

BIUW



BESTANDSHYDRAULIK

WASSERVERBAND NIDDA

HOCHWASSERSCHUTZ AN DER NIDDA IN RANSTADT-DAUERNHEIM

STAND OKTOBER 2020



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***           WSP - ASS 4.0 2013       ***
***                                     ***
***   BERECHNUNG STATIONAERER WASSERSPIEGELLAGEN   ***
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Büro für
 Ingenieurbiologie * Umweltplanung * Wasserbau

BIUW Ingenieur GmbH

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Projekt: Hochwasserschutz an der Nidda in Ranstadt-Dauernheim

Zustand: Bestandshydraulik

Variante: HQ10

Abflusspende: 30,7 m³/s



ERGEBNISSE													
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STATION	WSPLAGE/H	ABFLUSS	K-WERT	BREITE	UMFANG	FLAECHE	GESCHW	HZV	E-HOEHE	FROUDE	ALPHA	KZW	KZD
ABFLUSS	NN+m/m	m3/s	m^0.33/s	m	m	m2	m/s	m	NN+m	IE o/oo	ALPHAS		
55 + 469.00	124.53	2.81	23.0	47.20	47.20	10.51 *	0.27						
30.70	2.12	27.69	23.0	19.00	20.63	29.78	0.93	0.000	124.57	0.363	1.449	5	0
		0.20	23.0	15.50	15.51	1.39	0.15			1.00	1.173		
55 + 587.39	124.69 DH	0.00	23.0	0.00	0.00	0.00	0.00						
30.70	2.51	30.70	30.0	12.96	31.58	25.44	1.21	0.011	124.77	0.000	1.000	11	0
		0.00	23.0	0.00	0.00	0.00	0.00			2.16	1.000		
55 + 609.95	124.76	0.06	23.0	2.41	2.42	0.35 *	0.17						
30.70	2.58	30.46	23.0	18.62	20.10	34.24	0.89	0.000	124.80	0.223	1.039	9	0
		0.18	23.0	2.83	2.87	0.71	0.25			0.74	1.017		
55 + 705.57	124.83	6.23	23.0	55.94	56.04	22.73 *	0.27						
30.70	2.61	24.34	23.0	16.26	17.81	32.54	0.75	0.000	124.86	0.260	1.528	0	0
		0.13	23.0	3.64	3.67	0.76	0.17			0.47	1.185		
55 + 818.25	124.89	5.23	23.0	57.99	58.06	20.03 *	0.26						
30.70	3.12	25.24	23.0	12.02	14.39	29.48	0.86	0.000	124.92	0.313	1.725	0	0
		0.23	23.0	18.14	18.24	1.93	0.12			0.53	1.256		
55 + 862.87	124.94	0.19	23.0	9.31	9.43	1.30 *	0.15						
30.70	2.87	28.26	23.0	15.83	17.54	33.30	0.85	0.000	124.98	0.278	1.386	0	0
		2.25	23.0	35.37	35.42	9.66 *	0.23			0.58	1.152		
55 + 899.82	124.97	0.43	23.0	7.46	7.68	2.16 *	0.20						
30.70	2.84	30.18	23.0	18.92	20.04	40.53	0.74	0.000	125.00	0.180	1.076	0	0
		0.08	23.0	1.31	1.46	0.41	0.20			0.41	1.033		
55 + 924.51	124.98	0.39	23.0	3.04	3.15	1.33	0.30						
30.70	2.81	30.11	23.0	16.00	17.48	35.55	0.85	0.000	125.02	0.202	1.074	0	0
		0.20	23.0	4.41	4.51	1.01	0.19			0.53	1.031		
55 + 942.97	124.97	0.00	23.0	0.00	0.00	0.00	0.00						
30.70	2.04	30.70	30.0	14.32	16.88	26.38	1.16	0.006	125.04	0.274	1.000	11	0
		0.00	23.0	0.00	0.00	0.00	0.00			0.83	1.000		
55 + 950.93	124.99	0.00	23.0	0.00	0.00	0.00	0.00						
30.70	2.64	30.70	30.0	13.99	15.76	30.36	1.01	0.000	125.04	0.219	1.000	11	0
		0.00	23.0	0.00	0.00	0.00	0.00			0.47	1.000		
55 + 964.63	125.00	0.16	23.0	1.73	1.84	0.53	0.30						
30.70	2.54	29.85	23.0	12.77	14.24	27.86	1.07	0.000	125.05	0.254	1.067	0	0
		0.70	23.0	2.85	2.97	1.56	0.45			0.89	1.027		



ERGEBNISSE														
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STATION	WSPLAGE/H		ABFLUSS	K-WERT	BREITE	UMFANG	FLAECHE	GESCHW	HZV	E-HOEHE	FROUDE	ALPHA	KZW	KZD
ABFLUSS	NN+m/m		m3/s	m^0.33/s	m	m	m2	m/s	m	NN+m	IE o/oo	ALPHAS		
56 +	0.15	125.04	1.21	23.0	25.25	25.30	5.77	0.21						
	30.70	2.66	29.20	23.0	14.47	16.11	32.56	0.90	0.000	125.08	0.268	1.290	0	0
			0.29	23.0	7.20	7.24	1.48	0.19			0.59	1.119		
56 +	54.64	125.07	3.77	23.0	29.24	29.28	11.32	0.33						
	30.70	2.57	26.67	23.0	12.21	13.71	27.03	0.99	0.000	125.11	0.318	1.431	0	0
			0.26	23.0	6.63	6.71	1.25	0.20			0.74	1.161		
56 +	93.49	125.10	3.42	23.0	26.66	26.68	10.88	0.31						
	30.70	2.46	27.12	23.0	14.76	16.51	31.08	0.87	0.000	125.14	0.269	1.330	0	0
			0.15	23.0	4.81	4.91	0.85	0.18			0.62	1.125		
56 +	127.16	125.12	0.76	23.0	10.63	10.67	2.86	0.27						
	30.70	2.64	29.83	23.0	14.85	16.50	31.85	0.94	0.001	125.16	0.250	1.138	0	0
			0.11	23.0	5.43	5.52	0.72	0.15			0.69	1.059		
56 +	129.69	125.10	0.00	23.0	0.00	0.00	0.00	0.00						
	30.70	2.66	30.70	27.0	14.77	35.71	26.55	1.16	0.004	125.17	0.000	1.000	11	0
			0.00	23.0	0.00	0.00	0.00	0.00			2.72	1.000		
56 +	133.32	125.13	0.75	23.0	8.51	8.59	2.60	0.29						
	30.70	2.77	29.80	23.0	13.57	15.18	29.85	1.00	0.000	125.18	0.261	1.141	9	0
			0.15	23.0	5.56	5.66	0.85	0.18			0.76	1.060		
56 +	170.10	125.16	2.57	23.0	18.72	18.77	7.22	0.36						
	30.70	2.60	27.66	23.0	14.53	16.28	30.75	0.90	0.000	125.20	0.270	1.243	0	0
			0.46	23.0	5.67	5.77	1.80	0.26			0.66	1.094		
56 +	202.62	125.18	0.45	23.0	6.59	6.70	1.83	0.24						
	30.70	3.62	29.64	23.0	10.33	13.34	29.82	0.99	0.001	125.23	0.235	1.151	0	0
			0.61	23.0	5.37	5.45	2.02	0.30			0.64	1.063		
56 +	240.98	125.20	0.38	23.0	5.07	5.17	1.49	0.26						
	30.70	3.38	29.84	23.0	11.12	13.54	28.39	1.05	0.000	125.26	0.256	1.128	0	0
			0.48	23.0	5.40	5.47	1.55	0.31			0.78	1.054		
56 +	282.04	125.24	0.45	23.0	8.52	8.54	1.91	0.24						
	30.70	2.70	29.92	23.0	14.03	16.07	30.37	0.99	0.000	125.29	0.251	1.111	0	0
			0.33	23.0	2.34	2.47	0.96	0.34			0.79	1.047		
56 +	320.00	125.27	0.81	23.0	7.56	8.01	3.02	0.27						
	30.70	2.98	28.66	23.0	12.63	13.14	31.25	0.92	0.000	125.31	0.229	1.192	0	0
			1.23	23.0	5.62	5.73	3.39	0.36			0.50	1.077		



ERGEBNISSE													
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STATION	WSPLAGE/H	ABFLUSS	K-WERT	BREITE	UMFANG	FLAECHE	GESCHW	HZV	E-HOEHE	FROUDE	ALPHA	KZW	KZD
ABFLUSS	NN+m/m	m3/s	m^0.33/s	m	m	m2	m/s	m	NN+m	IE o/oo	ALPHAS		
56 +	361.94	125.29	6.46	23.0	14.80	16.22	12.24	0.53					
	30.70	2.62	23.81	23.0	11.05	12.80	24.35	0.98	0.000	125.33	0.264	1.231	0 0
			0.44	23.0	4.52	4.61	1.47	0.30			0.77	1.083	
56 +	395.62	125.32	5.02	23.0	14.20	16.41	11.44 *	0.44					
	30.70	2.90	25.43	23.0	11.61	13.48	27.99	0.91	0.000	125.35	0.233	1.239	0 0
			0.26	23.0	2.77	3.03	0.98	0.26			0.59	1.087	
56 +	438.38	125.34	6.32	23.0	22.05	23.94	15.67 *	0.40					
	30.70	3.59	23.85	23.0	9.53	12.47	26.78	0.89	0.000	125.38	0.242	1.341	0 0
			0.53	23.0	3.19	3.24	1.60	0.33			0.54	1.120	
56 +	491.27	125.37	5.52	23.0	22.81	24.62	13.11 *	0.42					
	30.70	3.25	24.30	23.0	9.83	12.30	24.17	1.01	0.000	125.41	0.302	1.411	0 0
			0.89	23.0	6.84	6.88	2.63	0.34			0.78	1.145	
56 +	543.32	125.41	4.51	23.0	18.26	19.83	11.53 *	0.39					
	30.70	2.95	25.36	23.0	11.78	13.82	28.13	0.90	0.000	125.45	0.255	1.327	0 0
			0.84	23.0	6.68	6.75	2.73	0.31			0.60	1.119	
56 +	583.73	125.44	8.07	23.0	13.48	15.10	15.18 *	0.53					
	30.70	2.80	22.20	23.0	10.44	11.00	24.53	0.91	0.000	125.47	0.222	1.210	0 0
			0.42	23.0	4.33	4.61	1.60	0.26			0.53	1.074	
56 +	590.21	125.43	0.00	35.0	0.00	0.00	0.00	0.00					
	30.70	2.77	30.70	35.0	17.05	23.39	32.99	0.93	0.002	125.48	0.214	1.000	11 0
			0.00	35.0	0.00	0.00	0.00	0.00			0.45	1.000	
56 +	599.29	125.44	0.00	35.0	0.00	0.00	0.00	0.00					
	30.70	2.64	30.70	35.0	18.07	24.75	33.07	0.93	0.000	125.48	0.219	1.000	11 0
			0.00	35.0	0.00	0.00	0.00	0.00			0.48	1.000	
56 +	608.50	125.45	9.33	23.0	15.23	17.09	17.16 *	0.54					
	30.70	2.55	21.23	23.0	10.73	11.87	24.30	0.87	0.000	125.48	0.211	1.156	0 0
			0.14	23.0	1.34	1.56	0.53	0.26			0.56	1.054	
56 +	639.18	125.46	0.83	23.0	6.25	6.33	2.45	0.34					
	30.70	3.37	29.71	23.0	12.06	14.11	28.96	1.03	0.003	125.51	0.247	1.109	0 0
			0.17	23.0	1.75	1.87	0.58	0.29			0.76	1.045	
56 +	676.80	125.49	0.86	23.0	6.42	6.45	2.34	0.37					
	30.70	2.66	29.65	23.0	12.09	13.87	26.54	1.12	0.000	125.55	0.280	1.111	0 0
			0.19	23.0	1.42	1.61	0.54	0.35			0.99	1.046	



		ERGEBNISSE											
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STATION	WSPLAGE/H	ABFLUSS	K-WERT	BREITE	UMFANG	FLAECHE	GESCHW	HZV	E-HOEHE	FROUDE	ALPHA	KZW	KZD
ABFLUSS	NN+m/m	m3/s	m^0.33/s	m	m	m2	m/s	m	NN+m	IE o/oo	ALPHAS		
56 +	741.00	125.53	0.40	15.0	8.35	8.36	2.05	0.20					
	30.70	3.19	27.25	23.0	13.57	15.34	25.49	1.07	0.000	125.59	0.319	1.497	0 0
			3.05	15.0	18.51	18.57	9.56	0.32			1.10	1.188	
56 +	781.00	125.58	3.44	15.0	27.94	28.01	16.09	0.21					
	30.70	3.21	15.97	23.0	9.24	11.57	21.97	0.73	0.000	125.60	0.224	1.588	0 0
			11.30	25.0	42.19	42.37	28.54	0.40			0.42	1.188	
56 +	835.50	125.64	2.21	15.0	19.49	19.58	10.23	0.22					
	30.70	3.34	18.94	23.0	11.87	14.25	25.30	0.75	0.000	125.66	0.229	1.631	0 0
			9.56	20.0	39.88	39.89	27.55	0.35			0.49	1.202	
56 +	930.00	125.66	3.91	15.0	30.64	30.86	21.70	0.18					
	30.70	3.44	11.70	23.0	10.07	13.47	23.28	0.50	0.000	125.67	0.143	1.358	0 0
			15.09	25.0	60.85	60.90	47.16 *	0.32			0.23	1.116	
56 +	973.00	125.67	3.50	15.0	26.20	26.25	19.04	0.18					
	30.70	2.79	14.09	23.0	13.56	15.78	27.70	0.51	0.000	125.68	0.152	1.413	0 0
			13.11	25.0	65.83	65.86	44.68	0.29			0.23	1.131	
57 +	35.00	125.68	3.32	15.0	26.16	26.19	17.30 *	0.19					
	30.70	2.99	14.37	23.0	13.97	15.87	26.38	0.54	0.000	125.69	0.171	1.445	0 0
			13.01	25.0	70.10	70.11	42.82	0.30			0.28	1.140	