

BIUW



ENTWURFSHYDRAULIK

WASSERVERBAND NIDDA

HOCHWASSERSCHUTZ AN DER NIDDA IN RANSTADT-DAUERNHEIM

STAND FEBRUAR 2021

```
*****
***                                     ***
***                                     ***
***           WSP - ASS 4.0 2013       ***
***                                     ***
***   BERECHNUNG STATIONAERER WASSERSPIEGELLAGEN   ***
***                                     ***
***                                     ***
*****
```

Büro für
Ingenieurbiologie * Umweltplanung * Wasserbau

BIUW Ingenieur GmbH

Erfurter Str. 45, 06567 Bad Frankenhausen
Tel.: 034671 / 555-649 - Fax: 034671 / 556-467

Projekt: Hochwasserschutz an der Nidda in Ranstadt-Dauernheim

Zustand: Entwurfshydraulik

Variante: HQ10

Abflussspende: 30,7 m³/s

ERGEBNISSE												
=====												
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	
		2.81	23.0	47.20	47.20	10.51 *	0.27					
55 +	469.00	124.53	27.69	19.00	20.63	29.78	0.93	0.000	124.57	0.363	1.449	5 0
	30.70	2.12	0.20	23.0	15.50	15.51	1.39			1.00	1.173	
		0.00	23.0	0.00	0.00	0.00	0.00					
55 +	587.39	124.69 DH	30.70	12.96	31.58	25.44	1.21	0.011	124.77	0.000	1.000	11 0
	30.70	2.51	0.00	23.0	0.00	0.00	0.00			2.16	1.000	
		0.06	23.0	2.41	2.42	0.35 *	0.17					
55 +	609.95	124.76	30.46	18.62	20.10	34.24	0.89	0.000	124.80	0.223	1.039	9 0
	30.70	2.58	0.18	23.0	2.83	2.87	0.71			0.74	1.017	
		6.23	23.0	55.94	56.04	22.73 *	0.27					
55 +	705.57	124.83	24.34	16.26	17.81	32.54	0.75	0.000	124.86	0.260	1.528	0 0
	30.70	2.61	0.13	23.0	3.64	3.67	0.76			0.47	1.185	
		5.23	23.0	57.99	58.06	20.03 *	0.26					
55 +	818.25	124.89	25.24	12.02	14.39	29.48	0.86	0.000	124.92	0.313	1.725	0 0
	30.70	3.12	0.23	23.0	18.14	18.24	1.93			0.53	1.256	
		0.15	23.0	8.57	8.67	1.00 *	0.15					
55 +	862.87	124.91	30.47	15.83	17.53	32.78	0.93	0.005	124.96	0.230	1.063	0 0
	30.70	2.84	0.08	23.0	1.97	2.01	0.40			0.71	1.029	
		0.33	23.0	7.69	7.74	1.86	0.18					
55 +	899.82	124.95	30.06	21.04	22.20	42.54	0.71	0.000	124.97	0.177	1.079	0 0
	30.70	2.82	0.31	23.0	2.42	2.57	1.15			0.40	1.034	
		2.00	23.0	4.53	4.58	4.25	0.47					
55 +	924.51	124.95	28.53	16.00	16.88	35.24	0.81	0.000	124.99	0.192	1.079	0 0
	30.70	2.79	0.17	23.0	3.71	3.81	0.89			0.46	1.031	
		0.00	23.0	0.00	0.00	0.00	0.00					
55 +	942.97	124.94	30.70	14.32	16.82	25.92	1.18	0.009	125.01	0.281	1.000	11 0
	30.70	2.01	0.00	23.0	0.00	0.00	0.00			0.88	1.000	
		0.00	23.0	0.00	0.00	0.00	0.00					
55 +	950.93	124.96	30.70	13.99	15.73	29.93	1.03	0.000	125.01	0.224	1.000	11 0
	30.70	2.61	0.00	23.0	0.00	0.00	0.00			0.50	1.000	
		0.00	23.0	0.00	0.00	0.00	0.00					
55 +	964.63	124.97	30.70	17.00	18.38	30.36	1.01	0.000	125.02	0.242	1.000	0 0
	30.70	2.50	0.00	23.0	0.00	0.00	0.00			0.99	1.000	

ERGEBNISSE

=====

STATION ABFLUSS	WSPLAGE/H NN+m/m		ABFLUSS m3/s	K-WERT m^0.33/s	BREITE m	UMFANG m	FLAECHE m2	GESCHW m/s	HZV m	E-HOEHE NN+m	FROUDE IE o/oo	ALPHA ALPHAS	KZW	KZD
			0.89	23.0	2.86	2.90	1.99	0.44						
56 +	0.15	125.00	29.81	23.0	16.82	18.06	34.13	0.87	0.000	125.04	0.205	1.034	0	0
	30.70	2.62	0.00	23.0	0.00	0.10	0.00	0.00			0.62	1.013		
			2.21	23.0	5.70	5.74	3.89	0.57						
56 +	54.64	125.04	28.49	23.0	13.86	14.89	26.42	1.08	0.001	125.09	0.273	1.075	0	0
	30.70	2.53	0.00	23.0	0.00	0.00	0.00	0.00			1.02	1.028		
			8.36	23.0	24.57	24.68	22.40	0.37						
56 +	93.49	125.10	22.34	23.0	18.74	18.02	35.62	0.63	0.000	125.11	0.164	1.158	0	0
	30.70	2.46	0.00	23.0	0.00	0.00	0.00	0.00			0.30	1.055		
			1.62	23.0	36.57	36.57	7.88	0.21						
56 +	127.16	125.10	29.02	23.0	16.12	18.14	34.82	0.83	0.002	125.13	0.263	1.304	0	0
	30.70	2.62	0.06	23.0	4.15	4.15	0.50	0.13			0.55	1.124		
			0.02	23.0	3.23	3.54	0.29 *	0.08						
56 +	129.69	125.10	30.68	27.0	17.22	18.34	38.33	0.80	0.000	125.13	0.175	1.013	0	0
	30.70	2.64	0.00	23.0	0.00	1.19	0.00	0.00			0.33	1.006		
			1.11	23.0	22.30	22.30	5.60	0.20						
56 +	133.32	125.10	29.58	23.0	17.59	19.38	37.96	0.78	0.000	125.13	0.218	1.191	0	0
	30.70	2.74	0.01	23.0	8.45	8.45	0.18	0.04			0.47	1.080		
			1.15	23.0	10.06	10.07	3.96	0.29						
56 +	170.10	125.12	29.26	23.0	21.69	23.24	41.83	0.70	0.000	125.15	0.198	1.145	0	0
	30.70	2.39	0.28	23.0	13.12	13.12	2.13	0.13			0.42	1.060		
			0.08	23.0	2.09	2.09	0.66	0.13						
56 +	186.36	125.13	30.57	23.0	25.22	27.60	63.40	0.48	0.000	125.15	0.102	1.029	0	0
	30.70	3.04	0.05	23.0	4.58	4.59	0.66	0.08			0.14	1.013		
			0.03	23.0	2.43	2.43	0.46	0.08						
56 +	202.62	125.14	30.64	23.0	23.80	26.93	70.79	0.43	0.000	125.15	0.083	1.019	0	0
	30.70	3.58	0.03	23.0	2.74	2.76	0.43	0.07			0.10	1.009		
			0.04	23.0	2.27	2.27	0.41	0.10						
56 +	240.98	125.14	30.66	23.0	22.62	24.67	54.41	0.56	0.001	125.16	0.118	1.011	0	0
	30.70	3.32	0.00	23.0	0.00	0.00	0.00	0.00			0.21	1.005		
			0.13	23.0	3.37	3.37	0.71	0.18						
56 +	282.04	125.15	30.57	23.0	21.07	22.36	40.18	0.76	0.002	125.17	0.183	1.023	0	0
	30.70	2.56	0.00	23.0	0.00	0.00	0.00	0.00			0.50	1.010		

ERGEBNISSE													
=====													
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 +	320.00	125.16	0.03	23.0	1.56	0.22	0.13						
	30.70	2.88	30.67	23.0	22.78	23.85	0.72	0.000	125.19	0.170	1.008	0	0
			0.00	23.0	0.00	0.00	0.00			0.45	1.003		
56 +	361.94	125.18	10.91	23.0	14.80	15.63	0.58						
	30.70	2.51	19.79	23.0	13.55	13.50	0.79	0.000	125.21	0.189	1.060	0	0
			0.00	23.0	0.00	0.00	0.00			0.51	1.020		
56 +	395.62	125.20	8.30	23.0	15.20	16.32	0.50						
	30.70	2.79	22.40	23.0	15.72	15.81	0.75	0.000	125.22	0.185	1.097	0	0
			0.00	23.0	0.00	0.00	0.00			0.45	1.034		
56 +	438.38	125.22	5.45	23.0	19.21	20.49	0.42						
	30.70	3.47	25.25	23.0	13.83	16.01	0.85	0.000	125.25	0.230	1.213	0	0
			0.00	23.0	0.00	0.00	0.00			0.59	1.077		
56 +	491.27	125.25	5.57	23.0	19.73	21.13	0.49						
	30.70	2.98	25.13	23.0	13.97	15.47	1.02	0.001	125.30	0.304	1.228	0	0
			0.00	23.0	0.00	0.00	0.00			1.05	1.082		
56 +	543.32	125.31	4.04	23.0	19.36	20.66	0.38						
	30.70	2.86	26.66	23.0	16.50	17.95	0.86	0.000	125.34	0.246	1.213	0	0
			0.00	23.0	0.00	0.00	0.00			0.67	1.079		
56 +	583.73	125.33	7.73	23.0	13.51	14.82	0.56						
	30.70	2.70	22.97	23.0	14.33	14.40	0.87	0.000	125.37	0.221	1.110	0	0
			0.00	23.0	0.00	0.00	0.00			0.65	1.038		
56 +	590.21	125.32	5.95	35.0	5.32	7.85	0.74						
	30.70	2.66	24.75	35.0	10.66	12.89	1.07	0.002	125.38	0.235	1.062	11	0
			0.00	35.0	0.00	0.00	0.00			0.43	1.022		
56 +	599.29	125.33	5.36	35.0	5.04	8.57	0.72						
	30.70	2.53	25.34	35.0	12.02	14.43	1.08	0.000	125.38	0.246	1.070	11	0
			0.00	35.0	0.00	0.00	0.00			0.50	1.025		
56 +	608.50	125.34	10.19	23.0	14.72	16.42	0.66						
	30.70	2.42	20.51	23.0	11.51	12.20	0.98	0.000	125.38	0.248	1.105	0	0
			0.00	23.0	0.00	0.08	0.00			0.88	1.036		
56 +	639.18	125.37	0.13	23.0	3.51	3.53	0.19						
	30.70	3.28	30.57	23.0	16.15	17.83	0.92	0.000	125.41	0.213	1.027	0	0
			0.00	23.0	0.00	0.00	0.00			0.69	1.012		

ERGEBNISSE														
=====														
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 +	676.80	125.39	0.54	23.0	6.42	6.45	1.71	0.32						
	30.70	2.57	30.16	23.0	14.76	16.22	27.45	1.10	0.001	125.45	0.285	1.071	0	0
			0.00	23.0	0.00	0.00	0.00	0.00			1.13	1.030		
56 +	741.00	125.47	0.26	15.0	8.35	8.36	1.49	0.17						
	30.70	3.13	28.00	23.0	13.57	15.28	24.57	1.14	0.001	125.53	0.348	1.469	0	0
			2.45	15.0	18.85	19.00	8.03	0.30			1.30	1.182		
56 +	781.00	125.54	3.25	15.0	27.94	28.01	14.97	0.22						
	30.70	3.17	16.56	23.0	9.24	11.59	21.60	0.77	0.000	125.56	0.244	1.622	0	0
			10.89	25.0	42.19	42.37	26.84	0.41			0.48	1.199		
56 +	835.50	125.57	1.35	15.0	19.49	19.58	8.73	0.15						
	30.70	3.26	14.20	23.0	11.87	14.21	24.38	0.58	0.000	125.58	0.153	1.328	0	0
			15.15	20.0	39.88	40.46	41.90	0.36			0.31	1.111		
56 +	882.75	125.58	3.16	15.0	25.07	25.23	13.71	0.23						
	30.70	3.30	17.91	23.0	11.02	13.81	23.59	0.76	0.000	125.60	0.242	1.597	0	0
			9.63	23.0	40.23	40.26	24.94	0.39			0.53	1.191		
56 +	930.00	125.61	4.44	15.0	29.30	29.51	20.16 *	0.22						
	30.70	3.39	14.15	23.0	9.92	13.35	22.76	0.62	0.000	125.62	0.186	1.454	0	0
			12.10	25.0	47.68	47.73	32.81 *	0.37			0.36	1.145		
56 +	951.50	125.61	4.07	15.0	28.42	28.47	19.00	0.21						
	30.70	2.97	15.68	23.0	11.87	14.36	25.12	0.62	0.000	125.63	0.193	1.515	0	0
			10.95	25.0	50.54	50.56	31.86	0.34			0.35	1.163		
56 +	973.00	125.62	4.57	15.0	26.20	26.25	17.83	0.26						
	30.70	2.74	19.77	23.0	13.56	15.73	27.07	0.73	0.000	125.64	0.235	1.590	0	0
			6.36	25.0	34.97	35.00	17.96	0.35			0.49	1.191		
57 +	35.00	125.65	3.89	15.0	25.62	25.65	16.51 *	0.24						
	30.70	2.96	17.53	23.0	13.90	15.78	25.95	0.68	0.000	125.67	0.226	1.571	0	0
			9.28	25.0	54.03	54.04	27.57	0.34			0.44	1.180		