

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: HQ25

Abflussspende: 39 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	124.67	6.37	23.0	48.80	48.81	17.42 *	0.37						
	39.00	2.26	31.67	23.0	19.21	20.99	32.53	0.97	0.000	124.71	0.378	1.556	5	0
			0.96	23.0	31.67	31.68	4.70	0.20			1.00	1.199		
55 +	587.39	124.89	0.00	23.0	0.00	0.00	0.00	0.00						
	39.00	2.71	39.00	30.0	12.96	31.58	25.44	1.53	0.034	125.01	0.000	1.000	11	0
			0.00	23.0	0.00	0.00	0.00	0.00			3.48	1.000		
55 +	609.95	125.02	0.33	23.0	4.49	4.52	1.23 *	0.27						
	39.00	2.84	38.19	23.0	19.34	20.82	39.07	0.98	0.000	125.07	0.250	1.092	9	0
			0.48	23.0	6.68	6.74	1.81	0.27			0.78	1.039		
55 +	705.57	125.10	12.39	23.0	61.55	61.67	38.59	0.32						
	39.00	2.87	26.27	23.0	16.26	17.77	36.82	0.71	0.000	125.12	0.228	1.516	0	0
			0.35	23.0	21.14	21.18	2.94	0.12			0.36	1.172		
55 +	818.25	125.14	11.28	23.0	63.39	63.46	35.73	0.32						
	39.00	3.37	25.92	23.0	12.02	14.37	32.49	0.80	0.000	125.16	0.273	1.793	0	0
			1.81	23.0	34.59	34.70	9.35	0.19			0.41	1.254		
55 +	862.87	125.18	0.90	23.0	14.97	15.13	4.09	0.22						
	39.00	3.11	32.15	23.0	15.83	17.57	37.05	0.87	0.001	125.21	0.276	1.483	0	0
			5.95	23.0	37.92	38.02	18.35 *	0.32			0.53	1.174		
55 +	899.82	125.21	1.16	23.0	8.55	8.87	4.04 *	0.29						
	39.00	3.08	37.63	23.0	18.92	19.92	44.97	0.84	0.001	125.24	0.197	1.106	0	0
			0.20	23.0	1.80	2.00	0.78	0.26			0.45	1.044		
55 +	924.51	125.22	0.79	23.0	3.71	3.85	2.12	0.37						
	39.00	3.05	37.53	23.0	16.00	17.38	39.31	0.95	0.001	125.26	0.225	1.114	0	0
			0.68	23.0	6.47	6.60	2.41	0.28			0.58	1.047		
55 +	942.97	125.20	0.00	23.0	0.00	0.00	0.00	0.00						
	39.00	2.27	39.00	30.0	14.38	17.35	29.68	1.31	0.009	125.29	0.292	1.000	11	0
			0.00	23.0	0.00	0.00	0.00	0.00			0.94	1.000		
55 +	950.93	125.22	0.00	23.0	0.00	0.00	0.00	0.00						
	39.00	2.88	39.00	30.0	14.04	15.99	33.63	1.16	0.000	125.29	0.239	1.000	11	0
			0.00	23.0	0.00	0.00	0.00	0.00			0.55	1.000		
55 +	964.63	125.23	0.39	23.0	2.40	2.54	1.01	0.39						
	39.00	2.77	37.29	23.0	12.77	14.12	30.85	1.21	0.000	125.30	0.274	1.077	0	0
			1.32	23.0	2.85	2.97	2.23	0.59			0.97	1.031		



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	125.29	4.01	23.0	25.25	25.30	12.07	0.33						
	39.00	2.90	33.93	23.0	14.47	16.01	36.17	0.94	0.000	125.33	0.269	1.361	0	0
			1.05	23.0	7.20	7.24	3.28	0.32			0.56	1.135		
56 +	54.64	125.32	8.04	23.0	29.24	29.28	18.56	0.43						
	39.00	2.81	29.99	23.0	12.21	13.55	30.05	1.00	0.000	125.36	0.292	1.408	0	0
			0.97	23.0	6.63	6.71	2.89	0.33			0.65	1.143		
56 +	93.49	125.34	7.11	23.0	26.66	26.68	17.29	0.41						
	39.00	2.70	31.25	23.0	14.76	16.45	34.63	0.90	0.000	125.38	0.257	1.322	0	0
			0.64	23.0	6.17	6.28	2.28	0.28			0.57	1.115		
56 +	127.16	125.35	2.20	23.0	10.63	10.67	5.35	0.41						
	39.00	2.87	36.14	23.0	14.85	16.48	35.32	1.02	0.002	125.40	0.268	1.190	0	0
			0.66	23.0	6.73	6.82	2.29	0.29			0.72	1.075		
56 +	129.69	125.32	0.00	23.0	0.00	0.00	0.00	0.00						
	39.00	2.87	39.00	27.0	14.77	35.71	26.55	1.47	0.016	125.43	0.000	1.000	11	0
			0.00	23.0	0.00	0.00	0.00	0.00			4.39	1.000		
56 +	133.32	125.38	2.04	23.0	8.51	8.59	4.73	0.43						
	39.00	3.02	36.18	23.0	13.57	15.10	33.24	1.09	0.000	125.44	0.275	1.181	9	0
			0.78	23.0	5.56	5.66	2.24	0.35			0.78	1.072		
56 +	170.10	125.42	5.75	23.0	18.72	18.77	12.02	0.48						
	39.00	2.86	32.06	23.0	14.53	16.20	34.48	0.93	0.000	125.46	0.255	1.219	0	0
			1.18	23.0	5.67	5.77	3.26	0.36			0.60	1.080		
56 +	202.62	125.43	1.38	23.0	6.59	6.70	3.48	0.40						
	39.00	3.87	36.11	23.0	10.33	13.32	32.40	1.11	0.002	125.49	0.257	1.178	0	0
			1.50	23.0	5.37	5.45	3.36	0.45			0.72	1.070		
56 +	240.98	125.46	1.13	23.0	5.07	5.17	2.77	0.41						
	39.00	3.64	36.45	23.0	11.12	13.51	31.21	1.17	0.000	125.52	0.275	1.153	0	0
			1.42	23.0	5.40	5.47	2.91	0.49			0.84	1.061		
56 +	282.04	125.50	1.64	23.0	8.52	8.54	4.09	0.40						
	39.00	2.96	36.61	23.0	14.03	16.02	33.97	1.08	0.000	125.55	0.263	1.137	0	0
			0.75	23.0	2.34	2.47	1.56	0.48			0.81	1.054		
56 +	320.00	125.53	1.88	23.0	7.56	8.01	4.96	0.38						
	39.00	3.24	34.86	23.0	12.63	12.81	34.50	1.01	0.000	125.57	0.237	1.203	0	0
			2.25	23.0	5.62	5.73	4.83	0.47			0.52	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	125.55	9.88	23.0	14.80	16.22	16.08	0.61					
	39.00	2.88	27.99	23.0	11.05	12.69	27.22	1.03	0.000	125.60	0.253	1.193	0 0
			1.13	23.0	4.52	4.61	2.64	0.43			0.72	1.067	
56 +	395.62	125.58	7.80	23.0	14.21	17.18	15.10 *	0.52					
	39.00	3.16	30.55	23.0	11.61	13.38	30.98	0.99	0.000	125.62	0.233	1.227	0 0
			0.65	23.0	2.77	3.03	1.69	0.38			0.60	1.081	
56 +	438.38	125.60	10.35	23.0	22.06	24.71	21.37 *	0.48					
	39.00	3.85	27.58	23.0	9.53	12.45	29.24	0.94	0.000	125.64	0.232	1.288	0 0
			1.06	23.0	3.19	3.24	2.42	0.44			0.54	1.098	
56 +	491.27	125.63	9.58	23.0	22.81	25.40	19.00 *	0.50					
	39.00	3.51	27.43	23.0	9.83	12.28	26.71	1.03	0.000	125.67	0.275	1.344	0 0
			2.00	23.0	6.84	6.88	4.40	0.45			0.71	1.117	
56 +	543.32	125.67	7.46	23.0	21.89	24.11	17.01 *	0.44					
	39.00	3.21	29.70	23.0	11.78	13.73	31.13	0.95	0.000	125.70	0.254	1.341	0 0
			1.85	23.0	6.68	6.75	4.43	0.42			0.58	1.119	
56 +	583.73	125.69	11.01	23.0	14.17	16.26	18.70 *	0.59					
	39.00	3.05	27.16	23.0	10.44	10.70	27.18	1.00	0.000	125.73	0.243	1.275	0 0
			0.82	23.0	11.95	12.24	3.52	0.23			0.54	1.099	
56 +	590.21	125.67 DH	0.00	35.0	0.00	0.00	0.00	0.00					
	39.00	3.01	39.00	35.0	17.05	40.46	33.25	1.17	0.007	125.74	0.000	1.000	11 0
			0.00	35.0	0.00	0.00	0.00	0.00			1.46	1.000	
56 +	599.29	125.69 DH	0.00	35.0	0.00	0.00	0.00	0.00					
	39.00	2.89	39.00	35.0	18.07	42.84	33.27	1.17	0.000	125.76	0.000	1.000	11 0
			0.00	35.0	0.00	0.00	0.00	0.00			1.57	1.000	
56 +	608.50	125.74	12.89	23.0	15.63	18.14	21.61 *	0.60					
	39.00	2.84	25.77	23.0	10.73	11.60	27.39	0.94	0.000	125.78	0.208	1.154	9 0
			0.34	23.0	1.45	1.69	0.94	0.36			0.53	1.053	
56 +	639.18	125.74	1.98	23.0	7.27	7.38	4.36	0.45					
	39.00	3.66	36.57	23.0	12.06	14.03	32.40	1.13	0.003	125.81	0.264	1.143	0 0
			0.45	23.0	2.50	2.68	1.19	0.38			0.79	1.057	
56 +	676.80	125.77	2.23	23.0	6.42	6.45	4.15	0.54					
	39.00	2.95	36.31	23.0	12.09	13.75	29.97	1.21	0.000	125.84	0.287	1.125	0 0
			0.45	23.0	1.85	2.10	1.02	0.44			0.98	1.049	



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	m ³ /s	m ^{^0.33} /s	m	m	m ²	m/s	m	NN+m	IE o/o	ALPHAS		
56 +	741.00	125.83	1.36	15.0	8.35	8.36	4.49	0.30					
	39.00	3.49	31.72	23.0	13.57	15.46	29.45	1.08	0.000	125.87	0.289	1.526	0 0
			5.93	15.0	18.51	18.57	14.97	0.40			0.93	1.187	
56 +	781.00	125.87	5.66	15.0	27.94	28.01	24.19	0.23					
	39.00	3.50	16.28	23.0	9.24	11.41	24.65	0.66	0.000	125.88	0.170	1.408	0 0
			17.06	25.0	42.19	42.37	40.76	0.42			0.30	1.132	
56 +	835.50	125.91	3.91	15.0	19.49	19.58	15.50	0.25					
	39.00	3.61	20.42	23.0	11.87	14.29	28.51	0.72	0.000	125.93	0.186	1.471	0 0
			14.67	20.0	39.88	39.89	38.34	0.38			0.39	1.149	
56 +	930.00	125.93	5.73	15.0	30.64	30.86	29.90	0.19					
	39.00	3.71	12.02	23.0	10.17	13.61	26.00	0.46	0.000	125.93	0.114	1.240	0 0
			21.25	25.0	61.25	61.30	63.54	0.33			0.17	1.081	
56 +	973.00	125.93	5.02	15.0	26.20	26.25	25.99	0.19					
	39.00	3.05	14.62	23.0	13.56	15.95	31.30	0.47	0.000	125.94	0.119	1.264	0 0
			19.36	25.0	65.83	65.86	62.13	0.31			0.17	1.086	
57 +	35.00	125.94	4.79	15.0	26.66	26.69	24.25	0.20					
	39.00	3.25	14.66	23.0	14.03	16.15	30.04	0.49	0.000	125.95	0.129	1.275	0 0
			19.56	25.0	70.10	70.11	61.12	0.32			0.20	1.089	