00	-776.6	1.5757E+05
9.30	1.406	3.534	2.135	350.98	-766.8	1.5680E+05
9.40	1.310	3.414	2.014	350.97	-758.2	1.5604E+05
9.50	1.219	3.292	1.895	350.96	-747.4	1.5529E+05
9.60	1.135	3.174	1.777	350.95	-735.2	1.5456E+05
9.70	1.057	3.058	1.662	350.94	-721.6	1.5384E+05
9.80	0.983	2.944	1.549	350.93	-707.3	1.5313E+05

9.90	0.915	2.832	1.439	350.92	SEERETHQ5000.OUT	-691.8	1.5244E+05
10.00	0.852	2.722	1.331	350.92		-674.9	1.5176E+05
10.10	0.792	2.617	1.226	350.91		-658.8	1.5110E+05
10.20	0.737	2.515	1.123	350.90		-641.7	1.5046E+05
10.30	0.686	2.413	1.024	350.89		-623.4	1.4984E+05
10.40	0.638	2.315	0.925	350.88		-605.5	1.4923E+05
10.50	0.594	2.220	0.833	350.87		-587.2	1.4865E+05
10.60	0.553	2.127	0.742	350.86		-568.6	1.4808E+05
10.70	0.515	2.039	0.654	350.86		-550.5	1.4753E+05
10.80	0.479	1.954	0.569	350.85		-532.7	1.4699E+05
10.90	0.447	1.870	0.487	350.84		-514.0	1.4648E+05
11.00	0.416	1.788	0.408	350.84		-495.6	1.4598E+05
11.10	0.388	1.712	0.332	350.83		-478.4	1.4551E+05
11.20	0.362	1.637	0.258	350.82		-460.8	1.4505E+05
11.30	0.336	1.565	0.187	350.82		-444.2	1.4460E+05
11.40	0.313	1.498	0.127	350.81		-427.8	1.4417E+05
11.50	0.291	1.429	0.053	350.80		-411.6	1.4376E+05
11.60	0.271	1.367		350.80		-395.6	1.4337E+05
11.70	0.253	1.350		350.79		-394.3	1.4297E+05
11.80	0.236	1.350		350.79		-400.4	1.4257E+05
11.90	0.220	1.350		350.78		-406.2	1.4217E+05
12.00	0.205	1.350		350.78		-411.7	1.4175E+05
12.10	0.192	1.350		350.77		-416.4	1.4134E+05
12.20	0.179	1.350		350.76		-421.1	1.4092E+05
12.30	0.166	1.350		350.76		-425.8	1.4049E+05
12.40	0.152	1.350		350.75		-430.8	1.4006E+05
12.50	0.140	1.350		350.75		-435.2	1.3962E+05
12.60	0.128	1.350		350.74		-439.5	1.3919E+05
12.70	0.118	1.350		350.73		-443.2	1.3874E+05
12.80	0.108	1.350		350.73		-446.8	1.3830E+05
12.90	0.099	1.350		350.72		-450.1	1.3785E+05
13.00	0.092	1.350		350.72		-452.6	1.3739E+05
13.10	0.088	1.350		350.71		-454.2	1.3694E+05
13.20	0.083	1.350		350.70		-455.9	1.3648E+05
13.30	0.080	1.350		350.70		-457.1	1.3603E+05
13.40	0.076	1.350		350.69		-458.5	1.3557E+05
13.50	0.073	1.350		350.68		-459.6	1.3511E+05

13.60	0.070	1.350	350.68	SEERETHQ5000.OUT	-460.7	1.3465E+05
13.70	0.067	1.350	350.67		-461.8	1.3418E+05
13.80	0.065	1.350	350.67		-462.5	1.3372E+05
13.90	0.063	1.350	350.66		-463.2	1.3326E+05
14.00	0.061	1.350	350.65		-464.0	1.3280E+05
14.10	0.059	1.350	350.65		-464.7	1.3233E+05
14.20	0.057	1.350	350.64		-465.4	1.3187E+05
14.30	0.055	1.350	350.63		-466.1	1.3140E+05
14.40	0.054	1.350	350.63		-466.5	1.3093E+05
14.50	0.052	1.350	350.62		-467.2	1.3047E+05
14.60	0.051	1.350	350.61		-467.6	1.3000E+05
14.70	0.050	1.350	350.61		-468.0	1.2953E+05
14.80	0.050	1.350	350.60		-468.0	1.2906E+05
14.90	0.050	1.350	350.59		-468.0	1.2859E+05
15.00	0.050	1.350	350.59		-468.0	1.2813E+05
15.10	0.050	1.350	350.58		-468.0	1.2766E+05
15.20	0.050	1.350	350.58		-468.0	1.2719E+05
15.30	0.050	1.350	350.57		-468.0	1.2672E+05
15.40	0.050	1.350	350.56		-468.0	1.2625E+05
15.50	0.050	1.350	350.56		-468.0	1.2579E+05
15.60	0.050	1.350	350.55		-468.0	1.2532E+05
15.70	0.050	1.350	350.54		-468.0	1.2485E+05
15.80	0.050	1.350	350.54		-468.0	1.2438E+05
15.90	0.050	1.350	350.53		-468.0	1.2391E+05
16.00	0.050	1.350	350.52		-468.0	1.2345E+05
16.10	0.050	1.350	350.52		-468.0	1.2298E+05
16.20	0.050	1.350	350.51		-468.0	1.2251E+05
16.30	0.050	1.350	350.50		-468.0	1.2204E+05
16.40	0.050	1.350	350.50		-468.0	1.2157E+05
16.50	0.050	1.350	350.49		-468.0	1.2111E+05
16.60	0.050	1.350	350.48		-468.0	1.2064E+05
16.70	0.050	1.350	350.48		-468.0	1.2017E+05
16.80	0.050	1.350	350.47		-468.0	1.1970E+05
16.90	0.050	1.350	350.47		-468.0	1.1923E+05
17.00	0.050	1.350	350.46		-468.0	1.1877E+05
17.10	0.050	1.350	350.45		-468.0	1.1830E+05
17.20	0.050	1.350	350.45		-468.0	1.1783E+05

17.30	0.050	1.350	350.44	-468.0	SEERETHQ5000.OUT	1.1736E+05
17.40	0.050	1.350	350.43	-468.0		1.1689E+05
17.50	0.050	1.350	350.43	-468.0		1.1643E+05
17.60	0.050	1.350	350.42	-468.0		1.1596E+05
17.70	0.050	1.350	350.41	-468.0		1.1549E+05
17.80	0.050	1.350	350.41	-468.0		1.1502E+05
17.90	0.050	1.350	350.40	-468.0		1.1455E+05
18.00	0.050	1.350	350.39	-468.0		1.1409E+05
18.10	0.050	1.350	350.39	-468.0		1.1362E+05
18.20	0.050	1.350	350.38	-468.0		1.1315E+05
18.30	0.050	1.350	350.37	-468.0		1.1268E+05
18.40	0.050	1.350	350.37	-468.0		1.1221E+05
18.50	0.050	1.350	350.36	-468.0		1.1175E+05
18.60	0.050	1.350	350.36	-468.0		1.1128E+05
18.70	0.050	1.350	350.35	-468.0		1.1081E+05
18.80	0.050	1.350	350.34	-468.0		1.1034E+05
18.90	0.050	1.350	350.34	-468.0		1.0987E+05
19.00	0.050	1.350	350.33	-468.0		1.0941E+05
19.10	0.050	1.350	350.32	-468.0		1.0894E+05
19.20	0.050	1.350	350.32	-468.0		1.0847E+05
19.30	0.050	1.350	350.31	-468.0		1.0800E+05
19.40	0.050	1.350	350.30	-468.0		1.0753E+05
19.50	0.050	1.350	350.30	-468.0		1.0707E+05
19.60	0.050	1.350	350.29	-468.0		1.0660E+05
19.70	0.050	1.350	350.28	-468.0		1.0613E+05
19.80	0.050	1.350	350.28	-468.0		1.0566E+05
19.90	0.050	1.350	350.27	-468.0		1.0519E+05
20.00	0.050	1.350	350.26	-468.0		1.0473E+05
20.10	0.050	1.350	350.26	-468.0		1.0426E+05
20.20	0.050	1.350	350.25	-468.0		1.0379E+05
20.30	0.050	1.350	350.25	-468.0		1.0332E+05
20.40	0.050	1.350	350.24	-468.0		1.0285E+05
20.50	0.050	1.350	350.23	-468.0		1.0239E+05
20.60	0.050	1.350	350.23	-468.0		1.0192E+05
20.70	0.050	1.350	350.22	-468.0		1.0145E+05
20.80	0.050	1.350	350.21	-468.0		1.0098E+05
20.90	0.050	1.350	350.21	-468.0		1.0051E+05

21.00	0.050	1.350	350.20	SEERETHQ5000.OUT	-468.0	1.0005E+05
21.10	0.050	1.350	350.19		-468.0	9.9577E+04
21.20	0.050	1.350	350.19		-468.0	9.9109E+04
21.30	0.050	1.350	350.18		-468.0	9.8641E+04
21.40	0.050	1.350	350.17		-468.0	9.8173E+04
21.50	0.050	1.350	350.17		-468.0	9.7705E+04
21.60	0.050	1.350	350.16		-468.0	9.7237E+04
21.70	0.050	1.350	350.16		-468.0	9.6769E+04
21.80	0.050	1.350	350.15		-468.0	9.6301E+04
21.90	0.050	1.350	350.14		-468.0	9.5833E+04
22.00	0.050	1.350	350.14		-468.0	9.5365E+04
22.10	0.050	1.350	350.13		-468.0	9.4897E+04
22.20	0.050	1.350	350.12		-468.0	9.4429E+04
22.30	0.050	1.350	350.12		-468.0	9.3961E+04
22.40	0.050	1.350	350.11		-468.0	9.3493E+04
22.50	0.050	1.350	350.10		-468.0	9.3025E+04
22.60	0.050	1.350	350.10		-468.0	9.2557E+04
22.70	0.050	1.350	350.09		-468.0	9.2089E+04
22.80	0.050	1.350	350.08		-468.0	9.1621E+04
22.90	0.050	1.350	350.08		-468.0	9.1153E+04
23.00	0.050	1.350	350.07		-468.0	9.0685E+04
23.10	0.050	1.350	350.06		-468.0	9.0217E+04
23.20	0.050	1.350	350.06		-468.0	8.9749E+04
23.30	0.050	1.350	350.05		-468.0	8.9281E+04
23.40	0.050	1.350	350.05		-468.0	8.8813E+04
23.50	0.050	1.350	350.04		-468.0	8.8345E+04
23.60	0.050	1.350	350.03		-468.0	8.7877E+04
23.70	0.050	1.350	350.03		-468.0	8.7409E+04
23.80	0.050	1.350	350.02		-468.0	8.6941E+04
23.90	0.050	1.350	350.01		-468.0	8.6473E+04
24.00	0.050	1.350	350.01		-468.0	8.6005E+04
24.10	0.050	1.350	350.00		-468.0	8.5537E+04
24.20	0.050	1.350	349.99		-468.0	8.5069E+04
24.30	0.050	1.350	349.98		-468.0	8.4601E+04
24.40	0.050	1.350	349.97		-468.0	8.4133E+04
24.50	0.050	1.350	349.96		-468.0	8.3665E+04
24.60	0.050	1.350	349.95		-468.0	8.3197E+04

24.70	0.050	1.350	349.94	SEERETHQ5000.OUT	-468.0	8.2729E+04
24.80	0.050	1.350	349.93		-468.0	8.2261E+04
24.90	0.050	1.350	349.92		-468.0	8.1793E+04
25.00	0.050	1.350	349.91		-468.0	8.1325E+04
25.10	0.050	1.350	349.90		-468.0	8.0857E+04
25.20	0.050	1.350	349.89		-468.0	8.0389E+04
25.30	0.050	1.350	349.88		-468.0	7.9921E+04
25.40	0.050	1.350	349.87		-468.0	7.9453E+04
25.50	0.050	1.350	349.86		-468.0	7.8985E+04
25.60	0.050	1.350	349.85		-468.0	7.8517E+04
25.70	0.050	1.350	349.84		-468.0	7.8049E+04
25.80	0.050	1.350	349.83		-468.0	7.7581E+04
25.90	0.050	1.350	349.82		-468.0	7.7113E+04
26.00	0.050	1.350	349.81		-468.0	7.6645E+04
26.10	0.050	1.350	349.80		-468.0	7.6177E+04
26.20	0.050	1.350	349.79		-468.0	7.5709E+04
26.30	0.050	1.350	349.78		-468.0	7.5241E+04
26.40	0.050	1.350	349.77		-468.0	7.4773E+04
26.50	0.050	1.350	349.76		-468.0	7.4305E+04
26.60	0.050	1.350	349.75		-468.0	7.3837E+04
26.70	0.050	1.350	349.74		-468.0	7.3369E+04
26.80	0.050	1.350	349.73		-468.0	7.2901E+04
26.90	0.050	1.350	349.72		-468.0	7.2433E+04
27.00	0.050	1.350	349.71		-468.0	7.1965E+04
27.10	0.050	1.350	349.70		-468.0	7.1497E+04
27.20	0.050	1.350	349.69		-468.0	7.1029E+04
27.30	0.050	1.350	349.68		-468.0	7.0561E+04
27.40	0.050	1.350	349.67		-468.0	7.0093E+04
27.50	0.050	1.350	349.66		-468.0	6.9625E+04
27.60	0.050	1.350	349.65		-468.0	6.9157E+04
27.70	0.050	1.350	349.64		-468.0	6.8689E+04
27.80	0.050	1.350	349.63		-468.0	6.8221E+04
27.90	0.050	1.350	349.62		-468.0	6.7753E+04
28.00	0.050	1.350	349.61		-468.0	6.7285E+04
28.10	0.050	1.350	349.60		-468.0	6.6817E+04
28.20	0.050	1.350	349.59		-468.0	6.6349E+04
28.30	0.050	1.350	349.58		-468.0	6.5881E+04

28.40	0.050	1.350	349.57	-468.0	SEERETHQ5000.OUT	6.5413E+04
28.50	0.050	1.350	349.56	-468.0		6.4945E+04
28.60	0.050	1.350	349.55	-468.0		6.4477E+04
28.70	0.050	1.350	349.54	-468.0		6.4008E+04
28.80	0.050	1.350	349.53	-468.0		6.3540E+04
28.90	0.050	1.350	349.52	-468.0		6.3072E+04
29.00	0.050	1.350	349.51	-468.0		6.2604E+04
29.10	0.050	1.350	349.50	-468.0		6.2136E+04
29.20	0.050	1.350	349.49	-468.0		6.1668E+04
29.30	0.050	1.350	349.48	-468.0		6.1200E+04
29.40	0.050	1.350	349.47	-468.0		6.0732E+04
29.50	0.050	1.350	349.46	-468.0		6.0264E+04
29.60	0.050	1.350	349.45	-468.0		5.9796E+04
29.70	0.050	1.350	349.44	-468.0		5.9328E+04
29.80	0.050	1.350	349.43	-468.0		5.8860E+04
29.90	0.050	1.350	349.42	-468.0		5.8392E+04
30.00	0.050	1.350	349.41	-468.0		5.7924E+04
30.10	0.050	1.350	349.40	-468.0		5.7456E+04
30.20	0.050	1.350	349.39	-468.0		5.6988E+04
30.30	0.050	1.350	349.38	-468.0		5.6520E+04
30.40	0.050	1.350	349.37	-468.0		5.6052E+04
30.50	0.050	1.350	349.36	-468.0		5.5584E+04
30.60	0.050	1.350	349.35	-468.0		5.5116E+04
30.70	0.050	1.350	349.34	-468.0		5.4648E+04
30.80	0.050	1.350	349.33	-468.0		5.4180E+04
30.90	0.050	1.350	349.32	-468.0		5.3712E+04
31.00	0.050	1.350	349.31	-468.0		5.3244E+04
31.10	0.050	1.350	349.30	-468.0		5.2776E+04
31.20	0.050	1.350	349.29	-468.0		5.2308E+04
31.30	0.050	1.350	349.28	-468.0		5.1840E+04
31.40	0.050	1.350	349.27	-468.0		5.1372E+04
31.50	0.050	1.350	349.26	-468.0		5.0904E+04
31.60	0.050	1.350	349.25	-468.0		5.0436E+04
31.70	0.050	1.350	349.24	-468.0		4.9968E+04
31.80	0.050	1.350	349.23	-468.0		4.9500E+04
31.90	0.050	1.350	349.22	-468.0		4.9032E+04
32.00	0.050	1.350	349.21	-468.0		4.8564E+04

32.10	0.050	1.350	349.20	-468.0	SEERETHQ5000. OUT	4.8096E+04
32.20	0.050	1.350	349.19	-468.0		4.7628E+04
32.30	0.050	1.350	349.18	-468.0		4.7160E+04
32.40	0.050	1.350	349.17	-468.0		4.6692E+04
32.50	0.050	1.350	349.16	-468.0		4.6224E+04
32.60	0.050	1.350	349.15	-468.0		4.5756E+04
32.70	0.050	1.350	349.14	-468.0		4.5288E+04
32.80	0.050	1.350	349.13	-468.0		4.4820E+04
32.90	0.050	1.350	349.12	-468.0		4.4352E+04
33.00	0.050	1.350	349.11	-468.0		4.3884E+04
33.10	0.050	1.350	349.10	-468.0		4.3416E+04
33.20	0.050	1.350	349.09	-468.0		4.2948E+04
33.30	0.050	1.350	349.08	-468.0		4.2480E+04
33.40	0.050	1.350	349.07	-468.0		4.2012E+04
33.50	0.050	1.350	349.06	-468.0		4.1544E+04
33.60	0.050	1.350	349.05	-468.0		4.1076E+04
33.70	0.050	1.350	349.04	-468.0		4.0608E+04
33.80	0.050	1.350	349.03	-468.0		4.0140E+04
33.90	0.050	1.350	349.02	-468.0		3.9672E+04
34.00	0.050	1.350	349.01	-468.0		3.9204E+04
34.10	0.050	1.350	348.99	-468.0		3.8736E+04
34.20	0.050	1.350	348.97	-468.0		3.8268E+04
34.30	0.050	1.350	348.95	-468.0		3.7800E+04
34.40	0.050	1.350	348.93	-468.0		3.7332E+04
34.50	0.050	1.350	348.91	-468.0		3.6864E+04
34.60	0.050	1.350	348.89	-468.0		3.6396E+04
34.70	0.050	1.350	348.87	-468.0		3.5928E+04
34.80	0.050	1.350	348.85	-468.0		3.5460E+04
34.90	0.050	1.350	348.83	-468.0		3.4992E+04
35.00	0.050	1.350	348.81	-468.0		3.4524E+04
35.10	0.050	1.350	348.79	-468.0		3.4056E+04
35.20	0.050	1.350	348.77	-468.0		3.3588E+04
35.30	0.050	1.350	348.75	-468.0		3.3120E+04
35.40	0.050	1.350	348.73	-468.0		3.2652E+04
35.50	0.050	1.350	348.71	-468.0		3.2184E+04
35.60	0.050	1.350	348.69	-468.0		3.1716E+04
35.70	0.050	1.350	348.67	-468.0		3.1248E+04

35.80	0.050	1.350	348.65	-468.0	SEERETHQ5000.OUT	3.0780E+04
35.90	0.050	1.350	348.62	-468.0		3.0312E+04
36.00	0.050	1.350	348.60	-468.0		2.9844E+04
36.10	0.050	1.350	348.58	-468.0		2.9376E+04
36.20	0.050	1.350	348.56	-468.0		2.8908E+04
36.30	0.050	1.350	348.54	-468.0		2.8440E+04
36.40	0.050	1.350	348.52	-468.0		2.7972E+04
36.50	0.050	1.350	348.50	-468.0		2.7504E+04
36.60	0.050	1.350	348.48	-468.0		2.7036E+04
36.70	0.050	1.350	348.46	-468.0		2.6568E+04
36.80	0.050	1.350	348.44	-468.0		2.6100E+04
36.90	0.050	1.350	348.42	-468.0		2.5632E+04
37.00	0.050	1.350	348.40	-468.0		2.5164E+04
37.10	0.050	1.350	348.38	-468.0		2.4696E+04
37.20	0.050	1.350	348.36	-468.0		2.4228E+04
37.30	0.050	1.350	348.34	-468.0		2.3760E+04
37.40	0.050	1.350	348.32	-468.0		2.3292E+04
37.50	0.050	1.350	348.30	-468.0		2.2824E+04
37.60	0.050	1.350	348.28	-468.0		2.2356E+04
37.70	0.050	1.350	348.26	-468.0		2.1888E+04
37.80	0.050	1.350	348.24	-468.0		2.1420E+04
37.90	0.050	1.350	348.22	-468.0		2.0952E+04
38.00	0.050	1.350	348.20	-468.0		2.0484E+04
38.10	0.050	1.350	348.18	-468.0		2.0016E+04
38.20	0.050	1.350	348.16	-468.0		1.9548E+04
38.30	0.050	1.350	348.14	-468.0		1.9080E+04
38.40	0.050	1.350	348.12	-468.0		1.8612E+04
38.50	0.050	1.350	348.10	-468.0		1.8144E+04
38.60	0.050	1.350	348.08	-468.0		1.7676E+04
38.70	0.050	1.350	348.06	-468.0		1.7208E+04
38.80	0.050	1.350	348.04	-468.0		1.6740E+04
38.90	0.050	1.350	348.02	-468.0		1.6272E+04
39.00	0.050	1.350	347.99	-468.0		1.5804E+04
39.10	0.050	1.350	347.95	-468.0		1.5336E+04
39.20	0.050	1.350	347.91	-468.0		1.4868E+04
39.30	0.050	1.350	347.87	-468.0		1.4400E+04
39.40	0.050	1.350	347.83	-468.0		1.3932E+04

39.50	0.050	1.350	347.78	SEERETHQ5000.OUT	1.3464E+04
39.60	0.050	1.350	347.74	-468.0	1.2996E+04
39.70	0.050	1.350	347.70	-468.0	1.2528E+04
39.80	0.050	1.350	347.66	-468.0	1.2060E+04
39.90	0.050	1.350	347.62	-468.0	1.1592E+04
40.00	0.050	1.350	347.57	-468.0	1.1124E+04
40.10	0.050	1.350	347.53	-468.0	1.0656E+04
40.20	0.050	1.350	347.49	-468.0	1.0188E+04
40.30	0.050	1.350	347.45	-468.0	9720.
40.40	0.050	1.350	347.41	-468.0	9252.
40.50	0.050	1.350	347.37	-468.0	8784.
40.60	0.050	1.350	347.32	-468.0	8316.
40.70	0.050	1.350	347.28	-468.0	7848.
40.80	0.050	1.350	347.24	-468.0	7380.
40.90	0.050	1.350	347.20	-468.0	6912.
41.00	0.050	1.350	347.16	-468.0	6444.
41.10	0.050	1.350	347.12	-468.0	5976.
41.20	0.050	1.350	347.07	-468.0	5508.
41.30	0.050	1.350	347.03	-468.0	5040.
41.40	0.050	1.350	346.97	-468.0	4572.
41.50	0.050	1.350	346.87	-468.0	4104.
41.60	0.050	1.350	346.76	-468.0	3636.
41.70	0.050	1.350	346.65	-468.0	3168.
41.80	0.050	1.350	346.54	-468.0	2700.
41.90	0.050	1.350	346.43	-468.0	2232.
42.00	0.050	1.350	346.33	-468.0	1764.
42.10	0.050	1.350	346.22	-468.0	1296.
42.20	0.050	1.350	346.11	-468.0	828.1
42.30	0.050	1.326	346.00	-461.9	366.1
42.40	0.050	0.631	345.39	-241.4	124.7
42.50	0.050	0.229	345.19	-72.22	52.51
42.60	0.050	0.109	345.13	-24.04	28.46
42.70	0.050	0.070	345.11	-8.020	20.45
42.80	0.050	0.057	345.10	-2.650	17.79
42.90	0.050	0.052	345.10	-0.9011	16.89
43.00	0.050	0.051	345.10	-0.2979	16.60
43.10	0.050	0.050	345.09	-9.9415E-02	16.50

SEERETHQ5000.OUT

345.09	-3.3262E-02	16.46
345.09	-1.5799E-02	16.45
345.09	0.000	16.45

43.20	0.050	0.050
43.30	0.050	0.050
43.40	0.050	0.050

Zuflussumme: SUMZ = 0.2840E+06
 Abflussumme: SUMA = 0.2840E+06
 Anfangsueuung: SANF = 16.45
 ueuung am Ende : SEND = 16.45
 Differenz : SEND - SANF = 0.000

Wasserstand: HANF = 345.09
 HMAX = 351.21
 HEND = 345.09
 Volumen: SMAX = 1.7803E+05

Station: **Haselbach Gde. Tiefenbach**

Datum: 13.05.05

Kennung:

Bemerkung:

Gauß-Krüger Koordinaten Rechtswert: 4602440 m

Hochwert: 5390700 m

Geografische Koordinaten östliche Länge: ° ' "

nördliche Breite: ° ' "

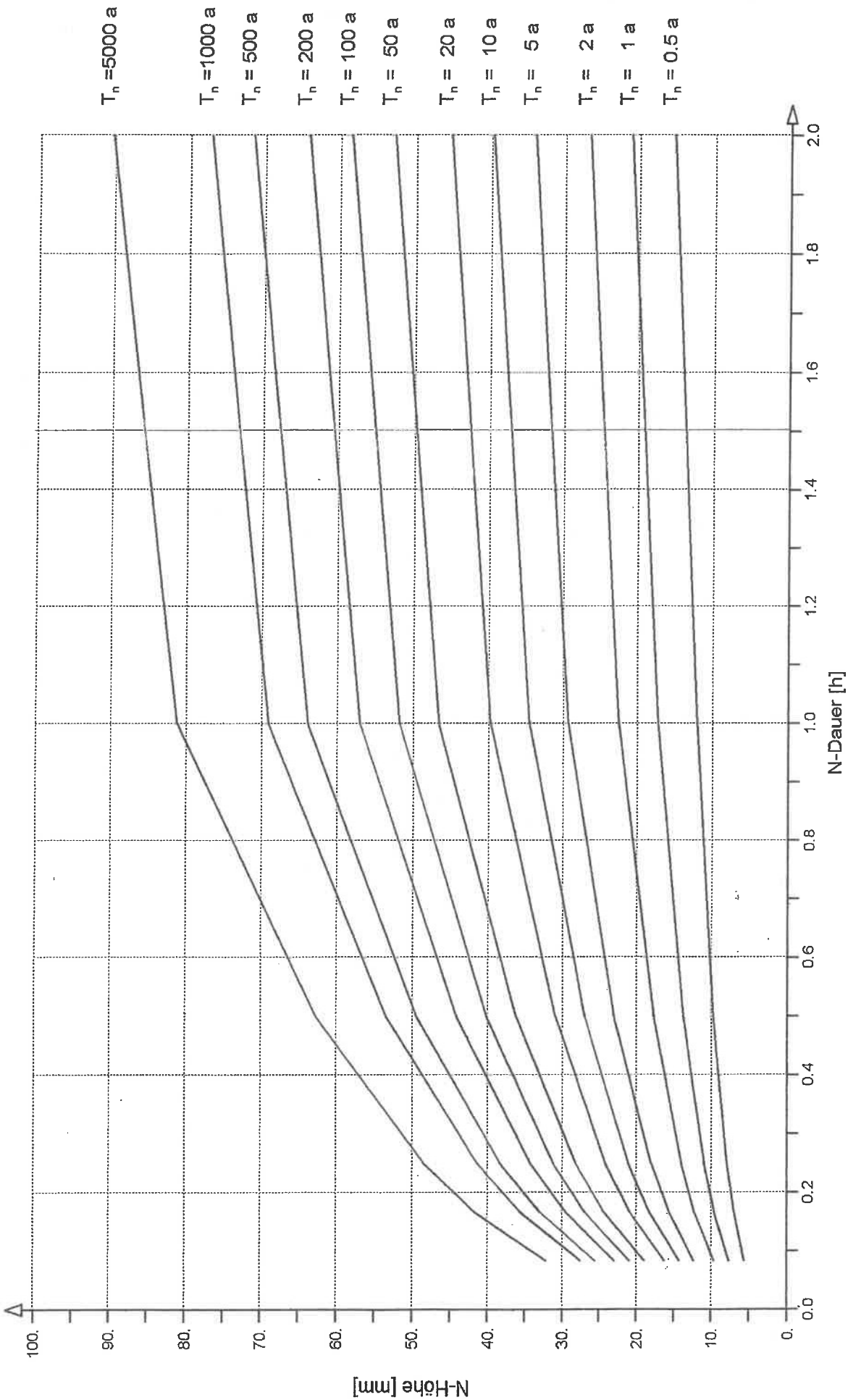
hN in mm, r in l/(s*ha)

T	0,5		1		2		5		10		20		50		100	
D	hN	r	hN	r	hN	r	hN	r	hN	r	hN	r	hN	r	hN	r
5'	5,5	184,9	7,6	251,9	9,6	318,8	12,2	407,3	14,2	474,2	16,2	541,2	18,9	629,7	20,9	696,6
10'	6,9	114,8	9,5	158,5	12,1	202,2	15,6	260,0	18,2	303,7	20,8	347,4	24,3	405,2	26,9	448,9
15'	7,8	86,7	10,9	120,7	13,9	154,8	18,0	199,8	21,0	233,8	24,1	267,9	28,2	312,9	31,2	346,9
20'	8,5	70,8	11,9	99,4	15,3	127,9	19,9	165,6	23,3	194,1	26,7	222,6	31,2	260,3	34,7	288,8
30'	9,6	53,5	13,6	75,7	17,6	98,0	22,9	127,3	26,9	149,5	30,9	171,7	36,2	201,1	40,2	223,3
45'	10,9	40,5	15,6	57,8	20,3	75,1	26,4	97,9	31,1	115,2	35,8	132,5	42,0	155,4	46,6	172,7
60'	12,0	33,3	17,2	47,8	22,4	62,3	29,3	81,4	34,5	95,9	39,7	110,4	46,6	129,5	51,8	144,0
90'	13,8	25,6	19,3	35,7	24,7	45,8	31,9	59,1	37,4	69,2	42,8	79,3	50,0	92,6	55,5	102,7
2h	15,4	21,3	21,0	29,1	26,6	37,0	34,0	47,3	39,7	55,1	45,3	62,9	52,7	73,2	58,4	81,0
3h	17,7	16,4	23,6	21,8	29,5	27,3	37,3	34,5	43,1	39,9	49,0	45,4	56,8	52,6	62,7	58,1
4h	19,5	13,6	25,6	17,8	31,7	22,0	39,7	27,6	45,8	31,8	51,9	36,0	59,9	41,6	66,0	45,9
6h	22,4	10,4	28,8	13,3	35,2	16,3	43,6	20,2	50,0	23,1	56,3	26,1	64,8	30,0	71,2	32,9
9h	25,6	7,9	32,3	10,0	39,0	12,0	47,9	14,8	54,6	16,8	61,3	18,9	70,1	21,6	76,8	23,7
12h	28,2	6,5	35,2	8,1	42,1	9,7	51,2	11,9	58,2	13,5	65,1	15,1	74,2	17,2	81,2	18,8
18h	33,4	5,1	41,1	6,3	48,8	7,5	59,0	9,1	66,7	10,3	74,5	11,5	84,7	13,1	92,4	14,3
24h	37,0	4,3	45,3	5,2	53,5	6,2	64,5	7,5	72,8	8,4	81,1	9,4	92,0	10,7	100,3	11,6
48h	45,7	2,6	55,4	3,2	65,0	3,8	77,8	4,5	87,4	5,1	97,1	5,6	109,8	6,4	119,5	6,9
72h	50,8	2,0	61,3	2,4	71,7	2,8	85,5	3,3	96,0	3,7	106,4	4,1	120,2	4,6	130,7	5,0

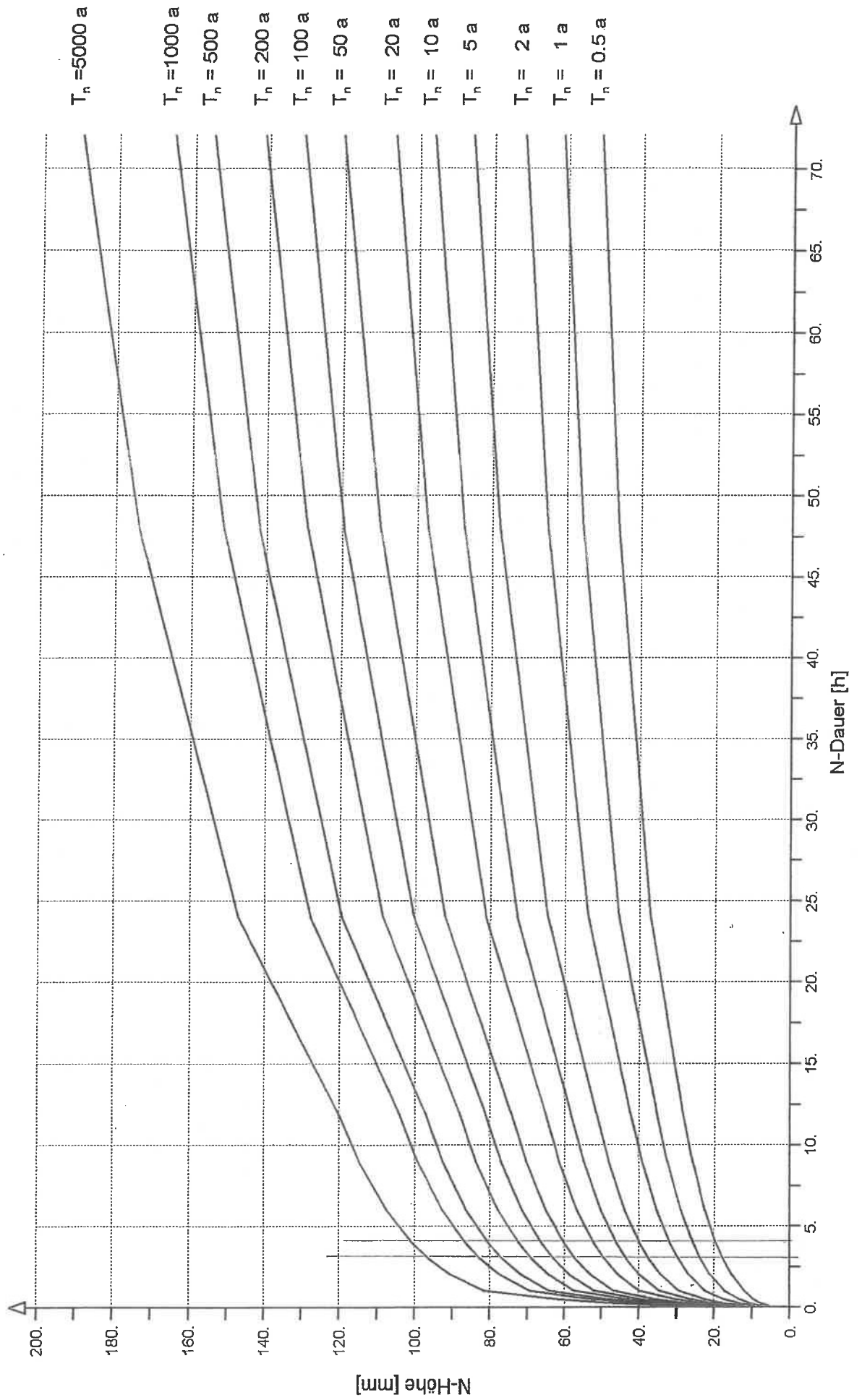
D	u(D)	w(D)
5'	7,6	2,897
10'	9,5	3,783
15'	10,9	4,421
20'	11,9	4,937
30'	13,6	5,767
45'	15,6	6,736
60'	17,2	7,519
90'	19,3	7,860
2h	21,0	8,115
3h	23,6	8,495
4h	25,6	8,779
6h	28,8	9,203
9h	32,3	9,654
12h	35,2	9,992
18h	41,1	11,141
24h	45,3	11,957
48h	55,4	13,921
72h	61,3	15,067

Rasterfeldnummer KOSTRA Atlas horizontal 65
 Rasterfeldnummer KOSTRA Atlas vertikal 85
 Der Mittelpunkt des Rasterfeldes liegt: 3,744 km östlich
 2,788 km nördlich
 Räumlich interpoliert: ja

Niederschlagsstatistik für:
Haselbach



Niederschlagsstatistik für: Haselbach



Anlage 1.4

Flächenbilanz	Haselbach		Rohrwiesbachl		Eisweiher		Ort Haselbach		Gesamt	
	km ² / %		km ² / %		km ² / %		km ² / %		km ² / %	
Wald	1,85	/ 33	0,40	/ 18	0,74	/ 39	0,04	/ 7	3,03	/ 28
Mähweide / Weide	0,21	/ 4	0,09	/ 4	0,05	/ 3	0,01	/ 2	0,36	/ 4
Dauerwiese	2,16	/ 39	0,97	/ 44	0,65	/ 34	0,22	/ 37	4,00	/ 39
Ackerland genutzt als Silomais, Getreide und Ackerfrucht	1,20	/ 21	0,59	/ 27	0,19	/ 10	0,07	/ 11	2,05	/ 20
bebauter Anteil, Orte und Ortsteile Haselbach, Rast, Rasthofstraße, Teilbereich von Wilmerding, Dornreut, Ranzing, Oberhaselbach, Fillersöd, Teilbereiche von Sittenberg, Trasham, Teilbereiche von Möging, Teilbereiche von Pilling und Teilbereiche von Ruderding	0,18	/ 3	0,15	/ 7	0,27	/ 14	0,26	/ 43	0,86	/ 9
Größe des Einzugsgebietes (10,3 km ²)	5,60	/ 100	2,20	/ 100	1,90	/ 100	0,60	/ 100	10,3	/ 100