

BIUW



ENTWURFSHYDRAULIK

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WASSERVERBAND NIDDA

HOCHWASSERSCHUTZ AN DER NIDDA IN RANSTADT-DAUERNHEIM

STAND FEBRUAR 2021

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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: Entwurfshydraulik neue Berechnung

Variante: HQ100

Abflussspende: 49 m<sup>3</sup>/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		
		10.53	23.0	51.69	51.71	24.10 *	0.44						
55 +	469.00	124.81	35.67	23.0	19.33	21.24	35.12	1.02	0.000	124.85	0.369	1.544	5 0
	49.00	2.40	2.80	23.0	31.67	31.68	8.95	0.31			1.00	1.184	
		0.00	23.0	0.00	0.00	0.00	0.00	0.00					
55 +	587.39	125.12 DH	49.00	30.0	12.96	31.58	25.44	1.93	0.074	125.31	0.000	1.000	11 0
	49.00	2.93	0.00	23.0	0.00	0.00	0.00	0.00			5.50	1.000	
		1.24	23.0	8.89	8.93	3.66	0.34						
55 +	609.95	125.33	46.02	23.0	19.49	21.07	45.18	1.02	0.000	125.38	0.259	1.161	9 0
	49.00	3.15	1.74	23.0	8.42	8.48	4.40	0.40			0.71	1.064	
		19.84	23.0	61.55	61.67	57.85	0.34						
55 +	705.57	125.41	26.75	23.0	16.26	17.59	41.91	0.64	0.000	125.42	0.178	1.430	0 0
	49.00	3.18	2.41	23.0	32.19	32.23	12.61	0.19			0.24	1.139	
		18.65	23.0	63.39	63.46	54.69	0.34						
55 +	818.25	125.44	25.26	23.0	12.02	14.25	36.09	0.70	0.000	125.45	0.197	1.544	0 0
	49.00	3.67	5.09	23.0	34.59	34.70	19.70	0.26			0.27	1.167	
		3.18	23.0	14.97	15.13	7.90	0.40						
55 +	862.87	125.44	45.01	23.0	15.83	17.49	41.08	1.10	0.013	125.49	0.283	1.236	0 0
	49.00	3.37	0.82	23.0	7.23	7.30	2.62	0.31			0.73	1.093	
		2.33	23.0	7.69	7.74	5.91	0.39						
55 +	899.82	125.47	45.84	23.0	21.04	21.94	53.64	0.85	0.000	125.51	0.195	1.118	0 0
	49.00	3.34	0.84	23.0	4.96	5.22	2.74	0.31			0.42	1.047	
		4.36	23.0	4.53	4.58	6.63	0.66						
55 +	924.51	125.48	43.14	23.0	16.00	16.37	43.66	0.99	0.001	125.53	0.216	1.116	0 0
	49.00	3.31	1.49	23.0	7.09	7.28	4.19	0.36			0.50	1.045	
		0.00	23.0	0.00	0.00	0.00	0.00	0.00					
55 +	942.97	125.45	49.00	30.0	14.45	17.85	33.26	1.47	0.017	125.56	0.310	1.000	11 0
	49.00	2.52	0.00	23.0	0.00	0.00	0.00	0.00			1.05	1.000	
		0.00	23.0	0.00	0.00	0.00	0.00	0.00					
55 +	950.93	125.48 DH	49.00	30.0	14.07	30.24	36.12	1.36	0.000	125.57	0.000	1.000	11 0
	49.00	3.13	0.00	23.0	0.00	0.00	0.00	0.00			1.61	1.000	
		0.25	23.0	4.82	4.82	0.96	0.26						
55 +	964.63	125.52	48.75	23.0	18.05	19.93	40.20	1.21	0.000	125.60	0.275	1.033	9 0
	49.00	3.06	0.00	23.0	0.02	0.54	0.01	0.04			1.09	1.015	

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		
			2.46	23.0	2.86	2.90	3.60	0.68						
56 +	0.15	125.57	46.54	23.0	16.82	17.98	43.61	1.07	0.000	125.62	0.219	1.026	0	0
	49.00	3.19	0.00	23.0	0.00	0.66	0.00	0.00			0.66	1.010		
			5.91	23.0	5.70	5.74	7.11	0.83						
56 +	54.64	125.60	43.09	23.0	13.98	14.94	34.31	1.26	0.001	125.67	0.272	1.051	0	0
	49.00	3.10	0.00	23.0	0.00	0.50	0.00	0.00			0.98	1.018		
			17.19	23.0	24.57	24.68	36.63	0.47						
56 +	93.49	125.68	31.81	23.0	18.82	17.82	46.51	0.68	0.000	125.70	0.147	1.097	0	0
	49.00	3.03	0.00	23.0	0.01	0.54	0.00	0.01			0.25	1.033		
			12.13	23.0	36.57	36.57	29.28	0.41						
56 +	127.16	125.68	35.85	23.0	16.12	18.53	44.25	0.81	0.000	125.71	0.214	1.279	0	0
	49.00	3.20	1.02	23.0	4.15	4.15	2.92	0.35			0.39	1.096		
			1.08	23.0	15.03	15.93	5.17 *	0.21						
56 +	129.69	125.67	47.92	27.0	17.22	18.07	48.16	0.99	0.004	125.72	0.222	1.154	0	0
	49.00	3.21	0.01	23.0	2.12	3.88	0.14	0.05			0.37	1.067		
			7.57	23.0	22.30	22.30	18.73	0.40						
56 +	133.32	125.69	39.75	23.0	17.59	19.83	48.31	0.82	0.000	125.72	0.207	1.254	0	0
	49.00	3.33	1.68	23.0	8.45	8.45	5.15	0.33			0.39	1.092		
			4.74	23.0	10.06	10.07	9.83	0.48						
56 +	170.10	125.70	41.00	23.0	21.69	23.31	54.47	0.75	0.000	125.73	0.182	1.152	0	0
	49.00	2.98	3.26	23.0	13.12	13.12	9.78	0.33			0.35	1.056		
			0.53	23.0	2.09	2.09	1.87	0.29						
56 +	186.36	125.71	47.64	23.0	25.22	27.91	78.02	0.61	0.000	125.73	0.119	1.052	0	0
	49.00	3.62	0.83	23.0	4.66	4.67	3.36	0.25			0.18	1.021		
			0.42	23.0	2.43	2.43	1.87	0.23						
56 +	202.62	125.72	48.16	23.0	23.80	27.38	84.60	0.57	0.000	125.73	0.103	1.045	0	0
	49.00	4.16	0.42	23.0	3.03	3.59	2.18	0.19			0.14	1.019		
			0.51	23.0	2.27	2.27	1.73	0.29						
56 +	240.98	125.72	48.49	23.0	24.30	26.64	68.00	0.71	0.001	125.74	0.140	1.021	0	0
	49.00	3.90	0.00	23.0	0.00	0.00	0.00	0.00			0.28	1.009		
			1.23	23.0	3.37	3.37	2.67	0.46						
56 +	282.04	125.73	47.77	23.0	22.75	24.24	52.90	0.90	0.002	125.77	0.197	1.029	0	0
	49.00	3.14	0.00	23.0	0.00	0.00	0.00	0.00			0.54	1.012		

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 +	320.00	125.75	0.46	23.0	1.56	1.56	1.13	0.41				
	49.00	3.46	48.54	23.0	24.41	25.73	56.48	0.86	0.000	125.78	0.184	1.013
			0.00	23.0	0.00	0.00	0.00	0.00		0.49	1.005	0 0
56 +	361.94	125.77	19.57	23.0	14.80	15.63	27.33	0.72				
	49.00	3.09	29.43	23.0	14.74	14.05	33.45	0.88	0.000	125.80	0.184	1.030
			0.00	23.0	0.00	0.00	0.00	0.00		0.46	1.010	0 0
56 +	395.62	125.78	15.89	23.0	15.21	16.91	25.56	0.62				
	49.00	3.37	33.11	23.0	17.37	16.77	39.57	0.84	0.000	125.81	0.177	1.057
			0.00	23.0	0.00	0.00	0.00	0.00		0.42	1.019	0 0
56 +	438.38	125.80	14.23	23.0	21.54	22.89	24.94	0.57				
	49.00	4.05	34.77	23.0	15.46	17.51	38.29	0.91	0.000	125.84	0.211	1.132
			0.00	23.0	0.00	0.00	0.00	0.00		0.55	1.045	0 0
56 +	491.27	125.83	15.17	23.0	21.84	23.33	23.30	0.65				
	49.00	3.56	33.83	23.0	15.72	17.07	33.27	1.02	0.000	125.87	0.250	1.126
			0.00	23.0	0.00	0.00	0.00	0.00		0.80	1.043	0 0
56 +	543.32	125.87	11.95	23.0	21.33	22.73	22.03	0.54				
	49.00	3.42	37.05	23.0	18.23	19.51	40.86	0.91	0.000	125.91	0.220	1.142
			0.00	23.0	0.00	0.00	0.00	0.00		0.58	1.050	0 0
56 +	583.73	125.89	14.86	23.0	15.25	17.15	22.10	0.67				
	49.00	3.26	34.14	23.0	16.06	15.36	34.83	0.98	0.000	125.94	0.218	1.089
			0.00	23.0	0.00	0.00	0.00	0.00		0.61	1.030	0 0
56 +	590.21	125.85	0.00	35.0	0.00	0.00	0.00	0.00				
	49.00	3.19	49.00	35.0	17.03	38.78	33.23	1.47	0.019	125.96	0.000	1.000
			0.00	35.0	0.00	0.00	0.00	0.00		2.18	1.000	11 0
56 +	599.29	125.87	0.00	35.0	0.00	0.00	0.00	0.00				
	49.00	3.07	49.00	35.0	18.07	42.59	33.05	1.48	0.000	125.99	0.000	1.000
			0.00	35.0	0.00	0.00	0.00	0.00		2.52	1.000	11 0
56 +	608.50	125.96	18.54	23.0	15.87	18.90	25.05 *	0.74				
	49.00	3.04	30.46	23.0	11.51	11.92	28.05	1.09	0.000	126.01	0.229	1.104
			0.00	23.0	0.01	0.70	0.00	0.01		0.71	1.035	9 0
56 +	639.18	125.97	1.48	23.0	5.74	5.84	3.40	0.43				
	49.00	3.88	47.52	23.0	16.38	18.49	43.25	1.10	0.001	126.03	0.237	1.067
			0.00	23.0	0.00	0.48	0.00	0.01		0.73	1.027	0 0

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 +	676.80	126.00	3.77	23.0	6.42	6.45	5.61	0.67					
	49.00	3.17	45.23	23.0	15.65	17.10	36.76	1.23	0.001	126.07	0.280	1.071	0 0
			0.00	23.0	0.00	0.19	0.00	0.00			1.03	1.027	
56 +	741.00	126.07	2.53	15.0	8.35	8.36	6.57	0.39					
	49.00	3.73	37.65	23.0	13.57	15.43	32.83	1.15	0.000	126.13	0.286	1.551	0 0
			8.82	15.0	20.68	20.92	20.06	0.44			0.91	1.190	
56 +	781.00	126.13	8.05	15.0	27.94	28.01	31.60	0.25					
	49.00	3.76	17.62	23.0	9.24	11.19	27.10	0.65	0.000	126.15	0.148	1.319	0 0
			23.32	25.0	42.19	42.37	51.95	0.45			0.25	1.105	
56 +	835.50	126.15	4.53	15.0	19.49	19.58	20.08	0.23					
	49.00	3.85	18.01	23.0	11.87	14.23	31.29	0.58	0.000	126.16	0.121	1.218	0 0
			26.46	20.0	39.88	40.46	65.11	0.41			0.22	1.074	
56 +	882.75	126.16	7.81	15.0	25.07	25.23	28.20	0.28					
	49.00	3.88	19.76	23.0	11.02	13.86	29.95	0.66	0.000	126.17	0.152	1.291	0 0
			21.43	23.0	40.23	40.26	48.18	0.44			0.29	1.095	
56 +	930.00	126.17	9.07	15.0	30.64	30.86	37.47	0.24					
	49.00	3.95	15.25	23.0	10.17	13.58	28.51	0.53	0.000	126.18	0.122	1.224	0 0
			24.68	25.0	48.72	48.77	60.36	0.41			0.20	1.076	
56 +	951.50	126.18	8.35	15.0	28.42	28.47	35.00	0.24					
	49.00	3.53	17.14	23.0	11.87	14.46	31.80	0.54	0.000	126.19	0.123	1.240	0 0
			23.51	25.0	50.54	50.56	60.31	0.39			0.19	1.080	
56 +	973.00	126.18	9.55	15.0	26.20	26.25	32.49	0.29					
	49.00	3.30	22.73	23.0	13.56	15.97	34.66	0.66	0.000	126.20	0.154	1.296	0 0
			16.72	25.0	34.97	35.00	37.53	0.45			0.29	1.097	
57 +	35.00	126.20	7.76	15.0	26.66	26.69	31.07	0.25					
	49.00	3.51	18.93	23.0	14.03	16.22	33.63	0.56	0.000	126.21	0.135	1.247	0 0
			22.31	25.0	54.03	54.04	57.13	0.39			0.23	1.081	