

BIUW



BESTANDSHYDRAULIK

WASSERVERBAND NIDDA

HOCHWASSERSCHUTZ AN DER NIDDA IN RANSTADT-DAUERNHEIM

STAND OKTOBER 2020



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***           WSP - ASS 4.0 2013       ***
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***   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: HQ100

Abflussspende: 49 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	124.81	10.54	23.0	51.71	51.73	24.14 *	0.44					
	49.00	2.40	35.65	23.0	19.33	21.26	35.13	1.01	0.000	124.85	0.369	1.543	5 0
			2.81	23.0	31.67	31.68	8.97	0.31			1.00	1.184	
55 +	587.39	125.12	0.00	23.0	0.00	0.00	0.00	0.00					
	49.00	2.93	49.00	30.0	12.96	31.58	25.44	1.93	0.074	125.31	0.000	1.000	11 0
			0.00	23.0	0.00	0.00	0.00	0.00			5.50	1.000	
55 +	609.95	125.33	1.25	23.0	8.89	8.93	3.67	0.34					
	49.00	3.15	45.98	23.0	19.49	21.39	45.19	1.02	0.000	125.38	0.259	1.159	9 0
			1.76	23.0	8.42	8.48	4.41	0.40			0.72	1.063	
55 +	705.57	125.41	20.10	23.0	61.55	61.67	57.96	0.35					
	49.00	3.19	26.44	23.0	16.26	18.21	41.94	0.63	0.000	125.43	0.176	1.402	0 0
			2.46	23.0	32.19	32.23	12.67	0.19			0.25	1.131	
55 +	818.25	125.44	18.93	23.0	63.39	63.46	54.85	0.35					
	49.00	3.67	24.89	23.0	12.02	14.81	36.12	0.69	0.000	125.46	0.194	1.505	0 0
			5.18	23.0	34.59	34.70	19.79	0.26			0.27	1.155	
55 +	862.87	125.47	2.71	23.0	14.97	15.13	8.39	0.32					
	49.00	3.40	34.83	23.0	15.83	17.92	41.61	0.84	0.001	125.50	0.241	1.441	0 0
			11.46	23.0	42.55	42.66	30.21	0.38			0.43	1.149	
55 +	899.82	125.48	2.47	23.0	9.99	10.42	6.61 *	0.37					
	49.00	3.35	46.21	23.0	18.92	20.53	50.24	0.92	0.003	125.52	0.212	1.138	0 0
			0.32	23.0	4.33	4.58	1.39	0.23			0.48	1.055	
55 +	924.51	125.50	1.48	23.0	4.50	4.70	3.27	0.45					
	49.00	3.33	45.77	23.0	16.00	17.93	43.78	1.05	0.001	125.55	0.238	1.135	0 0
			1.75	23.0	7.13	7.32	4.31	0.41			0.63	1.053	
55 +	942.97	125.47	0.00	23.0	0.00	0.00	0.00	0.00					
	49.00	2.54	49.00	30.0	14.45	17.90	33.58	1.46	0.013	125.58	0.306	1.000	11 0
			0.00	23.0	0.00	0.00	0.00	0.00			1.02	1.000	
55 +	950.93	125.50	0.00	23.0	0.00	0.00	0.00	0.00					
	49.00	3.15	49.00	30.0	14.07	30.24	36.12	1.36	0.000	125.59	0.000	1.000	11 0
			0.00	23.0	0.00	0.00	0.00	0.00			1.61	1.000	
55 +	964.63	125.53	1.00	23.0	2.67	2.83	1.80	0.55					
	49.00	3.07	45.65	23.0	12.77	14.75	34.70	1.32	0.000	125.62	0.281	1.075	9 0
			2.36	23.0	2.85	2.97	3.09	0.76			1.05	1.029	



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	125.60	8.80	23.0	25.25	25.30	20.11	0.44						
	49.00	3.22	37.82	23.0	14.47	16.63	40.77	0.93	0.000	125.64	0.239	1.301	0	0
			2.39	23.0	7.20	7.24	5.57	0.43			0.49	1.106		
56 +	54.64	125.63	14.41	23.0	29.24	29.28	27.76	0.52						
	49.00	3.13	32.40	23.0	12.21	14.30	33.89	0.96	0.000	125.67	0.244	1.280	0	0
			2.19	23.0	6.63	6.71	4.98	0.44			0.55	1.094		
56 +	93.49	125.65	12.59	23.0	26.66	26.68	25.57	0.49						
	49.00	3.01	34.78	23.0	14.76	16.92	39.22	0.89	0.000	125.68	0.223	1.240	0	0
			1.63	23.0	6.17	6.28	4.20	0.39			0.48	1.083		
56 +	127.16	125.66	4.74	23.0	10.63	10.67	8.60	0.55						
	49.00	3.18	42.40	23.0	14.85	16.90	39.85	1.06	0.002	125.71	0.258	1.179	0	0
			1.87	23.0	6.73	6.82	4.34	0.43			0.68	1.067		
56 +	129.69	125.59	0.00	23.0	0.00	0.00	0.00	0.00						
	49.00	3.15	49.00	27.0	14.77	35.71	26.55	1.85	0.043	125.76	0.000	1.000	11	0
			0.00	23.0	0.00	0.00	0.00	0.00			6.94	1.000		
56 +	133.32	125.72	4.37	23.0	8.51	8.59	7.60	0.58						
	49.00	3.35	42.54	23.0	13.57	15.64	37.82	1.12	0.000	125.78	0.262	1.164	9	0
			2.08	23.0	5.56	5.66	4.12	0.51			0.74	1.061		
56 +	170.10	125.76	10.69	23.0	18.72	18.77	18.36	0.58						
	49.00	3.20	35.96	23.0	14.53	16.74	39.40	0.91	0.000	125.80	0.221	1.147	0	0
			2.35	23.0	5.67	5.77	5.17	0.45			0.50	1.051		
56 +	202.63	125.76	3.18	23.0	6.59	6.70	5.64	0.56						
	49.00	4.20	42.70	23.0	10.33	13.82	35.80	1.19	0.004	125.82	0.258	1.160	0	0
			3.12	23.0	5.37	5.45	5.13	0.61			0.76	1.059		
56 +	240.98	125.79	2.51	23.0	5.07	5.17	4.45	0.56						
	49.00	3.97	43.31	23.0	11.13	13.99	34.88	1.24	0.000	125.86	0.273	1.137	0	0
			3.19	23.0	5.40	5.47	4.70	0.68			0.86	1.051		
56 +	282.04	125.83	3.88	23.0	8.52	8.54	6.94	0.56						
	49.00	3.30	43.67	23.0	14.03	16.55	38.66	1.13	0.000	125.89	0.255	1.123	0	0
			1.45	23.0	2.34	2.47	2.34	0.62			0.78	1.046		
56 +	320.00	125.86	3.92	23.0	7.56	8.01	7.50	0.52						
	49.00	3.58	41.00	23.0	12.63	14.35	38.74	1.06	0.000	125.91	0.230	1.156	0	0
			4.08	23.0	5.62	5.73	6.72	0.61			0.56	1.057		



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	125.89	14.73	23.0	14.80	16.22	21.08	0.70						
	49.00	3.21	31.98	23.0	11.05	13.26	30.96	1.03	0.000	125.93	0.228	1.128	0	0
			2.29	23.0	4.52	4.61	4.17	0.55			0.65	1.044		
56 +	395.62	125.91	11.79	23.0	14.21	18.19	19.87 *	0.59						
	49.00	3.50	35.88	23.0	11.61	13.98	34.88	1.03	0.000	125.96	0.220	1.188	0	0
			1.33	23.0	2.77	3.03	2.62	0.51			0.59	1.065		
56 +	438.38	125.94	16.10	23.0	22.07	25.73	28.84 *	0.56						
	49.00	4.19	30.99	23.0	9.53	12.95	32.47	0.95	0.000	125.98	0.209	1.208	0	0
			1.91	23.0	3.19	3.24	3.50	0.54			0.51	1.069		
56 +	491.27	125.97	15.21	23.0	22.82	26.41	26.69 *	0.57						
	49.00	3.85	30.07	23.0	9.83	12.74	30.02	1.00	0.000	126.00	0.234	1.239	0	0
			3.73	23.0	6.84	6.88	6.70	0.56			0.60	1.079		
56 +	543.32	126.00	12.38	23.0	21.94	25.11	24.28 *	0.51						
	49.00	3.54	33.20	23.0	11.78	14.29	35.04	0.95	0.000	126.03	0.223	1.255	0	0
			3.43	23.0	6.68	6.75	6.64	0.52			0.51	1.086		
56 +	583.73	126.02	15.44	23.0	14.25	17.28	23.38 *	0.66						
	49.00	3.38	30.67	23.0	10.44	12.12	30.62	1.00	0.000	126.06	0.226	1.218	0	0
			2.89	23.0	11.95	12.24	7.45	0.39			0.55	1.076		
56 +	590.21	125.98 DH	0.00	35.0	0.00	0.00	0.00	0.00						
	49.00	3.32	49.00	35.0	17.05	40.47	33.25	1.47	0.023	126.09	0.000	1.000	11	0
			0.00	35.0	0.00	0.00	0.00	0.00			2.30	1.000		
56 +	599.29	126.00 DH	0.00	35.0	0.00	0.00	0.00	0.00						
	49.00	3.20	49.00	35.0	18.07	42.84	33.27	1.47	0.000	126.11	0.000	1.000	11	0
			0.00	35.0	0.00	0.00	0.00	0.00			2.48	1.000		
56 +	608.50	126.10	18.16	23.0	15.89	19.32	27.27 *	0.67						
	49.00	3.20	30.14	23.0	10.73	12.68	31.22	0.97	0.000	126.14	0.195	1.109	9	0
			0.71	23.0	1.45	1.69	1.46	0.48			0.53	1.037		
56 +	639.18	126.10	4.17	23.0	8.21	8.35	7.16	0.58						
	49.00	4.01	43.71	23.0	12.06	14.58	36.65	1.19	0.003	126.16	0.263	1.144	0	0
			1.12	23.0	2.52	2.70	2.08	0.54			0.79	1.054		
56 +	676.80	126.12	4.54	23.0	6.42	6.45	6.42	0.71						
	49.00	3.30	43.44	23.0	12.09	14.34	34.22	1.27	0.000	126.20	0.277	1.105	0	0
			1.02	23.0	1.85	2.10	1.67	0.61			0.96	1.039		



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	126.18	2.86	15.0	8.35	8.36	0.38						
	49.00	3.84	36.31	23.0	13.57	15.83	1.06	0.000	126.23	0.249	1.472	0	0
			9.83	15.0	18.51	18.57	0.46			0.76	1.161		
56 +	781.00	126.22	8.46	15.0	27.94	28.01	0.25						
	49.00	3.85	16.27	23.0	9.24	12.13	0.58	0.000	126.23	0.130	1.254	0	0
			24.27	25.0	42.19	42.37	0.44			0.21	1.086		
56 +	835.50	126.25	6.15	15.0	19.49	19.58	0.28						
	49.00	3.95	21.71	23.0	11.87	14.71	0.67	0.000	126.27	0.149	1.317	0	0
			21.14	20.0	39.88	39.89	0.41			0.29	1.101		
56 +	930.00	126.26	8.00	15.0	30.64	30.86	0.20						
	49.00	4.04	12.12	23.0	10.17	14.36	0.41	0.000	126.27	0.092	1.161	0	0
			28.88	25.0	61.25	61.30	0.34			0.12	1.057		
56 +	973.00	126.27	6.85	15.0	26.20	26.25	0.20						
	49.00	3.39	15.17	23.0	13.56	16.30	0.42	0.000	126.27	0.095	1.172	0	0
			26.99	25.0	65.83	65.86	0.32			0.12	1.058		
57 +	35.00	126.28	6.58	15.0	26.66	26.69	0.20						
	49.00	3.59	15.03	23.0	14.03	16.49	0.43	0.000	126.28	0.100	1.175	0	0
			27.39	25.0	70.10	70.11	0.32			0.13	1.059		