



avvio del procedimento Del.C.C. n.55 del 15.05.2008
valutazione iniziale Del.G.C. n. 171 del 17.07.2008
valutazione intermedia e rapporto ambientale preliminare Del.C.C. n.47 del 29.05.2009
relazione di sintesi finale - rapporto ambientale Del.G.C. n.251 del 29.10.2009
rapporto ambientale - relazione di sintesi non tecnica Del.C.C. n..... del
adozione Del.C.C. n..... del

**variante di adeguamento
alla disciplina urbanistica regionale e ai contenuti dell'art.55 co.6 della L.R.1/2005**

RELAZIONE IDRAULICA - ALLEGATO 2 - VOLUME II

PIANO STRUTTURALE

dicembre 2009



comune di montevarchi - provincia di arezzo

Sindaco

Giorgio Valentini

Assessore

Moreno Grassi

Responsabile del procedimento

Domenico Scrascia

Garante della comunicazione

Francesca Barucci

Progetto

Stefania Fanfani
Domenico Scrascia

Sistema informativo

Ugo Fabbri

Ufficio di piano

Gabriele Banchetti
Stefano Borchi

Indagini geologiche ed idrauliche

Claudia Lombardi
Roberto Nevini
Michele Sani

RELAZIONE IDRAULICA - ALLEGATO 2 - VOLUME II

PIANO STRUTTURALE

dicembre 2009

verifiche idrauliche stato attuale

volume I

borro del Quercio
borro dello Spedaluzzo
borro del Giglio

volume II

borro della Sabina
borro del Caspri
borro della Dogana
borro dell'Ornaccio

volume III

borro del Valdilago
torrente Caposelvi (loc. Mercatale)
torrente Caposelvi
torrente Ambra

verifiche idrauliche stato attuale - volume II

- borro della Sabina
- borro del Caspri
- borro della Dogana
- borro dell'Ornaccio

borro della Sabina

verifiche con Tpioggia critico per il Borro della Sabina

- moto vario

Tr=200, 100, 30 e 20 anni

profilo

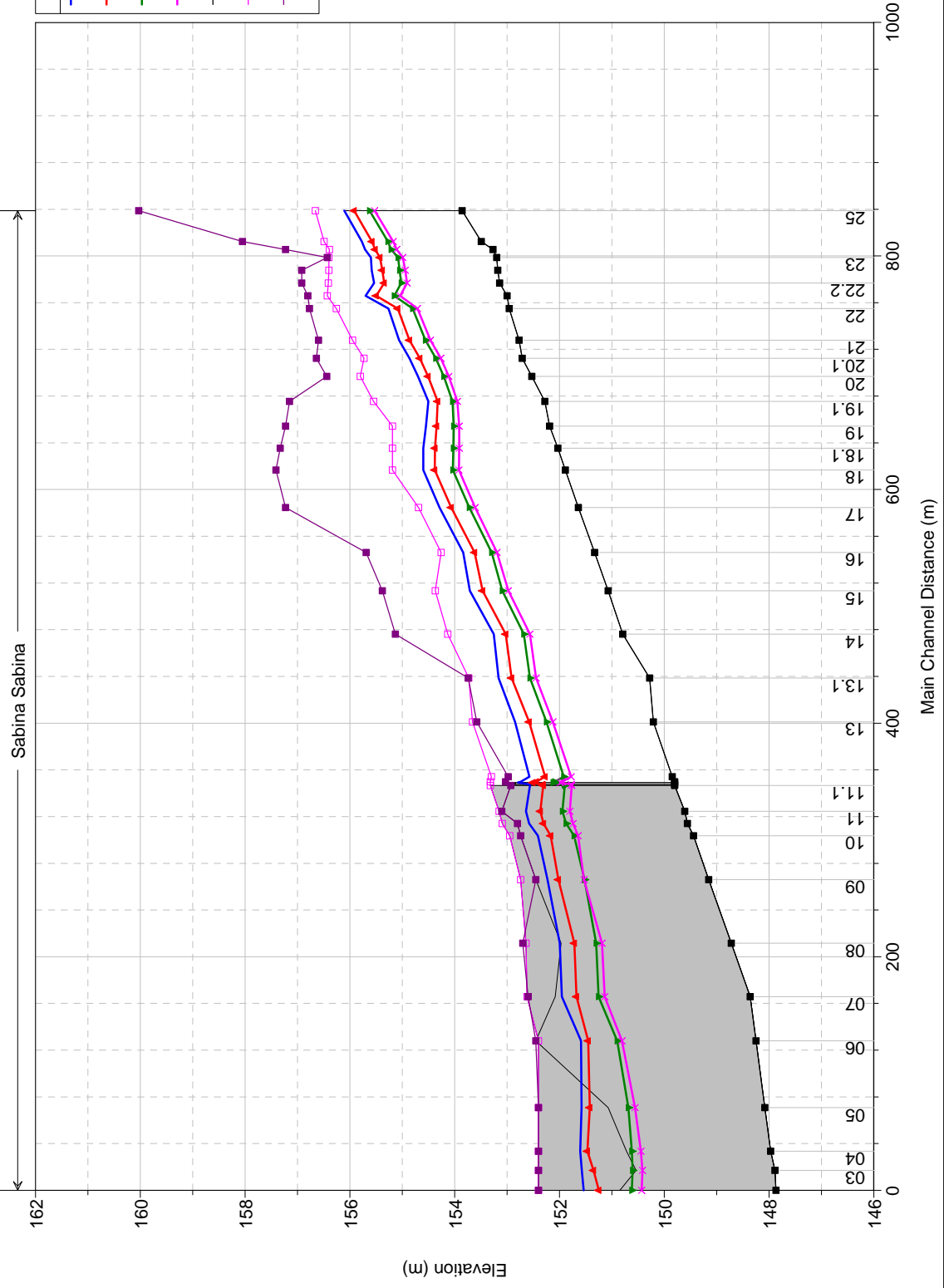
livelli idrici nelle sezioni di verifica

tabella di output del software Hec-ras 4.0

livelli e portate in ingresso alle aree di accumulo

Sabina_Caspri_Dogana Plan: 1) SCSA_200_cr 2) SCSA_100_cr 3) SCSA_30_cr 4) SCSA_20_cr

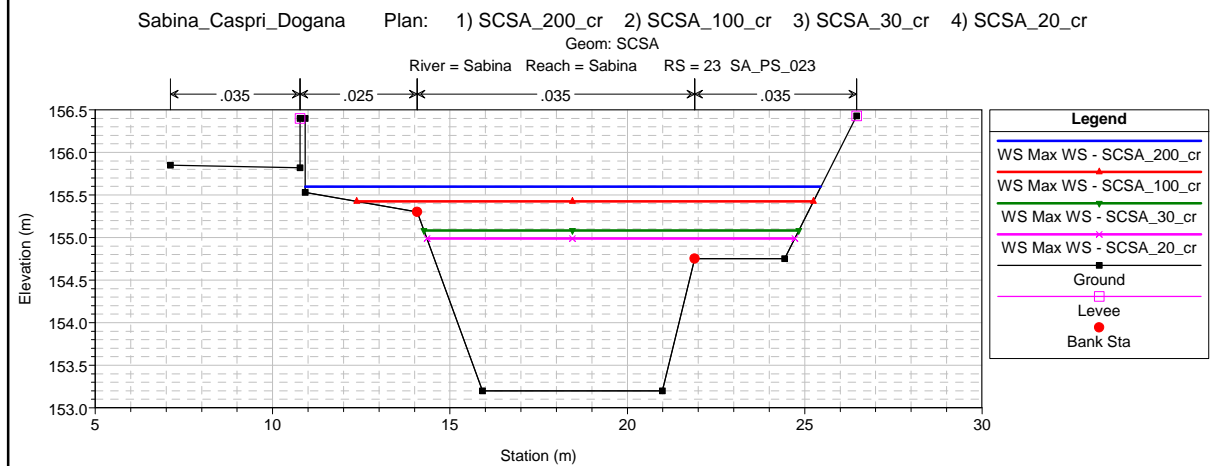
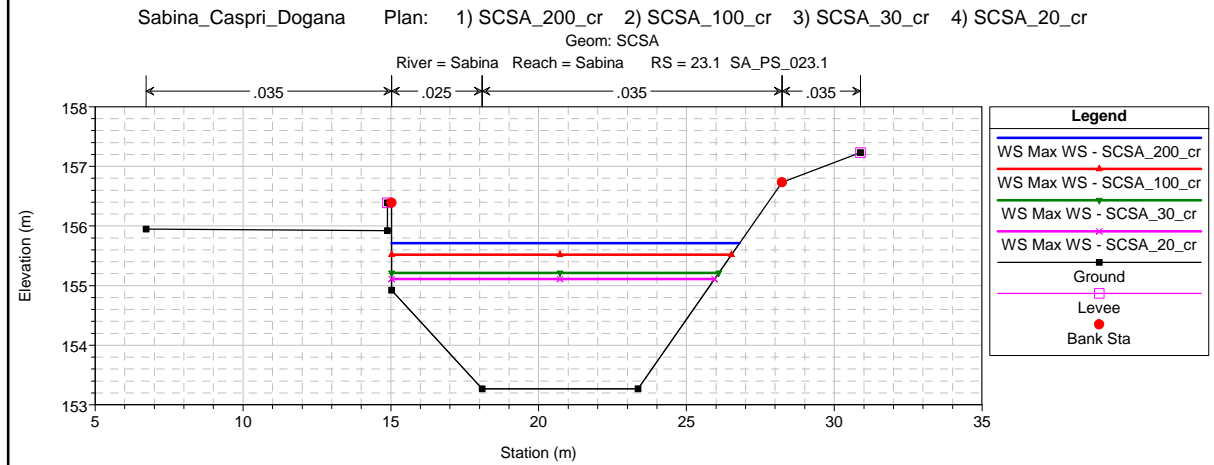
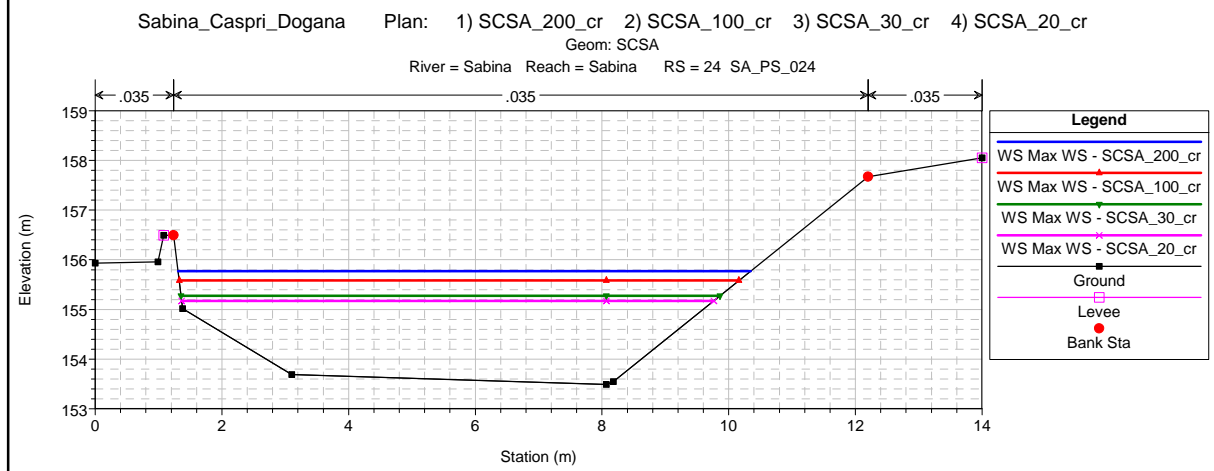
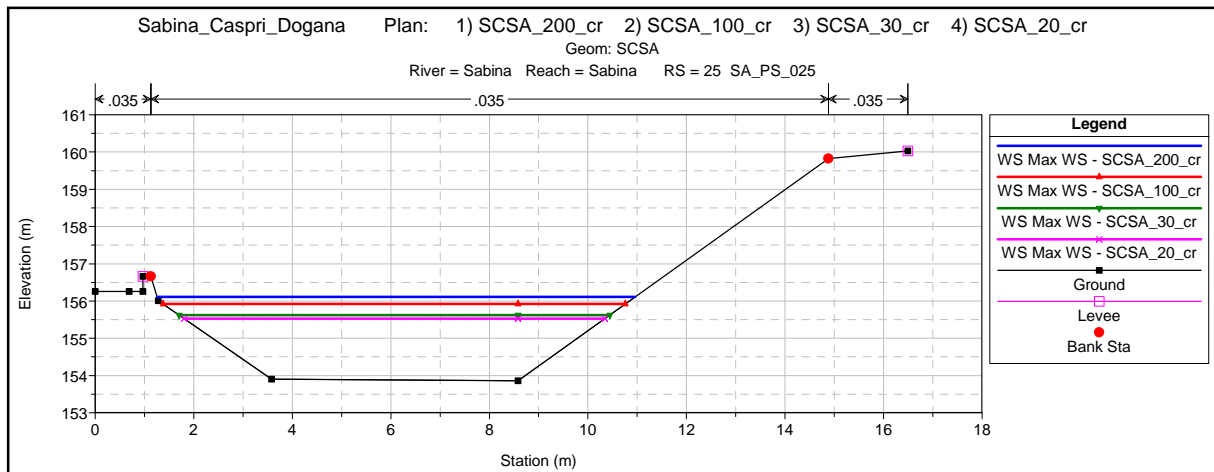
Geom: SCSA

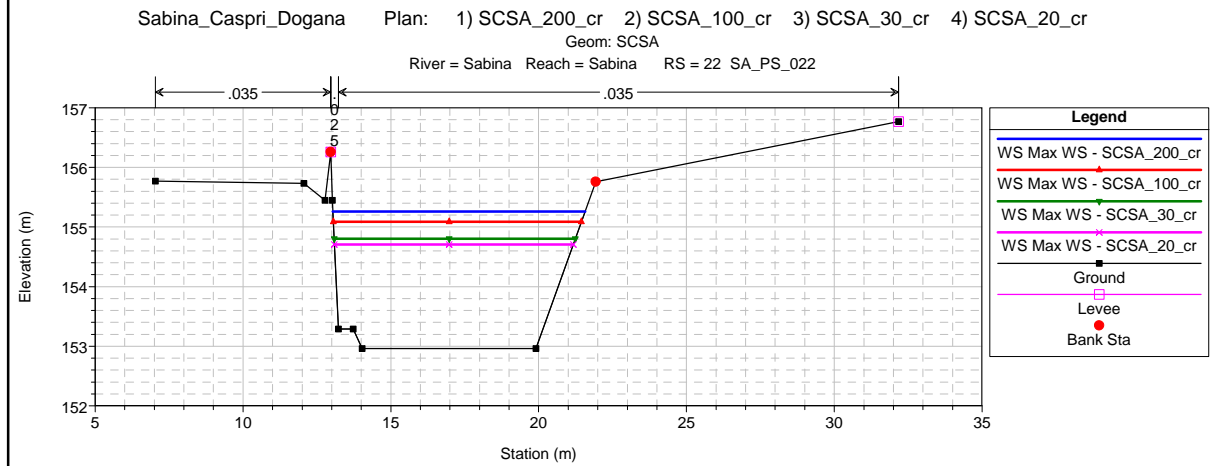
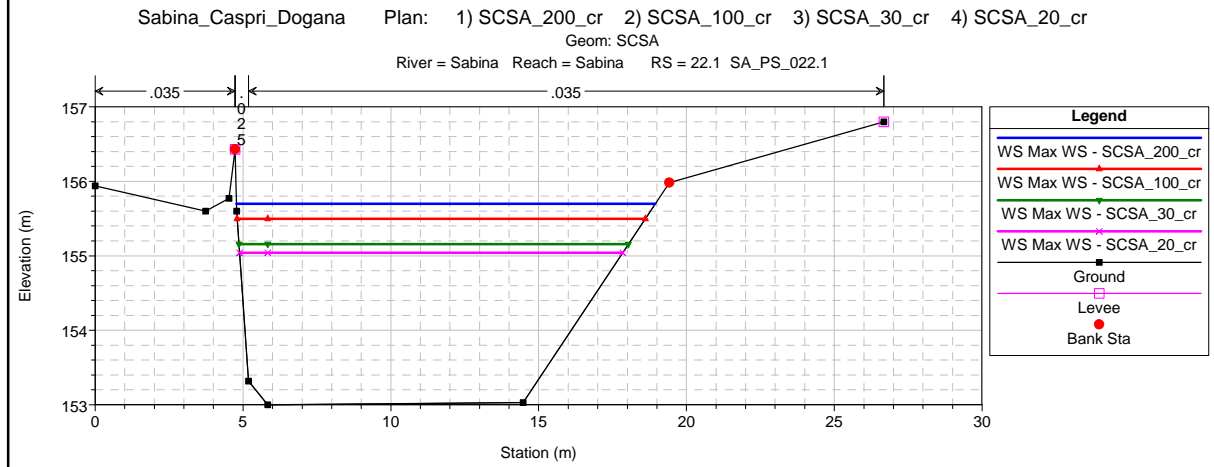
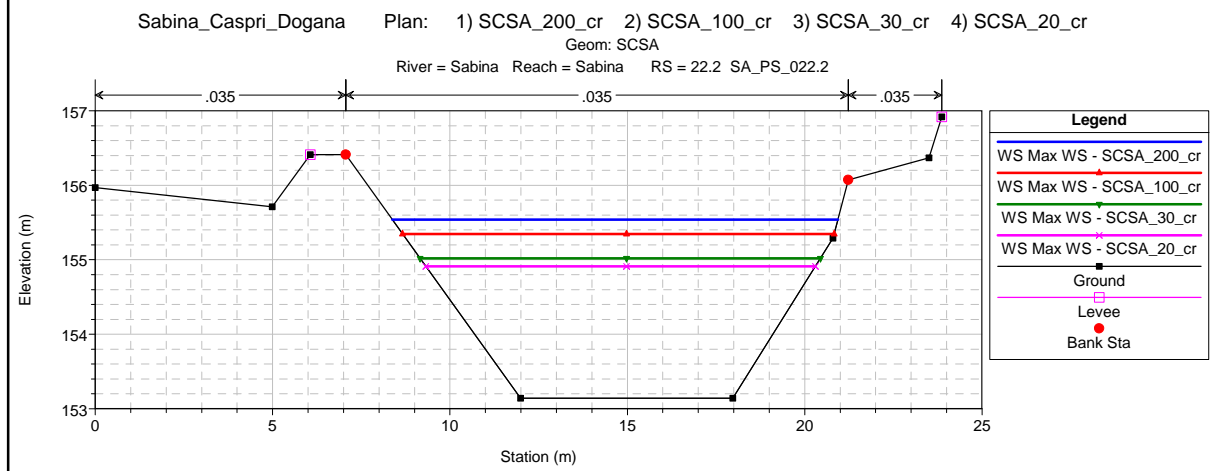
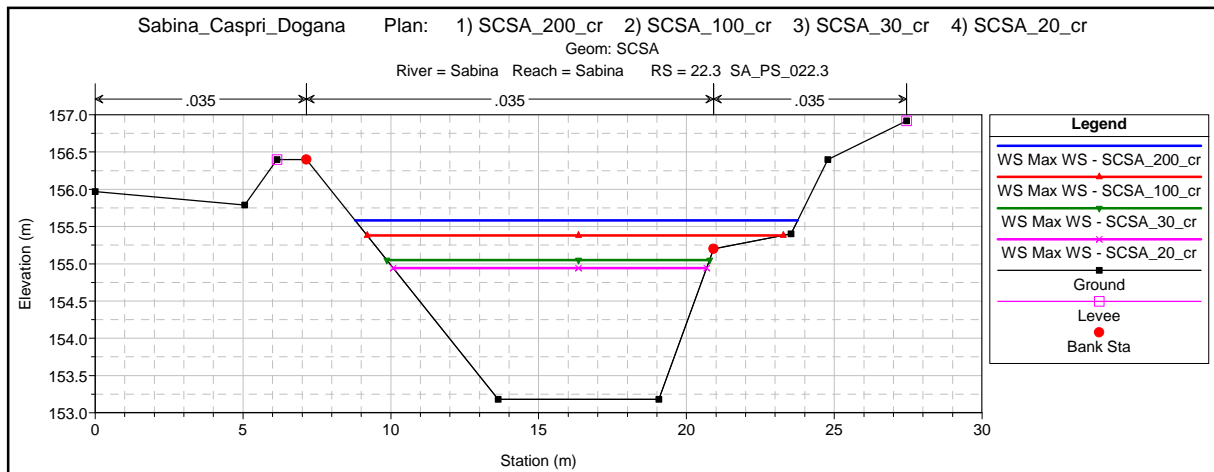


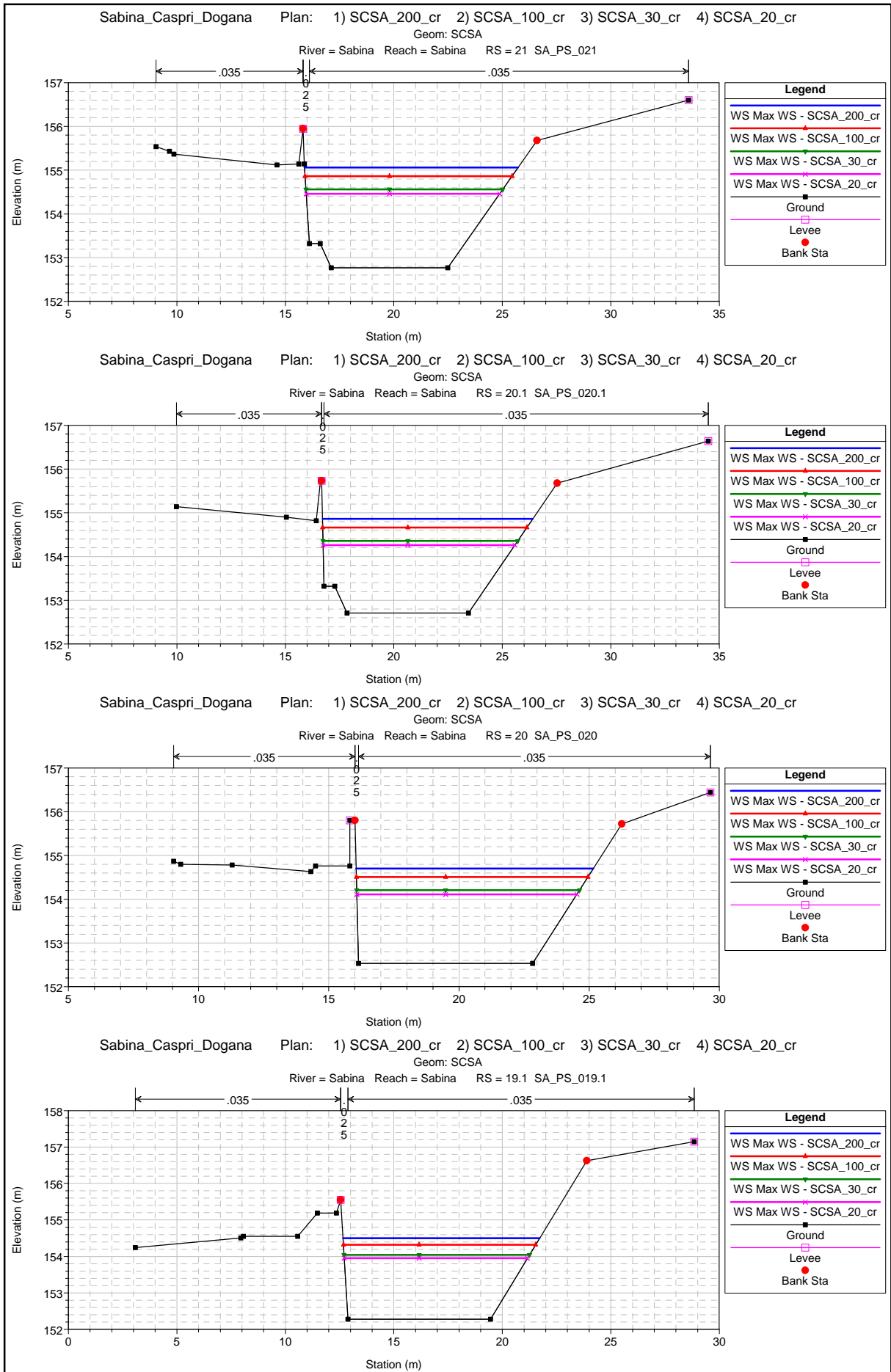
Sabina Sabina

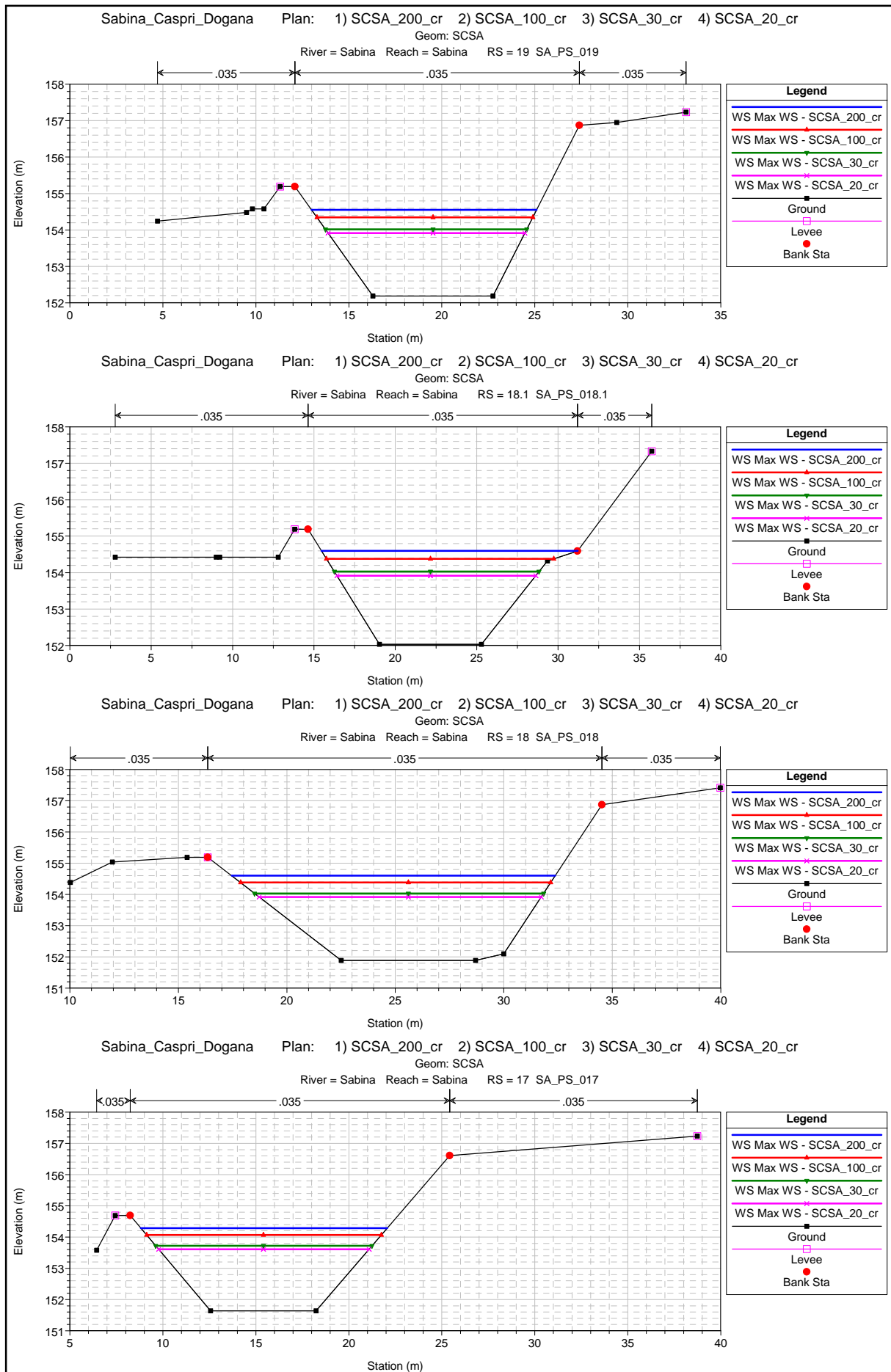
Elevation (m)

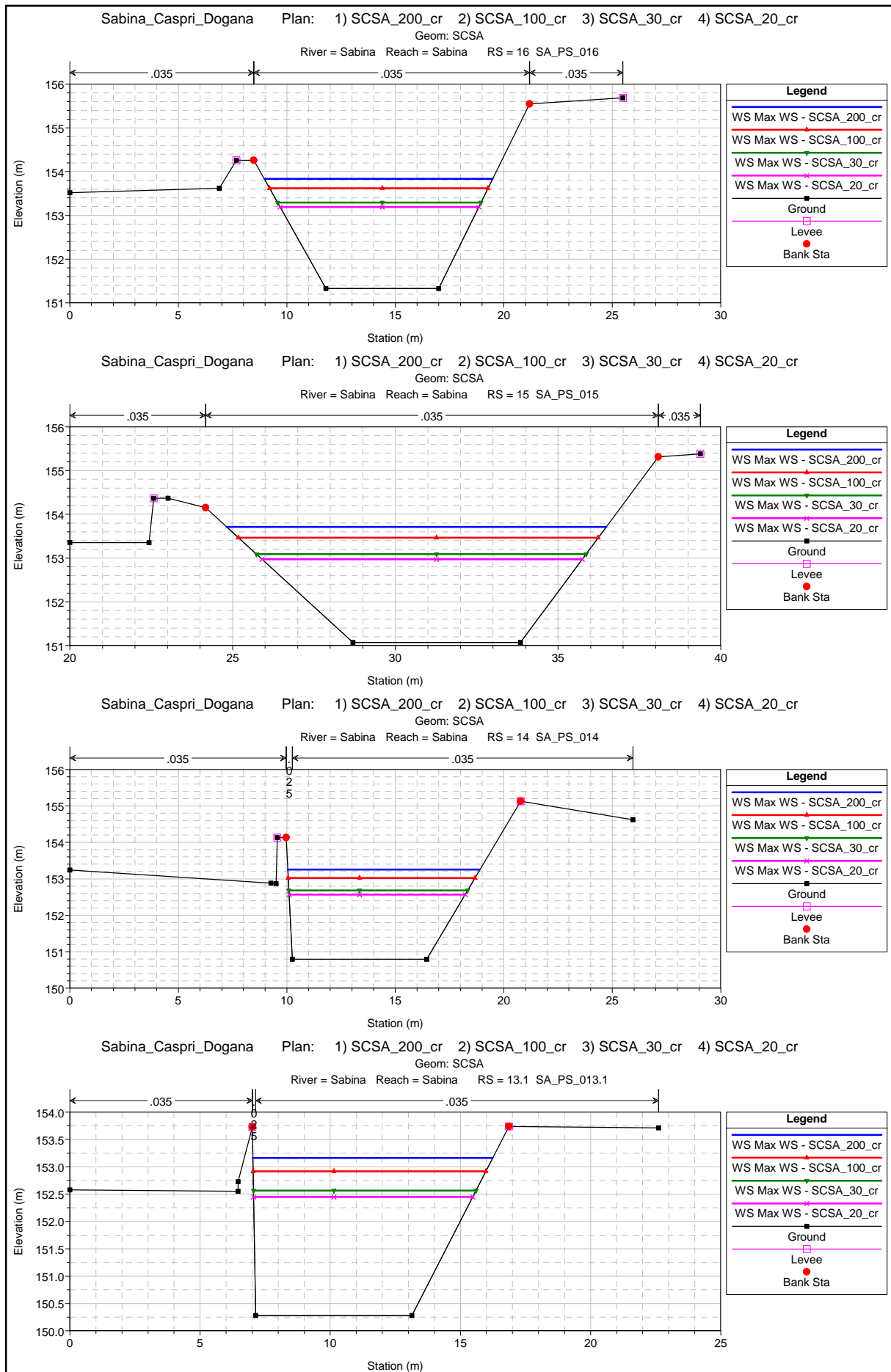
Main Channel Distance (m)

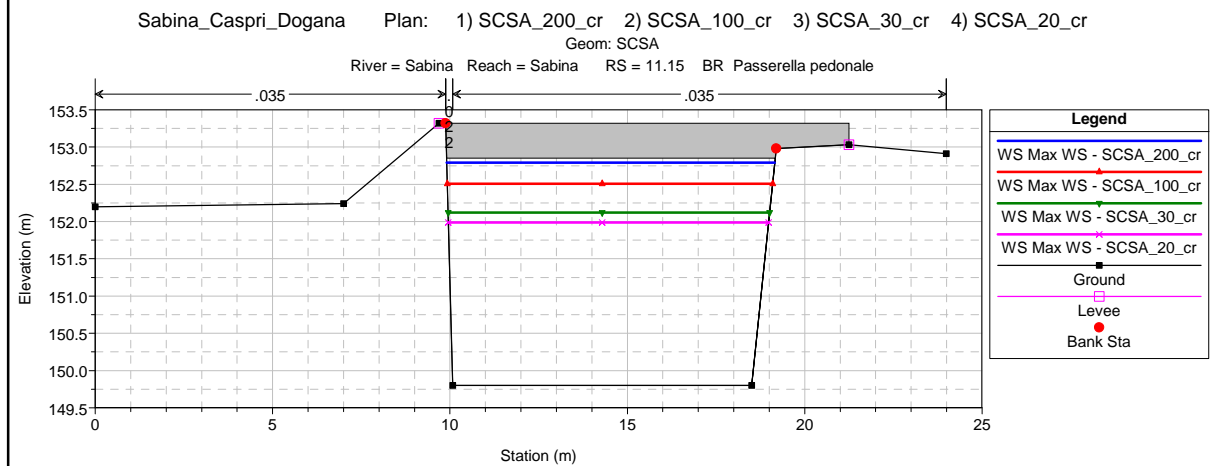
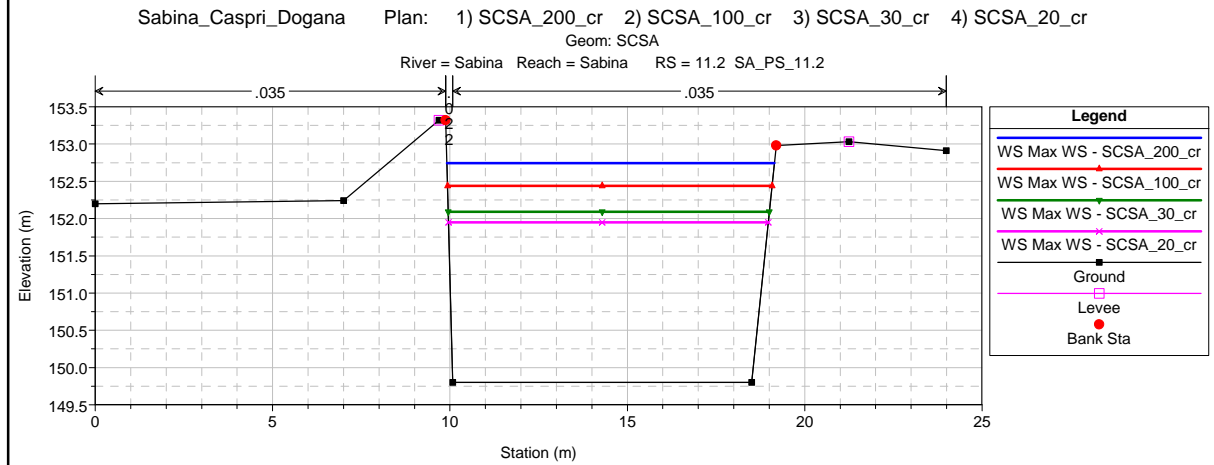
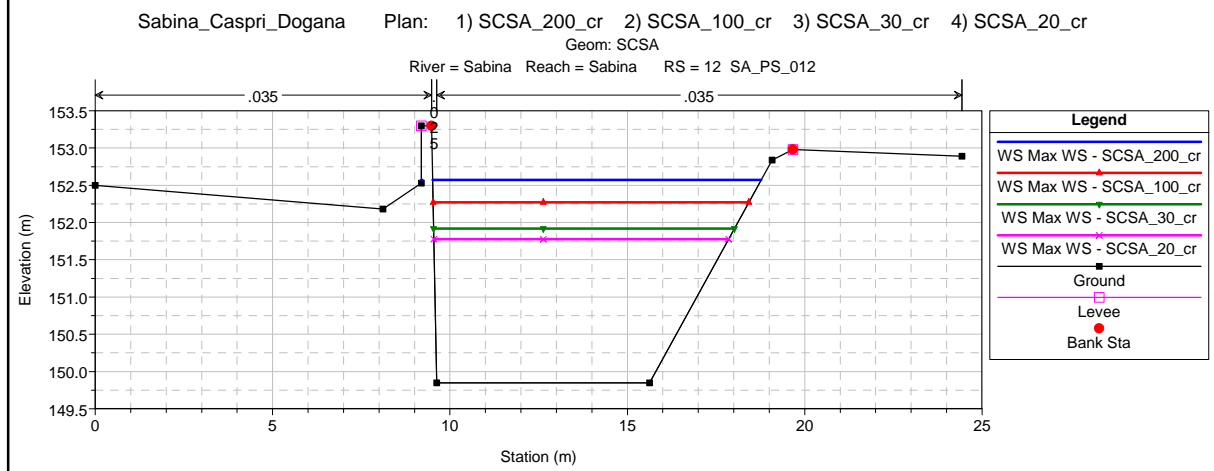
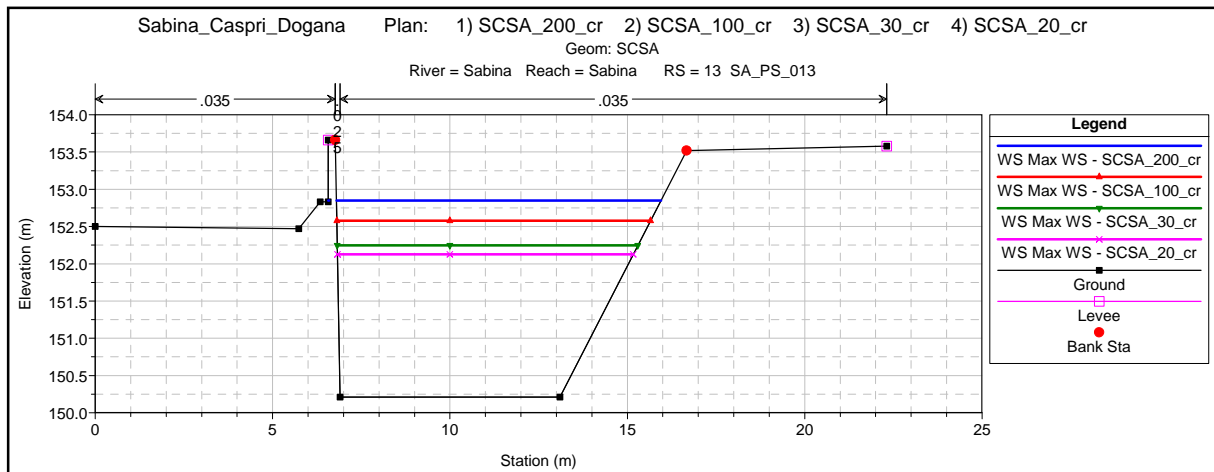


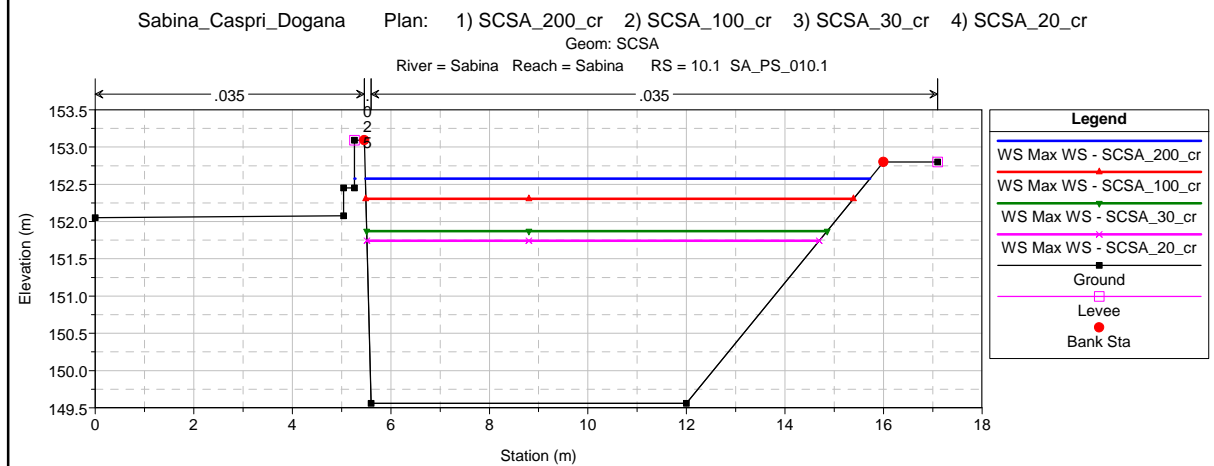
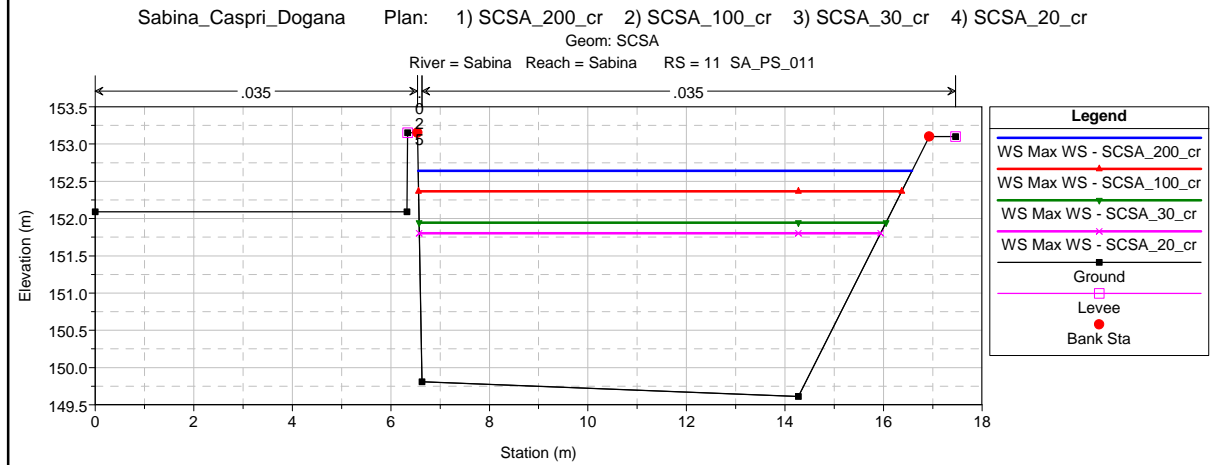
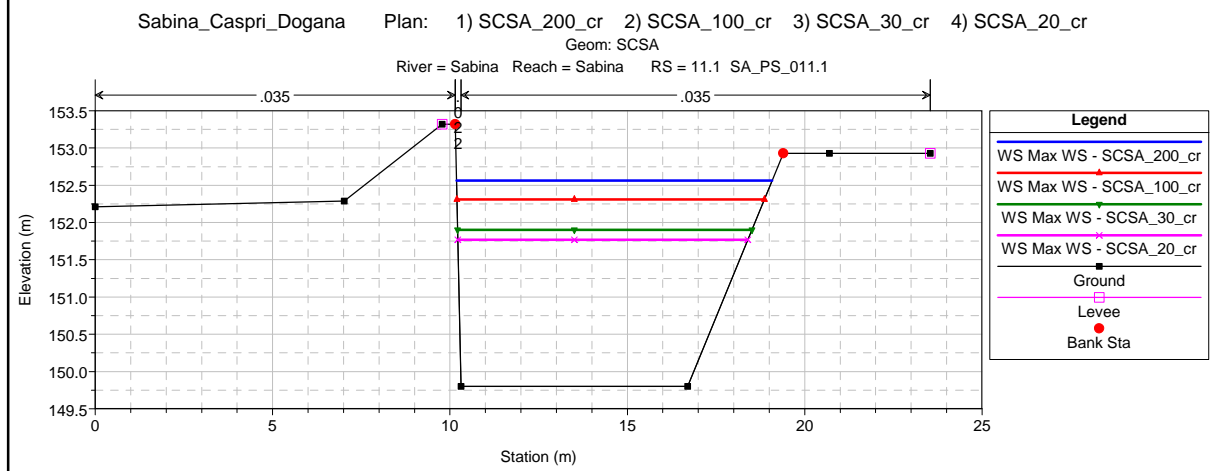
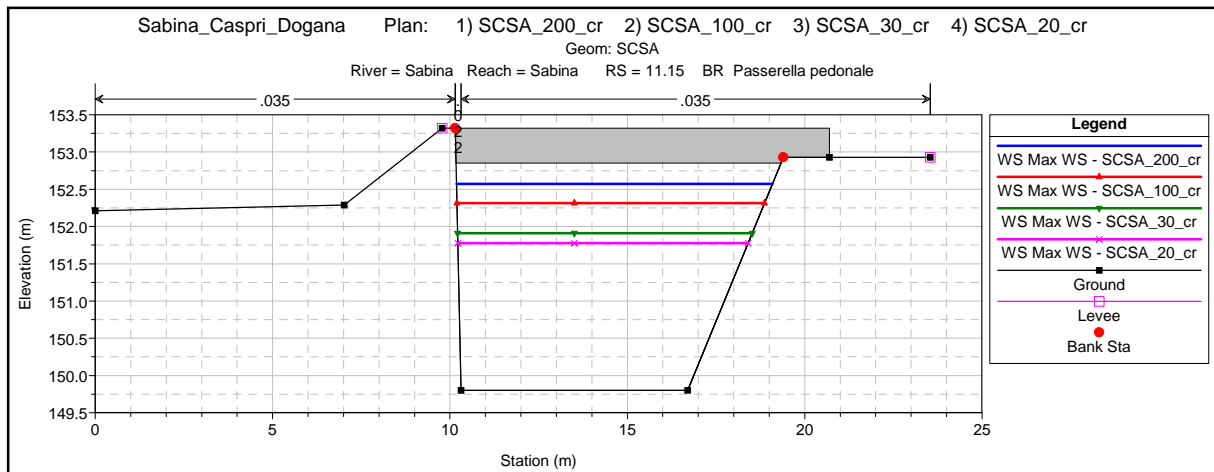


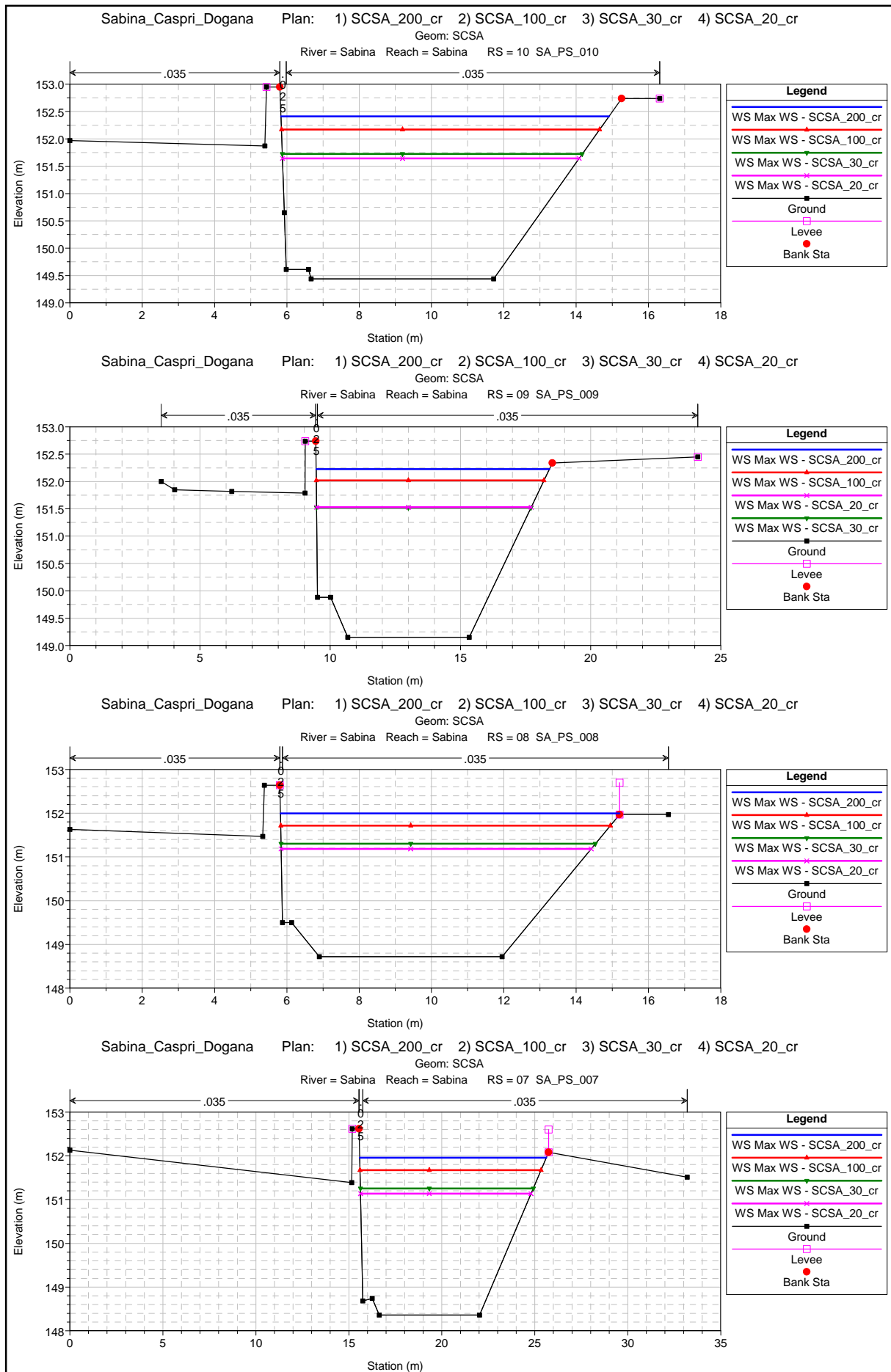


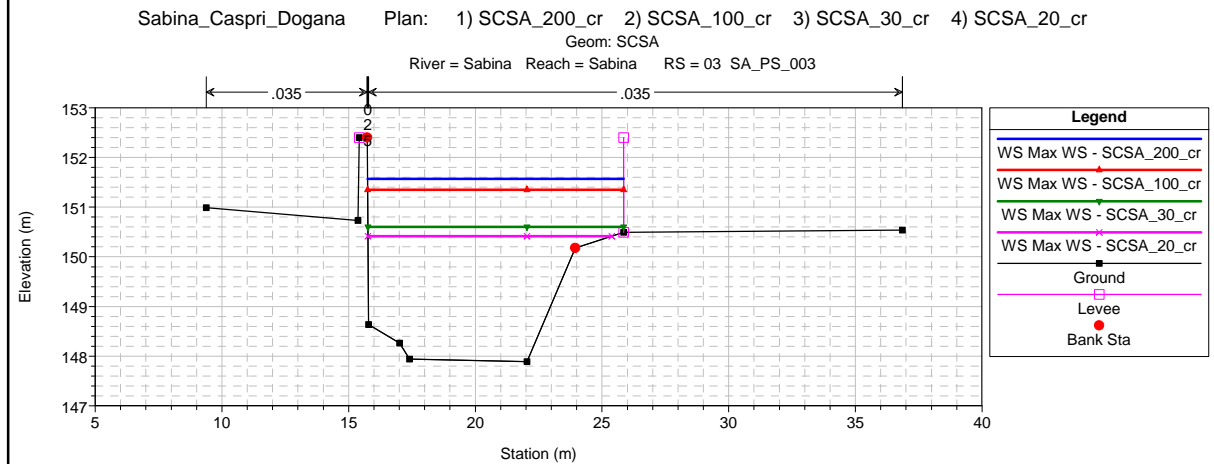
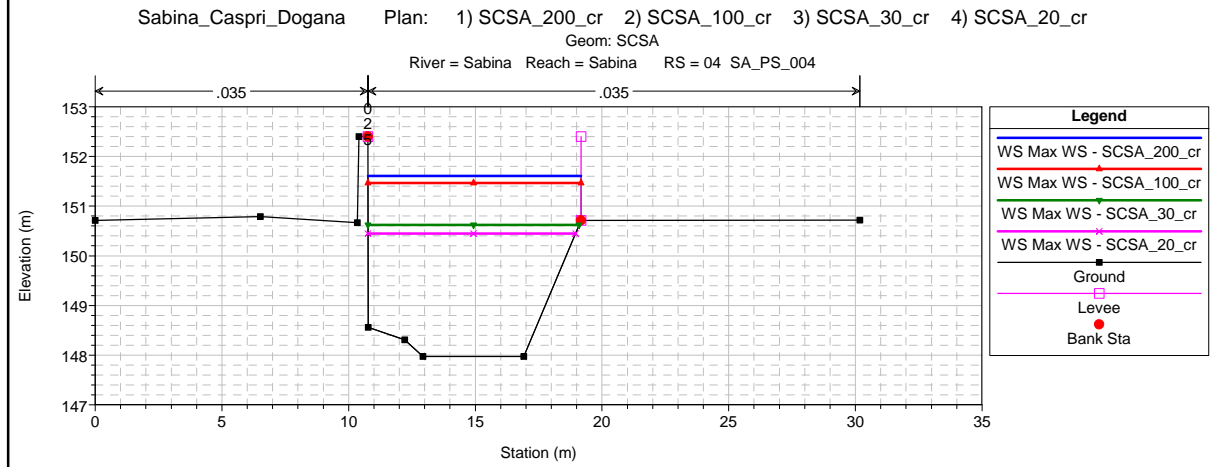
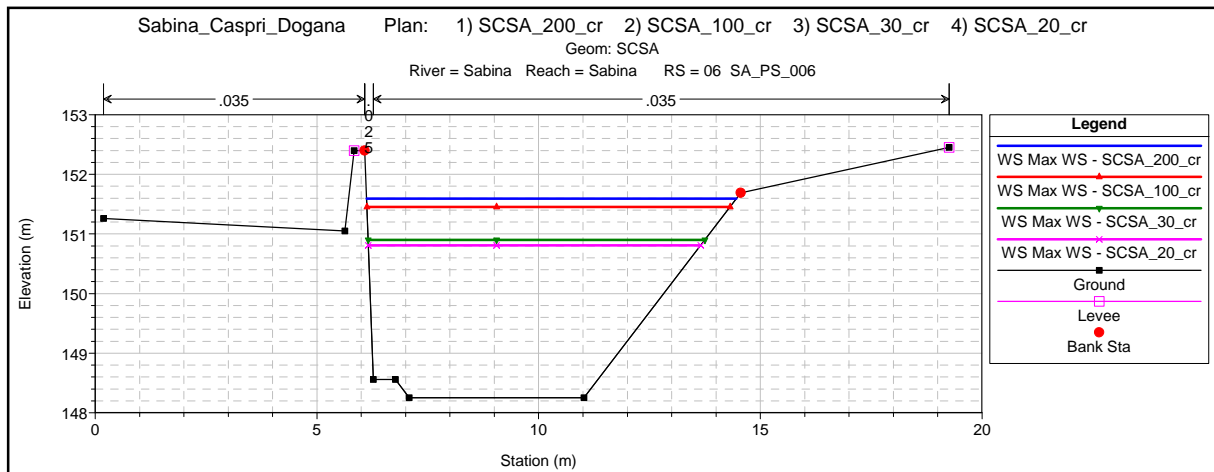






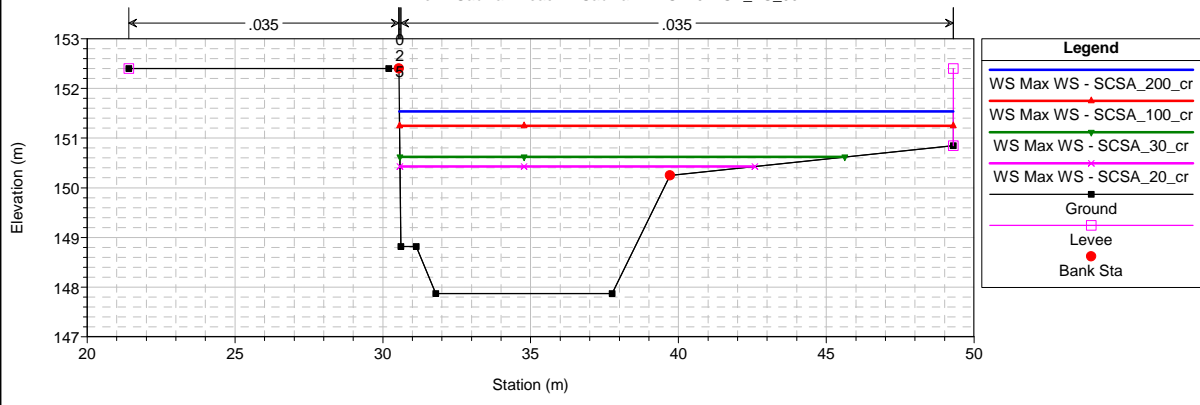






Sabina_Caspri_Dogana Plan: 1) SCSA_200_cr 2) SCSA_100_cr 3) SCSA_30_cr 4) SCSA_20_cr
Geom: SCSA

River = Sabina Reach = Sabina RS = 02 SA_PS_002



HEC-RAS River: Sabina Reach: Sabina Profile: Max WS

Reach	River Sta	Profile	Plan	Q Total (m3/s)	Min Ch El (m)	W.S. Elev (m)	Crit W.S. (m)	E.G. Elev (m)	E.G. Slope (m/m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Froude # Chl
Sabina	25	Max WS	SCSA_200_cr	66.36	153.86	156.11	156.10	156.94	0.012311	4.03	16.47	9.70	0.99
Sabina	25	Max WS	SCSA_100_cr	56.85	153.86	155.92	155.91	156.69	0.012500	3.87	14.67	9.38	0.99
Sabina	25	Max WS	SCSA_30_cr	43.05	153.86	155.62	155.61	156.28	0.012646	3.60	11.97	8.74	0.98
Sabina	25	Max WS	SCSA_20_cr	39.05	153.86	155.53	155.51	156.15	0.012678	3.50	11.16	8.54	0.98
Sabina	24	Max WS	SCSA_200_cr	66.34	153.49	155.77	155.77	156.65	0.013081	4.16	15.97	9.04	1.00
Sabina	24	Max WS	SCSA_100_cr	56.85	153.49	155.58	155.58	156.39	0.013232	3.99	14.26	8.84	1.00
Sabina	24	Max WS	SCSA_30_cr	43.05	153.49	155.28	155.29	155.98	0.013683	3.71	11.61	8.51	1.01
Sabina	24	Max WS	SCSA_20_cr	39.04	153.49	155.17	155.20	155.85	0.014098	3.63	10.75	8.40	1.03
Sabina	23.1	Max WS	SCSA_200_cr	66.43	153.27	155.71		156.18	0.004992	3.02	22.03	11.77	0.70
Sabina	23.1	Max WS	SCSA_100_cr	56.85	153.27	155.52		155.94	0.004977	2.87	19.78	11.50	0.70
Sabina	23.1	Max WS	SCSA_30_cr	43.05	153.27	155.21		155.57	0.004979	2.64	16.32	11.06	0.69
Sabina	23.1	Max WS	SCSA_20_cr	39.04	153.27	155.11		155.45	0.005067	2.57	15.17	10.92	0.70
Sabina	23	Max WS	SCSA_200_cr	66.44	153.20	155.60	155.58	156.27	0.008703	3.75	19.29	14.54	0.83
Sabina	23	Max WS	SCSA_100_cr	56.84	153.20	155.42	155.34	156.05	0.009038	3.60	16.84	12.87	0.84
Sabina	23	Max WS	SCSA_30_cr	43.05	153.20	155.08	155.05	155.68	0.010398	3.46	13.02	10.56	0.88
Sabina	23	Max WS	SCSA_20_cr	39.04	153.20	154.99	154.95	155.56	0.010495	3.37	12.04	10.37	0.87
Sabina	22.3	Max WS	SCSA_200_cr	66.43	153.18	155.58		156.06	0.006248	3.06	22.21	14.97	0.74
Sabina	22.3	Max WS	SCSA_100_cr	56.84	153.18	155.38		155.83	0.006624	2.98	19.25	14.08	0.75
Sabina	22.3	Max WS	SCSA_30_cr	43.05	153.18	155.05		155.45	0.007175	2.82	15.29	10.91	0.76
Sabina	22.3	Max WS	SCSA_20_cr	39.04	153.18	154.94		155.33	0.007314	2.76	14.15	10.61	0.76
Sabina	22.2	Max WS	SCSA_200_cr	66.43	153.14	155.54		155.98	0.005812	2.96	22.43	12.56	0.71
Sabina	22.2	Max WS	SCSA_100_cr	56.84	153.14	155.35		155.76	0.005840	2.83	20.07	12.17	0.70
Sabina	22.2	Max WS	SCSA_30_cr	43.05	153.14	155.02		155.38	0.006077	2.65	16.23	11.29	0.71
Sabina	22.2	Max WS	SCSA_20_cr	39.04	153.14	154.91		155.25	0.006221	2.60	15.01	10.98	0.71
Sabina	22.1	Max WS	SCSA_200_cr	66.42	153.00	155.70		155.93	0.002263	2.12	31.29	14.17	0.46
Sabina	22.1	Max WS	SCSA_100_cr	56.84	153.00	155.50		155.70	0.002174	2.00	28.46	13.81	0.44
Sabina	22.1	Max WS	SCSA_30_cr	43.05	153.00	155.15		155.32	0.002079	1.80	23.85	13.18	0.43
Sabina	22.1	Max WS	SCSA_20_cr	39.04	153.00	155.04		155.20	0.002063	1.75	22.37	12.96	0.42
Sabina	22	Max WS	SCSA_200_cr	66.42	152.96	155.26		156.02	0.009774	3.85	17.26	8.53	0.86
Sabina	22	Max WS	SCSA_100_cr	56.84	152.96	155.09		155.75	0.009293	3.60	15.77	8.39	0.84
Sabina	22	Max WS	SCSA_30_cr	43.05	152.96	154.80		155.33	0.008531	3.21	13.42	8.16	0.80
Sabina	22	Max WS	SCSA_20_cr	39.04	152.96	154.71		155.19	0.008315	3.08	12.66	8.08	0.79

HEC-RAS River: Sabina Reach: Sabina Profile: Max WS (Continued)

Reach	River Sta	Profile	Plan	Q Total (m3/s)	Min Ch El (m)	W.S. Elev (m)	Crit W.S. (m)	E.G. Elev (m)	E.G. Slope (m/m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Froude # Chl
Sabina	21	Max WS	SCSA_200_cr	65.98	152.77	155.06		155.74	0.009059	3.65	18.09	9.84	0.86
Sabina	21	Max WS	SCSA_100_cr	56.83	152.77	154.86		155.49	0.009211	3.51	16.20	9.54	0.86
Sabina	21	Max WS	SCSA_30_cr	43.02	152.77	154.56		155.09	0.009170	3.22	13.36	9.07	0.85
Sabina	21	Max WS	SCSA_20_cr	39.02	152.77	154.46		154.96	0.009181	3.12	12.49	8.92	0.84
Sabina	20.1	Max WS	SCSA_200_cr	65.98	152.71	154.86		155.62	0.010766	3.86	17.10	9.69	0.93
Sabina	20.1	Max WS	SCSA_100_cr	56.82	152.71	154.67		155.38	0.011153	3.73	15.23	9.42	0.94
Sabina	20.1	Max WS	SCSA_30_cr	43.01	152.71	154.36	154.30	154.97	0.011577	3.47	12.41	8.98	0.94
Sabina	20.1	Max WS	SCSA_20_cr	39.02	152.71	154.26	154.21	154.84	0.011768	3.38	11.55	8.84	0.94
Sabina	20	Max WS	SCSA_200_cr	65.97	152.53	154.70		155.46	0.010239	3.84	17.16	9.11	0.89
Sabina	20	Max WS	SCSA_100_cr	56.66	152.53	154.51		155.20	0.010300	3.68	15.41	8.89	0.89
Sabina	20	Max WS	SCSA_30_cr	42.85	152.53	154.21		154.78	0.010116	3.35	12.79	8.56	0.87
Sabina	20	Max WS	SCSA_20_cr	38.85	152.53	154.11		154.65	0.010115	3.25	11.97	8.45	0.87
Sabina	19.1	Max WS	SCSA_200_cr	65.14	152.28	154.50		155.22	0.009477	3.75	17.37	9.06	0.86
Sabina	19.1	Max WS	SCSA_100_cr	55.56	152.28	154.32		154.96	0.009115	3.53	15.76	8.86	0.84
Sabina	19.1	Max WS	SCSA_30_cr	42.18	152.28	154.04		154.55	0.008568	3.17	13.32	8.55	0.81
Sabina	19.1	Max WS	SCSA_20_cr	38.30	152.28	153.95		154.43	0.008396	3.05	12.55	8.44	0.80
Sabina	19	Max WS	SCSA_200_cr	62.51	152.19	154.55		154.97	0.005427	2.86	21.88	12.10	0.68
Sabina	19	Max WS	SCSA_100_cr	53.33	152.19	154.34		154.73	0.005490	2.74	19.45	11.61	0.68
Sabina	19	Max WS	SCSA_30_cr	40.50	152.19	154.02		154.35	0.005698	2.57	15.79	10.83	0.68
Sabina	19	Max WS	SCSA_20_cr	36.95	152.19	153.91		154.24	0.005836	2.52	14.68	10.58	0.68
Sabina	18.1	Max WS	SCSA_200_cr	62.97	152.03	154.60		154.88	0.003765	2.35	26.74	15.75	0.58
Sabina	18.1	Max WS	SCSA_100_cr	53.33	152.03	154.38		154.64	0.003614	2.28	23.41	13.96	0.56
Sabina	18.1	Max WS	SCSA_30_cr	40.50	152.03	154.03		154.26	0.003727	2.15	18.83	12.58	0.56
Sabina	18.1	Max WS	SCSA_20_cr	36.95	152.03	153.92		154.14	0.003840	2.12	17.44	12.23	0.57
Sabina	18	Max WS	SCSA_200_cr	62.86	151.89	154.60		154.82	0.002463	2.10	29.99	14.91	0.47
Sabina	18	Max WS	SCSA_100_cr	53.33	151.89	154.38		154.58	0.002428	1.99	26.78	14.30	0.46
Sabina	18	Max WS	SCSA_30_cr	40.63	151.89	154.03		154.21	0.002450	1.85	21.98	13.32	0.46
Sabina	18	Max WS	SCSA_20_cr	36.95	151.89	153.92		154.09	0.002469	1.80	20.49	13.00	0.46
Sabina	17	Max WS	SCSA_200_cr	69.31	151.64	154.29		154.68	0.004699	2.77	25.05	13.25	0.64
Sabina	17	Max WS	SCSA_100_cr	59.77	151.64	154.07		154.44	0.004878	2.69	22.19	12.62	0.65
Sabina	17	Max WS	SCSA_30_cr	45.86	151.64	153.72		154.05	0.005123	2.55	18.00	11.63	0.65

HEC-RAS River: Sabina Reach: Sabina Profile: Max WS (Continued)

Reach	River Sta	Profile	Plan	Q Total (m3/s)	Min Ch El (m)	W.S. Elev (m)	Crit W.S. (m)	E.G. Elev (m)	E.G. Slope (m/m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Froude # Chl
Sabina	11.1	Max WS	SCSA_200_cr	68.62	149.80	152.56		153.10	0.005681	3.25	21.14	8.90	0.67
Sabina	11.1	Max WS	SCSA_100_cr	56.60	149.80	152.31		152.77	0.005324	3.00	18.88	8.67	0.65
Sabina	11.1	Max WS	SCSA_30_cr	45.45	149.80	151.90		152.34	0.006137	2.95	15.42	8.30	0.69
Sabina	11.1	Max WS	SCSA_20_cr	38.69	149.80	151.77		152.14	0.005497	2.70	14.34	8.18	0.65
Sabina	11.09		Lat Struct										
Sabina	11.08		Lat Struct										
Sabina	11	Max WS	SCSA_200_cr	68.66	149.61	152.64		153.00	0.003447	2.64	26.00	10.03	0.52
Sabina	11	Max WS	SCSA_100_cr	56.71	149.61	152.37		152.67	0.003226	2.44	23.28	9.81	0.50
Sabina	11	Max WS	SCSA_30_cr	45.57	149.61	151.94		152.23	0.003630	2.37	19.21	9.48	0.53
Sabina	11	Max WS	SCSA_20_cr	38.76	149.61	151.80		152.04	0.003244	2.17	17.86	9.36	0.50
Sabina	10.1	Max WS	SCSA_200_cr	68.66	149.56	152.58		152.96	0.003813	2.73	25.11	10.24	0.56
Sabina	10.1	Max WS	SCSA_100_cr	56.66	149.56	152.31		152.63	0.003584	2.53	22.37	9.90	0.54
Sabina	10.1	Max WS	SCSA_30_cr	45.45	149.56	151.87		152.19	0.004132	2.50	18.19	9.34	0.57
Sabina	10.1	Max WS	SCSA_20_cr	37.16	149.56	151.74		151.99	0.003350	2.19	17.00	9.18	0.51
Sabina	10	Max WS	SCSA_200_cr	68.54	149.44	152.41		152.91	0.005352	3.13	21.86	9.07	0.64
Sabina	10	Max WS	SCSA_100_cr	56.12	149.44	152.17		152.58	0.004788	2.85	19.71	8.80	0.61
Sabina	10	Max WS	SCSA_30_cr	45.39	149.44	151.72		152.14	0.005727	2.85	15.90	8.29	0.66
Sabina	10	Max WS	SCSA_20_cr	37.02	149.44	151.64		151.94	0.004297	2.43	15.24	8.20	0.57
Sabina	09	Max WS	SCSA_200_cr	68.05	149.15	152.23		152.71	0.005077	3.07	22.13	8.96	0.62
Sabina	09	Max WS	SCSA_100_cr	55.74	149.15	152.02		152.40	0.004340	2.75	20.29	8.74	0.58
Sabina	09	Max WS	SCSA_30_cr	45.04	149.15	151.52		151.92	0.005459	2.80	16.07	8.24	0.64
Sabina	09	Max WS	SCSA_20_cr	35.58	149.15	151.53		151.78	0.003360	2.20	16.15	8.25	0.50
Sabina	08	Max WS	SCSA_200_cr	71.71	148.72	152.00		152.42	0.004101	2.89	24.83	9.38	0.57
Sabina	08	Max WS	SCSA_100_cr	61.58	148.72	151.72		152.11	0.004108	2.77	22.25	9.12	0.57
Sabina	08	Max WS	SCSA_30_cr	47.37	148.72	151.30		151.63	0.004055	2.56	18.53	8.69	0.56
Sabina	08	Max WS	SCSA_20_cr	43.49	148.72	151.19		151.50	0.003992	2.48	17.54	8.57	0.55
Sabina	07	Max WS	SCSA_200_cr	71.69	148.36	151.96		152.27	0.002684	2.47	29.05	10.03	0.46
Sabina	07	Max WS	SCSA_100_cr	61.58	148.36	151.67		151.95	0.002618	2.34	26.26	9.74	0.46
Sabina	07	Max WS	SCSA_30_cr	47.37	148.36	151.25		151.48	0.002454	2.13	22.26	9.30	0.44
Sabina	07	Max WS	SCSA_20_cr	43.47	148.36	151.14		151.35	0.002372	2.05	21.20	9.18	0.43

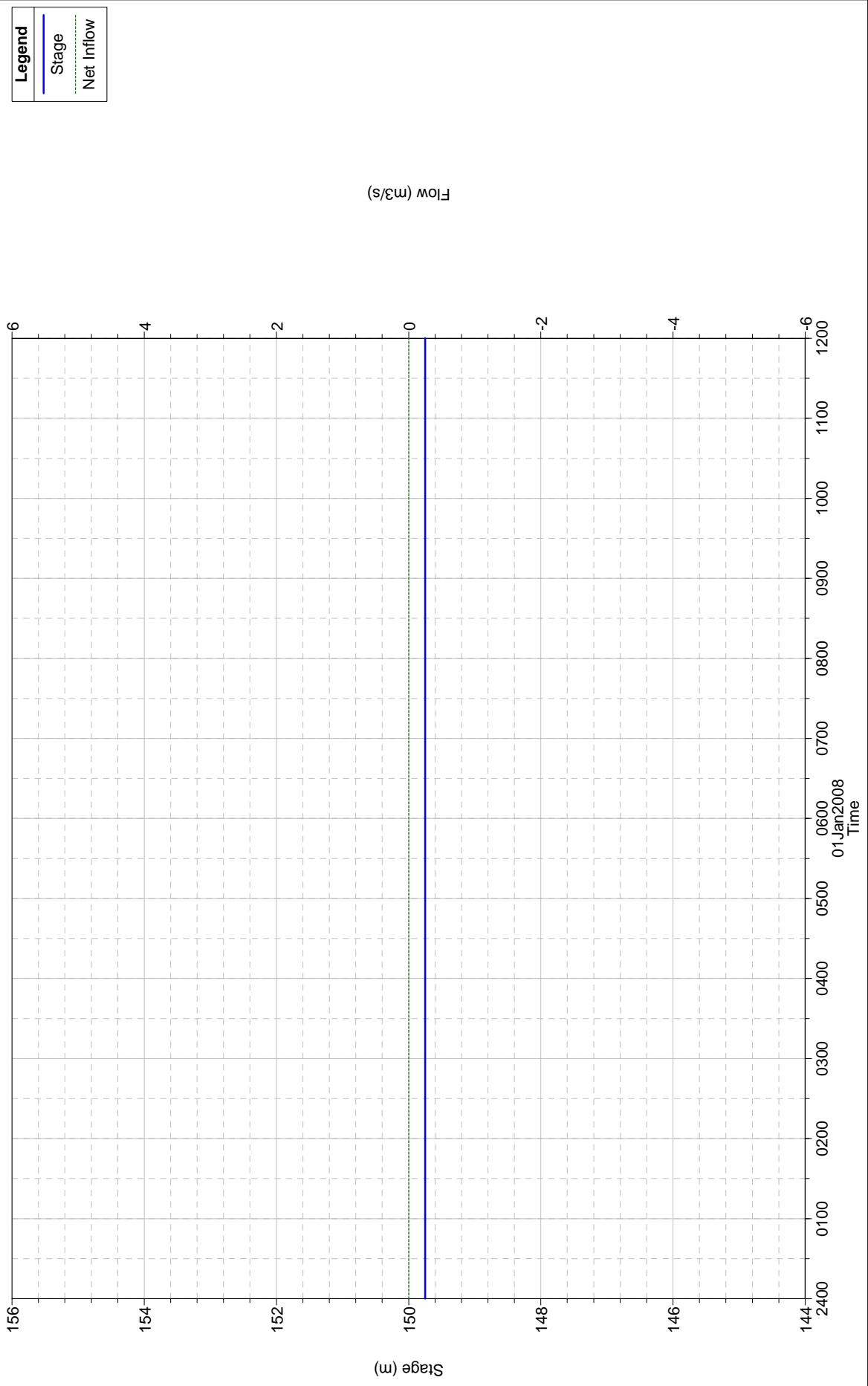
HEC-RAS River: Sabina Reach: Sabina Profile: Max WS (Continued)

Reach	River Sta	Profile	Plan	Q Total (m3/s)	Min Ch El (m)	W.S. Elev (m)	Crit W.S. (m)	E.G. Elev (m)	E.G. Slope (m/m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Froude # Chl
Sabina	06	Max WS	SCSA_200_cr	45.02	148.25	151.59		151.81	0.002286	2.08	21.63	8.34	0.41
Sabina	06	Max WS	SCSA_100_cr	43.80	148.25	151.45		151.69	0.002505	2.14	20.50	8.19	0.43
Sabina	06	Max WS	SCSA_30_cr	47.22	148.25	150.90		151.34	0.005618	2.93	16.13	7.59	0.64
Sabina	06	Max WS	SCSA_20_cr	43.38	148.25	150.81		151.21	0.005346	2.81	15.45	7.49	0.62
Sabina	05	Max WS	SCSA_200_cr	37.58	148.08	151.58		151.67	0.000896	1.40	30.54	20.24	0.26
Sabina	05	Max WS	SCSA_100_cr	42.71	148.08	151.42		151.57	0.001481	1.75	27.33	20.22	0.34
Sabina	05	Max WS	SCSA_30_cr	36.76	148.08	150.69		150.92	0.003004	2.15	17.10	8.02	0.47
Sabina	05	Max WS	SCSA_20_cr	39.36	148.08	150.56		150.86	0.004104	2.45	16.07	7.88	0.55
Sabina	04	Max WS	SCSA_200_cr	46.15	147.97	151.60		151.76	0.001341	1.73	26.65	8.41	0.31
Sabina	04	Max WS	SCSA_100_cr	36.21	147.97	151.47		151.57	0.000935	1.42	25.49	8.41	0.26
Sabina	04	Max WS	SCSA_30_cr	36.59	147.97	150.62		150.82	0.002427	1.99	18.37	8.33	0.43
Sabina	04	Max WS	SCSA_20_cr	39.30	147.97	150.45		150.72	0.003514	2.32	16.95	8.19	0.51
Sabina	03	Max WS	SCSA_200_cr	34.39	147.89	151.57		151.65	0.000563	1.22	29.40	10.11	0.21
Sabina	03	Max WS	SCSA_100_cr	44.74	147.89	151.35		151.50	0.001196	1.71	27.16	10.10	0.31
Sabina	03	Max WS	SCSA_30_cr	35.37	147.89	150.60		150.78	0.001881	1.84	19.63	10.09	0.38
Sabina	03	Max WS	SCSA_20_cr	38.29	147.89	150.41		150.66	0.002920	2.18	17.72	9.62	0.47
Sabina	02	Max WS	SCSA_200_cr	33.59	147.87	151.54	149.25	151.58	0.000336	0.95	39.83	18.74	0.17
Sabina	02	Max WS	SCSA_100_cr	56.68	147.87	151.25	149.76	151.41	0.001402	1.85	34.40	18.74	0.34
Sabina	02	Max WS	SCSA_30_cr	36.80	147.87	150.62	149.33	150.76	0.001480	1.66	23.02	15.05	0.34
Sabina	02	Max WS	SCSA_20_cr	39.45	147.87	150.43	149.39	150.62	0.002249	1.95	20.45	12.01	0.42

HEC-RAS Profile: Max WS

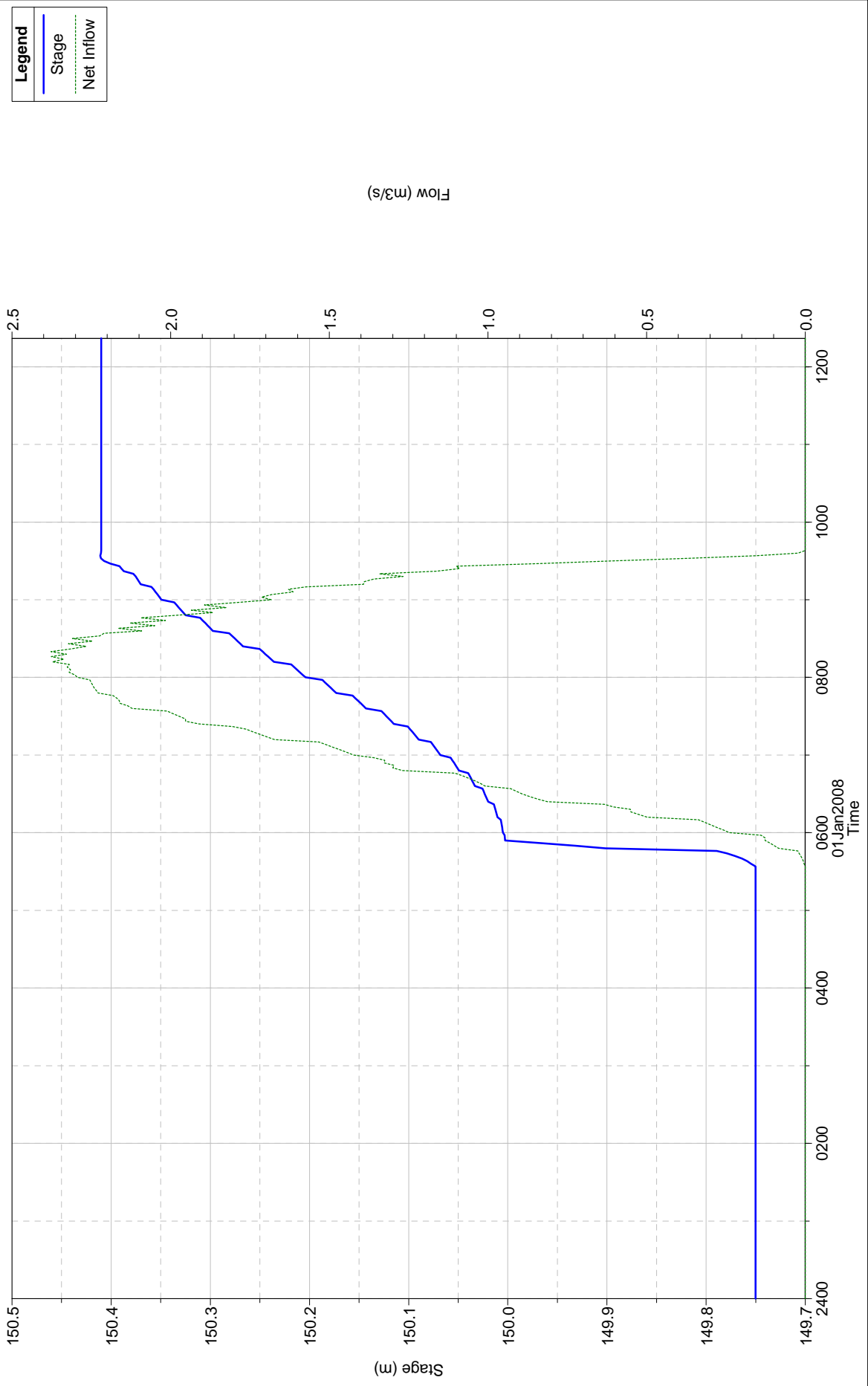
Storage Area	Profile	Plan	W.S. Elev (m)	SA Min El (m)	Net Flux (m3/s)	SA Area (1000 m2)	SA Volume (1000 m3)
Dogana_dx_1	Max WS	SCSA_200_cr	149.07	148.80	3.45	33.81	9.16
Dogana_dx_1	Max WS	SCSA_100_cr	148.84	148.80	0.72	33.81	1.25
Dogana_dx_1	Max WS	SCSA_30_cr	148.80	148.80	0.00	33.81	0.00
Dogana_dx_1	Max WS	SCSA_20_cr	148.80	148.80	0.00	33.81	0.00
Storage_1	Max WS	SCSA_200_cr	151.58	149.75	27.31	41.37	34.36
Storage_1	Max WS	SCSA_100_cr	151.44	149.75	3.28	31.32	29.05
Storage_1	Max WS	SCSA_30_cr	150.41	149.75	2.46	9.70	3.99
Storage_1	Max WS	SCSA_20_cr	149.75	149.75	0.00	0.04	0.00
Storage_Dx	Max WS	SCSA_200_cr	152.66	151.00	29.77	25.15	21.63
Storage_Dx	Max WS	SCSA_100_cr	152.55	151.00	21.53	25.15	18.90
Storage_Dx	Max WS	SCSA_30_cr	152.25	151.00	2.17	25.15	11.56
Storage_Dx	Max WS	SCSA_20_cr	152.06	151.00	1.26	25.15	6.55

Plan: SCSA_20_cr Storage Area: Storage_1

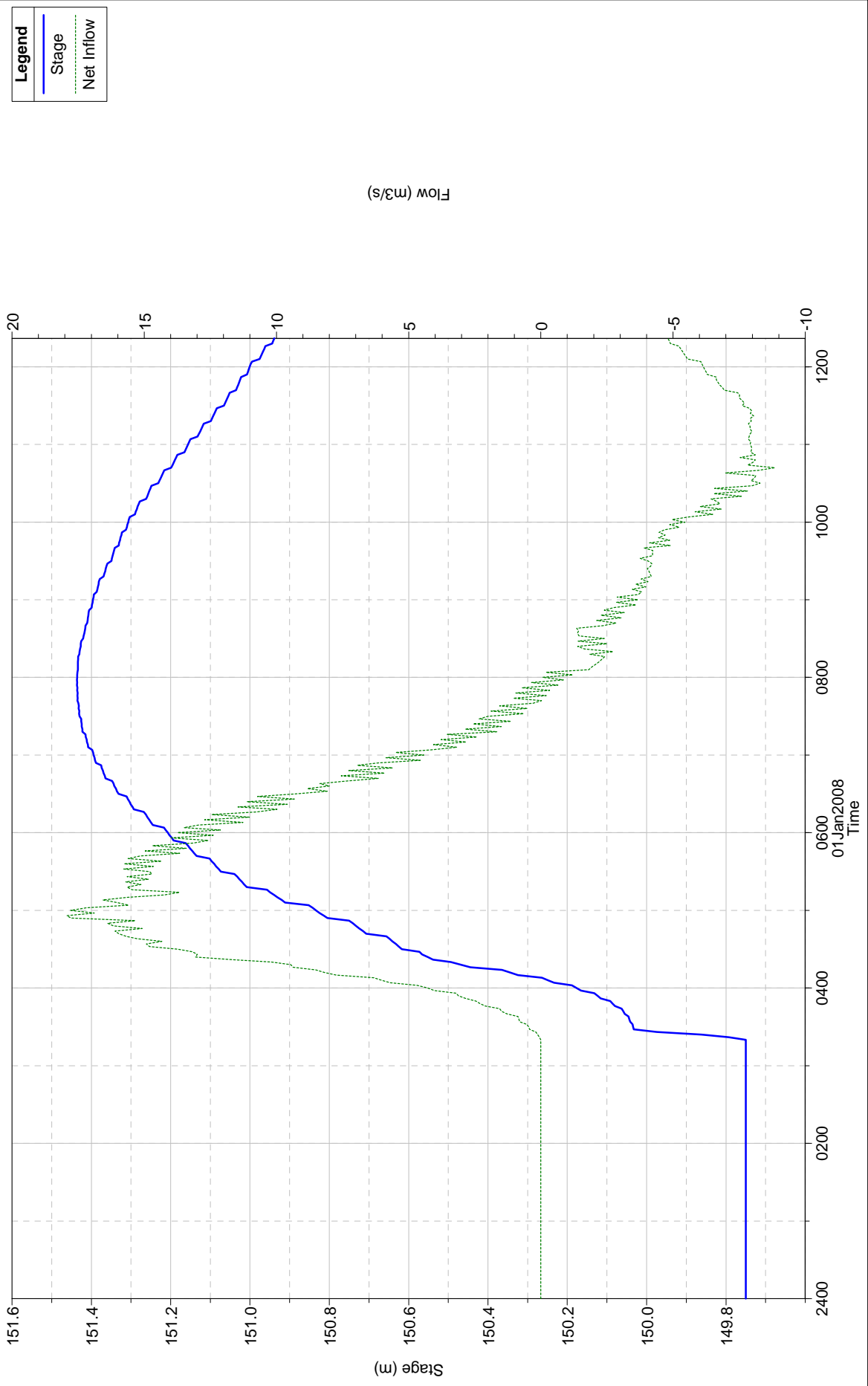


Legend	
—	Stage
...	Net Inflow

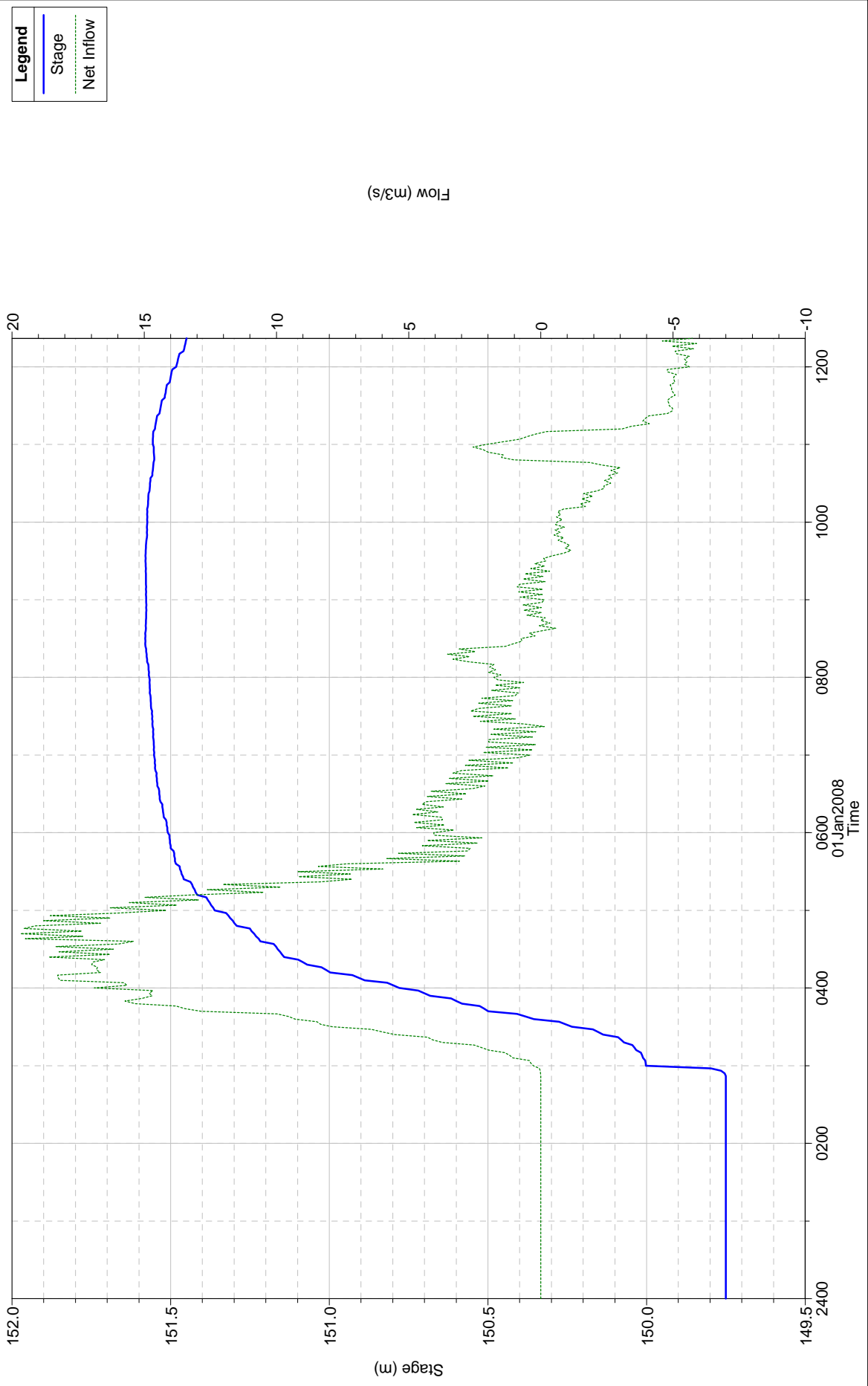
Plan: SCSA_30_cr Storage Area: Storage_1



Plan: SCSA_100_cr Storage Area: Storage_1



Plan: SCSA_200_cr Storage Area: Storage_1



borro del Caspri

verifiche con Tpioggia critico per il Borro del Caspri

- moto vario

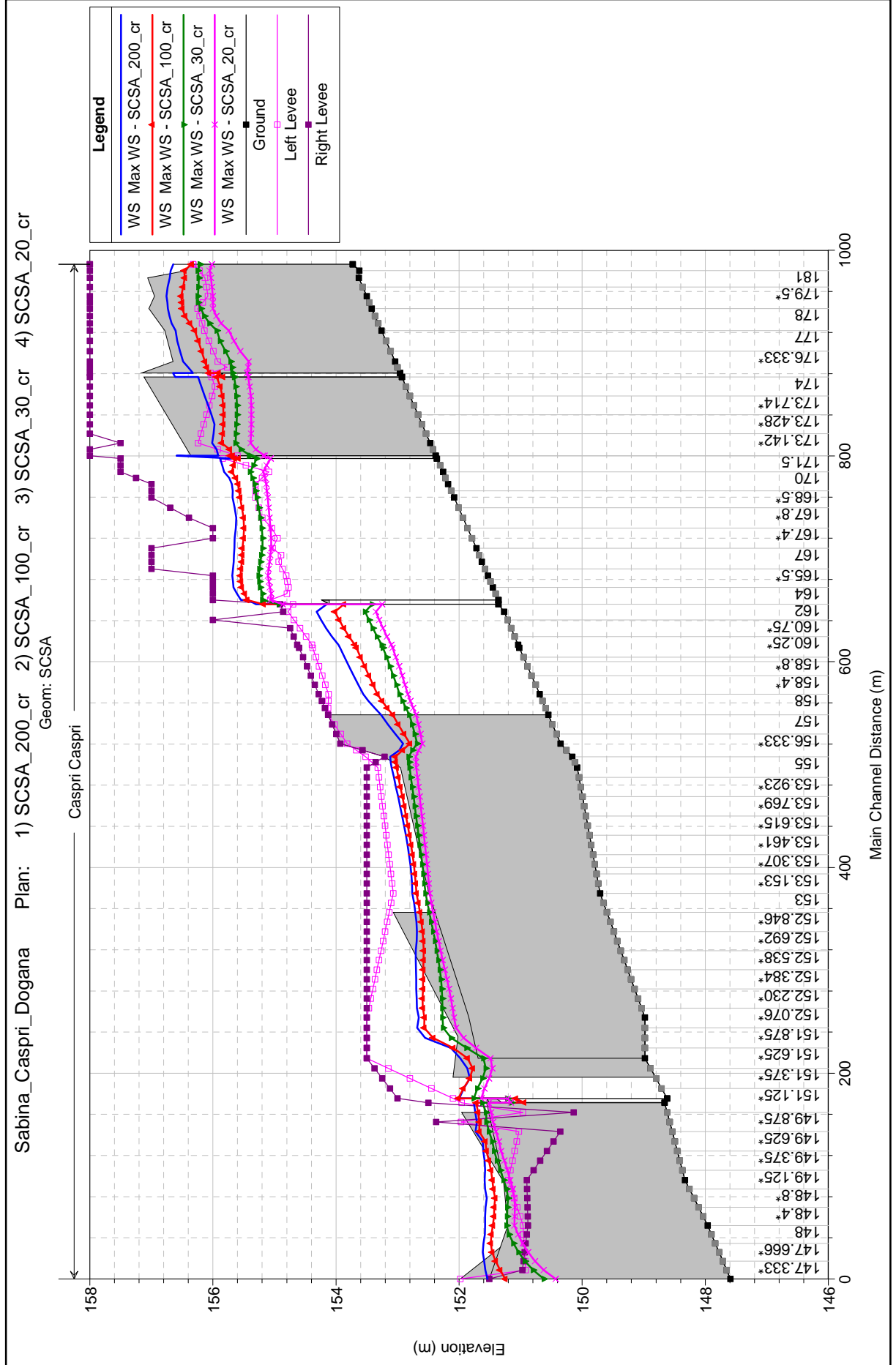
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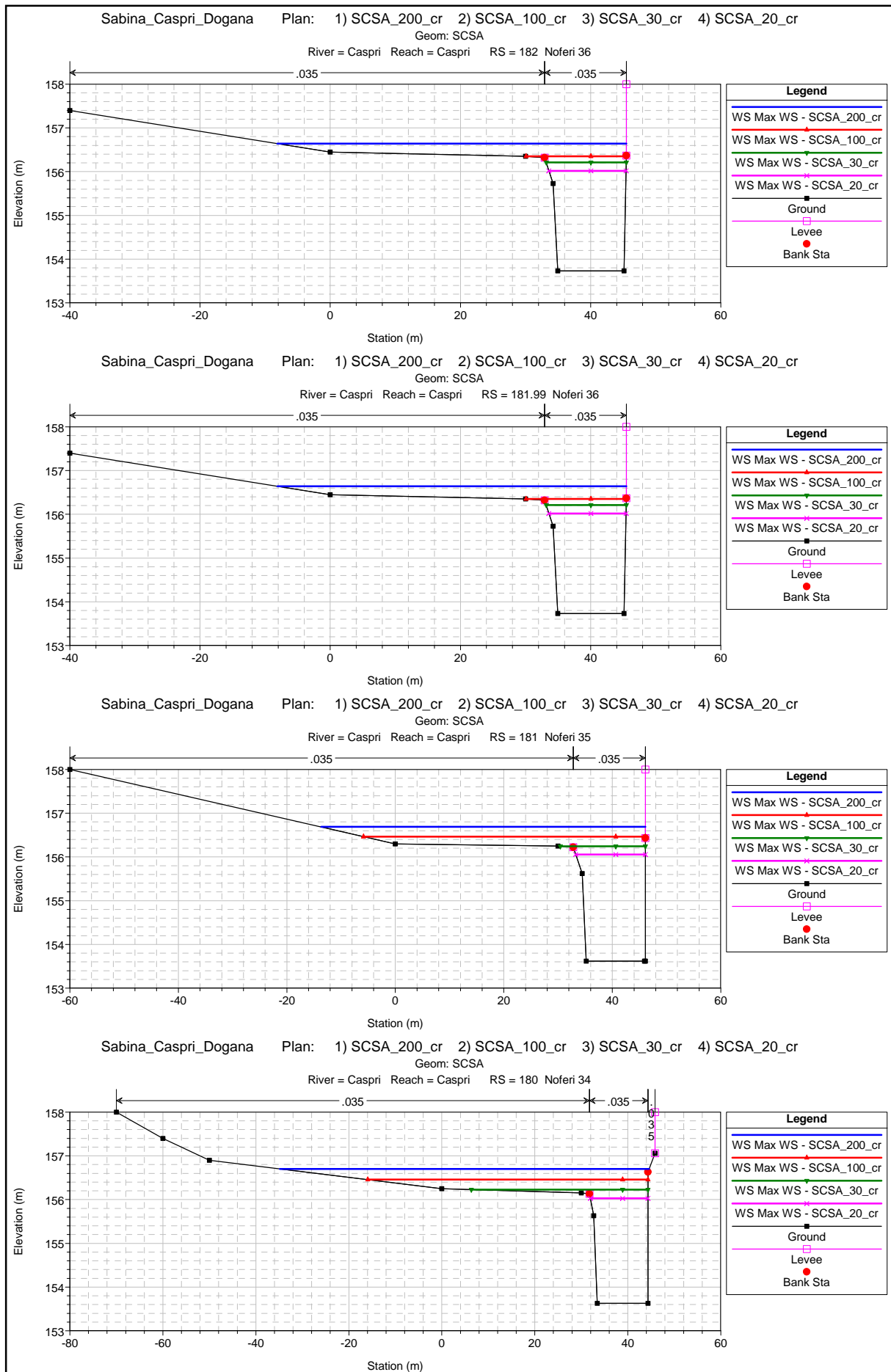
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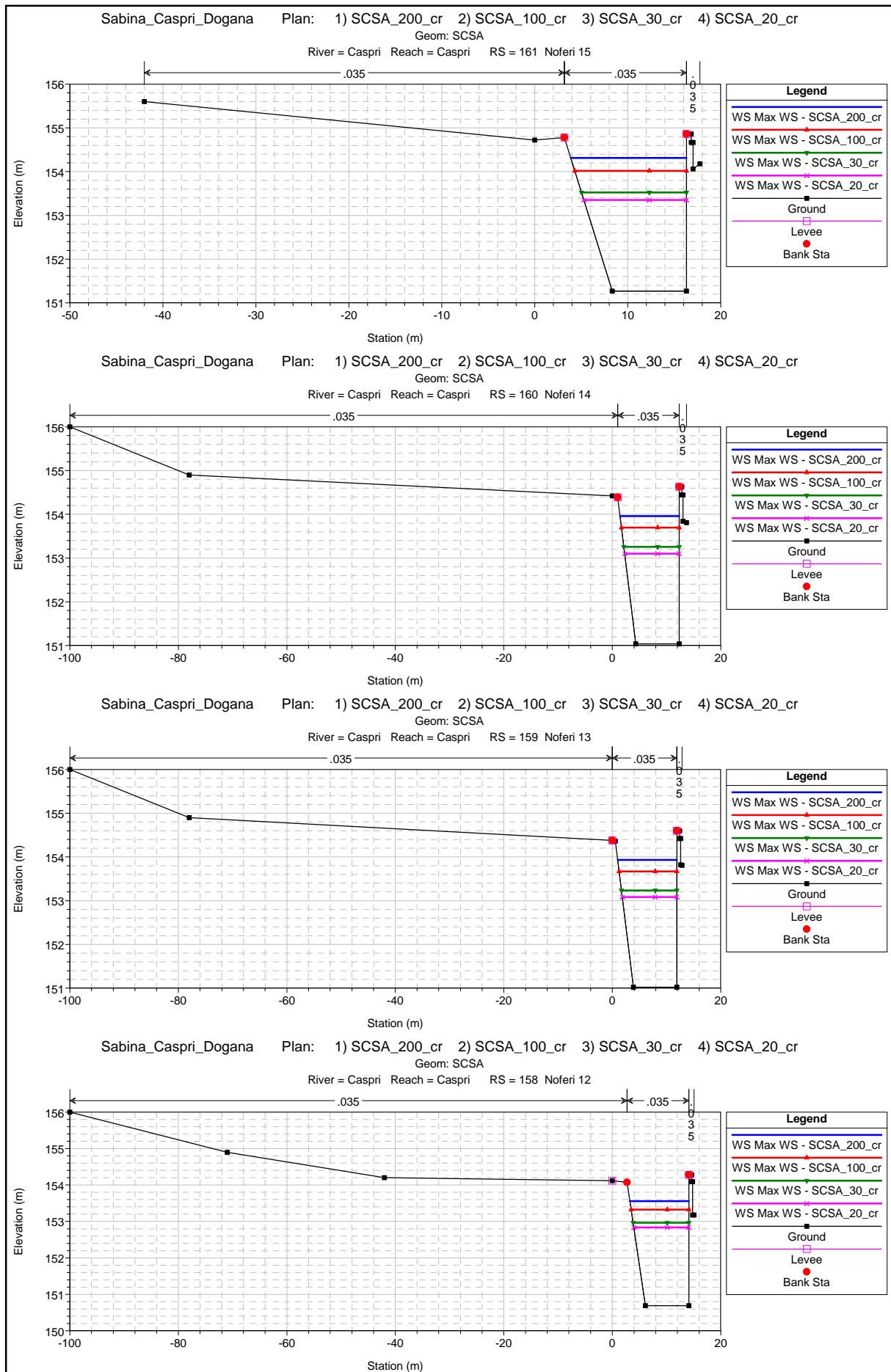
livelli idrici nelle sezioni di verifica

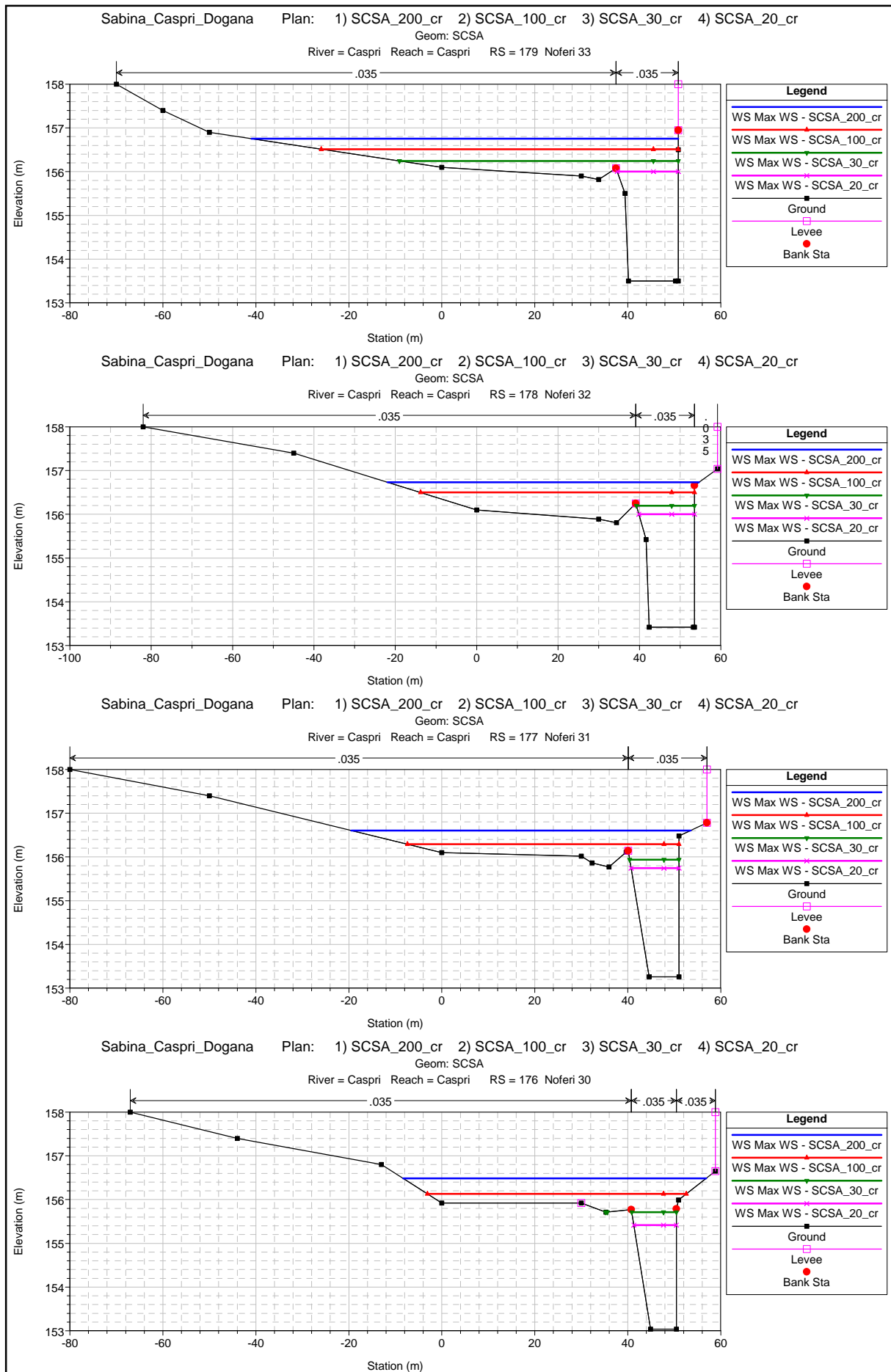
tabella di output del software Hec-ras 4.0

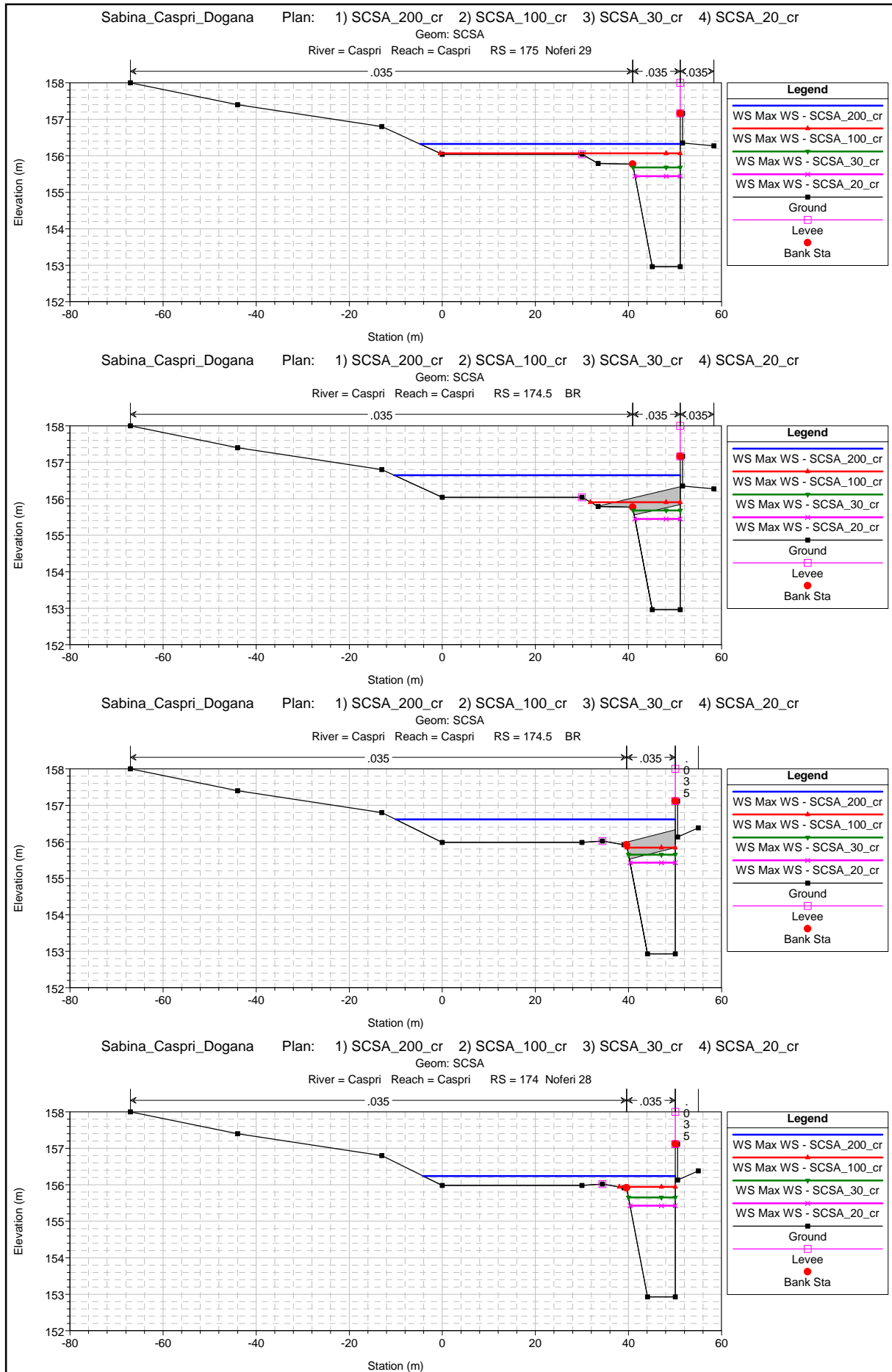
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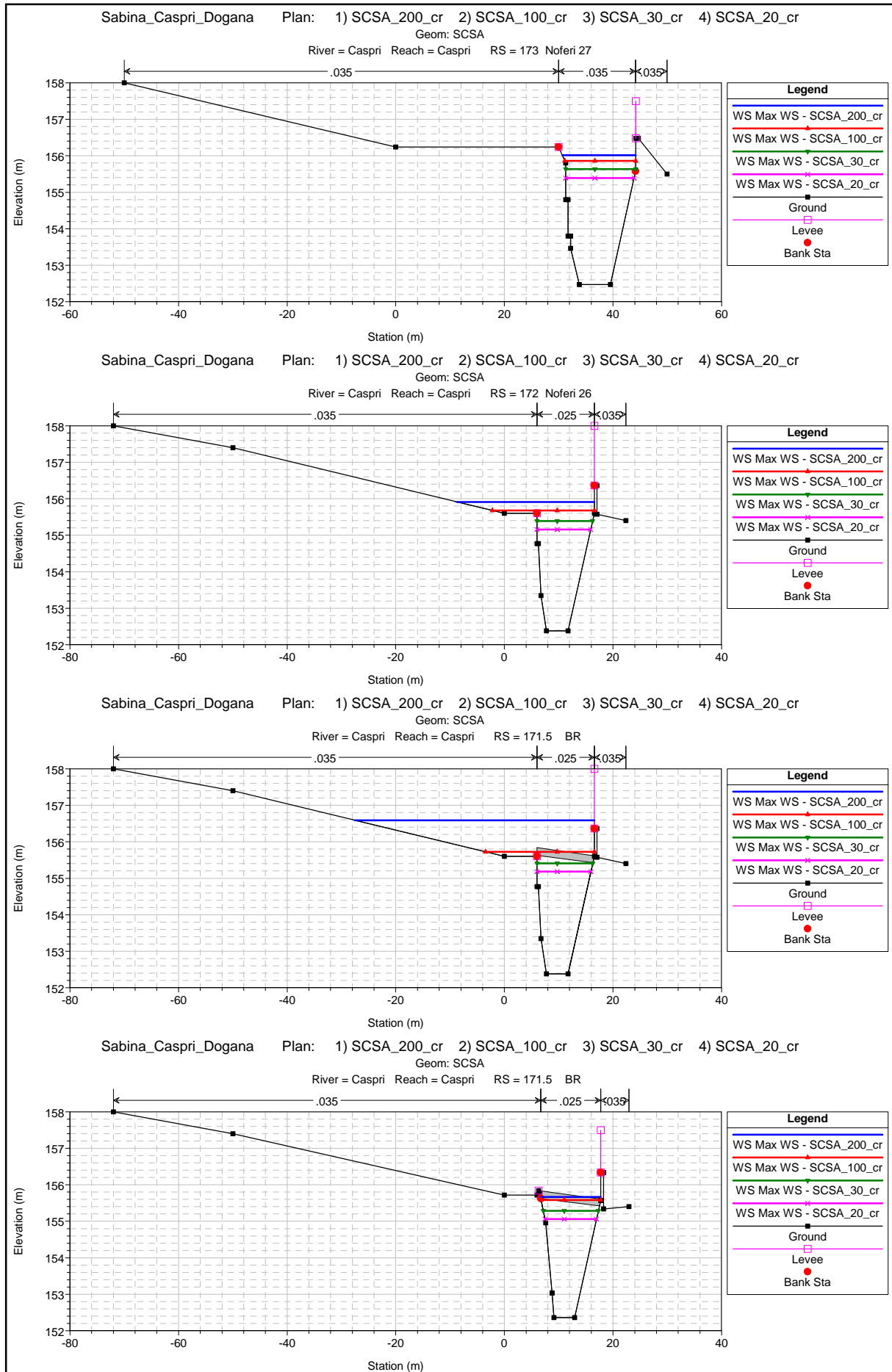


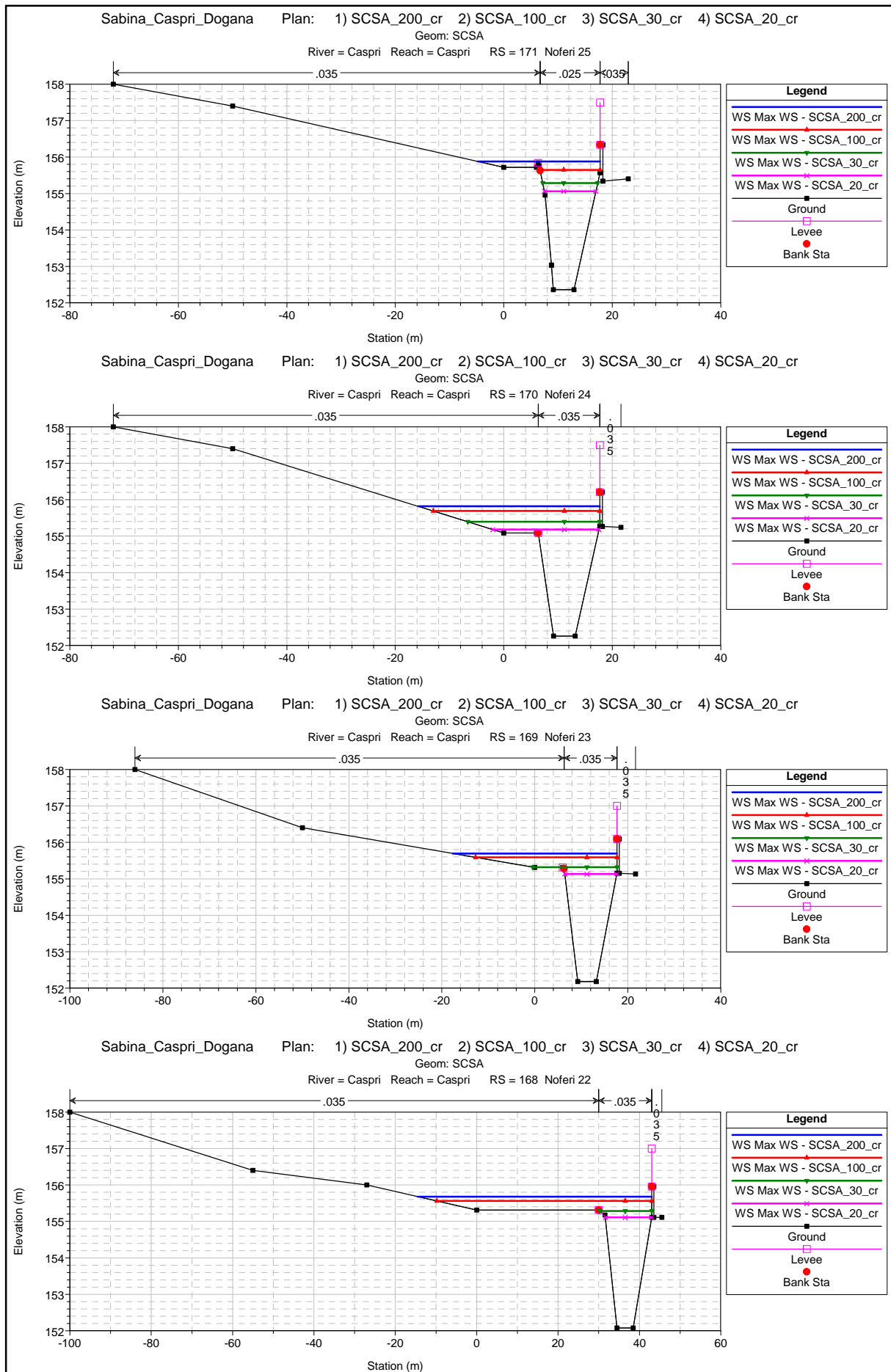


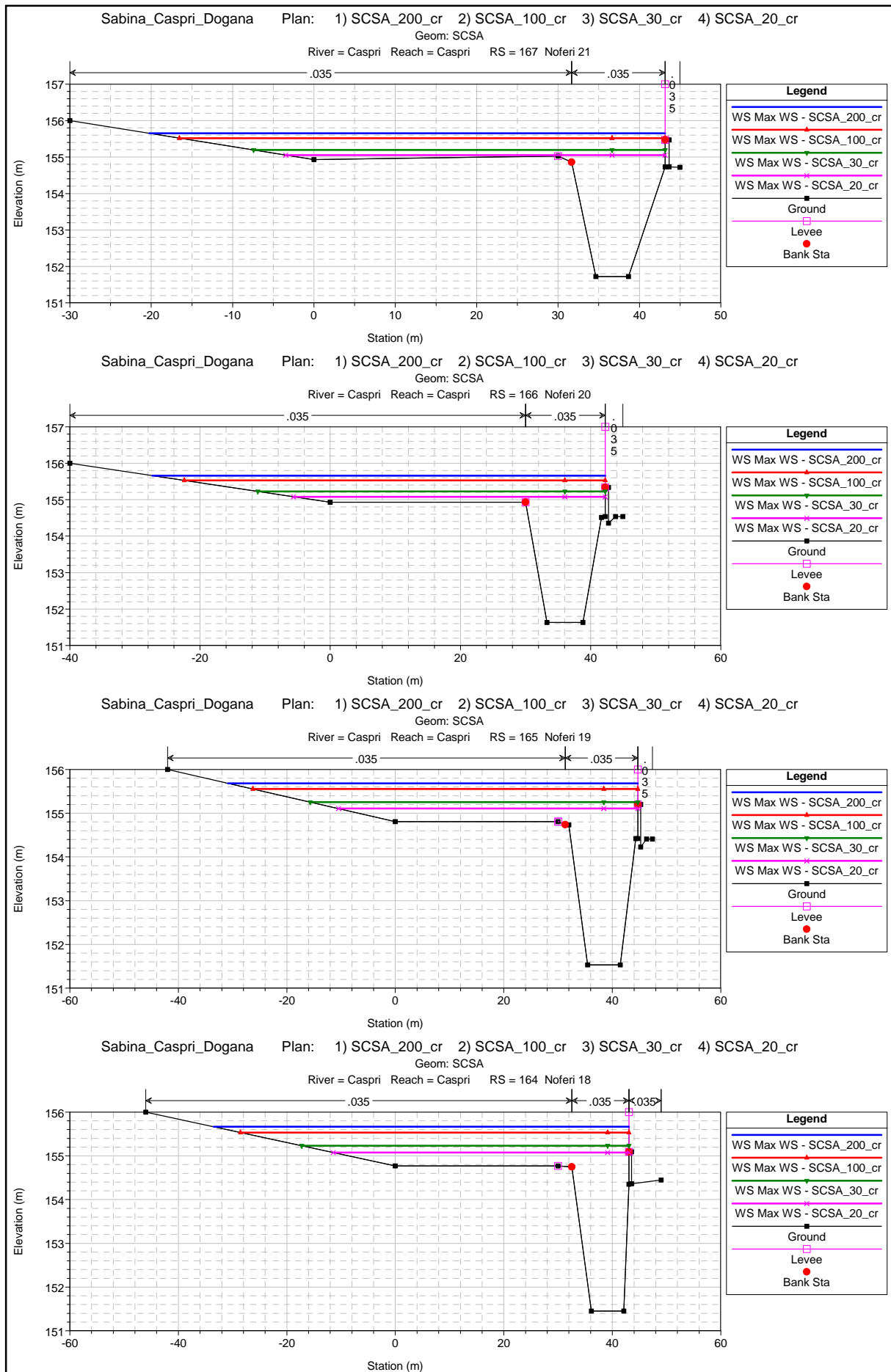


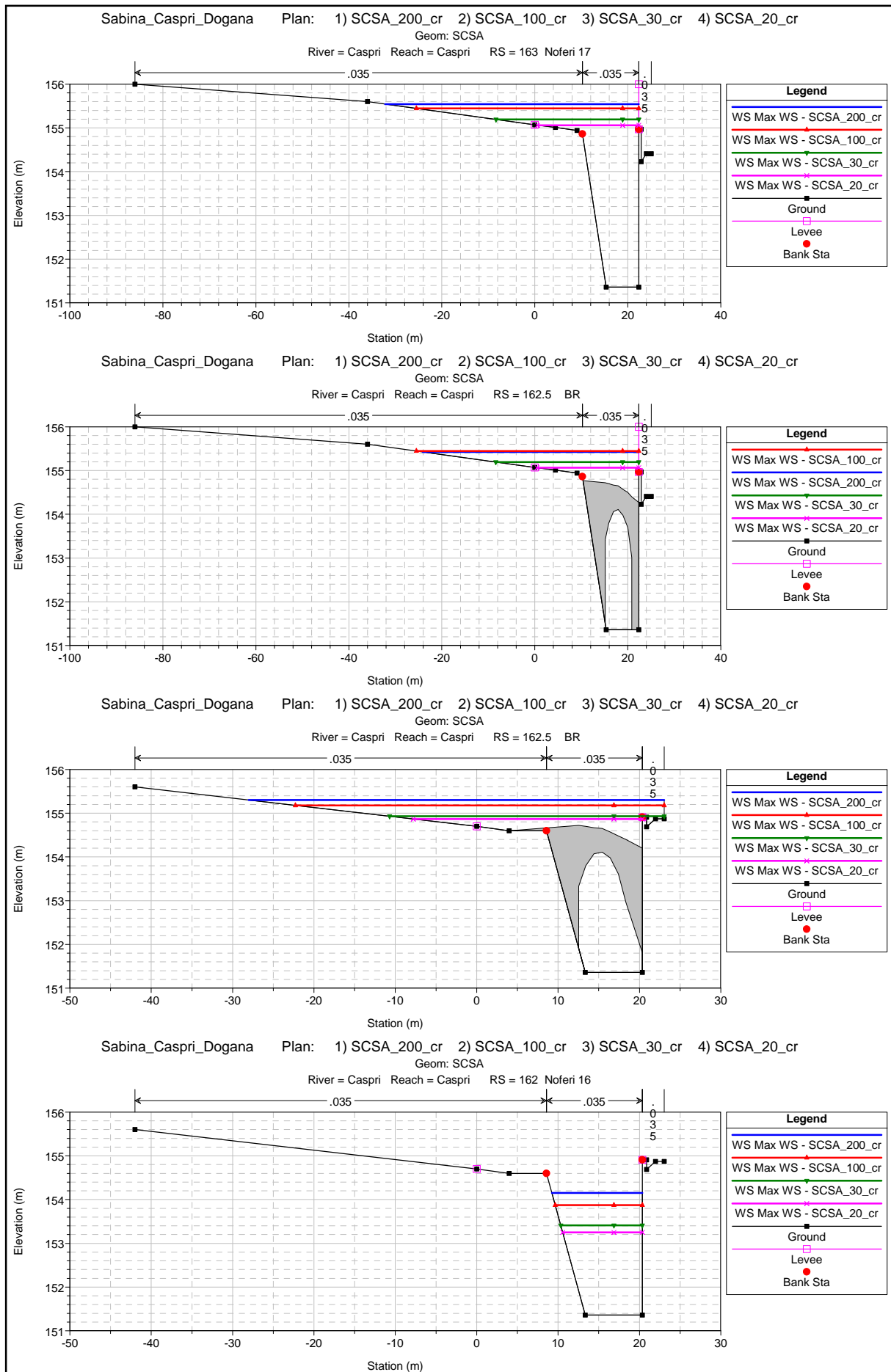


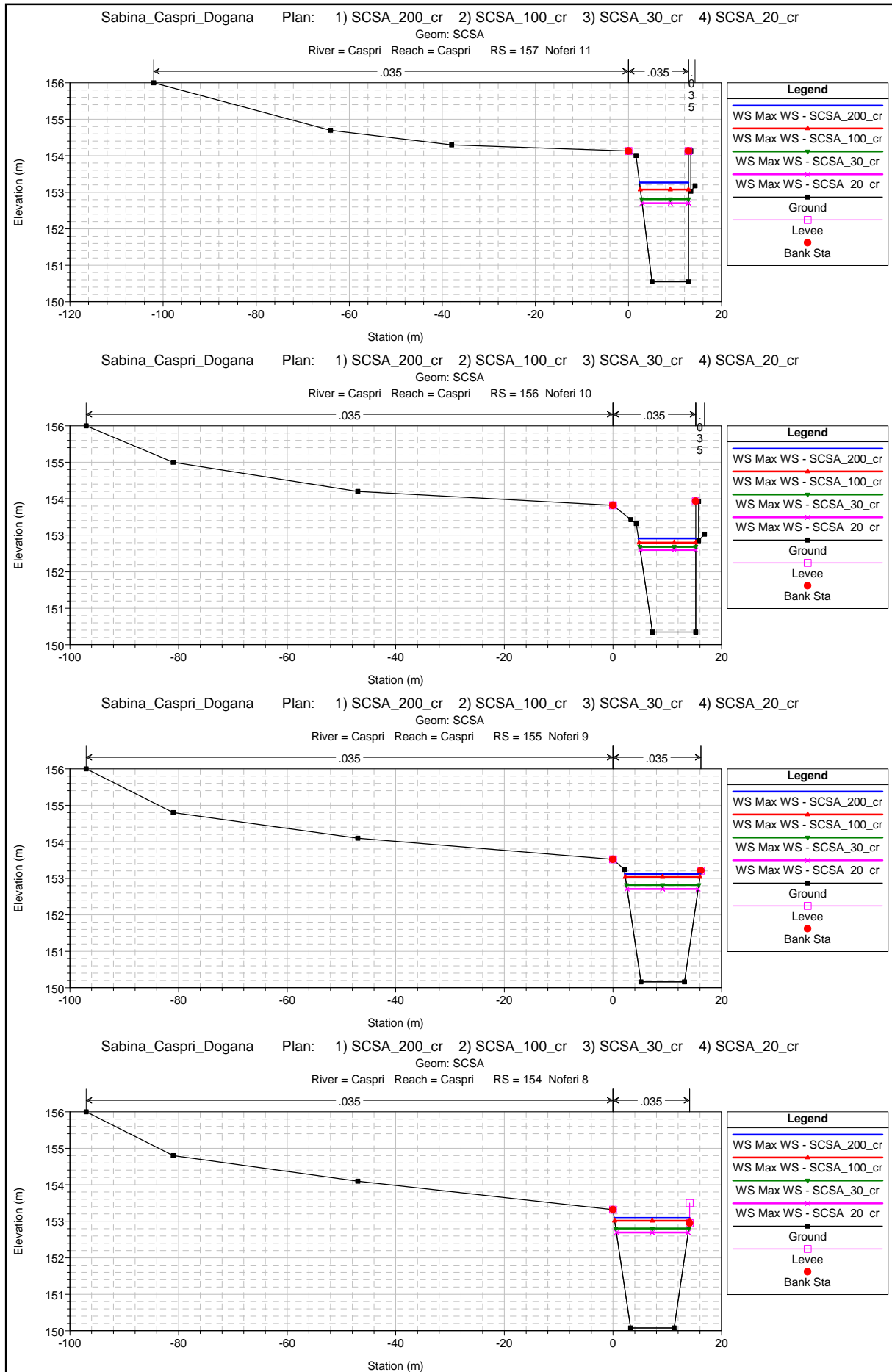


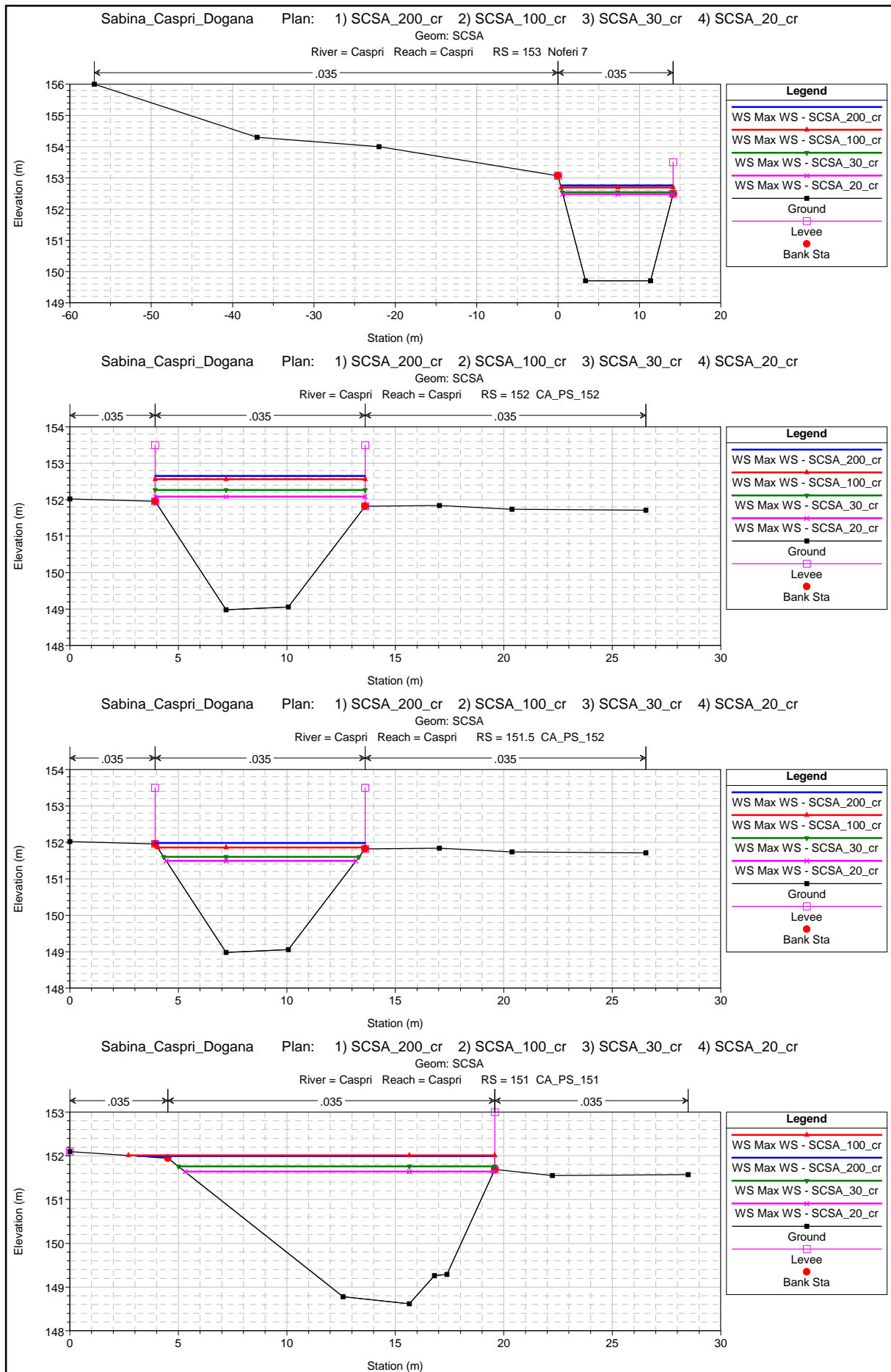


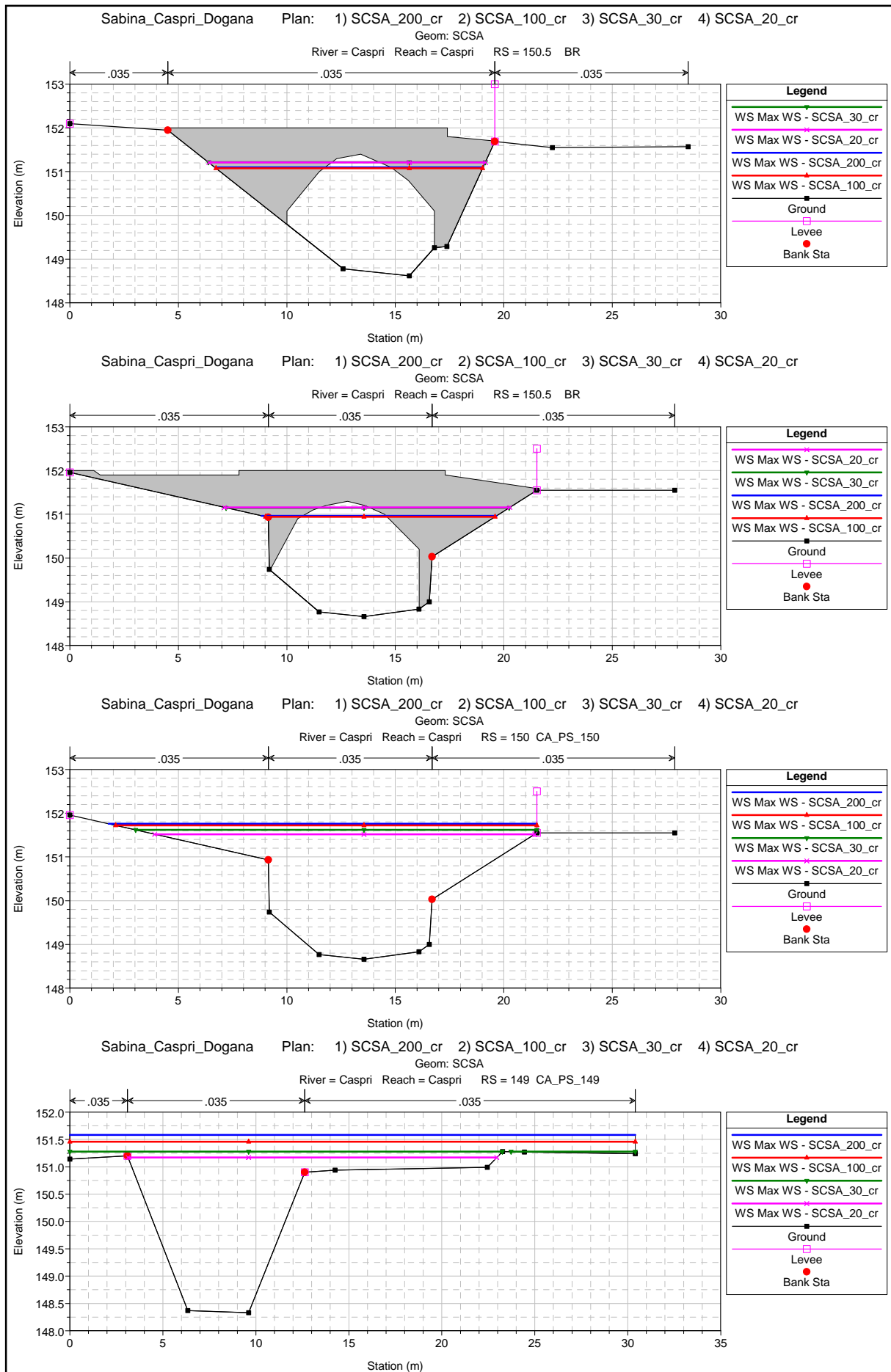


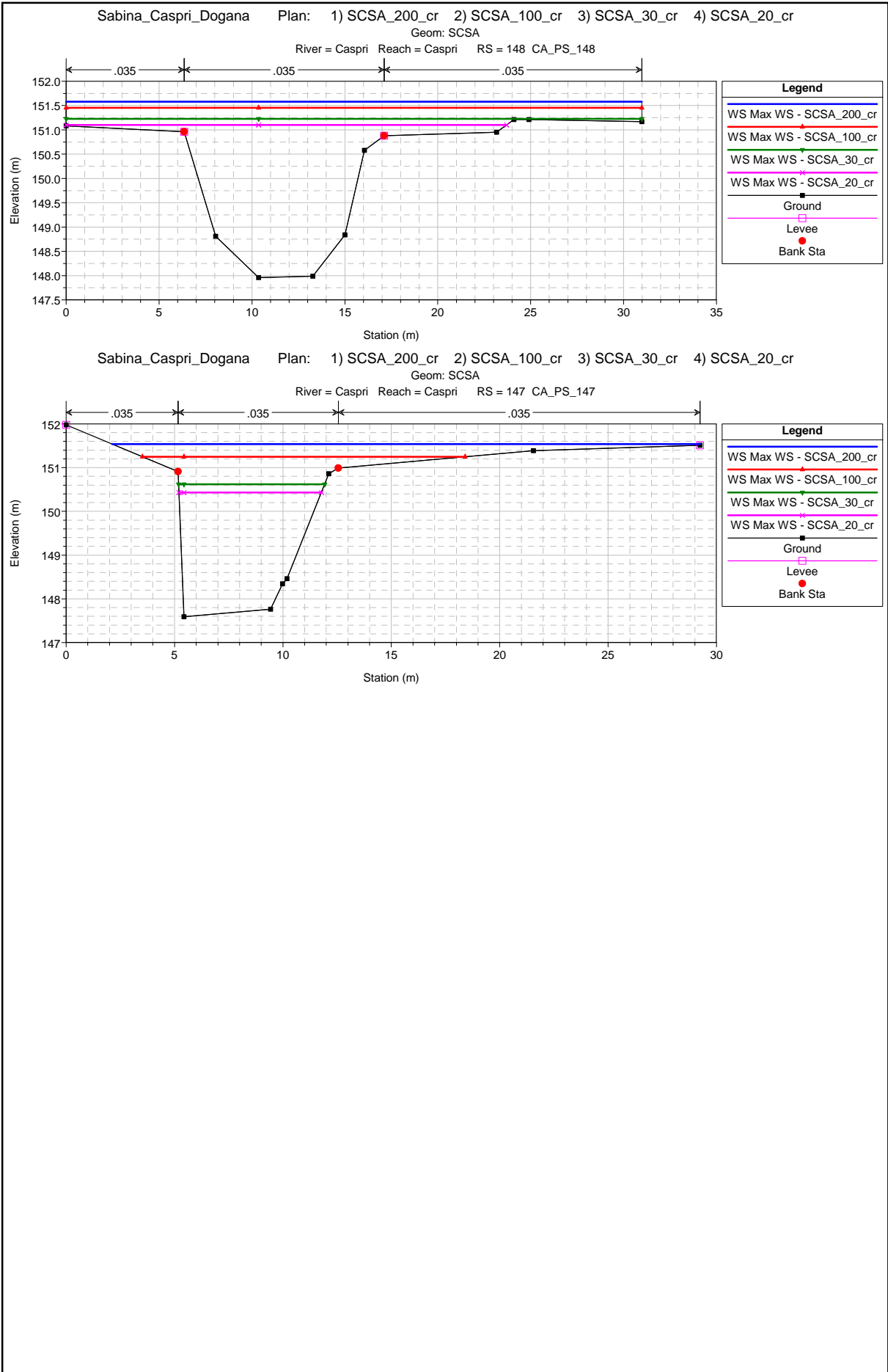












HEC-RAS River: Caspri Reach: Caspri Profile: Max WS

Reach	River Sta	Profile	Plan	Q Total (m3/s)	Min Ch El (m)	W.S. Elev (m)	Crit W.S. (m)	E.G. Elev (m)	E.G. Slope (m/m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Froude # Chl
Caspri	182	Max WS	SCSA_200_cr	104.27	153.73	156.64		157.08	0.004591	3.02	41.44	53.66	0.60
Caspri	182	Max WS	SCSA_100_cr	86.25	153.73	156.35		156.81	0.005205	3.00	28.78	15.45	0.63
Caspri	182	Max WS	SCSA_30_cr	62.33	153.73	156.21		156.48	0.003238	2.31	27.00	12.32	0.50
Caspri	182	Max WS	SCSA_20_cr	55.38	153.73	156.02		156.27	0.003260	2.24	24.68	11.87	0.50
Caspri	181.99	Max WS	SCSA_200_cr	104.27	153.73	156.64		157.08	0.004591	3.02	41.44	53.66	0.60
Caspri	181.99	Max WS	SCSA_100_cr	86.25	153.73	156.35		156.81	0.005207	3.00	28.78	15.42	0.63
Caspri	181.99	Max WS	SCSA_30_cr	62.33	153.73	156.21		156.48	0.003238	2.31	27.00	12.32	0.50
Caspri	181.99	Max WS	SCSA_20_cr	55.38	153.73	156.02		156.27	0.003260	2.24	24.68	11.87	0.50
Caspri	181.9		Lat Struct										
Caspri	181	Max WS	SCSA_200_cr	103.32	153.62	156.69		156.97	0.002976	2.50	52.59	59.79	0.48
Caspri	181	Max WS	SCSA_100_cr	86.29	153.62	156.47		156.77	0.003232	2.48	40.22	51.98	0.50
Caspri	181	Max WS	SCSA_30_cr	62.33	153.62	156.25		156.46	0.002451	2.05	30.43	15.71	0.43
Caspri	181	Max WS	SCSA_20_cr	55.38	153.62	156.06		156.26	0.002443	1.98	27.91	12.86	0.43
Caspri	180	Max WS	SCSA_200_cr	103.15	153.63	156.70		156.95	0.002597	2.39	59.82	79.44	0.45
Caspri	180	Max WS	SCSA_100_cr	86.22	153.63	156.46		156.75	0.003083	2.46	42.68	60.29	0.49
Caspri	180	Max WS	SCSA_30_cr	62.32	153.63	156.23		156.45	0.002438	2.08	30.97	38.04	0.43
Caspri	180	Max WS	SCSA_20_cr	55.38	153.63	156.03		156.24	0.002501	2.02	27.39	12.39	0.43
Caspri	179	Max WS	SCSA_200_cr	103.15	153.50	156.76		156.89	0.001553	1.86	80.83	91.78	0.35
Caspri	179	Max WS	SCSA_100_cr	86.06	153.50	156.51		156.68	0.001898	1.96	60.59	76.77	0.39
Caspri	179	Max WS	SCSA_30_cr	62.31	153.50	156.25		156.40	0.001852	1.82	42.21	59.97	0.38
Caspri	179	Max WS	SCSA_20_cr	55.38	153.50	156.00		156.20	0.002377	1.95	28.36	13.12	0.42
Caspri	178	Max WS	SCSA_200_cr	103.15	153.42	156.73		156.87	0.001487	1.83	77.31	76.56	0.35
Caspri	178	Max WS	SCSA_100_cr	86.00	153.42	156.50		156.65	0.001732	1.87	60.53	67.35	0.37
Caspri	178	Max WS	SCSA_30_cr	62.30	153.42	156.20		156.38	0.001980	1.87	33.23	14.27	0.39
Caspri	178	Max WS	SCSA_20_cr	55.38	153.42	156.00		156.17	0.001956	1.81	30.52	13.68	0.39
Caspri	177	Max WS	SCSA_200_cr	103.15	153.26	156.61		156.84	0.003514	2.44	58.66	72.99	0.52
Caspri	177	Max WS	SCSA_100_cr	85.71	153.26	156.29		156.67	0.004637	2.88	38.30	58.42	0.59
Caspri	177	Max WS	SCSA_30_cr	64.92	153.26	155.94		156.35	0.005207	2.85	22.82	10.61	0.62
Caspri	177	Max WS	SCSA_20_cr	55.37	153.26	155.74		156.11	0.004884	2.66	20.81	10.31	0.60
Caspri	176	Max WS	SCSA_200_cr	103.14	153.04	156.48		156.75	0.003194	2.64	56.25	65.17	0.50
Caspri	176	Max WS	SCSA_100_cr	84.49	153.04	156.13	155.59	156.58	0.005378	3.14	34.89	55.69	0.63

HEC-RAS River: Caspri Reach: Caspri Profile: Max WS (Continued)

Reach	River Sta	Profile	Plan	Q Total (m3/s)	Min Ch El (m)	W.S. Elev (m)	Crit W.S. (m)	E.G. Elev (m)	E.G. Slope (m/m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Froude # Chl
Caspri	176	Max WS	SCSA_30_cr	64.60	153.04	155.71	156.23	156.23	0.006988	3.20	20.21	9.94	0.70
Caspri	176	Max WS	SCSA_20_cr	55.37	153.04	155.42	155.93	155.93	0.007674	3.17	17.45	9.14	0.73
Caspri	175	Max WS	SCSA_200_cr	103.14	152.96	156.32	156.35	156.77	0.004899	3.14	43.08	55.94	0.60
Caspri	175	Max WS	SCSA_100_cr	83.77	152.96	156.07	155.39	156.58	0.005582	3.19	29.35	51.57	0.64
Caspri	175	Max WS	SCSA_30_cr	64.59	152.96	155.68	155.04	156.12	0.005668	2.95	21.89	10.09	0.64
Caspri	175	Max WS	SCSA_20_cr	55.37	152.96	155.44	154.85	155.85	0.005677	2.83	19.56	9.73	0.64
Caspri	174.5		Bridge										
Caspri	174	Max WS	SCSA_200_cr	103.14	152.93	156.24	156.33	156.76	0.005796	3.34	38.94	54.22	0.65
Caspri	174	Max WS	SCSA_100_cr	88.40	152.93	155.94	156.58	156.58	0.007461	3.55	24.90	12.04	0.74
Caspri	174	Max WS	SCSA_30_cr	64.58	152.93	155.66	156.10	156.10	0.005635	2.94	21.94	10.09	0.64
Caspri	174	Max WS	SCSA_20_cr	55.37	152.93	155.43	155.83	155.83	0.005589	2.82	19.67	9.74	0.63
Caspri	173.9		Lat Struct										
Caspri	173	Max WS	SCSA_200_cr	103.17	152.47	156.01	156.43	156.43	0.003729	2.87	36.01	13.52	0.56
Caspri	173	Max WS	SCSA_100_cr	87.46	152.47	155.86	156.20	156.20	0.003141	2.58	33.95	13.07	0.51
Caspri	173	Max WS	SCSA_30_cr	64.27	152.47	155.63	155.85	155.85	0.002223	2.07	31.04	12.90	0.43
Caspri	173	Max WS	SCSA_20_cr	55.36	152.47	155.39	155.59	155.59	0.002236	1.98	27.91	12.60	0.43
Caspri	172	Max WS	SCSA_200_cr	103.09	152.38	155.92	155.41	156.58	0.003408	3.66	30.90	25.31	0.72
Caspri	172	Max WS	SCSA_100_cr	87.28	152.38	155.68	155.16	156.29	0.003384	3.46	25.73	18.80	0.72
Caspri	172	Max WS	SCSA_30_cr	64.23	152.38	155.39	154.71	155.82	0.002644	2.90	22.12	10.24	0.63
Caspri	172	Max WS	SCSA_20_cr	55.36	152.38	155.16	154.53	155.56	0.002660	2.80	19.79	9.90	0.63
Caspri	171.5		Bridge										
Caspri	171	Max WS	SCSA_200_cr	103.08	152.36	155.88	155.55	156.64	0.004033	3.87	27.88	22.55	0.80
Caspri	171	Max WS	SCSA_100_cr	87.22	152.36	155.65	156.33	156.33	0.004022	3.65	23.87	11.06	0.79
Caspri	171	Max WS	SCSA_30_cr	64.23	152.36	155.29	155.81	155.81	0.003475	3.20	20.04	10.16	0.73
Caspri	171	Max WS	SCSA_20_cr	55.32	152.36	155.06	155.55	155.55	0.003519	3.11	17.79	9.50	0.73
Caspri	170	Max WS	SCSA_200_cr	103.25	152.26	155.82	155.26	156.26	0.004314	3.09	39.96	33.48	0.61
Caspri	170	Max WS	SCSA_100_cr	88.41	152.26	155.69	156.08	156.08	0.003941	2.88	35.85	30.71	0.58
Caspri	170	Max WS	SCSA_30_cr	64.17	152.26	155.40	155.71	155.71	0.003468	2.51	27.74	24.32	0.54
Caspri	170	Max WS	SCSA_20_cr	55.36	152.26	155.18	155.49	155.49	0.003716	2.47	23.04	19.54	0.56

HEC-RAS River: Caspri Reach: Caspri Profile: Max WS (Continued)

Reach	River Sta	Profile	Plan	Q Total (m3/s)	Min Ch El (m)	W.S. Elev (m)	Crit W.S. (m)	E.G. Elev (m)	E.G. Slope (m/m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Froude # Chl
Caspri	169	Max WS	SCSA_200_cr	103.23	152.18	155.69	155.19	156.26	0.005525	3.41	34.67	35.34	0.68
Caspri	169	Max WS	SCSA_100_cr	88.27	152.18	155.59		156.07	0.004818	3.11	31.17	30.46	0.64
Caspri	169	Max WS	SCSA_30_cr	64.10	152.18	155.32		155.67	0.003857	2.61	24.64	18.14	0.57
Caspri	169	Max WS	SCSA_20_cr	55.35	152.18	155.13		155.44	0.003723	2.46	22.48	11.21	0.56
Caspri	168	Max WS	SCSA_200_cr	103.20	152.08	155.68		156.08	0.004543	2.98	44.31	57.50	0.62
Caspri	168	Max WS	SCSA_100_cr	87.94	152.08	155.56		155.94	0.004325	2.82	37.79	52.87	0.60
Caspri	168	Max WS	SCSA_30_cr	64.04	152.08	155.29		155.61	0.003908	2.52	25.43	12.75	0.57
Caspri	168	Max WS	SCSA_20_cr	55.35	152.08	155.11		155.40	0.003361	2.37	23.34	11.40	0.53
Caspri	167	Max WS	SCSA_200_cr	103.13	151.72	155.65		155.87	0.002145	2.30	62.35	63.40	0.43
Caspri	167	Max WS	SCSA_100_cr	87.29	151.72	155.52		155.72	0.002034	2.19	54.22	59.70	0.42
Caspri	167	Max WS	SCSA_30_cr	63.35	151.72	155.20		155.41	0.002145	2.10	36.29	50.58	0.43
Caspri	167	Max WS	SCSA_20_cr	55.32	151.72	155.05		155.26	0.002157	2.04	29.42	46.61	0.43
Caspri	166	Max WS	SCSA_200_cr	103.13	151.63	155.66		155.83	0.001613	2.05	70.08	69.60	0.37
Caspri	166	Max WS	SCSA_100_cr	87.28	151.63	155.53		155.69	0.001500	1.93	61.28	64.70	0.36
Caspri	166	Max WS	SCSA_30_cr	63.29	151.63	155.23		155.38	0.001439	1.79	43.40	53.37	0.35
Caspri	166	Max WS	SCSA_20_cr	55.33	151.63	155.08		155.23	0.001446	1.74	35.99	47.90	0.35
Caspri	165	Max WS	SCSA_200_cr	103.13	151.53	155.68		155.80	0.001081	1.73	83.72	75.60	0.31
Caspri	165	Max WS	SCSA_100_cr	87.26	151.53	155.55		155.66	0.000996	1.62	74.13	70.98	0.30
Caspri	165	Max WS	SCSA_30_cr	63.24	151.53	155.26		155.36	0.000943	1.49	54.51	60.44	0.29
Caspri	165	Max WS	SCSA_20_cr	55.33	151.53	155.11		155.21	0.000968	1.47	45.89	55.18	0.29
Caspri	164	Max WS	SCSA_200_cr	103.13	151.45	155.67		155.79	0.001281	1.85	81.22	76.53	0.31
Caspri	164	Max WS	SCSA_100_cr	87.21	151.45	155.53		155.65	0.001192	1.75	71.49	71.62	0.30
Caspri	164	Max WS	SCSA_30_cr	63.20	151.45	155.23		155.35	0.001159	1.64	51.55	60.31	0.30
Caspri	164	Max WS	SCSA_20_cr	55.33	151.45	155.08		155.20	0.001209	1.63	42.66	54.52	0.30
Caspri	163	Max WS	SCSA_200_cr	103.13	151.36	155.54	153.91	155.79	0.001973	2.28	55.12	54.57	0.39
Caspri	163	Max WS	SCSA_100_cr	87.17	151.36	155.44	153.66	155.65	0.001624	2.03	50.05	47.84	0.35
Caspri	163	Max WS	SCSA_30_cr	63.17	151.36	155.19	153.24	155.33	0.001180	1.66	40.15	30.72	0.30
Caspri	163	Max WS	SCSA_20_cr	55.33	151.36	155.06	153.09	155.18	0.001052	1.53	36.71	21.80	0.28
Caspri	162.5		Bridge										
Caspri	162	Max WS	SCSA_200_cr	103.13	151.36	154.15		155.00	0.009890	4.07	25.34	11.12	0.86
Caspri	162	Max WS	SCSA_100_cr	87.17	151.36	153.87		154.65	0.010093	3.91	22.28	10.71	0.87

HEC-RAS River: Caspri Reach: Caspri Profile: Max WS (Continued)

Reach	River Sta	Profile	Plan	Q Total (m3/s)	Min Ch El (m)	W.S. Elev (m)	Crit W.S. (m)	E.G. Elev (m)	E.G. Slope (m/m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Froude # Chl
Caspri	162	Max WS	SCSA_30_cr	63.17	151.36	153.41		154.07	0.010419	3.61	17.51	10.04	0.87
Caspri	162	Max WS	SCSA_20_cr	55.33	151.36	153.25		153.87	0.010509	3.48	15.90	9.80	0.87
Caspri	161	Max WS	SCSA_200_cr	103.13	151.27	154.31		154.87	0.005727	3.31	31.16	12.47	0.67
Caspri	161	Max WS	SCSA_100_cr	87.16	151.27	154.02		154.53	0.005787	3.17	27.50	12.03	0.67
Caspri	161	Max WS	SCSA_30_cr	63.17	151.27	153.53		153.95	0.005861	2.90	21.78	11.31	0.67
Caspri	161	Max WS	SCSA_20_cr	55.33	151.27	153.35		153.75	0.005852	2.79	19.85	11.06	0.66
Caspri	160	Max WS	SCSA_200_cr	103.13	151.04	153.96		154.67	0.007595	3.73	27.63	10.92	0.75
Caspri	160	Max WS	SCSA_100_cr	87.12	151.04	153.69		154.32	0.007376	3.52	24.75	10.65	0.74
Caspri	160	Max WS	SCSA_30_cr	63.11	151.04	153.26		153.75	0.006895	3.13	20.19	10.22	0.71
Caspri	160	Max WS	SCSA_20_cr	55.33	151.04	153.10		153.55	0.006688	2.97	18.62	10.06	0.70
Caspri	159	Max WS	SCSA_200_cr	103.13	151.02	153.93		154.65	0.007646	3.74	27.56	10.91	0.75
Caspri	159	Max WS	SCSA_100_cr	87.12	151.02	153.67		154.30	0.007420	3.53	24.70	10.65	0.74
Caspri	159	Max WS	SCSA_30_cr	63.11	151.02	153.24		153.73	0.006906	3.13	20.18	10.22	0.71
Caspri	159	Max WS	SCSA_20_cr	55.33	151.02	153.08		153.53	0.006689	2.97	18.62	10.06	0.70
Caspri	158	Max WS	SCSA_200_cr	103.13	150.69	153.56		154.30	0.008062	3.81	27.04	10.87	0.77
Caspri	158	Max WS	SCSA_100_cr	87.10	150.69	153.33		153.97	0.007523	3.54	24.57	10.64	0.74
Caspri	158	Max WS	SCSA_30_cr	63.04	150.69	152.97		153.43	0.006311	3.03	20.81	10.28	0.68
Caspri	158	Max WS	SCSA_20_cr	55.33	150.69	152.83		153.25	0.005892	2.84	19.46	10.14	0.66
Caspri	157	Max WS	SCSA_200_cr	103.13	150.55	153.27		154.14	0.010089	4.14	24.90	10.53	0.86
Caspri	157	Max WS	SCSA_100_cr	87.10	150.55	153.08		153.81	0.009074	3.80	22.93	10.34	0.81
Caspri	157	Max WS	SCSA_30_cr	63.03	150.55	152.81		153.30	0.006830	3.12	20.18	10.07	0.70
Caspri	157	Max WS	SCSA_20_cr	55.31	150.55	152.70		153.13	0.006156	2.90	19.09	9.96	0.67
Caspri	156.9		Lat Struct										
Caspri	156	Max WS	SCSA_200_cr	103.13	150.35	152.91		153.87	0.011601	4.34	23.76	10.56	0.92
Caspri	156	Max WS	SCSA_100_cr	87.09	150.35	152.80		153.56	0.009554	3.86	22.58	10.45	0.84
Caspri	156	Max WS	SCSA_30_cr	63.02	150.35	152.68		153.12	0.005846	2.95	21.37	10.33	0.65
Caspri	156	Max WS	SCSA_20_cr	55.21	150.35	152.60		152.97	0.005034	2.69	20.53	10.25	0.61
Caspri	155	Max WS	SCSA_200_cr	103.13	150.16	153.12		153.64	0.004969	3.18	32.45	13.92	0.66
Caspri	155	Max WS	SCSA_100_cr	87.09	150.16	153.04		153.43	0.003922	2.78	31.30	13.75	0.59
Caspri	155	Max WS	SCSA_30_cr	63.01	150.16	152.82		153.07	0.002719	2.22	28.32	13.31	0.49
Caspri	155	Max WS	SCSA_20_cr	55.25	150.16	152.71		152.92	0.002430	2.06	26.85	13.09	0.46

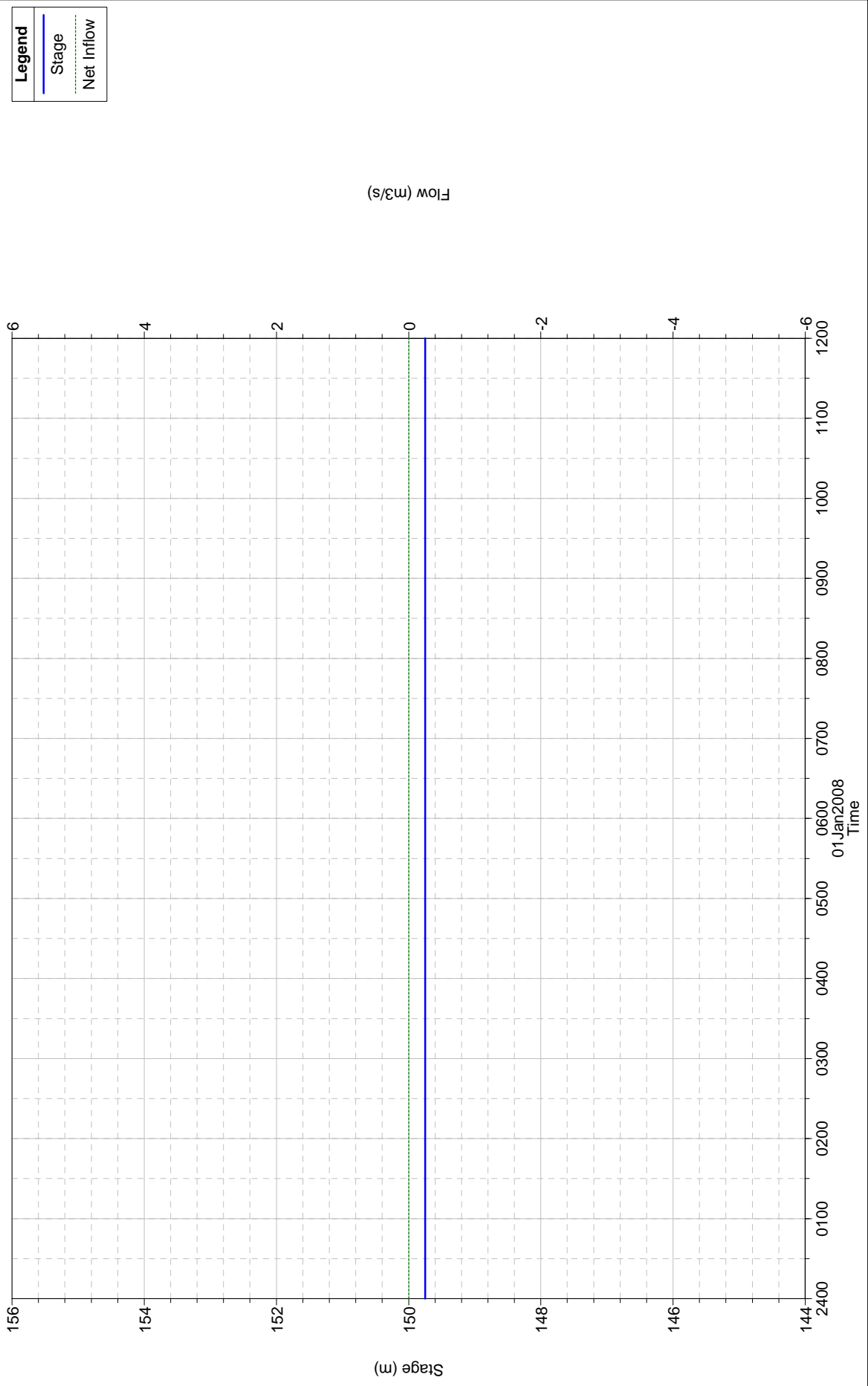
HEC-RAS River: Caspri Reach: Caspri Profile: Max WS (Continued)

Reach	River Sta	Profile	Plan	Q Total (m3/s)	Min Ch El (m)	W.S. Elev (m)	Crit W.S. (m)	E.G. Elev (m)	E.G. Slope (m/m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Froude # Chl
Caspri	149	Max WS	SCSA_200_cr	66.09	148.33	151.59		151.87	0.003197	2.51	32.51	30.40	0.52
Caspri	149	Max WS	SCSA_100_cr	65.55	148.33	151.46		151.81	0.004185	2.77	28.68	30.40	0.59
Caspri	149	Max WS	SCSA_30_cr	57.19	148.33	151.28		151.65	0.004758	2.79	23.12	29.95	0.62
Caspri	149	Max WS	SCSA_20_cr	52.74	148.33	151.17		151.55	0.005068	2.78	20.53	19.82	0.64
Caspri	148	Max WS	SCSA_200_cr	62.83	147.96	151.58		151.74	0.001533	1.90	39.81	30.98	0.37
Caspri	148	Max WS	SCSA_100_cr	62.36	147.96	151.45		151.65	0.001912	2.05	35.89	30.98	0.41
Caspri	148	Max WS	SCSA_30_cr	56.20	147.96	151.23		151.46	0.002392	2.16	28.87	30.98	0.45
Caspri	148	Max WS	SCSA_20_cr	52.74	147.96	151.10		151.34	0.002598	2.17	25.69	23.71	0.46
Caspri	147	Max WS	SCSA_200_cr	44.88	147.59	151.54	149.81	151.71	0.001865	1.89	27.33	27.12	0.35
Caspri	147	Max WS	SCSA_100_cr	55.48	147.59	151.25	150.10	151.62	0.004340	2.69	21.43	14.88	0.52
Caspri	147	Max WS	SCSA_30_cr	55.75	147.59	150.62	150.11	151.25	0.009059	3.51	15.89	6.74	0.73
Caspri	147	Max WS	SCSA_20_cr	52.41	147.59	150.43	150.02	151.08	0.009995	3.58	14.63	6.57	0.77

HEC-RAS Profile: Max WS

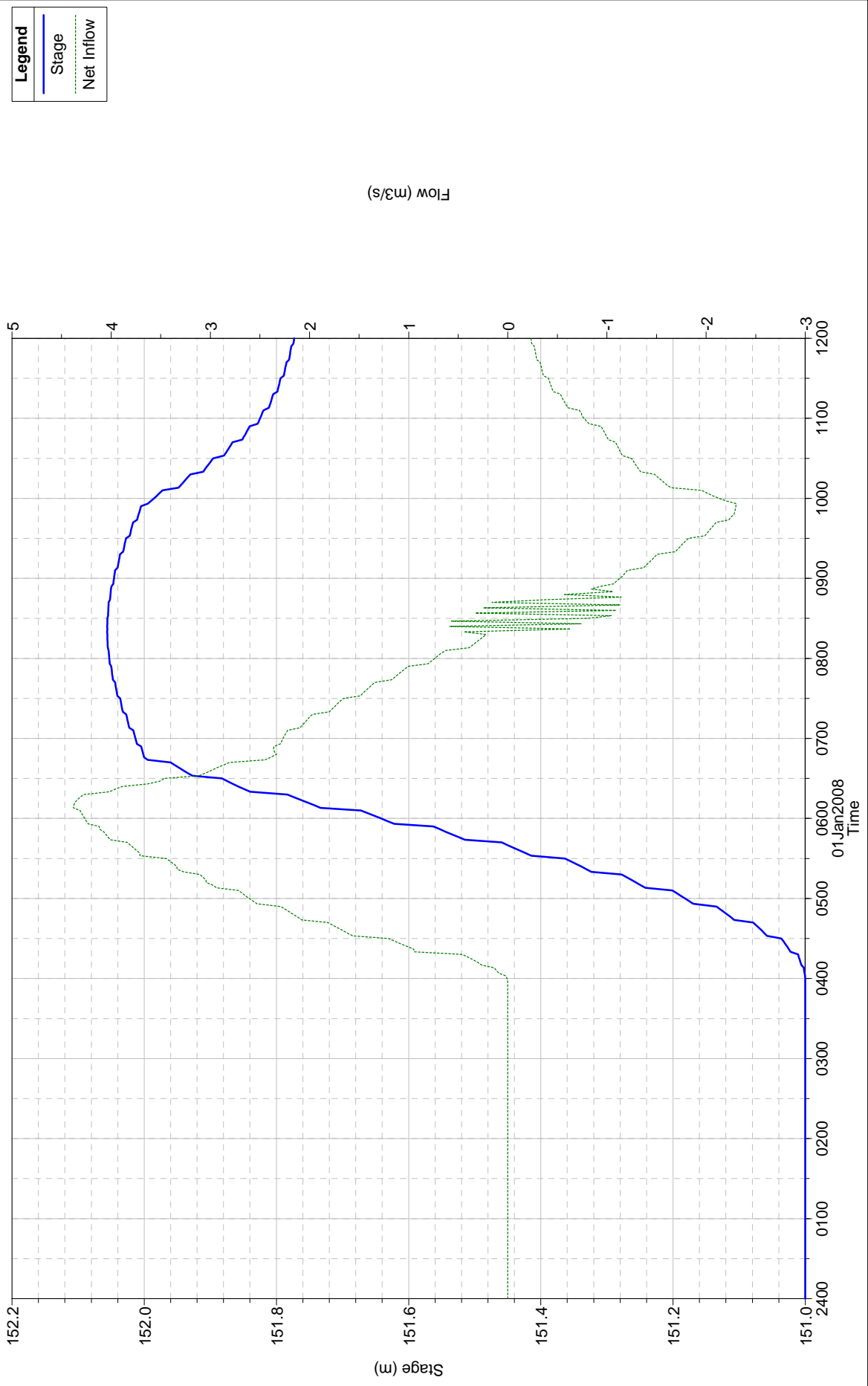
Storage Area	Profile	Plan	W.S. Elev (m)	SA Min El (m)	Net Flux (m3/s)	SA Area (1000 m2)	SA Volume (1000 m3)
Dogana_dx_1	Max WS	SCSA_200_cr	149.07	148.80	3.45	33.81	9.16
Dogana_dx_1	Max WS	SCSA_100_cr	148.84	148.80	0.72	33.81	1.25
Dogana_dx_1	Max WS	SCSA_30_cr	148.80	148.80	0.00	33.81	0.00
Dogana_dx_1	Max WS	SCSA_20_cr	148.80	148.80	0.00	33.81	0.00
Storage_1	Max WS	SCSA_200_cr	151.58	149.75	27.31	41.37	34.36
Storage_1	Max WS	SCSA_100_cr	151.44	149.75	3.28	31.32	29.05
Storage_1	Max WS	SCSA_30_cr	150.41	149.75	2.46	9.70	3.99
Storage_1	Max WS	SCSA_20_cr	149.75	149.75	0.00	0.04	0.00
Storage_Dx	Max WS	SCSA_200_cr	152.66	151.00	29.77	25.15	21.63
Storage_Dx	Max WS	SCSA_100_cr	152.55	151.00	21.53	25.15	18.90
Storage_Dx	Max WS	SCSA_30_cr	152.25	151.00	2.17	25.15	11.56
Storage_Dx	Max WS	SCSA_20_cr	152.06	151.00	1.26	25.15	6.55

Plan: SCSA_20_cr Storage Area: Storage_1

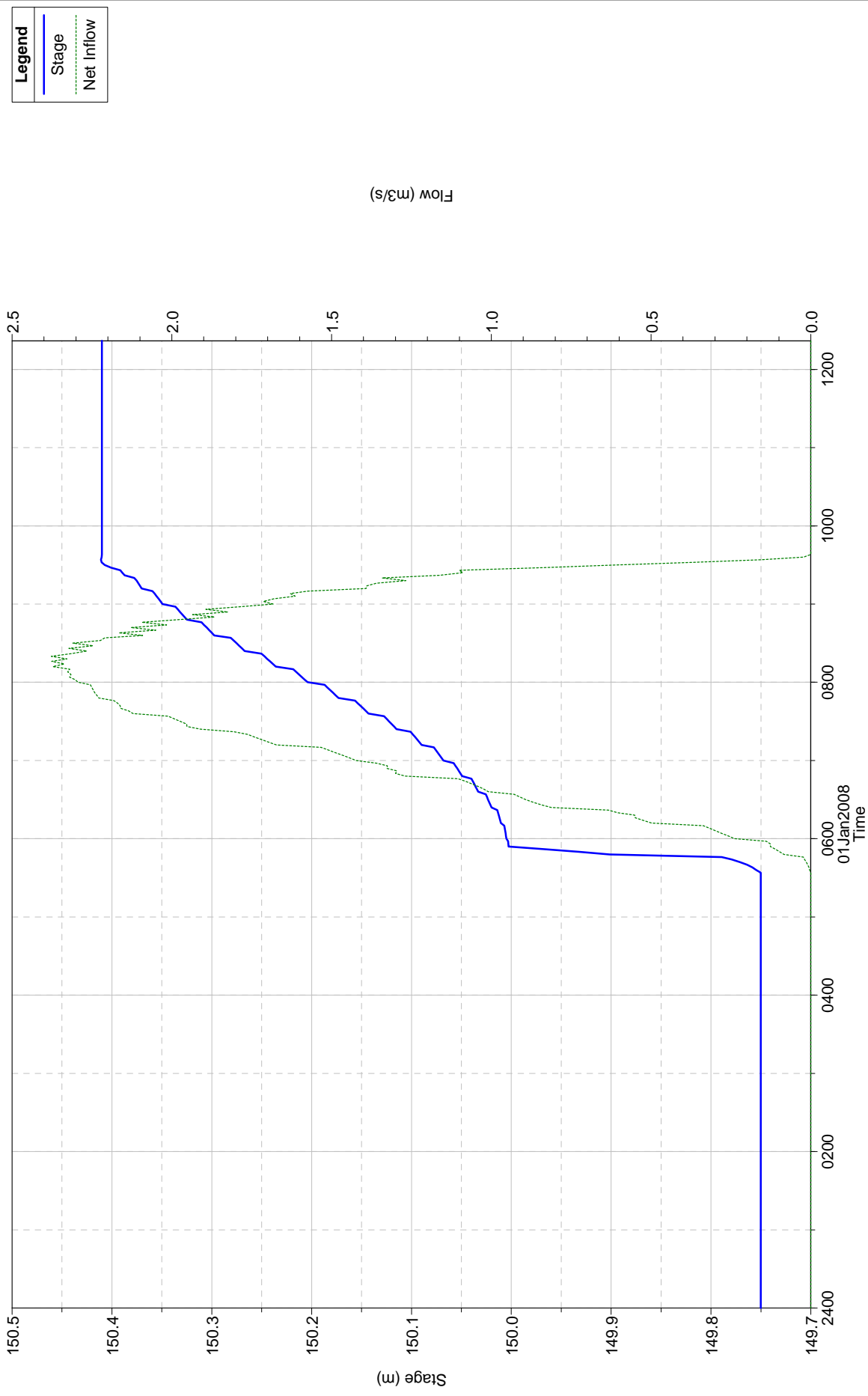


Legend	
—	Stage
—	Net Inflow

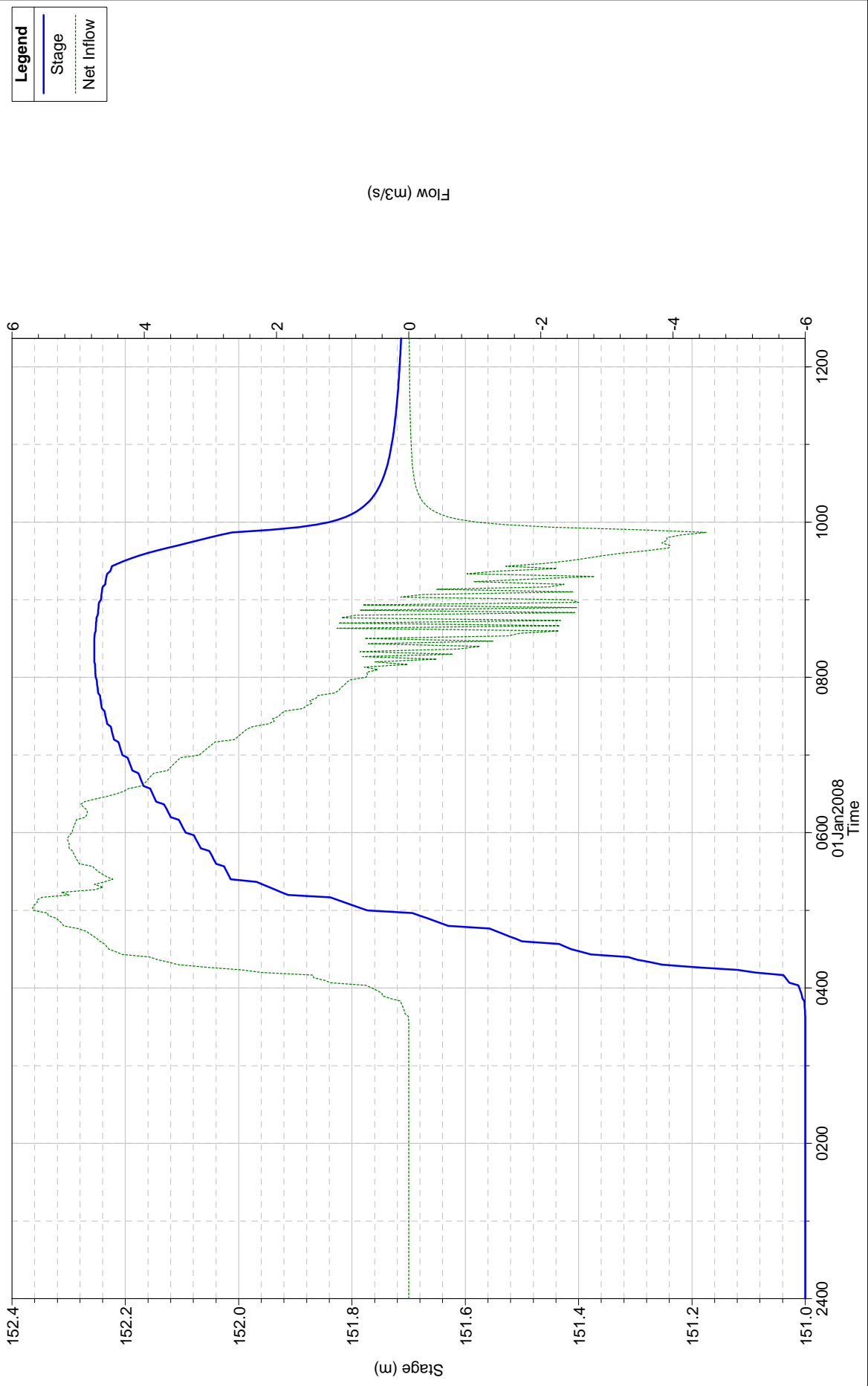
Plan: SCSA_20_cr Storage Area: Storage_Dx



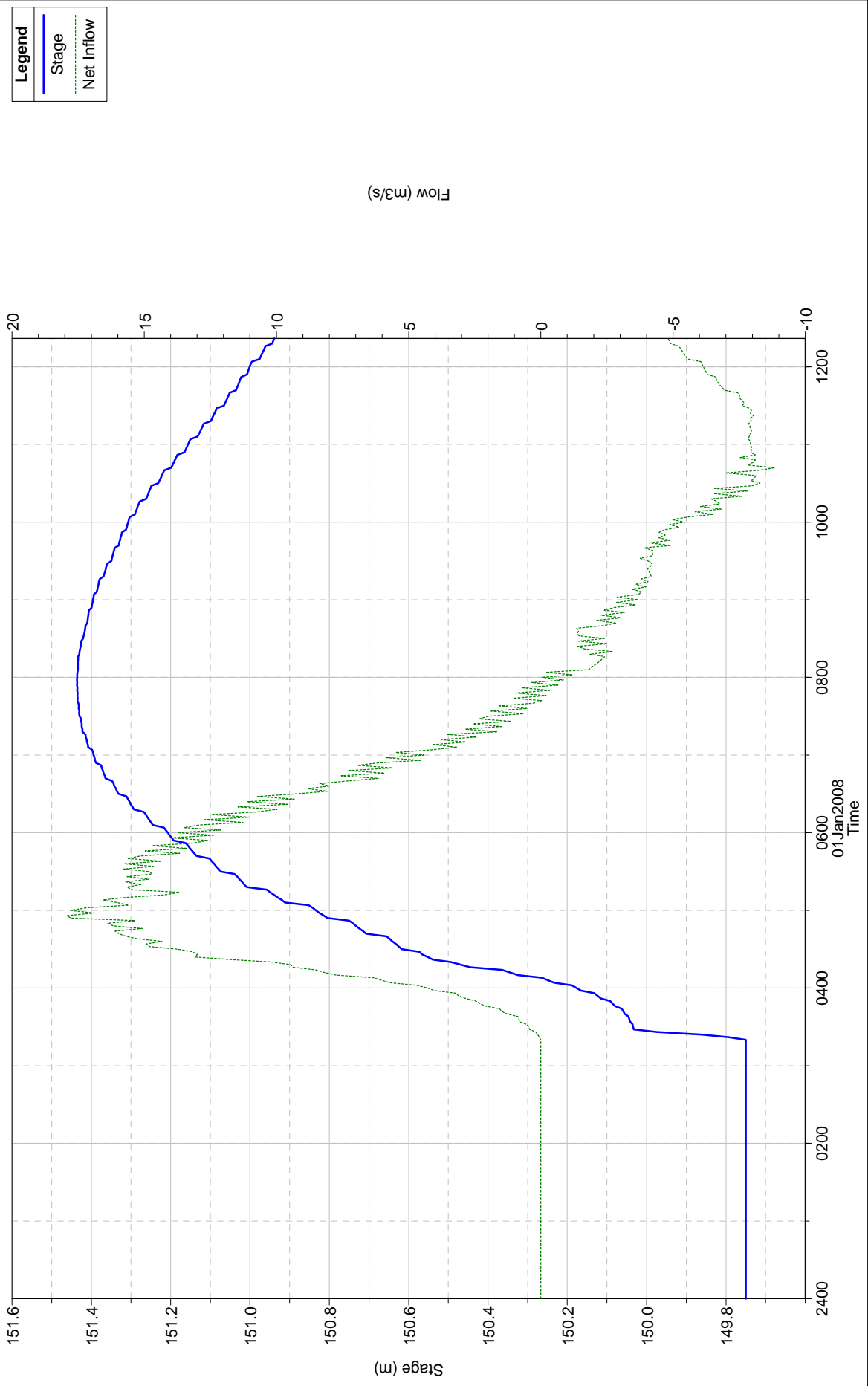
Plan: SCSA_30_cr Storage Area: Storage_1



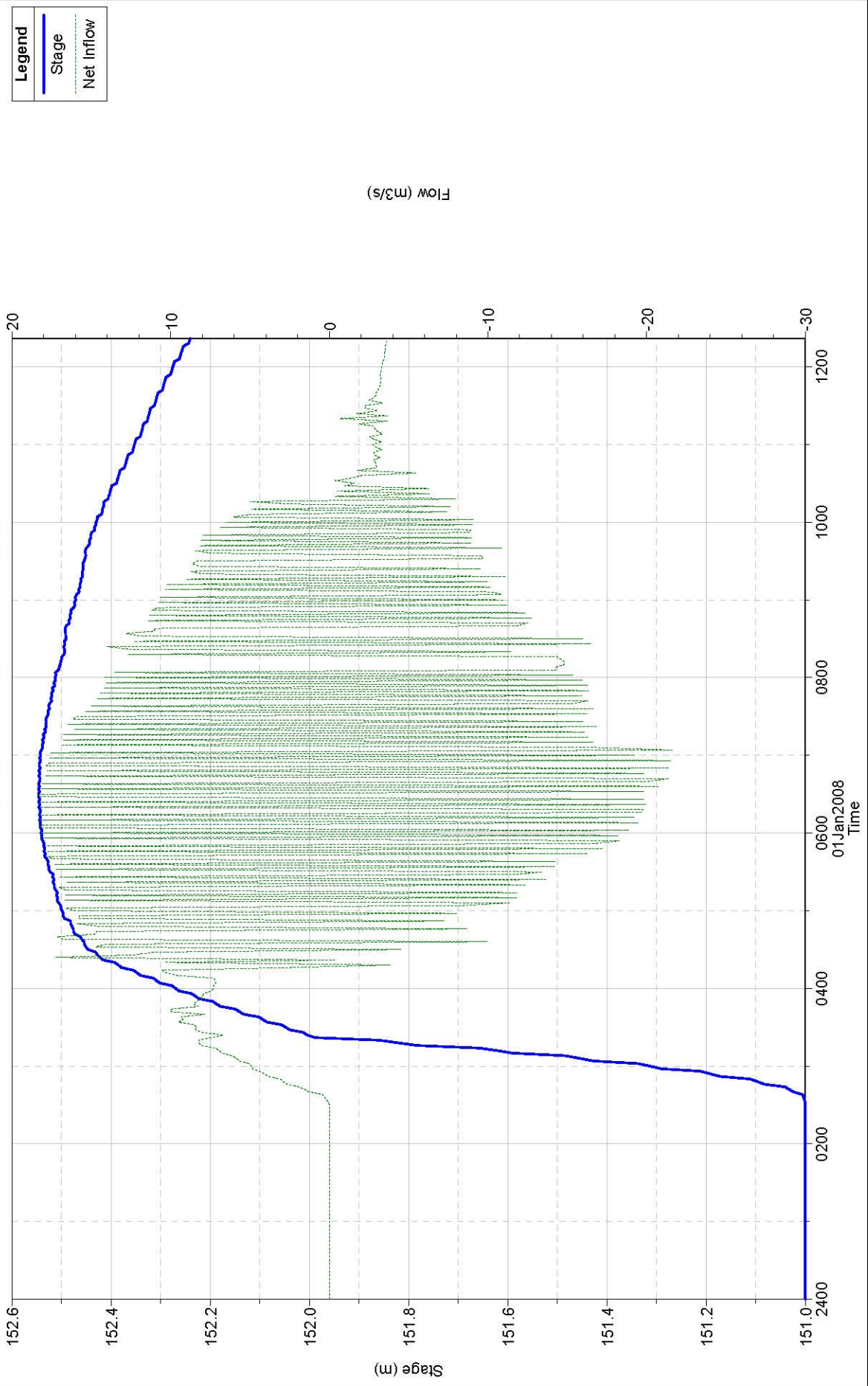
Plan: SCSA_30_cr Storage Area: Storage_Dx



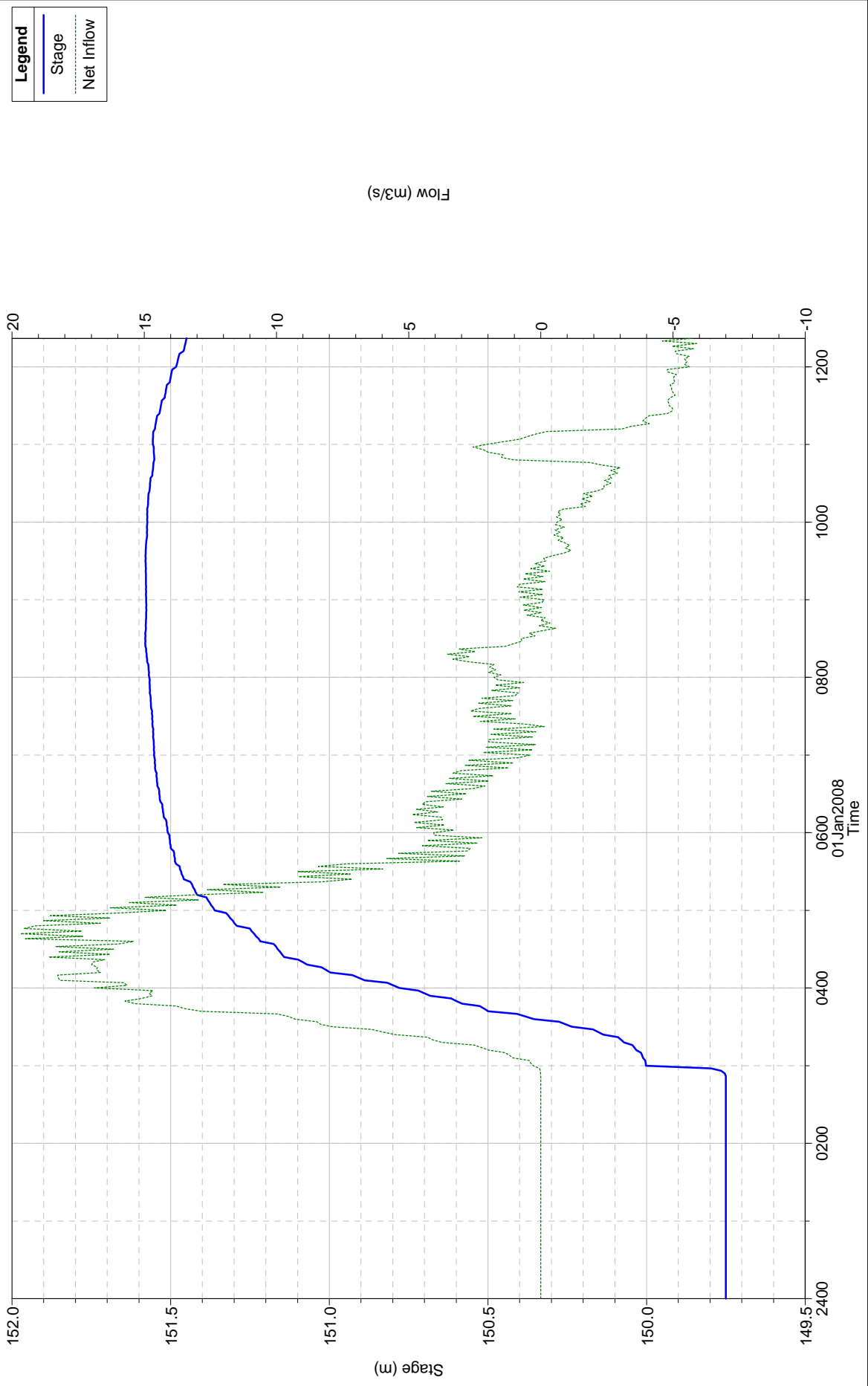
Plan: SCSA_100_cr Storage Area: Storage_1



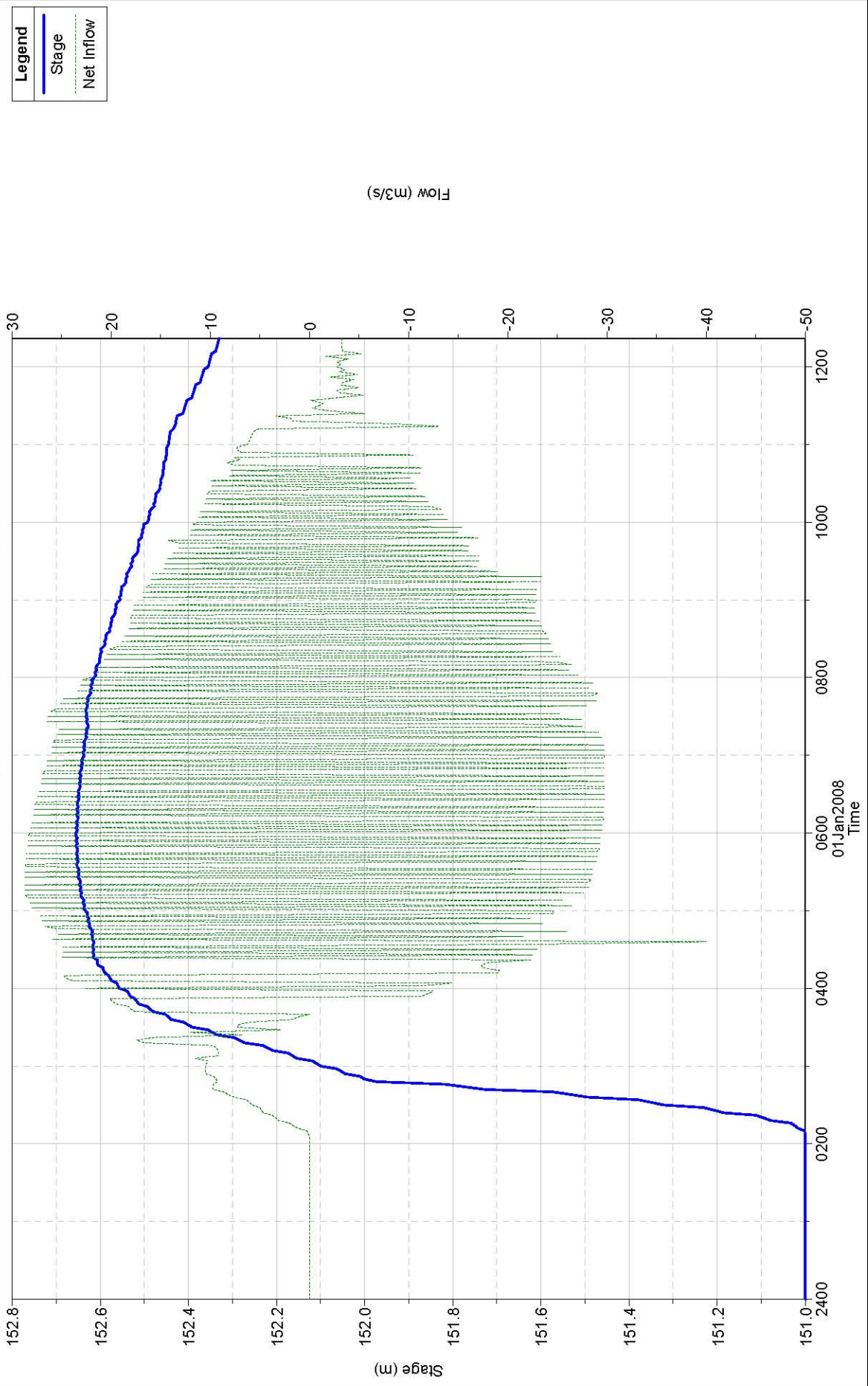
Plan: SCSA_100_cr Storage Area: Storage_Dx



Plan: SCSA_200_cr Storage Area: Storage_1



Plan: SCSA_200_cr Storage Area: Storage_Dx



borro della Dogana

verifiche con Tpioggia critico per il Borro della Dogana

- moto vario

Tr=200, 100, 30 e 20 anni

profilo

livelli idrici nelle sezioni di verifica

tabella di output del software Hec-ras 4.0

livelli e portate in ingresso alle aree di accumulo

verifiche con Tpioggia critico per il fiume Arno

- moto permanente

Tr=200, 100, 30 e 20 anni

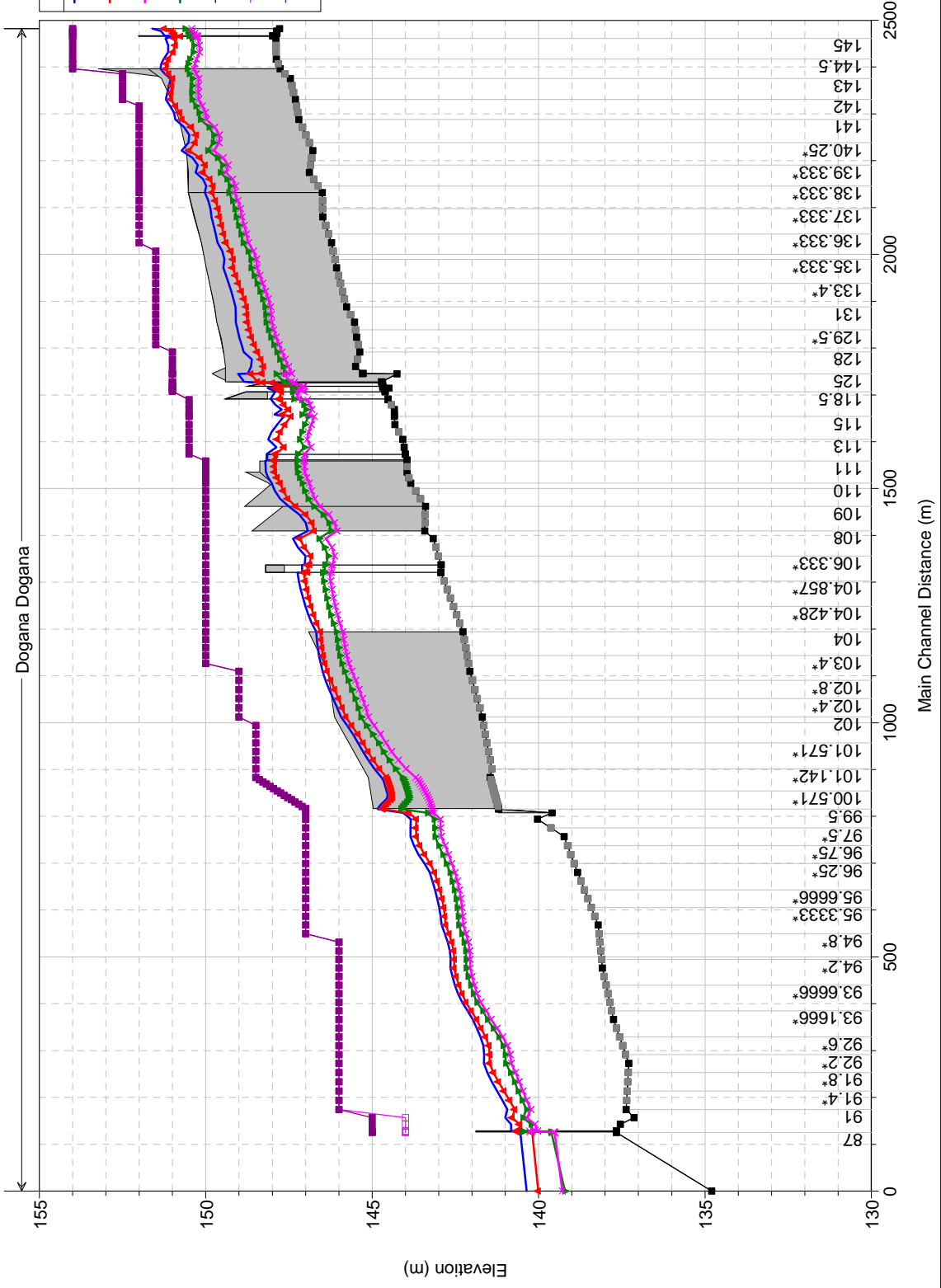
profilo

livelli idrici nelle sezioni di verifica

tabella di output del software Hec-ras 4.0

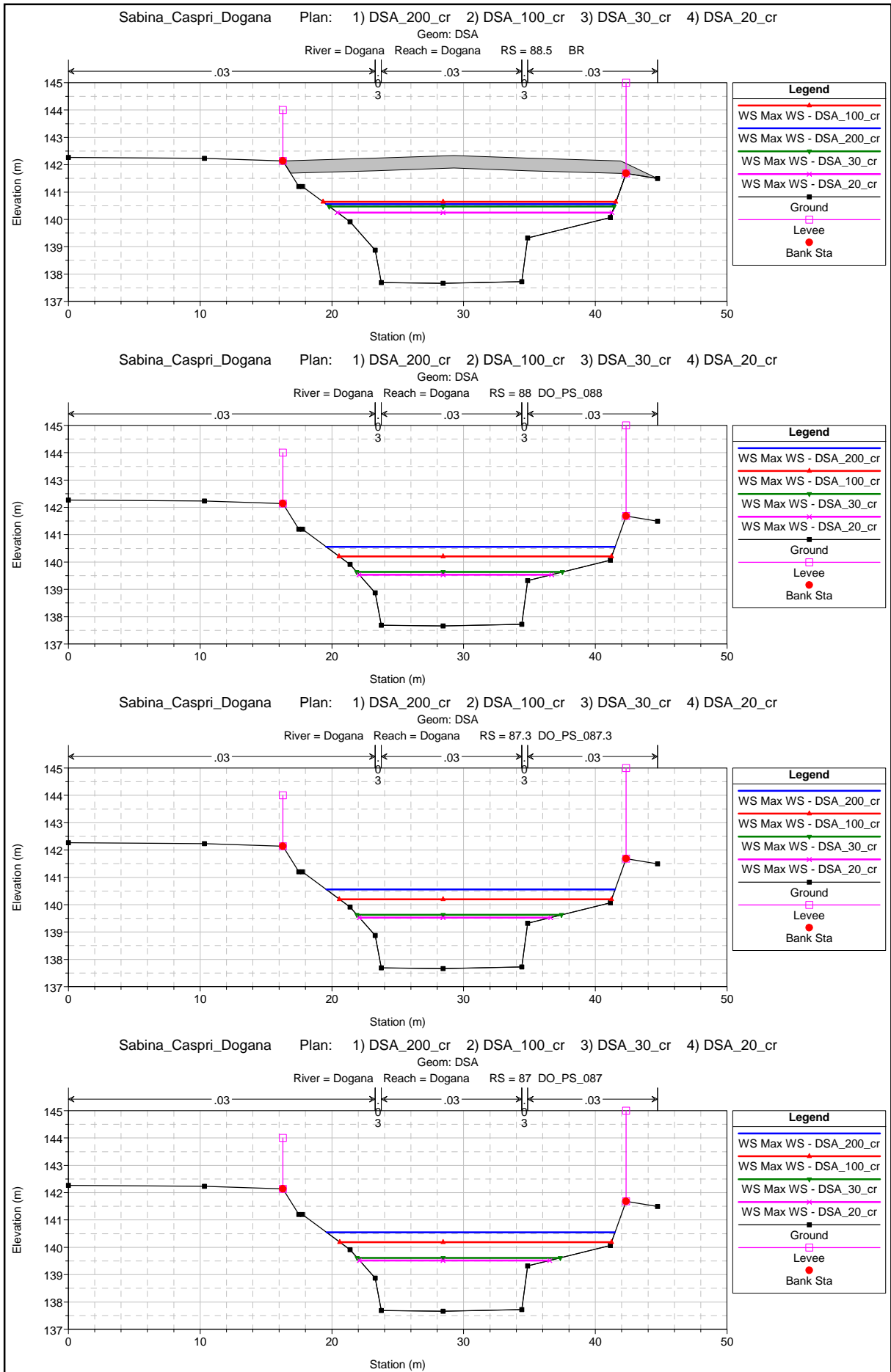
Sabina_Caspri_Dogana Plan: 1) DSA_200_cr 2) DSA_100_cr 3) DSA_30_cr 4) DSA_20_cr

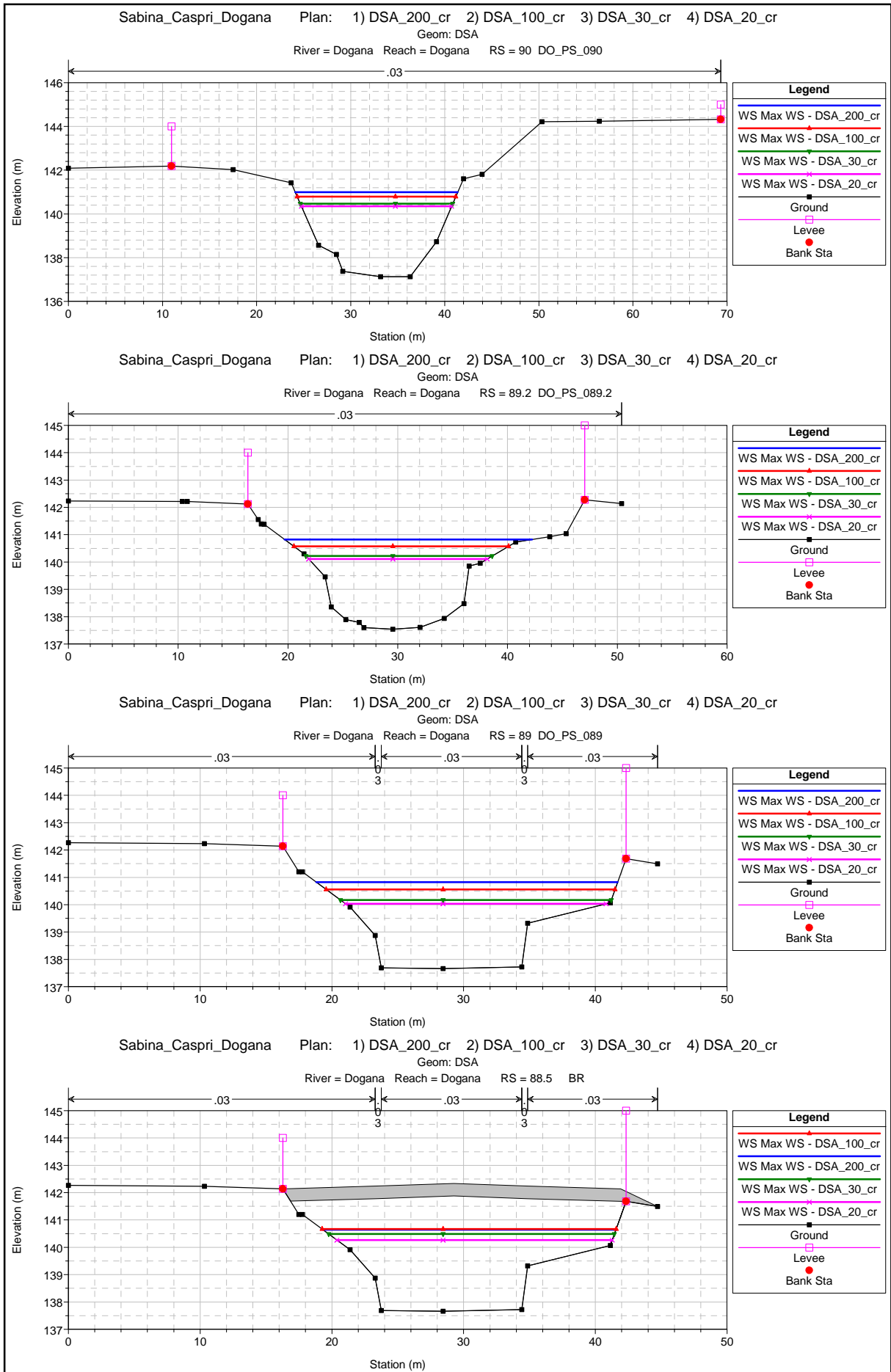
Geom: DSA

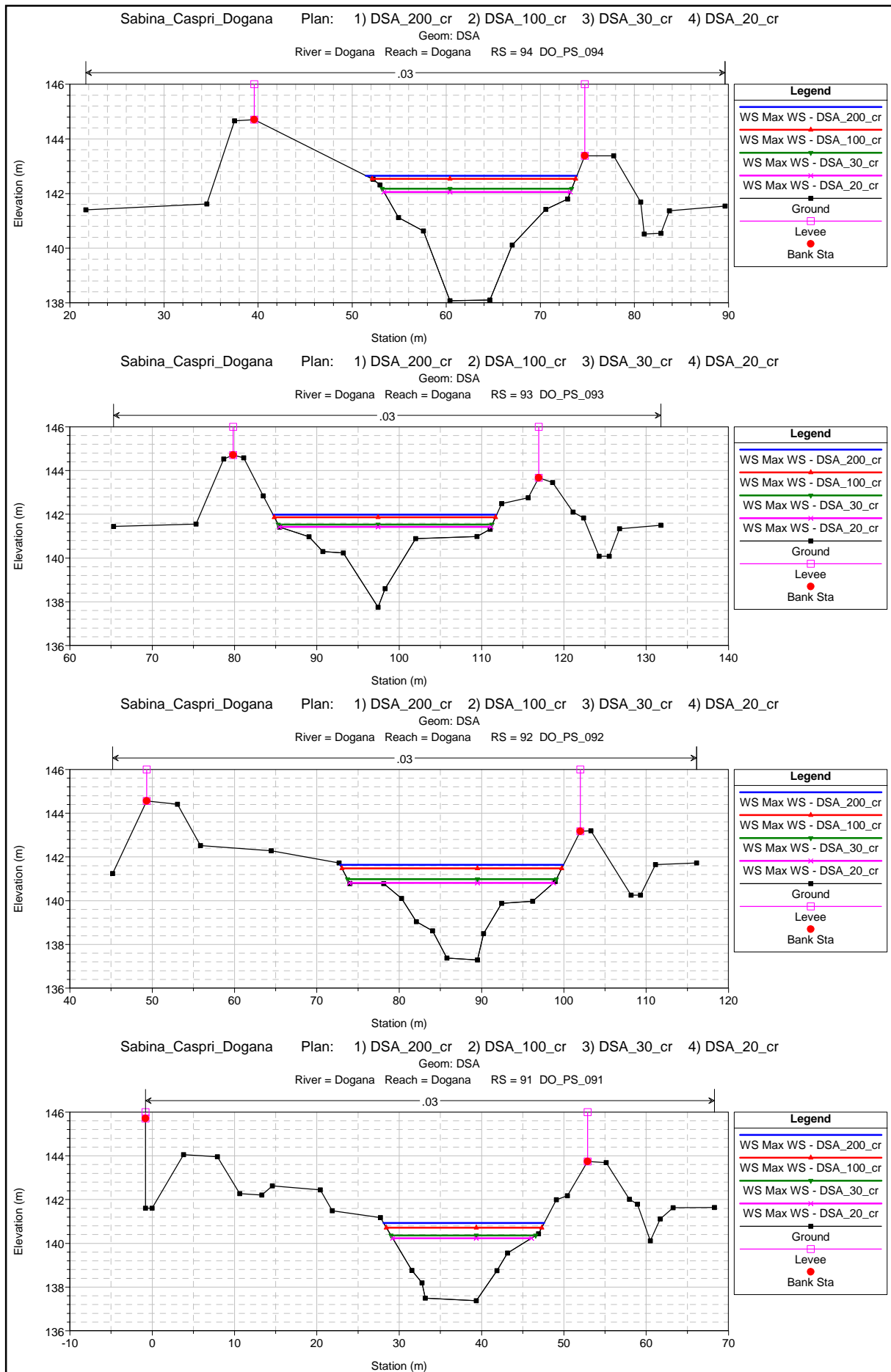


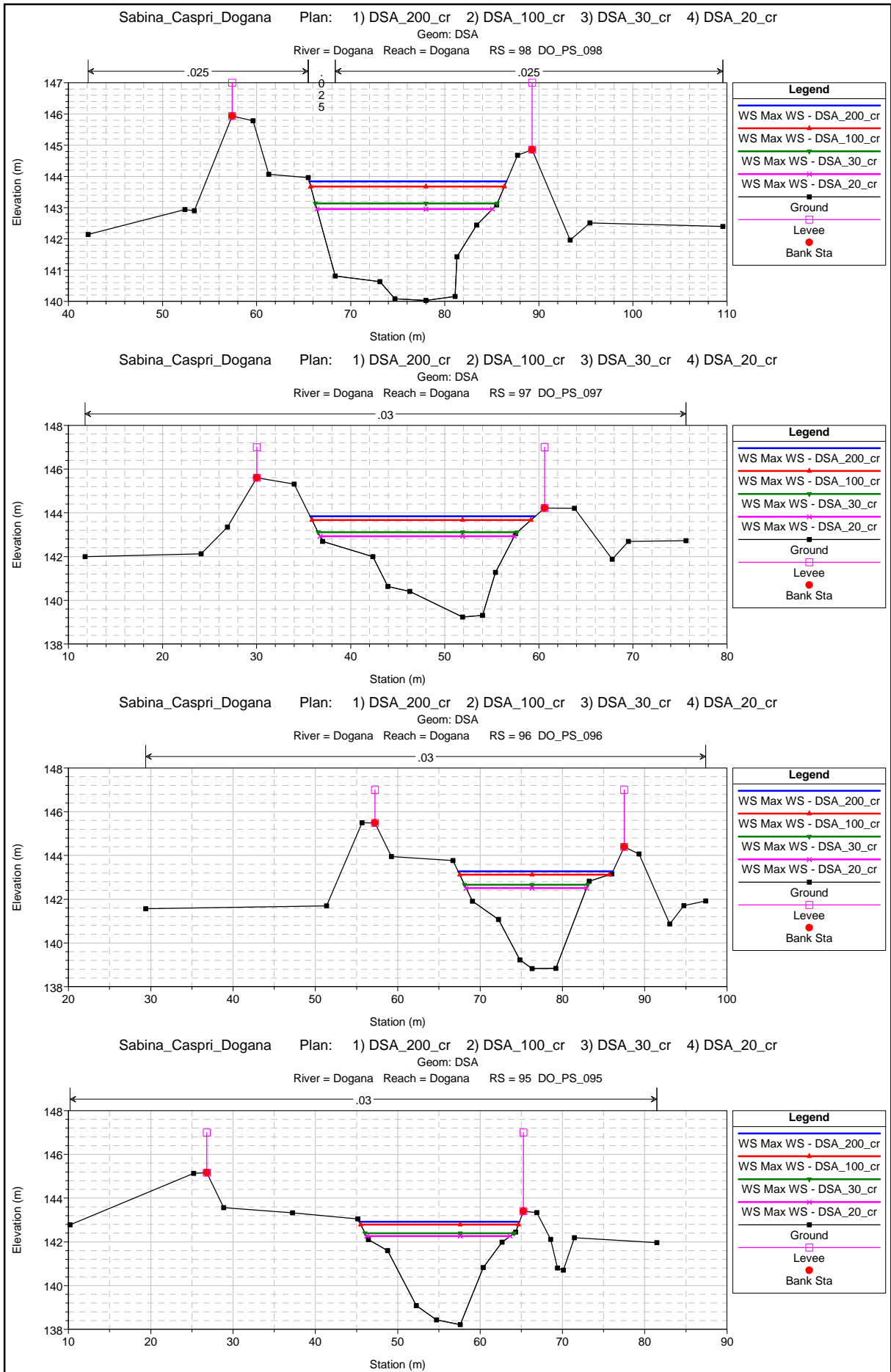
Legend

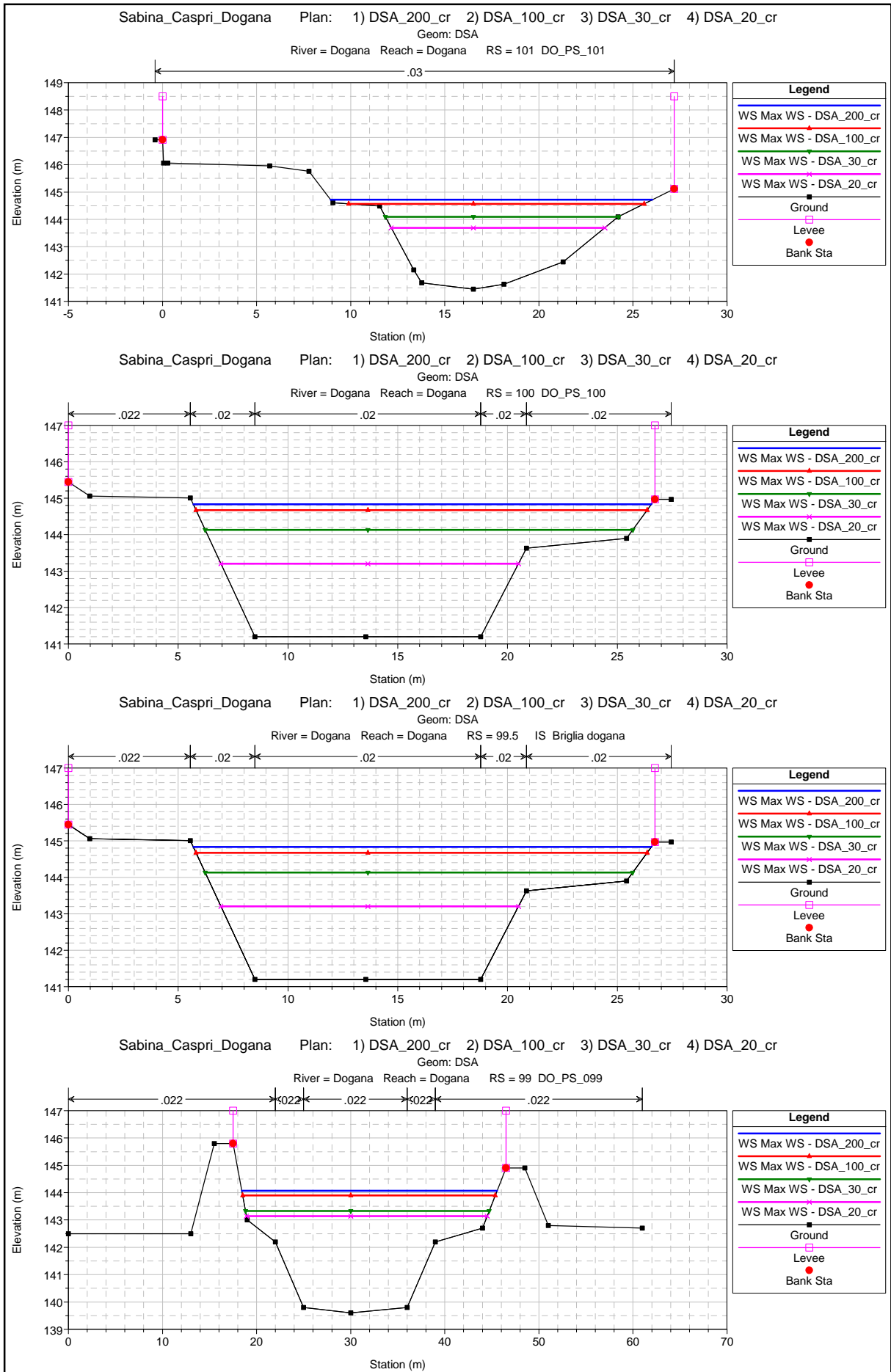
- WS Max WS - DSA_200_cr
- WS Max WS - DSA_100_cr
- WS Max WS - DSA_20_cr
- WS Max WS - DSA_30_cr
- Ground
- Left Levee
- Right Levee

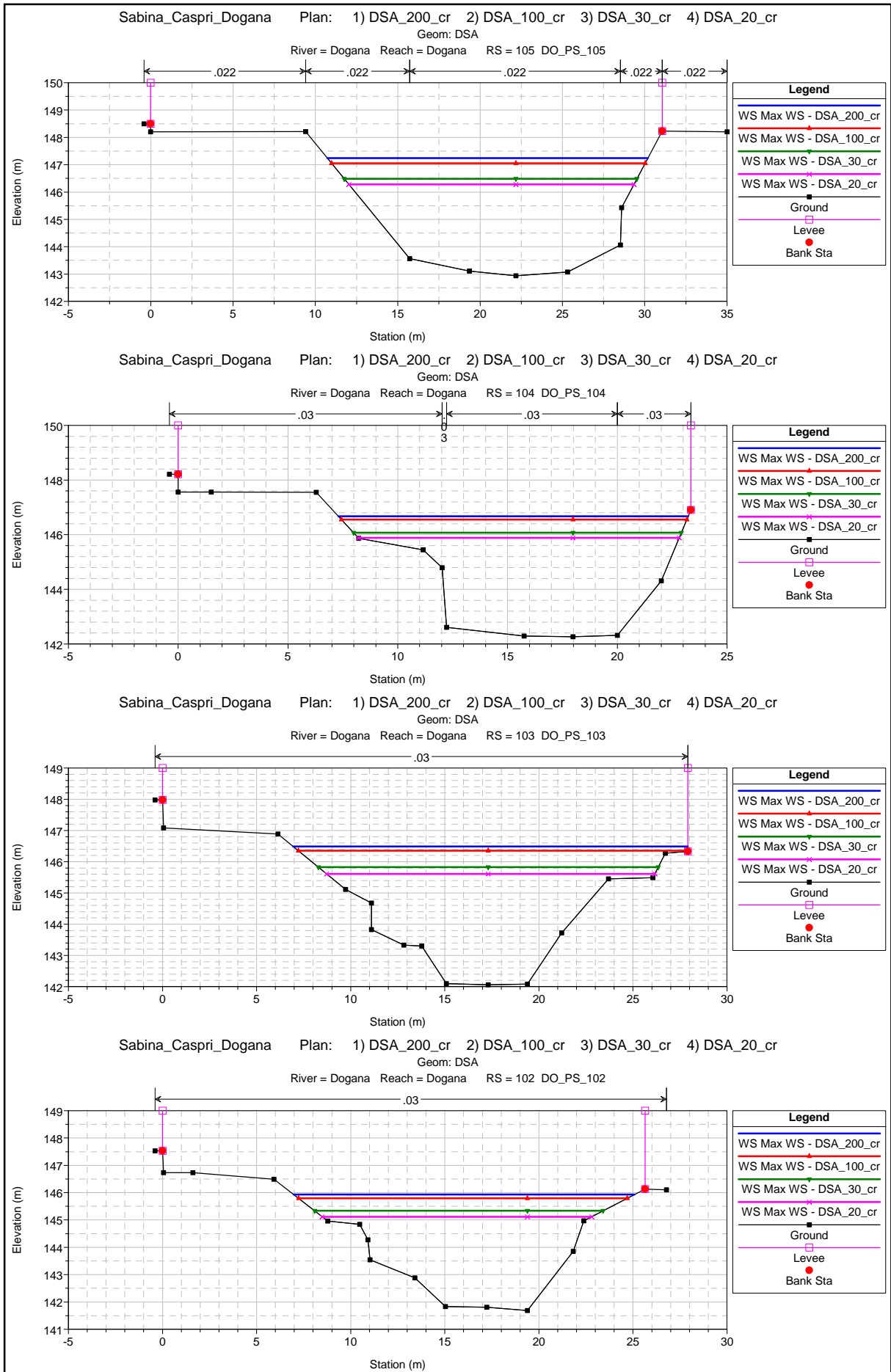


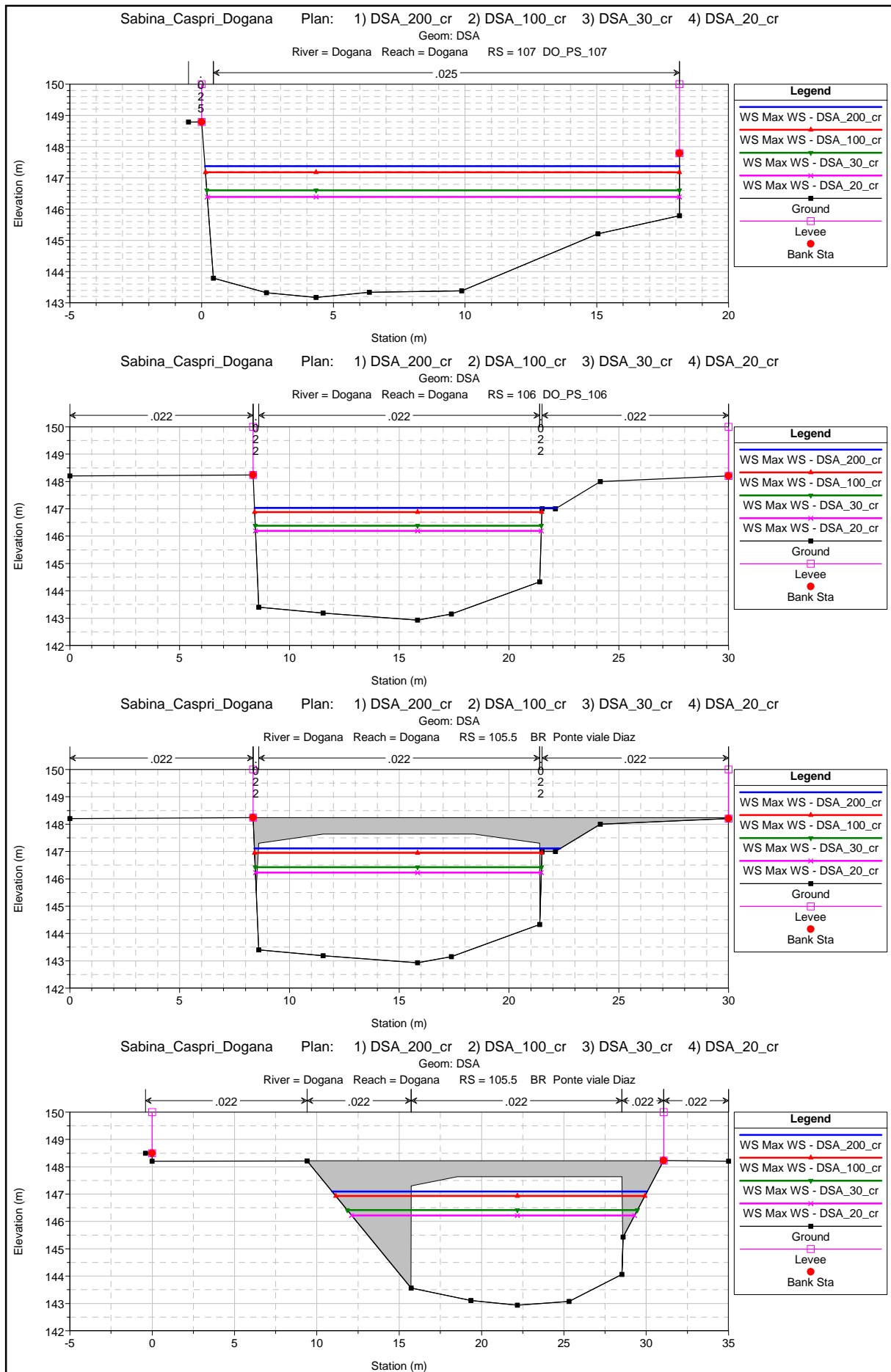


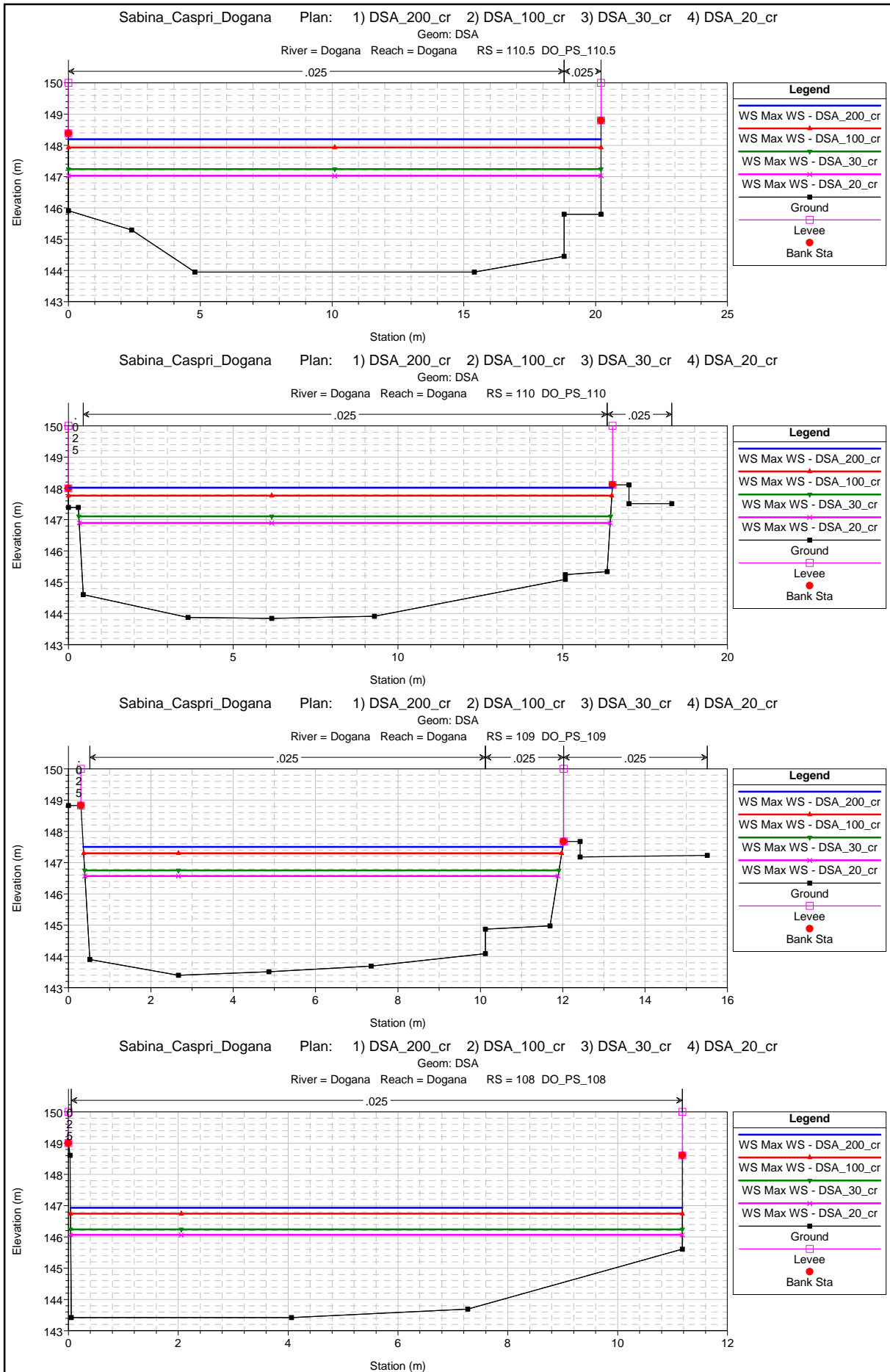


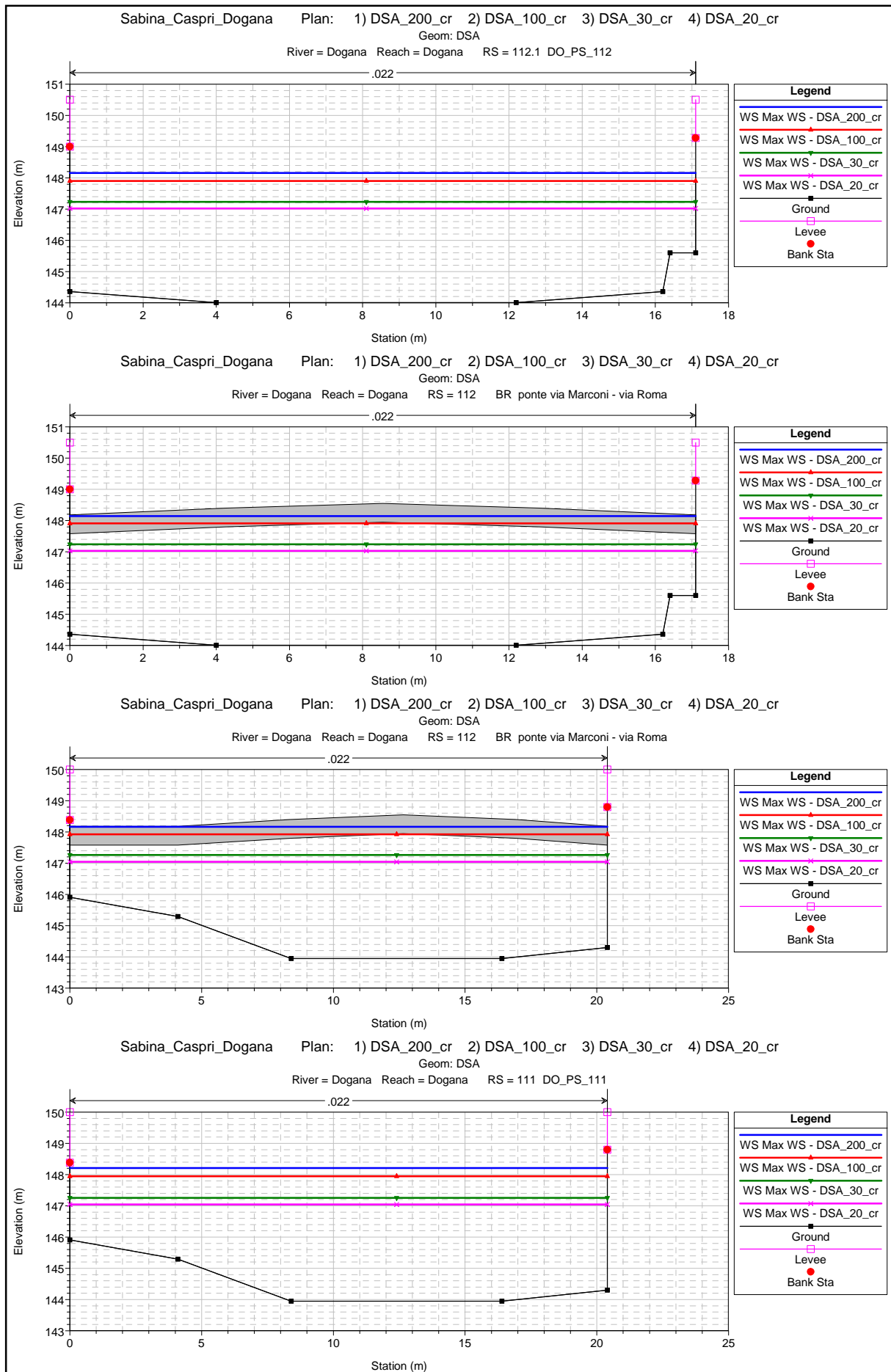


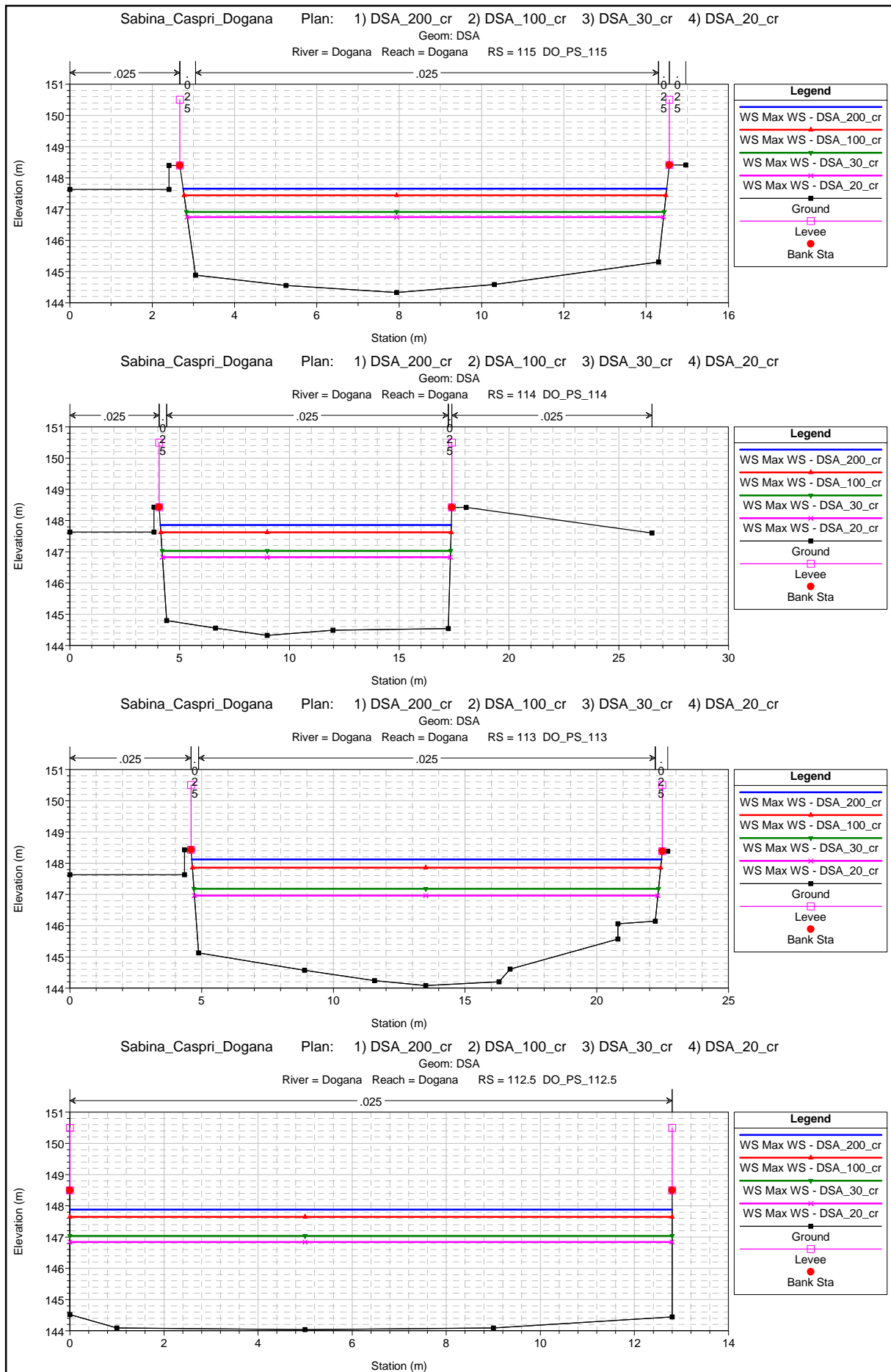


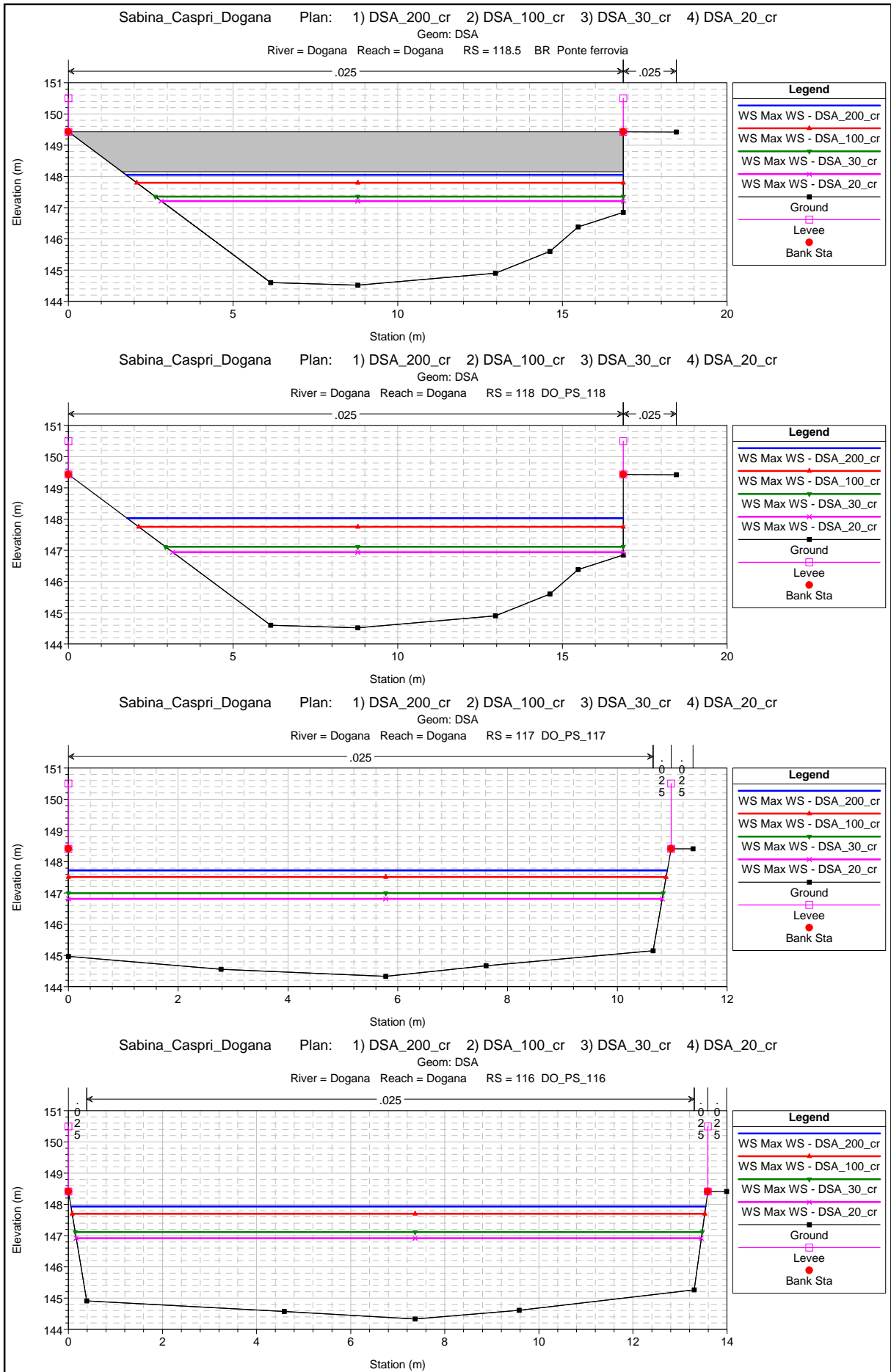


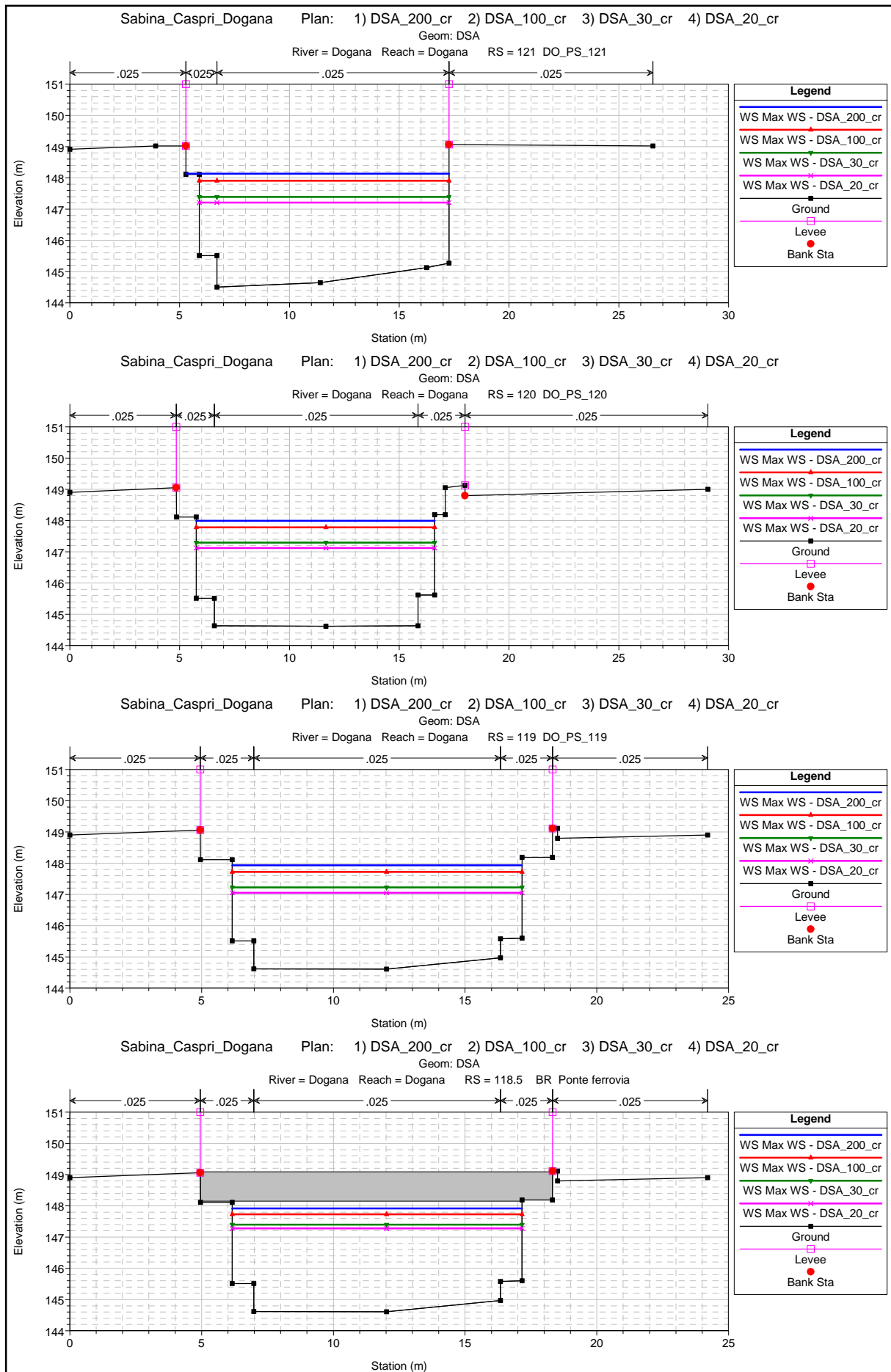


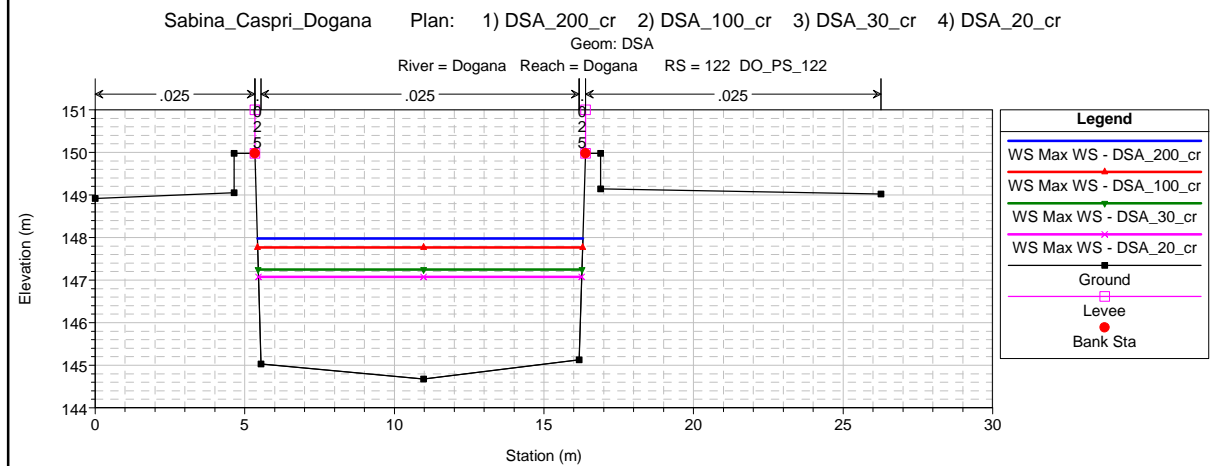
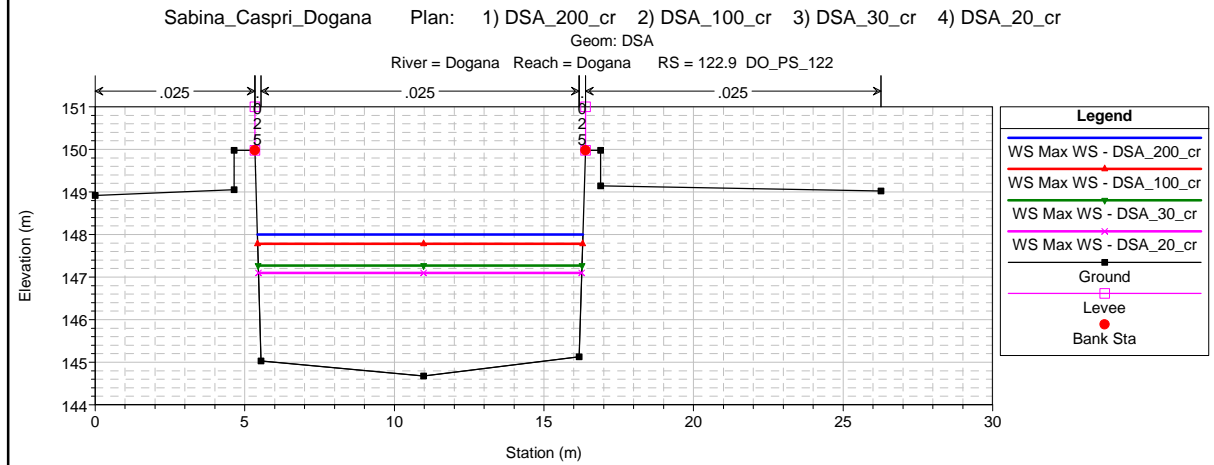
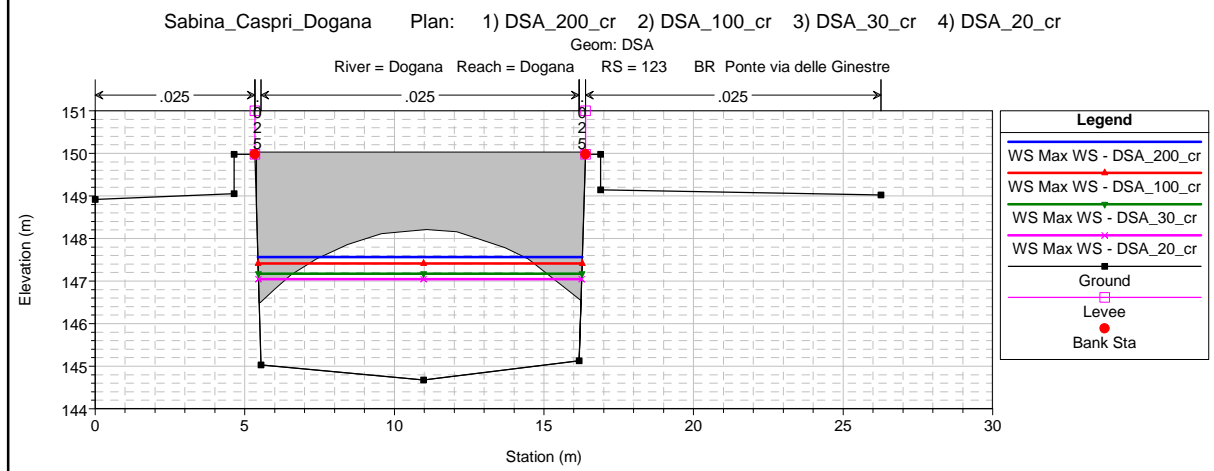
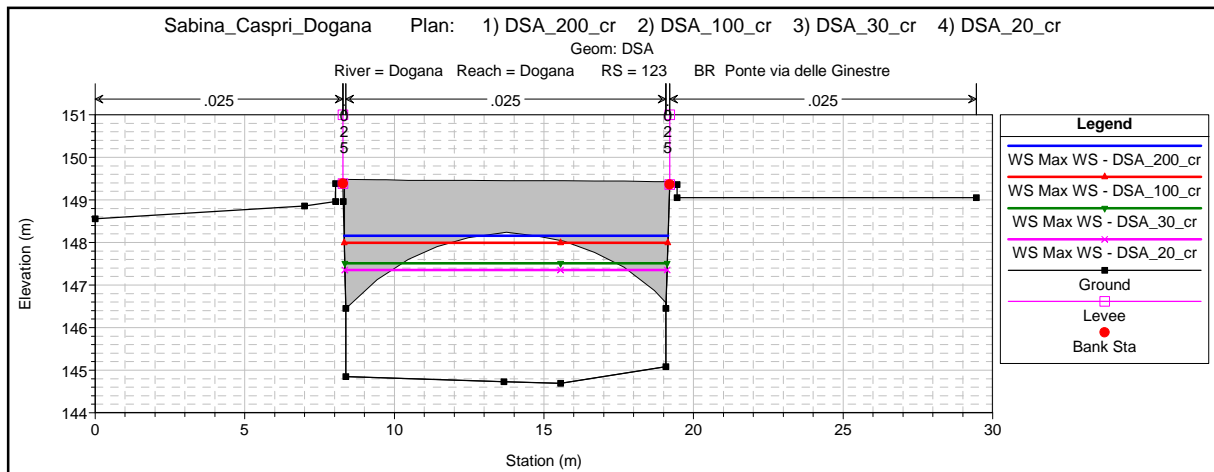


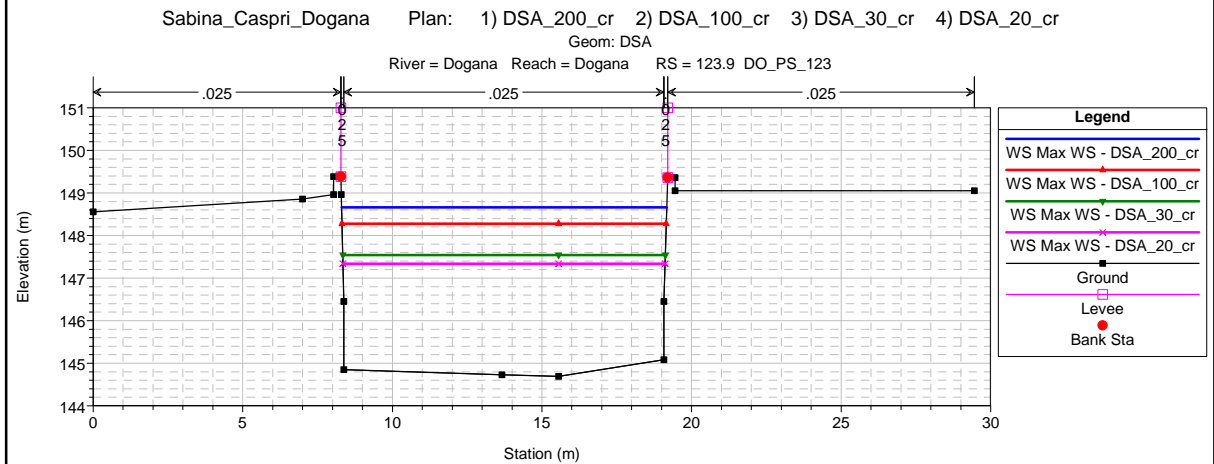
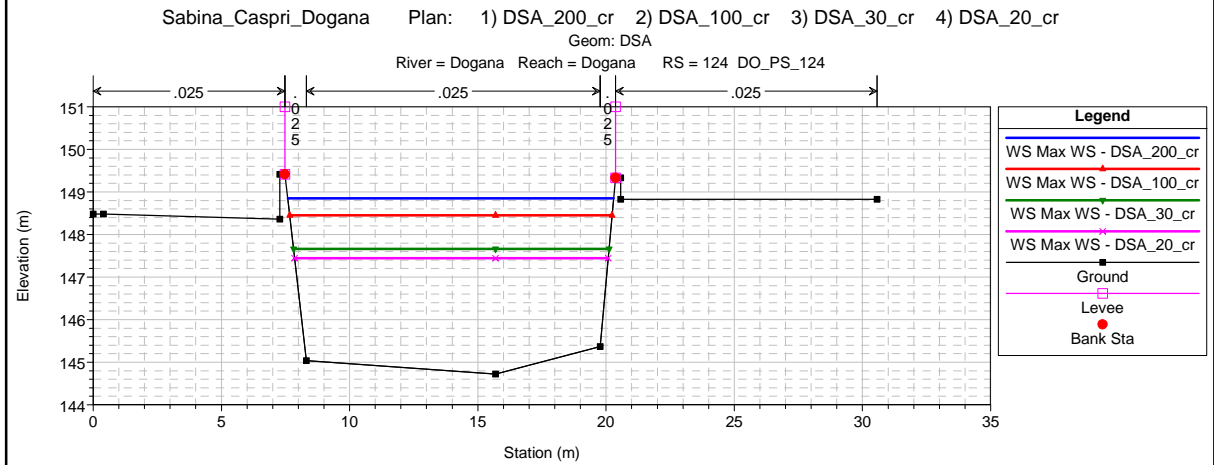
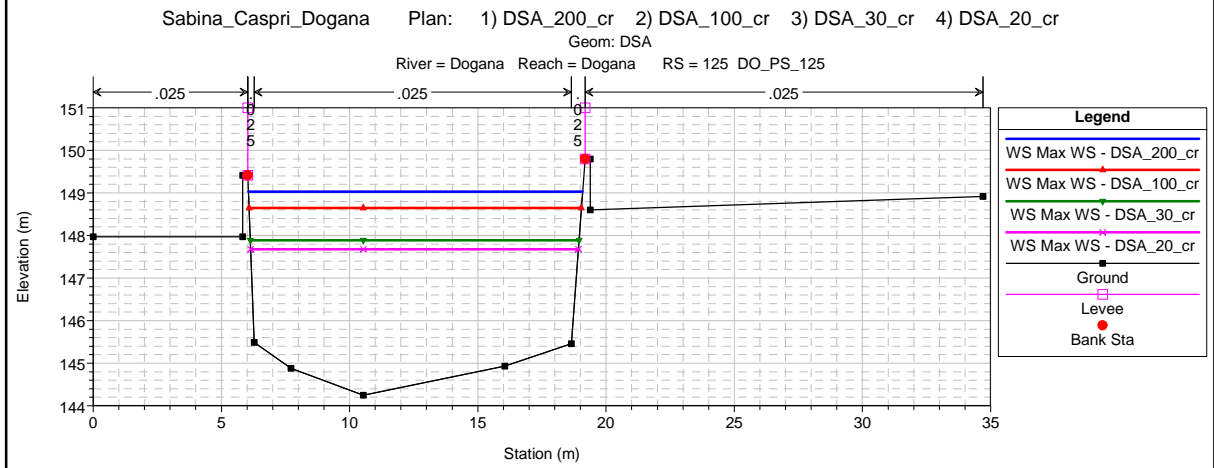
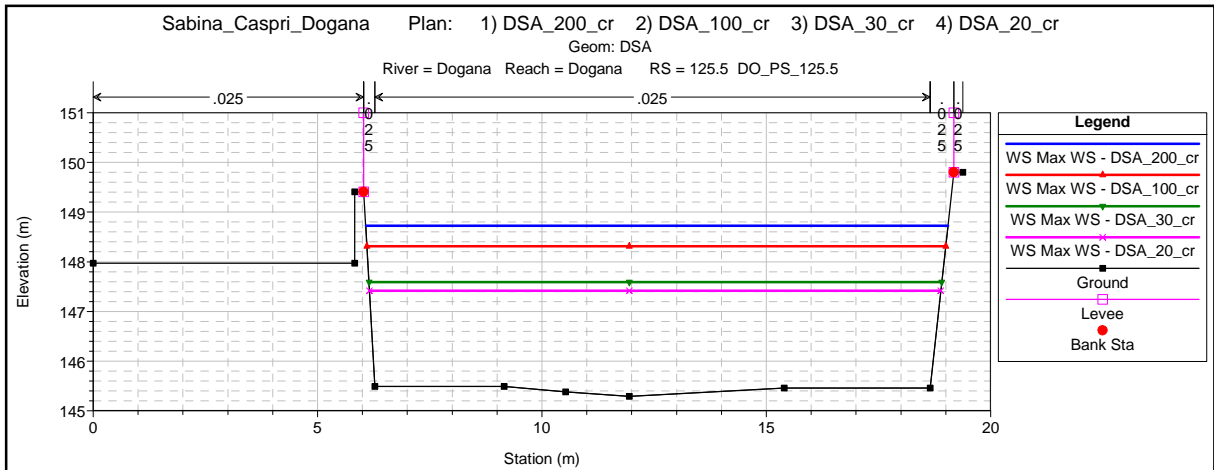


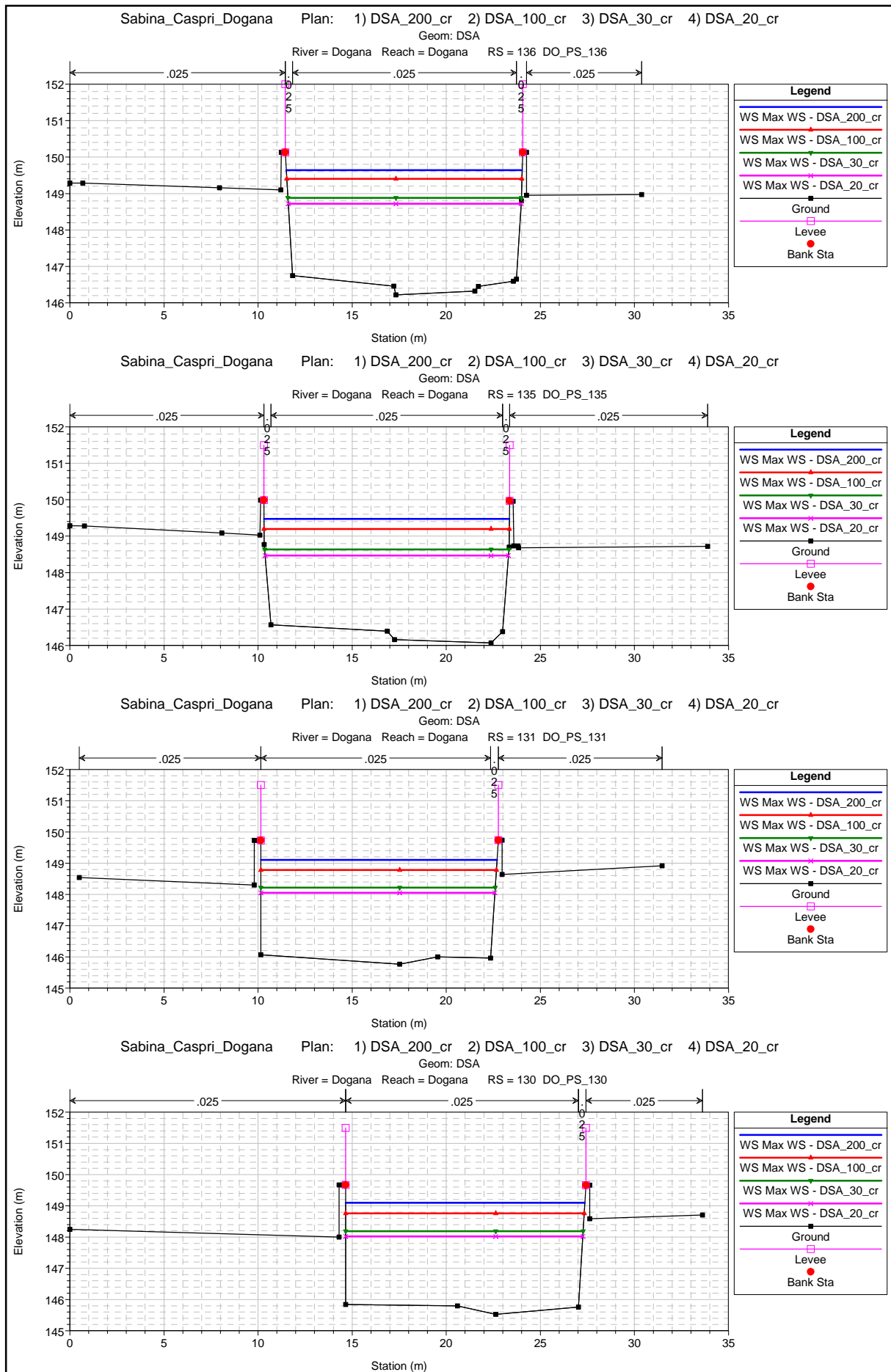


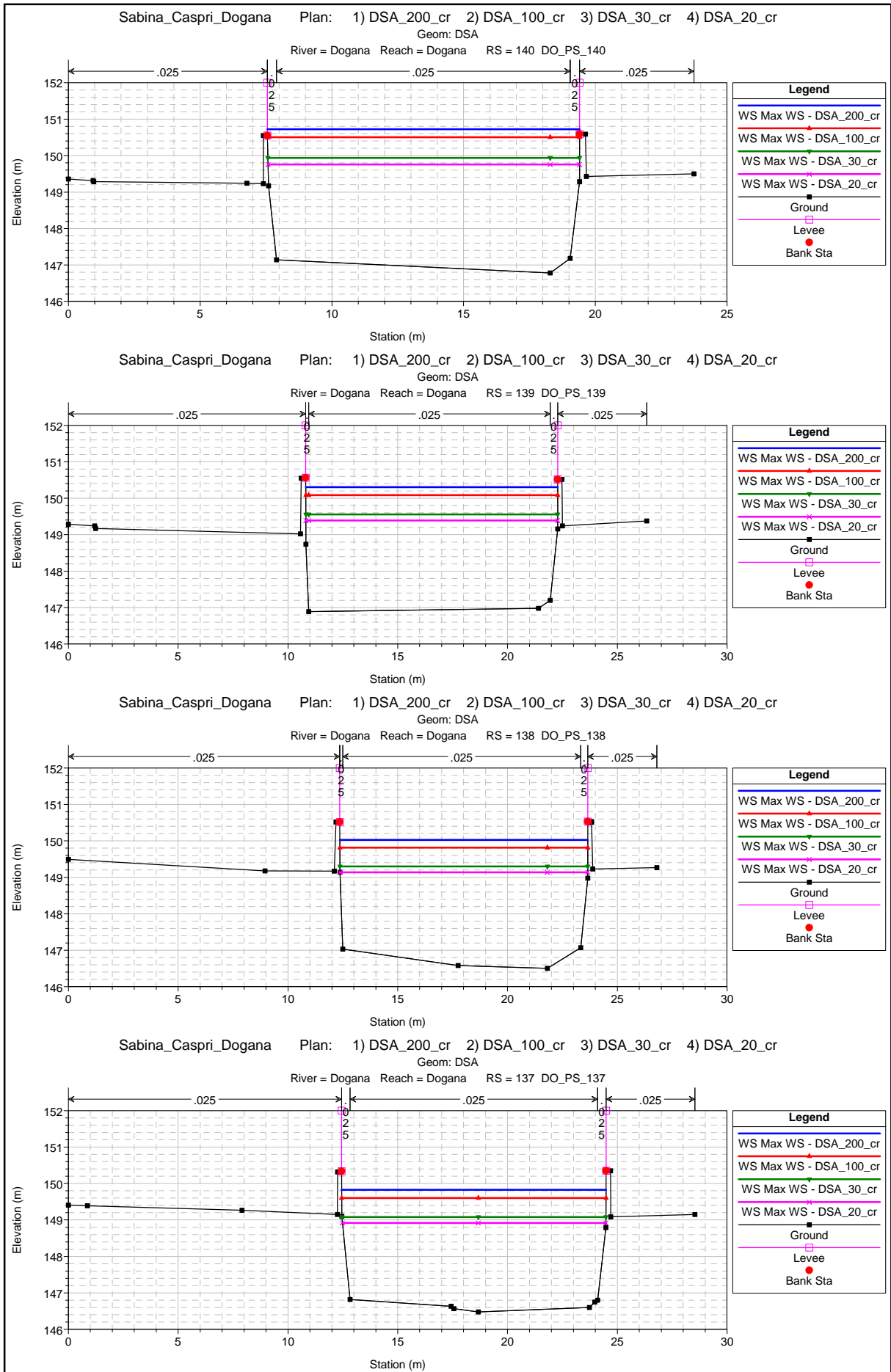


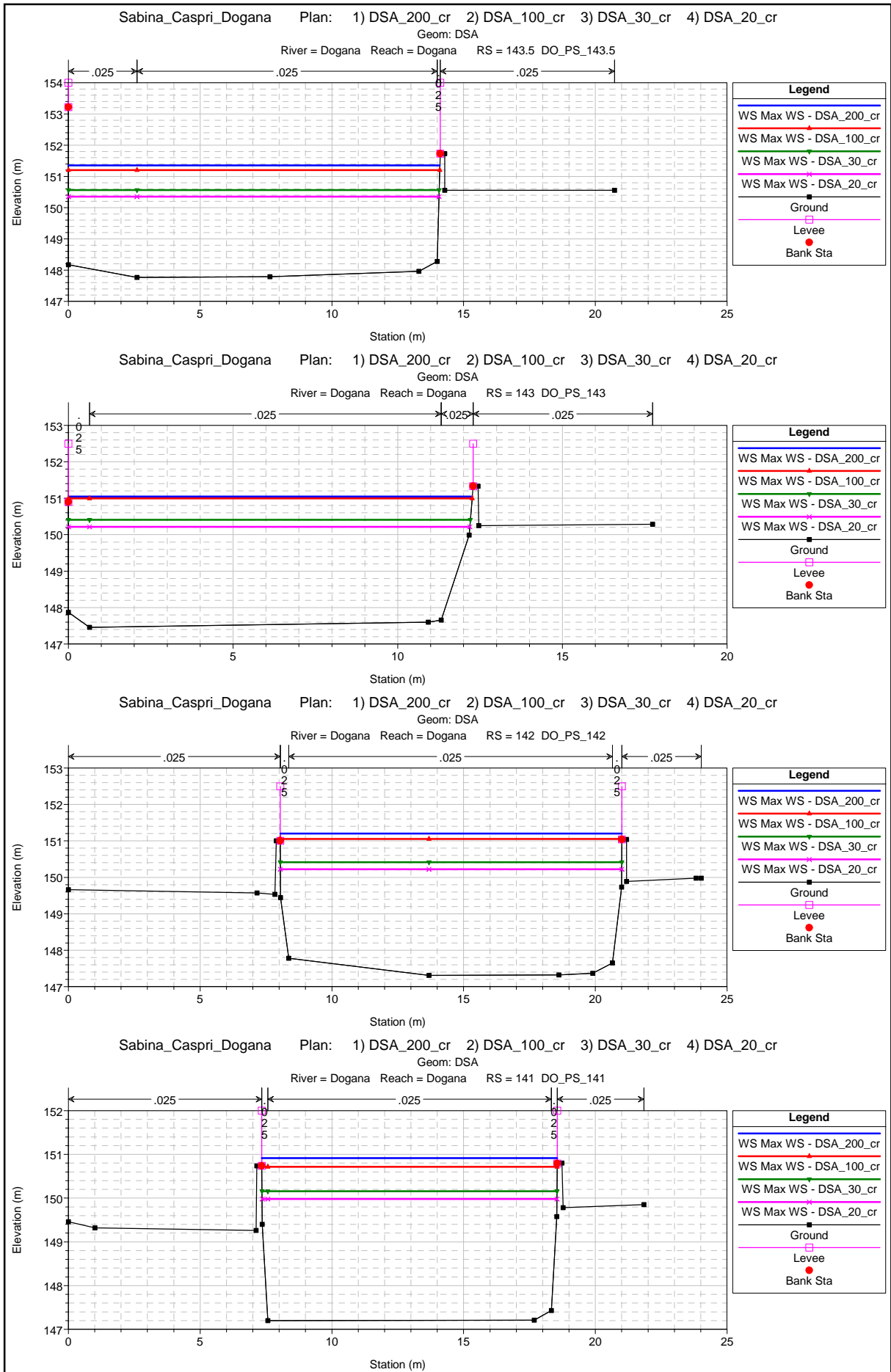


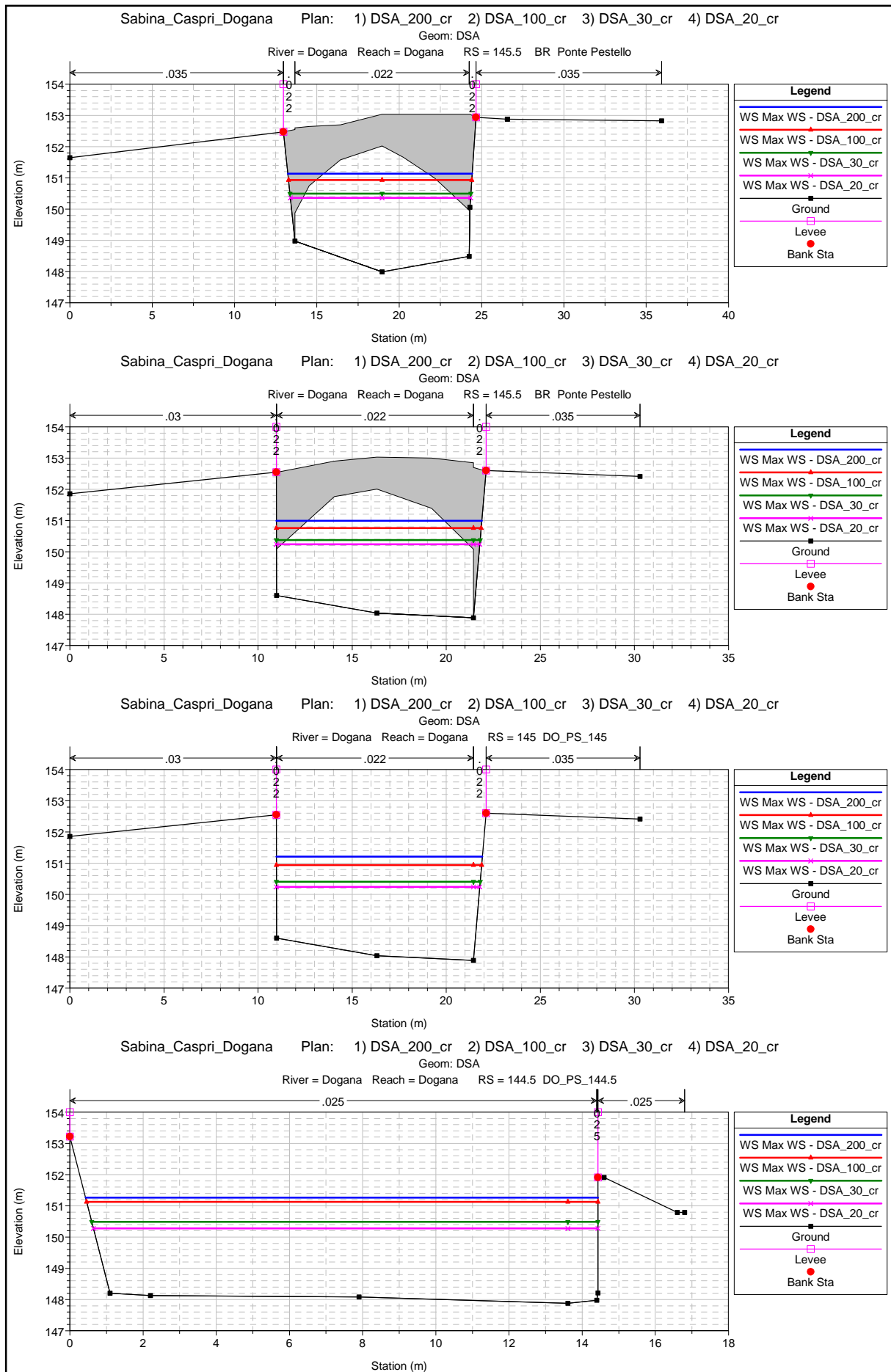


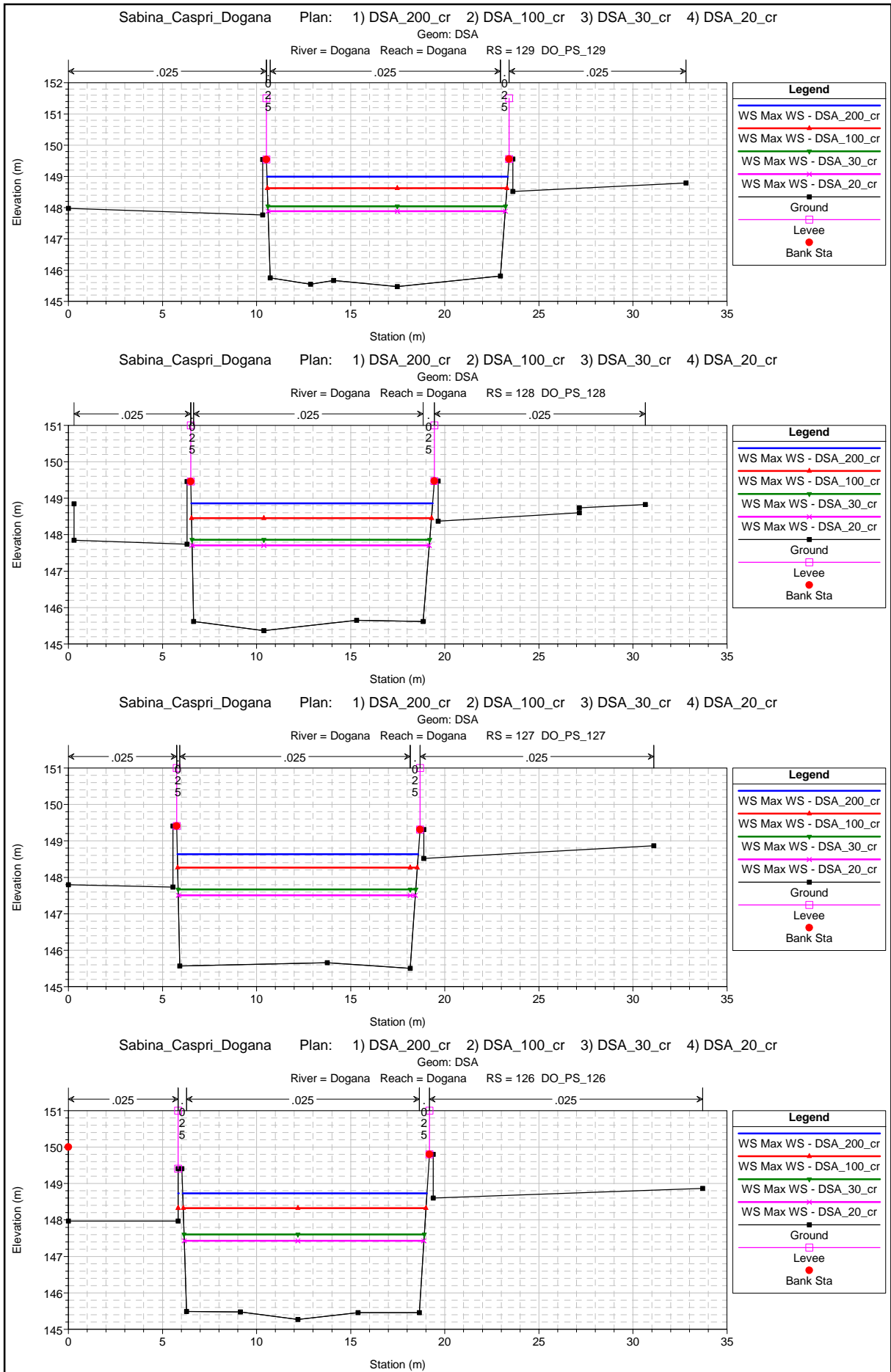


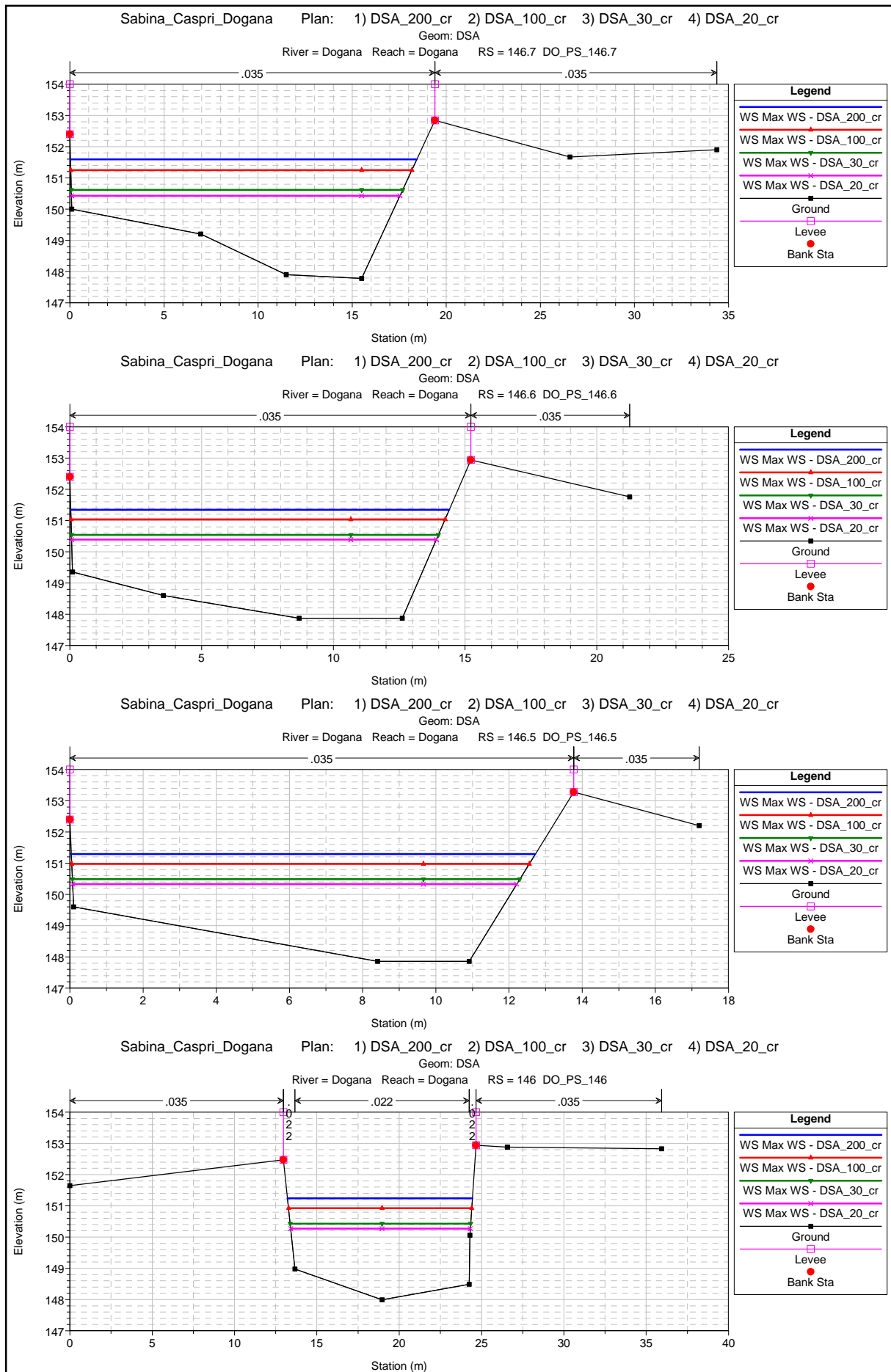








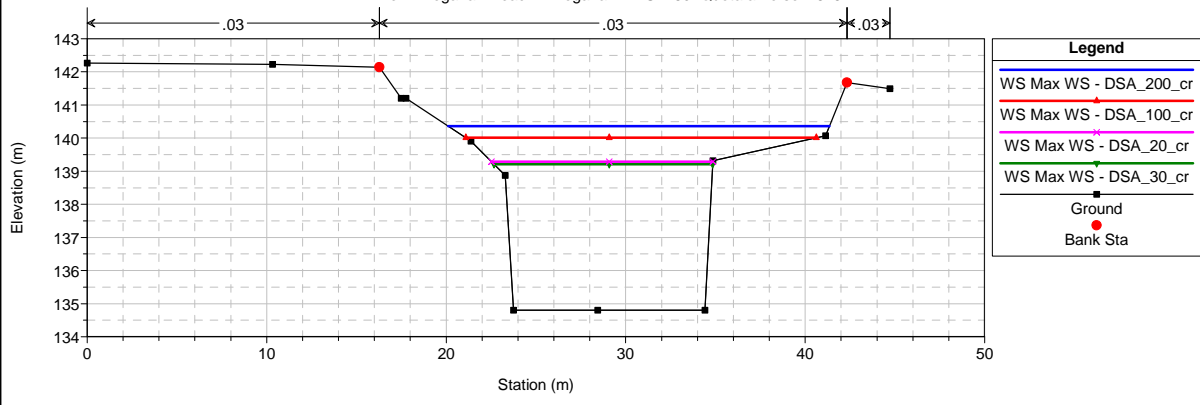




Sabina_Caspri_Dogana Plan: 1) DSA_200_cr 2) DSA_100_cr 3) DSA_30_cr 4) DSA_20_cr

Geom: DSA

River = Dogana Reach = Dogana RS = 80 Quota arno sez. 878



HEC-RAS River: Dogana Reach: Dogana Profile: Max WS

Reach	River Sta	Profile	Plan	Q Total (m3/s)	Min Ch El (m)	W.S. Elev (m)	Crit W.S. (m)	E.G. Elev (m)	E.G. Slope (m/m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Froude # Chl
Dogana	146.7	Max WS	DSA_200_cr	176.87	147.78	151.60		152.28	0.005809	3.67	48.21	18.41	0.72
Dogana	146.7	Max WS	DSA_100_cr	150.75	147.78	151.25		151.91	0.006420	3.60	41.89	18.13	0.76
Dogana	146.7	Max WS	DSA_30_cr	109.61	147.78	150.62		151.27	0.008798	3.58	30.62	17.61	0.87
Dogana	146.7	Max WS	DSA_20_cr	97.95	147.78	150.43		151.08	0.010065	3.60	27.25	17.46	0.92
Dogana	146.6	Max WS	DSA_200_cr	176.45	147.87	151.34		152.29	0.007910	4.31	40.96	14.37	0.81
Dogana	146.6	Max WS	DSA_100_cr	150.74	147.87	151.04		151.90	0.008024	4.12	36.58	14.20	0.82
Dogana	146.6	Max WS	DSA_30_cr	109.62	147.87	150.54		151.24	0.007889	3.70	29.64	13.93	0.81
Dogana	146.6	Max WS	DSA_20_cr	97.95	147.87	150.39		151.04	0.007901	3.57	27.48	13.85	0.81
Dogana	146.5	Max WS	DSA_200_cr	176.05	147.86	151.29	151.39	152.74	0.013903	5.33	33.00	12.68	1.06
Dogana	146.5	Max WS	DSA_100_cr	150.74	147.86	150.98	151.12	152.35	0.014677	5.18	29.10	12.51	1.08
Dogana	146.5	Max WS	DSA_30_cr	109.62	147.86	150.49	150.62	151.64	0.015557	4.77	22.98	12.23	1.11
Dogana	146.5	Max WS	DSA_20_cr	97.95	147.86	150.33	150.48	151.43	0.016104	4.65	21.07	12.14	1.13
Dogana	146	Max WS	DSA_200_cr	175.65	147.99	151.24	151.40	152.86	0.006222	5.64	31.12	11.23	1.08
Dogana	146	Max WS	DSA_100_cr	150.73	147.99	150.93	151.10	152.44	0.006447	5.45	27.64	11.13	1.10
Dogana	146	Max WS	DSA_30_cr	109.62	147.99	150.43	150.58	151.68	0.006510	4.95	22.14	10.96	1.11
Dogana	146	Max WS	DSA_20_cr	97.95	147.99	150.27	150.42	151.45	0.006617	4.80	20.41	10.91	1.12
Dogana	145.5		Bridge										
Dogana	145	Max WS	DSA_200_cr	178.10	147.89	151.21	151.21	152.71	0.005664	5.42	32.85	10.95	1.00
Dogana	145	Max WS	DSA_100_cr	150.73	147.89	150.94	150.89	152.23	0.005285	5.03	29.94	10.91	0.97
Dogana	145	Max WS	DSA_30_cr	109.62	147.89	150.41	150.36	151.46	0.005226	4.54	24.14	10.83	0.97
Dogana	145	Max WS	DSA_20_cr	97.95	147.89	150.24	150.21	151.22	0.005223	4.38	22.36	10.81	0.97
Dogana	144.5	Max WS	DSA_200_cr	177.47	147.88	151.26		152.09	0.003518	4.04	43.89	14.00	0.73
Dogana	144.5	Max WS	DSA_100_cr	150.71	147.88	151.13		151.78	0.002872	3.58	42.06	13.97	0.66
Dogana	144.5	Max WS	DSA_30_cr	109.52	147.88	150.49		151.04	0.003074	3.31	33.10	13.83	0.68
Dogana	144.5	Max WS	DSA_20_cr	97.88	147.88	150.28		150.81	0.003224	3.24	30.22	13.79	0.70
Dogana	143.5	Max WS	DSA_200_cr	177.36	147.77	151.36		152.03	0.002547	3.62	48.96	14.10	0.62
Dogana	143.5	Max WS	DSA_100_cr	150.71	147.77	151.20		151.73	0.002093	3.22	46.81	14.09	0.56
Dogana	143.5	Max WS	DSA_30_cr	109.54	147.77	150.56		150.99	0.002076	2.90	37.74	14.07	0.57
Dogana	143.5	Max WS	DSA_20_cr	97.90	147.77	150.35		150.76	0.002106	2.81	34.81	14.07	0.57

HEC-RAS River: Dogana Reach: Dogana Profile: Max WS (Continued)

Reach	River Sta	Profile	Plan	Q Total (m3/s)	Min Ch El (m)	W.S. Elev (m)	Crit.W.S. (m)	E.G. Elev (m)	E.G. Slope (m/m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Froude # Chl
Dogana	137	Max WS	DSA_200_cr	166.57	146.48	149.83		150.82	0.004393	4.43	37.64	12.04	0.80
Dogana	137	Max WS	DSA_100_cr	149.39	146.48	149.60		150.53	0.004387	4.28	34.90	12.04	0.80
Dogana	137	Max WS	DSA_30_cr	109.51	146.48	149.08		149.82	0.004186	3.82	28.65	12.03	0.79
Dogana	137	Max WS	DSA_20_cr	97.88	146.48	148.92		149.60	0.004109	3.66	26.71	12.00	0.78
Dogana	136	Max WS	DSA_200_cr	166.55	146.22	149.64		150.58	0.004152	4.29	38.79	12.54	0.78
Dogana	136	Max WS	DSA_100_cr	149.37	146.22	149.40		150.29	0.004225	4.18	35.75	12.50	0.79
Dogana	136	Max WS	DSA_30_cr	109.50	146.22	148.88		149.59	0.004083	3.74	29.26	12.41	0.78
Dogana	136	Max WS	DSA_20_cr	97.88	146.22	148.72		149.38	0.004007	3.59	27.29	12.38	0.77
Dogana	135	Max WS	DSA_200_cr	166.54	146.07	149.47		150.34	0.003786	4.13	40.28	13.04	0.75
Dogana	135	Max WS	DSA_100_cr	149.32	146.07	149.20		150.04	0.003993	4.07	36.68	13.04	0.77
Dogana	135	Max WS	DSA_30_cr	109.49	146.07	148.64		149.34	0.004129	3.73	29.38	12.99	0.79
Dogana	135	Max WS	DSA_20_cr	97.87	146.07	148.47		149.13	0.004146	3.60	27.21	12.94	0.79
Dogana	131	Max WS	DSA_200_cr	166.53	145.77	149.11		150.02	0.004076	4.23	39.33	12.55	0.76
Dogana	131	Max WS	DSA_100_cr	149.26	145.77	148.78		149.70	0.004488	4.23	35.27	12.51	0.80
Dogana	131	Max WS	DSA_30_cr	109.44	145.77	148.22		148.98	0.004646	3.88	28.22	12.45	0.82
Dogana	131	Max WS	DSA_20_cr	95.42	145.77	148.05		148.73	0.004422	3.65	26.17	12.43	0.80
Dogana	130	Max WS	DSA_200_cr	166.53	145.53	149.10		149.89	0.003359	3.95	42.21	12.70	0.69
Dogana	130	Max WS	DSA_100_cr	149.23	145.53	148.76		149.55	0.003673	3.94	37.92	12.67	0.73
Dogana	130	Max WS	DSA_30_cr	109.37	145.53	148.19		148.83	0.003682	3.57	30.64	12.61	0.73
Dogana	130	Max WS	DSA_20_cr	95.38	145.53	148.02		148.59	0.003442	3.34	28.58	12.60	0.71
Dogana	129	Max WS	DSA_200_cr	166.47	145.47	148.99		149.79	0.003297	3.95	42.18	12.80	0.69
Dogana	129	Max WS	DSA_100_cr	149.17	145.47	148.63		149.43	0.003707	3.98	37.52	12.74	0.74
Dogana	129	Max WS	DSA_30_cr	109.22	145.47	148.05		148.72	0.003767	3.62	30.15	12.64	0.75
Dogana	129	Max WS	DSA_20_cr	95.33	145.47	147.89		148.47	0.003515	3.39	28.16	12.61	0.72
Dogana	128	Max WS	DSA_200_cr	166.43	145.37	148.86		149.68	0.003475	4.01	41.53	12.83	0.71
Dogana	128	Max WS	DSA_100_cr	149.05	145.37	148.45		149.31	0.004106	4.10	36.31	12.75	0.78
Dogana	128	Max WS	DSA_30_cr	108.90	145.37	147.86		148.59	0.004341	3.78	28.78	12.64	0.80
Dogana	128	Max WS	DSA_20_cr	97.11	145.37	147.70		148.37	0.004261	3.62	26.81	12.61	0.79
Dogana	127	Max WS	DSA_200_cr	166.40	145.50	148.64		149.61	0.004580	4.38	38.01	12.80	0.81

HEC-RAS River: Dogana Reach: Dogana Profile: Max WS (Continued)

Reach	River Sta	Profile	Plan	Q Total (m3/s)	Min Ch El (m)	W.S. Elev (m)	Crit.W.S. (m)	E.G. Elev (m)	E.G. Slope (m/m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Froude # Chl
Dogana	127	Max WS	DSA_100_cr	149.27	145.50	148.27		149.29	0.005438	4.49	33.27	12.73	0.89
Dogana	127	Max WS	DSA_30_cr	108.26	145.50	147.67	147.59	148.57	0.006165	4.21	25.69	12.62	0.94
Dogana	127	Max WS	DSA_20_cr	96.23	145.50	147.51	147.44	148.35	0.006216	4.06	23.69	12.59	0.95
Dogana	126	Max WS	DSA_200_cr	166.34	145.27	148.73		149.53	0.003397	3.96	41.96	12.98	0.70
Dogana	126	Max WS	DSA_100_cr	149.18	145.27	148.32		149.17	0.004042	4.07	36.66	12.90	0.77
Dogana	126	Max WS	DSA_30_cr	108.00	145.27	147.61		148.39	0.004971	3.93	27.45	12.77	0.86
Dogana	126	Max WS	DSA_20_cr	95.44	145.27	147.43		148.16	0.005020	3.79	25.20	12.73	0.86
Dogana	125.5	Max WS	DSA_200_cr	166.33	145.29	148.72		149.53	0.003445	3.98	41.77	12.97	0.71
Dogana	125.5	Max WS	DSA_100_cr	149.17	145.29	148.31		149.16	0.004120	4.10	36.42	12.90	0.78
Dogana	125.5	Max WS	DSA_30_cr	108.00	145.29	147.59		148.39	0.005104	3.97	27.22	12.76	0.87
Dogana	125.5	Max WS	DSA_20_cr	95.42	145.29	147.42		148.16	0.005150	3.82	24.99	12.73	0.87
Dogana	125	Max WS	DSA_200_cr	166.33	144.25	149.03		149.52	0.001584	3.10	53.71	13.03	0.49
Dogana	125	Max WS	DSA_100_cr	149.17	144.25	148.65		149.13	0.001664	3.06	48.80	12.96	0.50
Dogana	125	Max WS	DSA_30_cr	110.48	144.25	147.89		148.29	0.001731	2.84	38.95	12.82	0.52
Dogana	125	Max WS	DSA_20_cr	100.05	144.25	147.67		148.06	0.001745	2.76	36.26	12.78	0.52
Dogana	124	Max WS	DSA_200_cr	166.24	144.72	148.85		149.48	0.002306	3.53	47.10	12.71	0.59
Dogana	124	Max WS	DSA_100_cr	149.06	144.72	148.45		149.09	0.002547	3.54	42.08	12.57	0.62
Dogana	124	Max WS	DSA_30_cr	110.28	144.72	147.66		148.26	0.002981	3.42	32.29	12.31	0.67
Dogana	124	Max WS	DSA_20_cr	99.66	144.72	147.44		148.02	0.003144	3.37	29.58	12.23	0.69
Dogana	123.9	Max WS	DSA_200_cr	166.23	144.69	148.66	147.72	149.48	0.003334	4.01	41.46	10.87	0.66
Dogana	123.9	Max WS	DSA_100_cr	149.05	144.69	148.28	147.51	149.09	0.003615	4.00	37.24	10.84	0.69
Dogana	123.9	Max WS	DSA_30_cr	110.27	144.69	147.54	147.02	148.26	0.003916	3.77	29.29	10.78	0.73
Dogana	123.9	Max WS	DSA_20_cr	99.65	144.69	147.34	146.88	148.03	0.004001	3.68	27.10	10.77	0.74
Dogana	123		Bridge										
Dogana	122.9	Max WS	DSA_200_cr	166.83	144.68	148.00		149.26	0.006000	4.97	33.56	10.88	0.90
Dogana	122.9	Max WS	DSA_100_cr	149.63	144.68	147.79		148.96	0.005927	4.79	31.22	10.87	0.90
Dogana	122.9	Max WS	DSA_30_cr	108.10	144.68	147.27		148.18	0.005472	4.22	25.63	10.82	0.88
Dogana	122.9	Max WS	DSA_20_cr	98.27	144.68	147.10		147.97	0.005650	4.14	23.75	10.81	0.89
Dogana	122	Max WS	DSA_200_cr	166.83	144.68	147.98		149.26	0.006119	5.01	33.33	10.88	0.91

HEC-RAS River: Dogana Reach: Dogana Profile: Max WS (Continued)

Reach	River Sta	Profile	Plan	Q Total (m3/s)	Min Ch El (m)	W.S. Elev (m)	Crit W.S. (m)	E.G. Elev (m)	E.G. Slope (m/m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Froude # Chl
Dogana	122	Max WS	DSA_100_cr	149.63	144.68	147.76		148.95	0.006055	4.83	30.99	10.86	0.91
Dogana	122	Max WS	DSA_30_cr	108.09	144.68	147.25		148.17	0.005604	4.25	25.41	10.82	0.89
Dogana	122	Max WS	DSA_20_cr	96.18	144.68	147.08		147.93	0.005555	4.09	23.54	10.81	0.88
Dogana	121	Max WS	DSA_200_cr	166.82	144.50	148.14		149.14	0.004780	4.44	37.60	11.98	0.80
Dogana	121	Max WS	DSA_100_cr	149.63	144.50	147.91		148.84	0.004496	4.27	35.06	11.38	0.78
Dogana	121	Max WS	DSA_30_cr	110.28	144.50	147.39		148.12	0.004186	3.79	29.09	11.38	0.76
Dogana	121	Max WS	DSA_20_cr	98.26	144.50	147.21		147.88	0.004115	3.63	27.05	11.38	0.75
Dogana	120	Max WS	DSA_200_cr	166.81	144.62	147.99		149.14	0.005636	4.76	35.06	10.86	0.85
Dogana	120	Max WS	DSA_100_cr	149.61	144.62	147.78		148.84	0.005484	4.56	32.80	10.86	0.84
Dogana	120	Max WS	DSA_30_cr	110.24	144.62	147.29		148.11	0.004976	4.01	27.46	10.86	0.81
Dogana	120	Max WS	DSA_20_cr	98.22	144.62	147.12		147.87	0.004835	3.83	25.63	10.86	0.80
Dogana	119	Max WS	DSA_200_cr	166.80	144.61	147.94	147.68	149.14	0.005963	4.87	34.23	11.00	0.88
Dogana	119	Max WS	DSA_100_cr	149.61	144.61	147.72	147.49	148.84	0.005863	4.69	31.91	11.00	0.88
Dogana	119	Max WS	DSA_30_cr	110.23	144.61	147.23	146.99	148.11	0.005501	4.17	26.43	11.00	0.86
Dogana	119	Max WS	DSA_20_cr	98.20	144.61	147.06	146.83	147.87	0.005422	4.00	24.55	11.00	0.85
Dogana	118.5		Bridge										
Dogana	118	Max WS	DSA_200_cr	166.76	144.52	148.03		148.97	0.004138	4.30	38.80	15.07	0.85
Dogana	118	Max WS	DSA_100_cr	149.47	144.52	147.75		148.70	0.004558	4.30	34.72	14.72	0.89
Dogana	118	Max WS	DSA_30_cr	107.80	144.52	147.11	147.11	148.02	0.005747	4.22	25.56	13.91	0.99
Dogana	118	Max WS	DSA_20_cr	96.09	144.52	146.94	146.96	147.82	0.006095	4.15	23.16	13.68	1.02
Dogana	117	Max WS	DSA_200_cr	166.36	144.33	147.72		149.03	0.006213	5.07	32.81	10.91	0.93
Dogana	117	Max WS	DSA_100_cr	148.95	144.33	147.51		148.72	0.006127	4.88	30.51	10.89	0.93
Dogana	117	Max WS	DSA_30_cr	107.24	144.33	146.99		147.94	0.005716	4.31	24.89	10.84	0.91
Dogana	117	Max WS	DSA_20_cr	95.45	144.33	146.81		147.69	0.005736	4.16	22.95	10.82	0.91
Dogana	116	Max WS	DSA_200_cr	166.73	144.33	147.93		148.71	0.003167	3.90	42.74	13.49	0.70
Dogana	116	Max WS	DSA_100_cr	149.51	144.33	147.70		148.43	0.003183	3.78	39.57	13.45	0.70
Dogana	116	Max WS	DSA_30_cr	111.23	144.33	147.11		147.74	0.003370	3.51	31.71	13.33	0.73
Dogana	116	Max WS	DSA_20_cr	99.87	144.33	146.92		147.52	0.003492	3.43	29.14	13.29	0.74
Dogana	115	Max WS	DSA_200_cr	166.72	144.33	147.66		148.87	0.005668	4.89	34.11	11.75	0.92

HEC-RAS River: Dogana Reach: Dogana Profile: Max WS (Continued)

Reach	River Sta	Profile	Plan	Q Total (m3/s)	Min Ch El (m)	W.S. Elev (m)	Crit.W.S. (m)	E.G. Elev (m)	E.G. Slope (m/m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Froude # Chl
Dogana	115	Max WS	DSA_100_cr	149.57	144.33	147.44		148.58	0.005676	4.73	31.61	11.71	0.92
Dogana	115	Max WS	DSA_30_cr	111.04	144.33	146.91	146.82	147.88	0.005925	4.37	25.39	11.60	0.94
Dogana	115	Max WS	DSA_20_cr	99.42	144.33	146.74	146.68	147.66	0.006008	4.24	23.45	11.57	0.95
Dogana	114	Max WS	DSA_200_cr	166.62	144.32	147.86		148.60	0.003049	3.81	43.68	13.25	0.67
Dogana	114	Max WS	DSA_100_cr	149.43	144.32	147.62		148.31	0.003034	3.68	40.58	13.22	0.67
Dogana	114	Max WS	DSA_30_cr	110.79	144.32	147.03		147.61	0.003129	3.39	32.73	13.14	0.68
Dogana	114	Max WS	DSA_20_cr	99.45	144.32	146.83		147.39	0.003215	3.30	30.15	13.11	0.69
Dogana	113	Max WS	DSA_200_cr	166.61	144.08	148.12		148.52	0.001412	2.81	59.27	17.83	0.49
Dogana	113	Max WS	DSA_100_cr	149.35	144.08	147.86		148.24	0.001450	2.74	54.54	17.78	0.50
Dogana	113	Max WS	DSA_30_cr	110.04	144.08	147.18		147.52	0.001663	2.59	42.52	17.63	0.53
Dogana	113	Max WS	DSA_20_cr	99.31	144.08	146.96		147.30	0.001802	2.57	38.70	17.59	0.55
Dogana	112.5	Max WS	DSA_200_cr	166.53	144.04	147.88		148.50	0.002324	3.48	47.82	12.80	0.58
Dogana	112.5	Max WS	DSA_100_cr	149.28	144.04	147.65		148.21	0.002243	3.33	44.83	12.80	0.57
Dogana	112.5	Max WS	DSA_30_cr	109.82	144.04	147.04		147.49	0.002097	2.96	37.07	12.80	0.56
Dogana	112.5	Max WS	DSA_20_cr	99.21	144.04	146.84		147.26	0.002097	2.87	34.57	12.80	0.56
Dogana	112.1	Max WS	DSA_200_cr	166.56	144.01	148.16	146.30	148.46	0.000737	2.44	68.26	17.10	0.39
Dogana	112.1	Max WS	DSA_100_cr	149.29	144.01	147.90	146.15	148.18	0.000720	2.34	63.81	17.10	0.39
Dogana	112.1	Max WS	DSA_30_cr	109.70	144.01	147.23	145.78	147.46	0.000695	2.09	52.40	17.10	0.38
Dogana	112.1	Max WS	DSA_20_cr	99.11	144.01	147.02	145.68	147.23	0.000700	2.03	48.83	17.10	0.38
Dogana	112		Bridge										
Dogana	111	Max WS	DSA_200_cr	166.54	143.95	148.21		148.45	0.000566	2.17	76.61	20.40	0.36
Dogana	111	Max WS	DSA_100_cr	149.27	143.95	147.94		148.17	0.000567	2.10	71.14	20.40	0.36
Dogana	111	Max WS	DSA_30_cr	109.91	143.95	147.26		147.45	0.000594	1.92	57.14	20.40	0.37
Dogana	111	Max WS	DSA_20_cr	98.95	143.95	147.04		147.22	0.000614	1.88	52.74	20.40	0.37
Dogana	110.99		Lat Struct										
Dogana	110.5	Max WS	DSA_200_cr	166.52	143.95	148.20		148.44	0.000719	2.17	76.78	20.20	0.36
Dogana	110.5	Max WS	DSA_100_cr	149.25	143.95	147.93		148.15	0.000717	2.09	71.38	20.20	0.36
Dogana	110.5	Max WS	DSA_30_cr	109.78	143.95	147.24		147.43	0.000741	1.91	57.53	20.20	0.36
Dogana	110.5	Max WS	DSA_20_cr	98.67	143.95	147.03		147.20	0.000761	1.86	53.15	20.20	0.37

HEC-RAS River: Dogana Reach: Dogana Profile: Max WS (Continued)

Reach	River Sta	Profile	Plan	Q Total (m3/s)	Min Ch El (m)	W.S. Elev (m)	Crit W.S. (m)	E.G. Elev (m)	E.G. Slope (m/m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Froude #	Chl
Dogana	110.49			Lat Struct										
Dogana	110	Max WS	DSA_200_cr	166.49	143.84	148.02		148.41	0.001303	2.77	60.16	16.51	0.46	
Dogana	110	Max WS	DSA_100_cr	149.23	143.84	147.77		148.13	0.001295	2.67	55.92	16.49	0.46	
Dogana	110	Max WS	DSA_30_cr	109.59	143.84	147.10		147.41	0.001293	2.43	45.09	16.14	0.46	
Dogana	110	Max WS	DSA_20_cr	98.44	143.84	146.89		147.18	0.001318	2.36	41.70	16.11	0.47	
Dogana	109	Max WS	DSA_200_cr	166.47	143.40	147.51		148.32	0.003312	4.00	41.65	11.64	0.67	
Dogana	109	Max WS	DSA_100_cr	149.21	143.40	147.30		148.04	0.003140	3.80	39.27	11.61	0.66	
Dogana	109	Max WS	DSA_30_cr	109.58	143.40	146.75		147.32	0.002804	3.33	32.90	11.51	0.63	
Dogana	109	Max WS	DSA_20_cr	98.24	143.40	146.57		147.09	0.002722	3.19	30.82	11.48	0.62	
Dogana	108	Max WS	DSA_200_cr	166.46	143.42	146.93		148.16	0.005760	4.92	33.85	11.14	0.90	
Dogana	108	Max WS	DSA_100_cr	149.21	143.42	146.74		147.87	0.005553	4.70	31.75	11.14	0.89	
Dogana	108	Max WS	DSA_30_cr	109.57	143.42	146.24		147.13	0.005256	4.19	26.13	11.14	0.87	
Dogana	108	Max WS	DSA_20_cr	98.18	143.42	146.07		146.90	0.005278	4.06	24.21	11.14	0.88	
Dogana	107	Max WS	DSA_200_cr	166.48	143.17	147.37		147.76	0.001351	2.77	60.17	18.01	0.48	
Dogana	107	Max WS	DSA_100_cr	149.18	143.17	147.18		147.53	0.001298	2.63	56.63	17.99	0.47	
Dogana	107	Max WS	DSA_30_cr	109.36	143.17	146.60		146.89	0.001279	2.36	46.25	17.94	0.47	
Dogana	107	Max WS	DSA_20_cr	98.14	143.17	146.39		146.66	0.001329	2.31	42.51	17.92	0.48	
Dogana	106	Max WS	DSA_200_cr	166.47	142.93	147.03	145.91	147.65	0.001816	3.47	47.96	13.77	0.59	
Dogana	106	Max WS	DSA_100_cr	149.15	142.93	146.88	145.72	147.42	0.001574	3.25	45.96	13.08	0.55	
Dogana	106	Max WS	DSA_30_cr	109.34	142.93	146.38	145.28	146.77	0.001308	2.77	39.47	13.04	0.51	
Dogana	106	Max WS	DSA_20_cr	98.07	142.93	146.20	145.14	146.55	0.001267	2.65	37.02	13.02	0.50	
Dogana	105.5			Bridge										
Dogana	105	Max WS	DSA_200_cr	166.46	142.94	147.24		147.61	0.000926	2.68	62.07	19.47	0.48	
Dogana	105	Max WS	DSA_100_cr	149.17	142.94	147.06		147.39	0.000879	2.55	58.44	19.05	0.47	
Dogana	105	Max WS	DSA_30_cr	109.35	142.94	146.49		146.75	0.000821	2.28	47.96	17.78	0.44	
Dogana	105	Max WS	DSA_20_cr	98.06	142.94	146.28		146.53	0.000822	2.21	44.37	17.32	0.44	
Dogana	104	Max WS	DSA_200_cr	166.45	142.27	146.68		147.31	0.003786	3.54	47.03	15.93	0.66	
Dogana	104	Max WS	DSA_100_cr	149.15	142.27	146.55		147.11	0.003422	3.31	45.10	15.73	0.62	

HEC-RAS River: Dogana Reach: Dogana Profile: Max WS (Continued)

Reach	River Sta	Profile	Plan	Q Total (m3/s)	Min Ch El (m)	W.S. Elev (m)	Crit W.S. (m)	E.G. Elev (m)	E.G. Slope (m/m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Froude # Chl
Dogana	104	Max WS	DSA_30_cr	109.33	142.27	146.07		146.50	0.003060	2.90	37.73	14.93	0.58
Dogana	104	Max WS	DSA_20_cr	97.75	142.27	145.89		146.28	0.003048	2.80	34.95	14.62	0.58
Dogana	103.99		Lat Struct										
Dogana	103	Max WS	DSA_200_cr	165.20	142.06	146.49		147.04	0.003674	3.27	50.44	20.97	0.67
Dogana	103	Max WS	DSA_100_cr	149.13	142.06	146.35		146.85	0.003558	3.14	47.54	20.69	0.66
Dogana	103	Max WS	DSA_30_cr	109.33	142.06	145.83		146.26	0.003487	2.90	37.66	18.07	0.64
Dogana	103	Max WS	DSA_20_cr	97.73	142.06	145.61		146.04	0.003805	2.89	33.78	17.44	0.66
Dogana	102	Max WS	DSA_200_cr	163.62	141.69	145.93		146.65	0.004875	3.75	43.65	18.12	0.77
Dogana	102	Max WS	DSA_100_cr	149.12	141.69	145.79		146.46	0.004710	3.62	41.15	17.46	0.75
Dogana	102	Max WS	DSA_30_cr	109.33	141.69	145.34		145.87	0.004206	3.25	33.69	15.34	0.70
Dogana	102	Max WS	DSA_20_cr	97.72	141.69	145.12		145.64	0.004326	3.21	30.46	14.32	0.70
Dogana	101	Max WS	DSA_200_cr	163.62	141.45	144.72	145.04	146.12	0.012884	5.24	31.23	17.10	1.24
Dogana	101	Max WS	DSA_100_cr	149.11	141.45	144.57	144.90	145.94	0.012702	5.19	28.74	15.71	1.22
Dogana	101	Max WS	DSA_30_cr	109.32	141.45	144.10	144.32	145.31	0.011554	4.88	22.41	12.39	1.16
Dogana	101	Max WS	DSA_20_cr	97.53	141.45	143.69	144.14	145.25	0.017961	5.54	17.62	11.35	1.42
Dogana	100	Max WS	DSA_200_cr	163.62	141.20	144.83	144.07	145.32	0.001343	3.09	52.88	20.87	0.62
Dogana	100	Max WS	DSA_100_cr	149.11	141.20	144.68	143.94	145.14	0.001346	3.01	49.62	20.55	0.62
Dogana	100	Max WS	DSA_30_cr	109.32	141.20	144.13	143.33	144.54	0.001503	2.82	38.79	19.48	0.64
Dogana	100	Max WS	DSA_20_cr	96.69	141.20	143.20		144.04	0.003677	4.05	23.87	13.55	0.97
Dogana	99.5		Inl Struct										
Dogana	99	Max WS	DSA_200_cr	163.61	139.60	144.07		144.28	0.000541	2.03	80.41	27.13	0.38
Dogana	99	Max WS	DSA_100_cr	149.09	139.60	143.90		144.09	0.000538	1.97	75.72	26.84	0.37
Dogana	99	Max WS	DSA_30_cr	109.31	139.60	143.33		143.49	0.000564	1.80	60.67	25.89	0.38
Dogana	99	Max WS	DSA_20_cr	98.51	139.60	143.14		143.30	0.000587	1.76	55.93	25.58	0.38
Dogana	98	Max WS	DSA_200_cr	163.61	140.03	143.84		144.28	0.001740	2.93	55.87	20.95	0.57
Dogana	98	Max WS	DSA_100_cr	149.08	140.03	143.68		144.09	0.001727	2.84	52.51	20.58	0.57
Dogana	98	Max WS	DSA_30_cr	109.30	140.03	143.13		143.48	0.001821	2.62	41.65	19.32	0.57
Dogana	98	Max WS	DSA_20_cr	98.18	140.03	142.95		143.29	0.001860	2.57	38.25	18.65	0.57

HEC-RAS River: Dogana Reach: Dogana Profile: Max WS (Continued)

Reach	River Sta	Profile	Plan	Q Total (m3/s)	Min Ch El (m)	W.S. Elev (m)	Crit W.S. (m)	E.G. Elev (m)	E.G. Slope (m/m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Froude # Chl
Dogana	97	Max WS	DSA_200_cr	163.61	139.23	143.84		144.20	0.002038	2.63	62.15	23.93	0.52
Dogana	97	Max WS	DSA_100_cr	149.09	139.23	143.67		144.01	0.002038	2.56	58.13	23.28	0.52
Dogana	97	Max WS	DSA_30_cr	109.31	139.23	143.11		143.40	0.002152	2.39	45.64	21.15	0.52
Dogana	97	Max WS	DSA_20_cr	98.19	139.23	142.93		143.21	0.002248	2.35	41.77	20.62	0.53
Dogana	96	Max WS	DSA_200_cr	163.60	138.83	143.27		143.95	0.004626	3.67	44.62	18.79	0.76
Dogana	96	Max WS	DSA_100_cr	149.07	138.83	143.12		143.77	0.004532	3.56	41.90	18.17	0.75
Dogana	96	Max WS	DSA_30_cr	109.30	138.83	142.66		143.17	0.003700	3.18	34.40	14.97	0.67
Dogana	96	Max WS	DSA_20_cr	97.93	138.83	142.51		142.98	0.003584	3.04	32.18	14.63	0.65
Dogana	95	Max WS	DSA_200_cr	163.59	138.21	142.92		143.47	0.003367	3.30	49.59	19.46	0.66
Dogana	95	Max WS	DSA_100_cr	149.07	138.21	142.79		143.30	0.003228	3.16	47.16	19.16	0.64
Dogana	95	Max WS	DSA_30_cr	109.29	138.21	142.40		142.78	0.002811	2.75	39.78	18.10	0.59
Dogana	95	Max WS	DSA_20_cr	97.80	138.21	142.26		142.61	0.002644	2.62	37.35	17.42	0.57
Dogana	94	Max WS	DSA_200_cr	163.58	138.08	142.65		143.13	0.003099	3.07	53.37	22.42	0.63
Dogana	94	Max WS	DSA_100_cr	149.06	138.08	142.54		142.97	0.002886	2.93	50.86	21.63	0.61
Dogana	94	Max WS	DSA_30_cr	109.28	138.08	142.17		142.50	0.002403	2.52	43.34	20.14	0.55
Dogana	94	Max WS	DSA_20_cr	97.76	138.08	142.05		142.35	0.002269	2.39	40.93	19.80	0.53
Dogana	93	Max WS	DSA_200_cr	163.57	137.75	141.98	141.94	142.71	0.007796	3.80	43.10	27.15	0.96
Dogana	93	Max WS	DSA_100_cr	149.05	137.75	141.87	141.84	142.57	0.008121	3.72	40.06	26.86	0.97
Dogana	93	Max WS	DSA_30_cr	109.28	137.75	141.53	141.55	142.16	0.009561	3.50	31.18	25.98	1.02
Dogana	93	Max WS	DSA_20_cr	97.72	137.75	141.43	141.46	142.03	0.010218	3.44	28.44	25.71	1.04
Dogana	92	Max WS	DSA_200_cr	163.35	137.29	141.64		142.07	0.003172	2.88	56.64	27.16	0.64
Dogana	92	Max WS	DSA_100_cr	149.03	137.29	141.48		141.89	0.003374	2.85	52.22	26.71	0.65
Dogana	92	Max WS	DSA_30_cr	109.27	137.29	140.99		141.38	0.004285	2.77	39.42	25.36	0.71
Dogana	92	Max WS	DSA_20_cr	97.63	137.29	140.82		141.21	0.004864	2.78	35.11	24.79	0.75
Dogana	91	Max WS	DSA_200_cr	160.64	137.37	140.93		141.65	0.005030	3.74	42.90	19.51	0.81
Dogana	91	Max WS	DSA_100_cr	149.03	137.37	140.72		141.47	0.005784	3.85	38.75	18.87	0.86
Dogana	91	Max WS	DSA_30_cr	109.26	137.37	140.36		140.95	0.005215	3.39	32.20	17.58	0.80
Dogana	91	Max WS	DSA_20_cr	97.65	137.37	140.23		140.77	0.004975	3.25	30.03	16.84	0.78
Dogana	90	Max WS	DSA_200_cr	161.03	137.13	141.00		141.56	0.003041	3.32	48.56	17.27	0.63
Dogana	90	Max WS	DSA_100_cr	149.03	137.13	140.79		141.35	0.003221	3.31	45.02	16.85	0.65

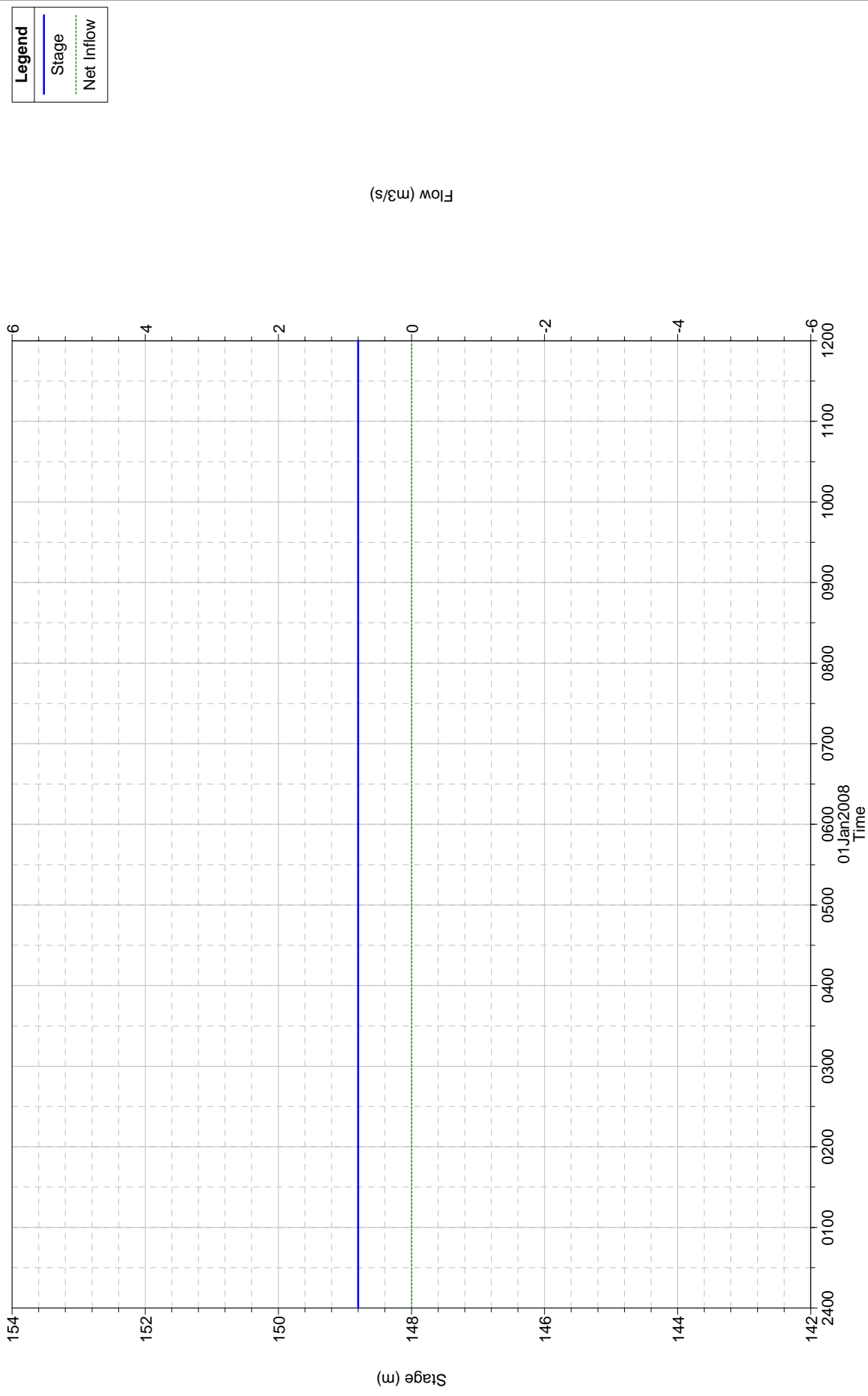
HEC-RAS River: Dogana Reach: Dogana Profile: Max WS (Continued)

Reach	River Sta	Profile	Plan	Q Total (m3/s)	Min Ch El (m)	W.S. Elev (m)	Crit W.S. (m)	E.G. Elev (m)	E.G. Slope (m/m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Froude # Chl
Dogana	90	Max WS	DSA_30_cr	109.26	137.13	140.47		140.86	0.002465	2.75	39.72	16.20	0.56
Dogana	90	Max WS	DSA_20_cr	97.65	137.13	140.35		140.69	0.002270	2.58	37.77	15.96	0.54
Dogana	89.2	Max WS	DSA_200_cr	160.49	137.54	140.83		141.53	0.005864	3.70	43.32	22.54	0.85
Dogana	89.2	Max WS	DSA_100_cr	149.03	137.54	140.58		141.35	0.006505	3.91	38.12	19.56	0.89
Dogana	89.2	Max WS	DSA_30_cr	109.26	137.54	140.22		140.83	0.005428	3.45	31.69	16.97	0.81
Dogana	89.2	Max WS	DSA_20_cr	97.65	137.54	140.11		140.66	0.005007	3.27	29.87	16.26	0.77
Dogana	89	Max WS	DSA_200_cr	159.52	137.66	140.83	140.43	141.42	0.004660	3.40	46.97	22.89	0.76
Dogana	89	Max WS	DSA_100_cr	149.03	137.66	140.56	140.34	141.23	0.006084	3.65	40.87	21.92	0.85
Dogana	89	Max WS	DSA_30_cr	109.26	137.66	140.17	139.96	140.74	0.006244	3.34	32.76	20.57	0.84
Dogana	89	Max WS	DSA_20_cr	97.64	137.66	140.03	139.80	140.58	0.006417	3.26	29.92	19.79	0.85
Dogana	88.5		Bridge										
Dogana	88	Max WS	DSA_200_cr	165.31	137.66	140.56	140.48	141.39	0.007419	4.03	41.00	21.94	0.94
Dogana	88	Max WS	DSA_100_cr	145.54	137.66	140.21	140.32	141.17	0.010430	4.35	33.44	20.68	1.09
Dogana	88	Max WS	DSA_30_cr	107.75	137.66	139.64	139.94	140.76	0.014286	4.70	22.91	15.62	1.24
Dogana	88	Max WS	DSA_20_cr	95.96	137.66	139.54	139.78	140.56	0.013085	4.48	21.42	14.62	1.18
Dogana	87.3	Max WS	DSA_200_cr	165.24	137.66	140.55	140.48	141.39	0.007501	4.05	40.83	21.92	0.95
Dogana	87.3	Max WS	DSA_100_cr	145.54	137.66	140.20	140.31	141.17	0.010570	4.37	33.29	20.66	1.10
Dogana	87.3	Max WS	DSA_30_cr	107.75	137.66	139.63	139.94	140.77	0.014501	4.74	22.75	15.52	1.25
Dogana	87.3	Max WS	DSA_20_cr	95.96	137.66	139.53	139.78	140.56	0.013259	4.51	21.29	14.53	1.19
Dogana	87	Max WS	DSA_200_cr	165.17	137.66	140.55	140.48	141.39	0.007581	4.06	40.67	21.89	0.95
Dogana	87	Max WS	DSA_100_cr	145.54	137.66	140.19	140.32	141.17	0.010712	4.39	33.14	20.63	1.11
Dogana	87	Max WS	DSA_30_cr	107.67	137.66	139.62	139.94	140.77	0.014702	4.77	22.59	15.42	1.26
Dogana	87	Max WS	DSA_20_cr	95.96	137.66	139.52	139.78	140.57	0.013439	4.54	21.15	14.43	1.20
Dogana	80	Max WS	DSA_200_cr	52.08	134.80	140.36	136.13	140.39	0.000167	0.76	68.72	21.23	0.13
Dogana	80	Max WS	DSA_100_cr	50.01	134.80	140.01	136.10	140.04	0.000204	0.81	61.52	19.53	0.15
Dogana	80	Max WS	DSA_30_cr	50.00	134.80	139.21	136.10	139.26	0.000278	1.02	49.18	12.18	0.16
Dogana	80	Max WS	DSA_20_cr	50.03	134.80	139.29	136.10	139.34	0.000265	1.00	50.16	12.34	0.16

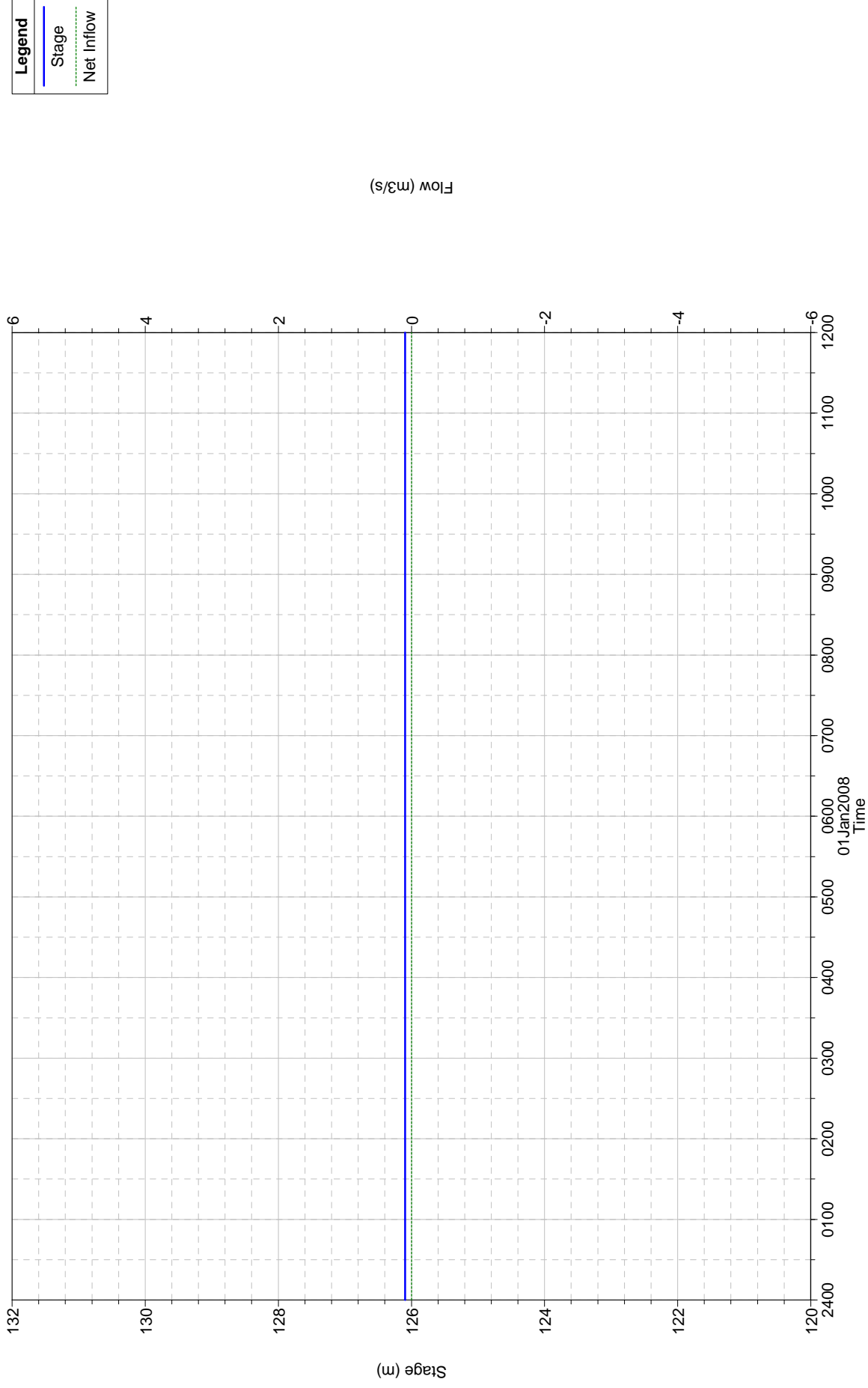
HEC-RAS Profile: Max WS

Storage Area	Profile	Plan	W.S. Elev (m)	SA Min EI (m)	Net Flux (m ³ /s)	SA Area (1000 m ²)	SA Volume (1000 m ³)
Dogana_dx_1	Max WS	DSA_200_cr	149.55	148.80	-0.56	29.42	24.24
Dogana_dx_1	Max WS	DSA_100_cr	149.00	148.80	0.00	33.81	6.83
Dogana_dx_1	Max WS	DSA_30_cr	148.80	148.80	0.00	33.81	0.00
Dogana_dx_1	Max WS	DSA_20_cr	148.80	148.80	0.00	33.81	0.00
Dogana_dx_2	Max WS	DSA_200_cr	122.10	142.50	2.82	14.00	-285.61
Dogana_dx_2	Max WS	DSA_100_cr	121.65	142.50	0.02	14.00	-291.84
Dogana_dx_2	Max WS	DSA_30_cr	121.65	142.50	0.00	14.00	-291.85
Dogana_dx_2	Max WS	DSA_20_cr	126.10	142.50	0.00	14.00	-229.66
Dogana_sx_1	Max WS	DSA_200_cr	144.04	144.00	7.77	500.00	21.49
Dogana_sx_1	Max WS	DSA_100_cr	144.00	144.00	1.22	500.00	1.37
Dogana_sx_1	Max WS	DSA_30_cr	144.00	144.00	0.00	500.00	0.00
Dogana_sx_1	Max WS	DSA_20_cr	144.00	144.00	0.00	500.00	0.00

Plan: DSA_20_cr Storage Area: Dogana_dx_1

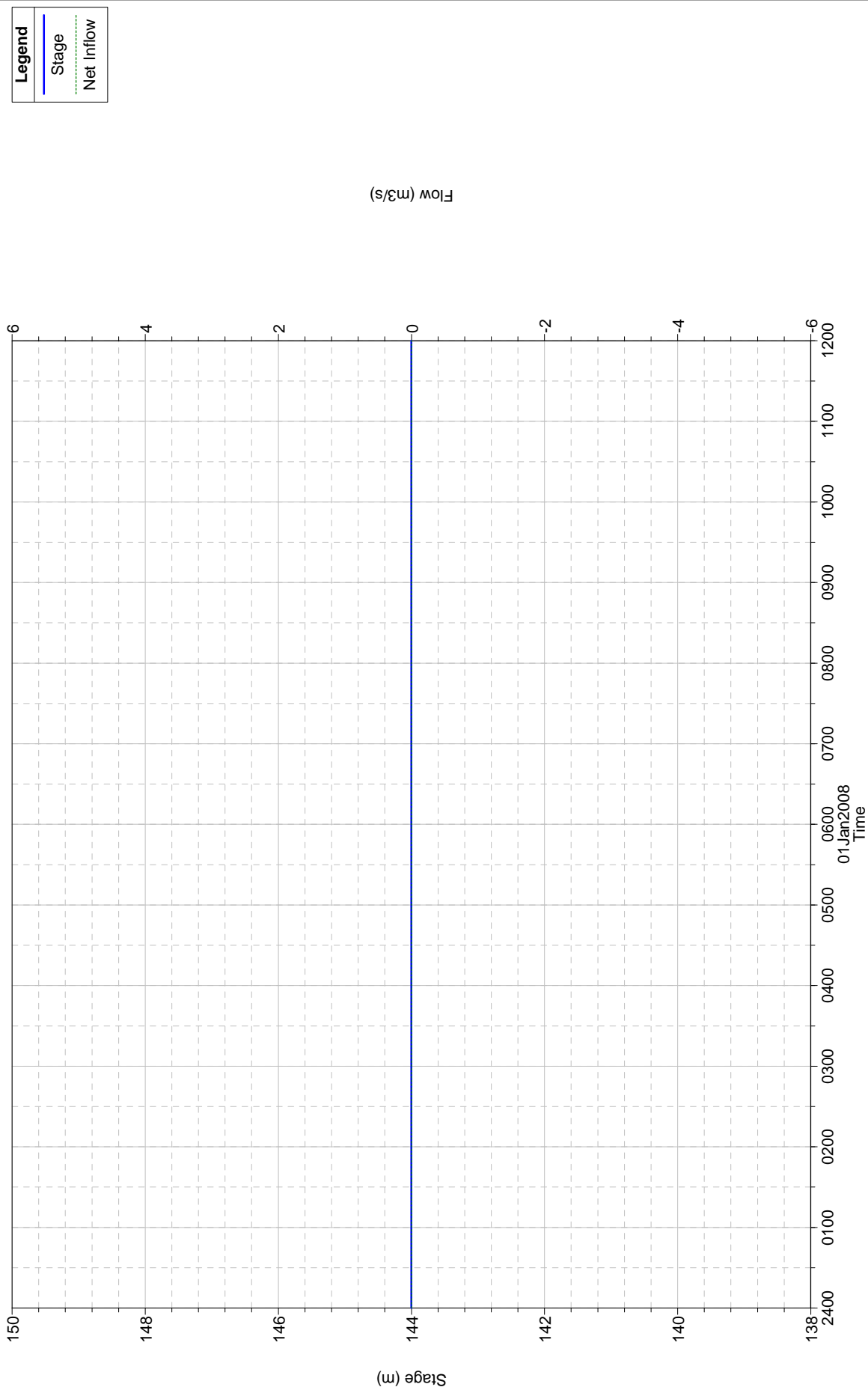


Plan: DSA_20_cr Storage Area: Dogana_dx_2



Legend	
—	Stage
- - -	Net Inflow

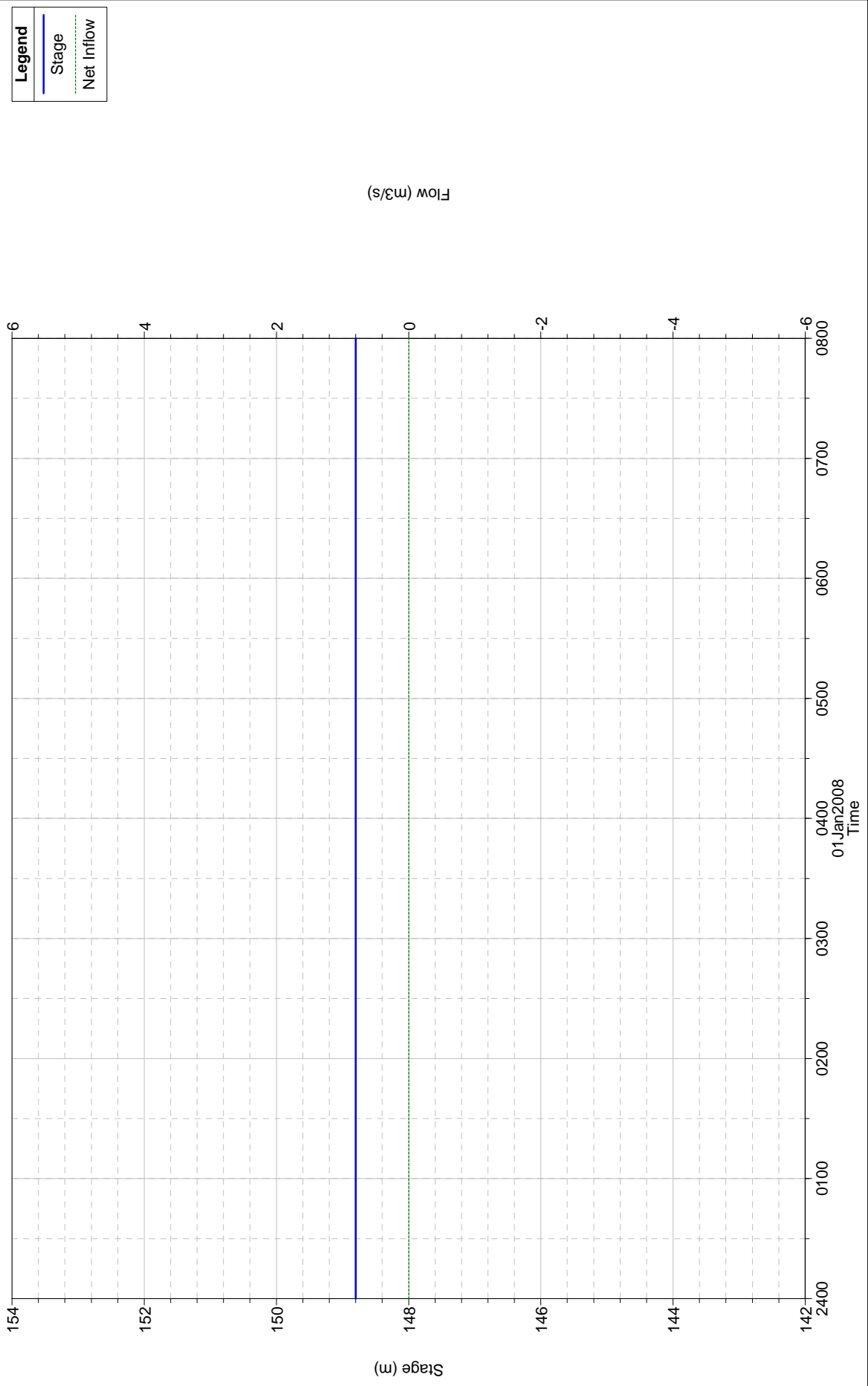
Plan: DSA_20_cr Storage Area: Dogana_sx_1



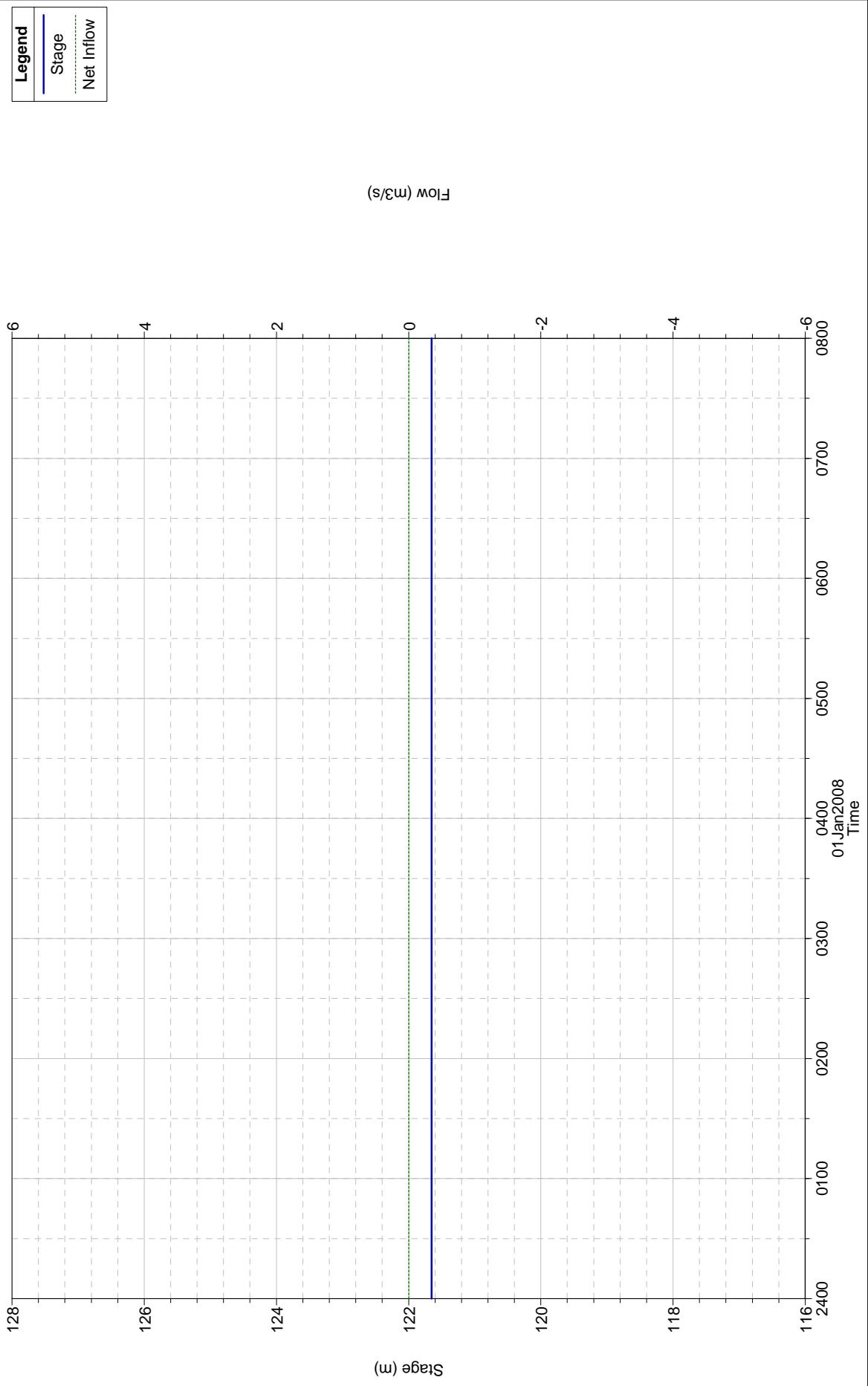
Legend

- Stage
- Net Inflow

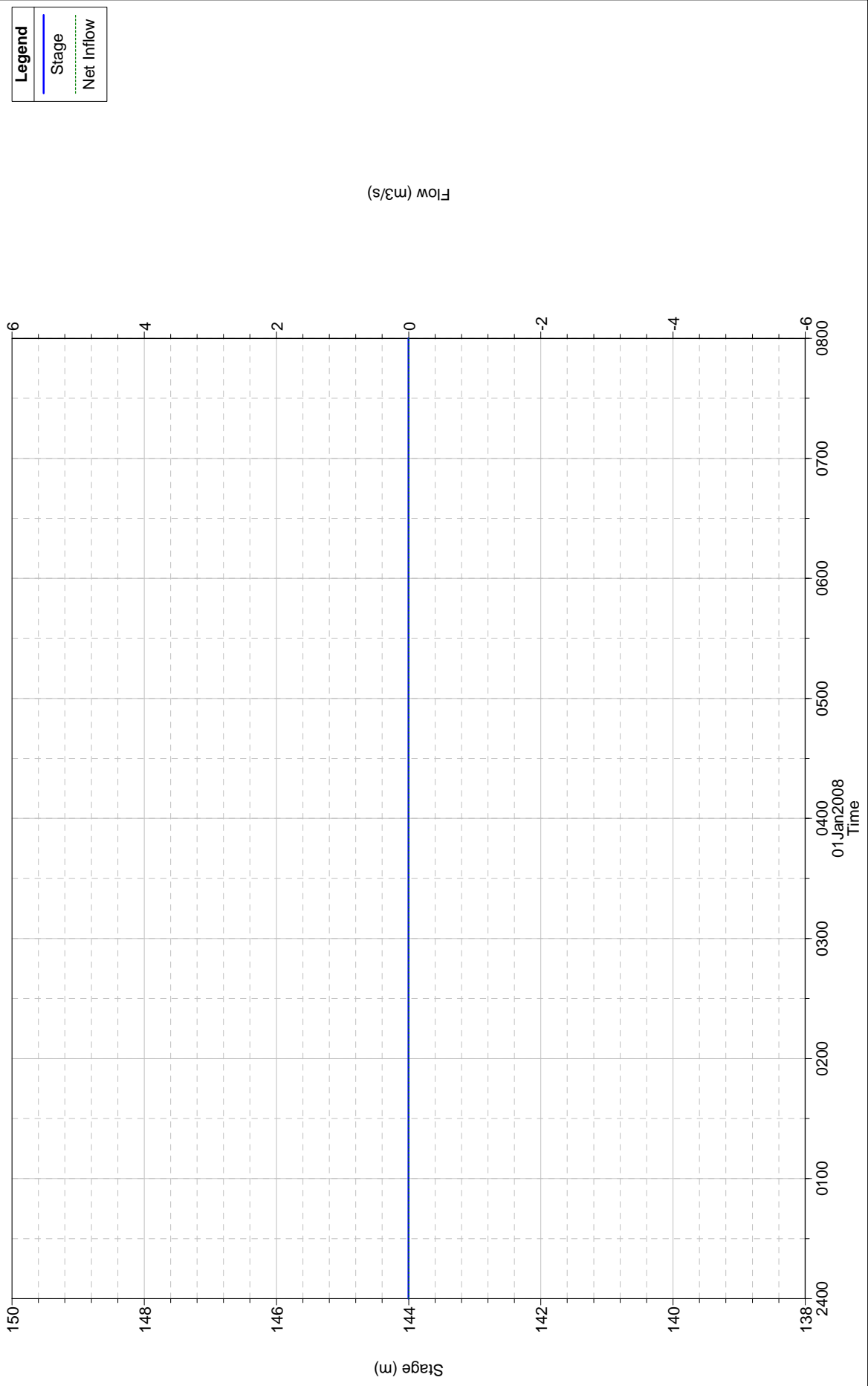
Plan: DSA_30_cr Storage Area: Dogana_dx_1



Plan: DSA_30_cr Storage Area: Dogana_dx_2



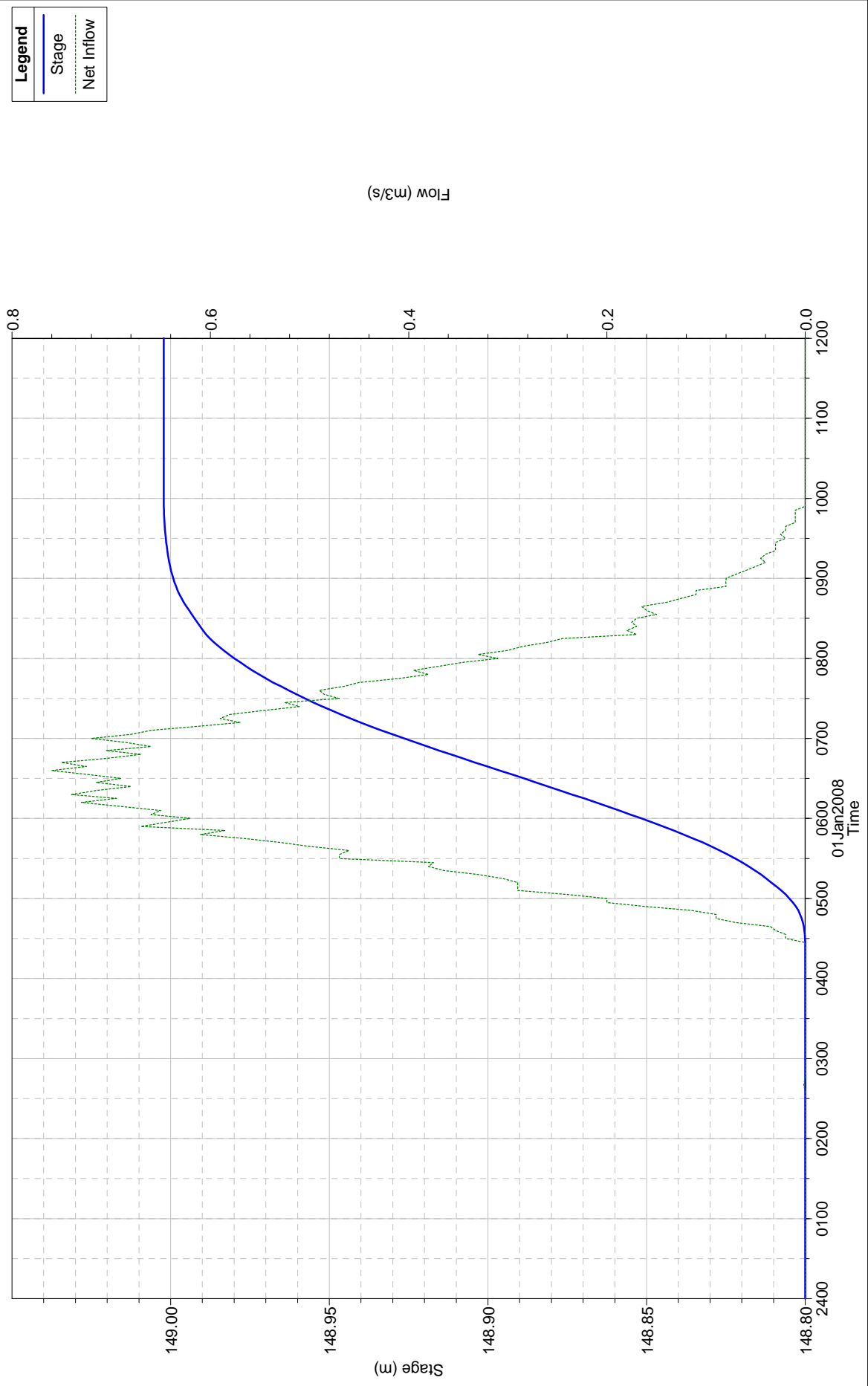
Plan: DSA_30_cr Storage Area: Dogana_sx_1



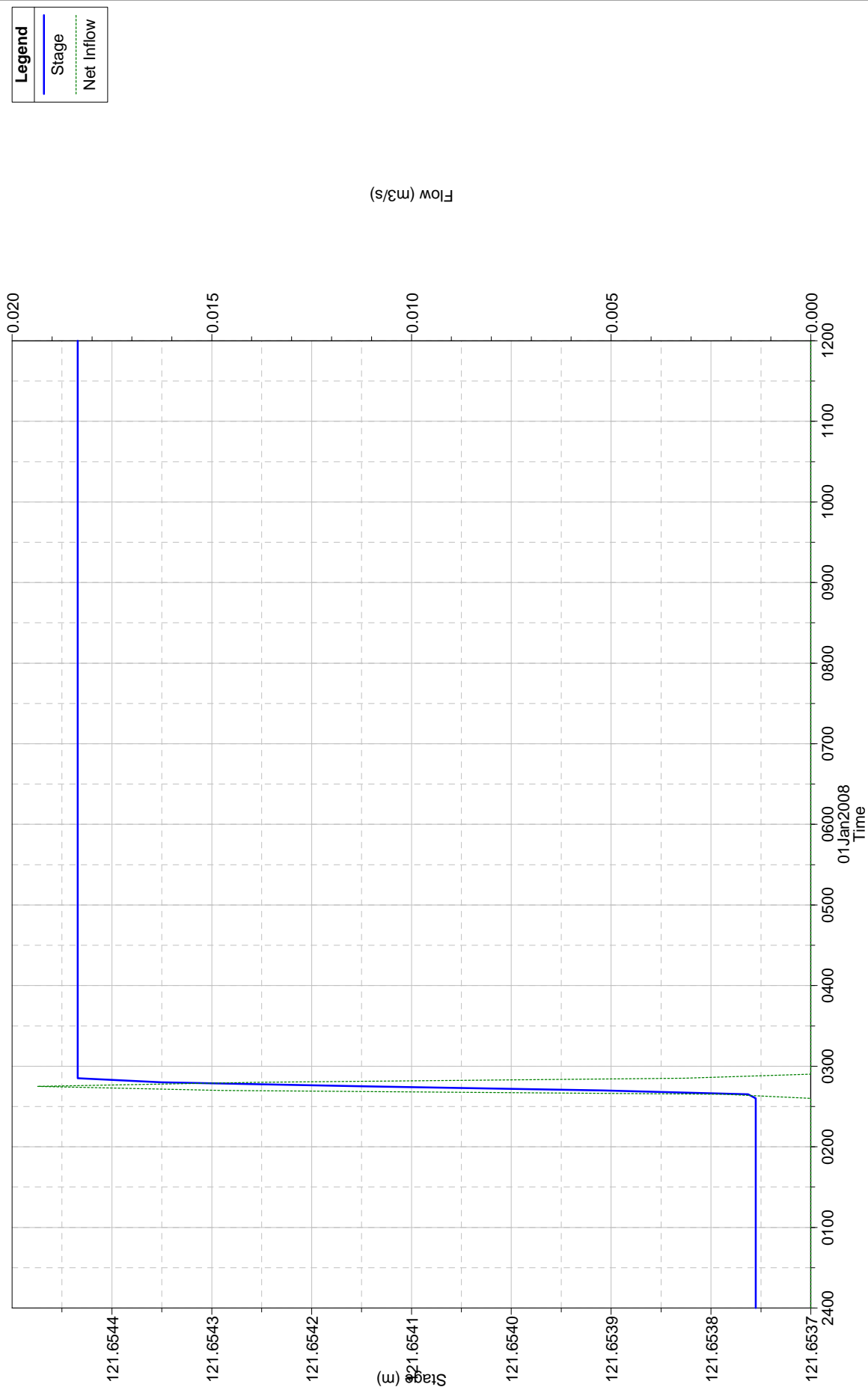
Legend

- Stage
- Net Inflow

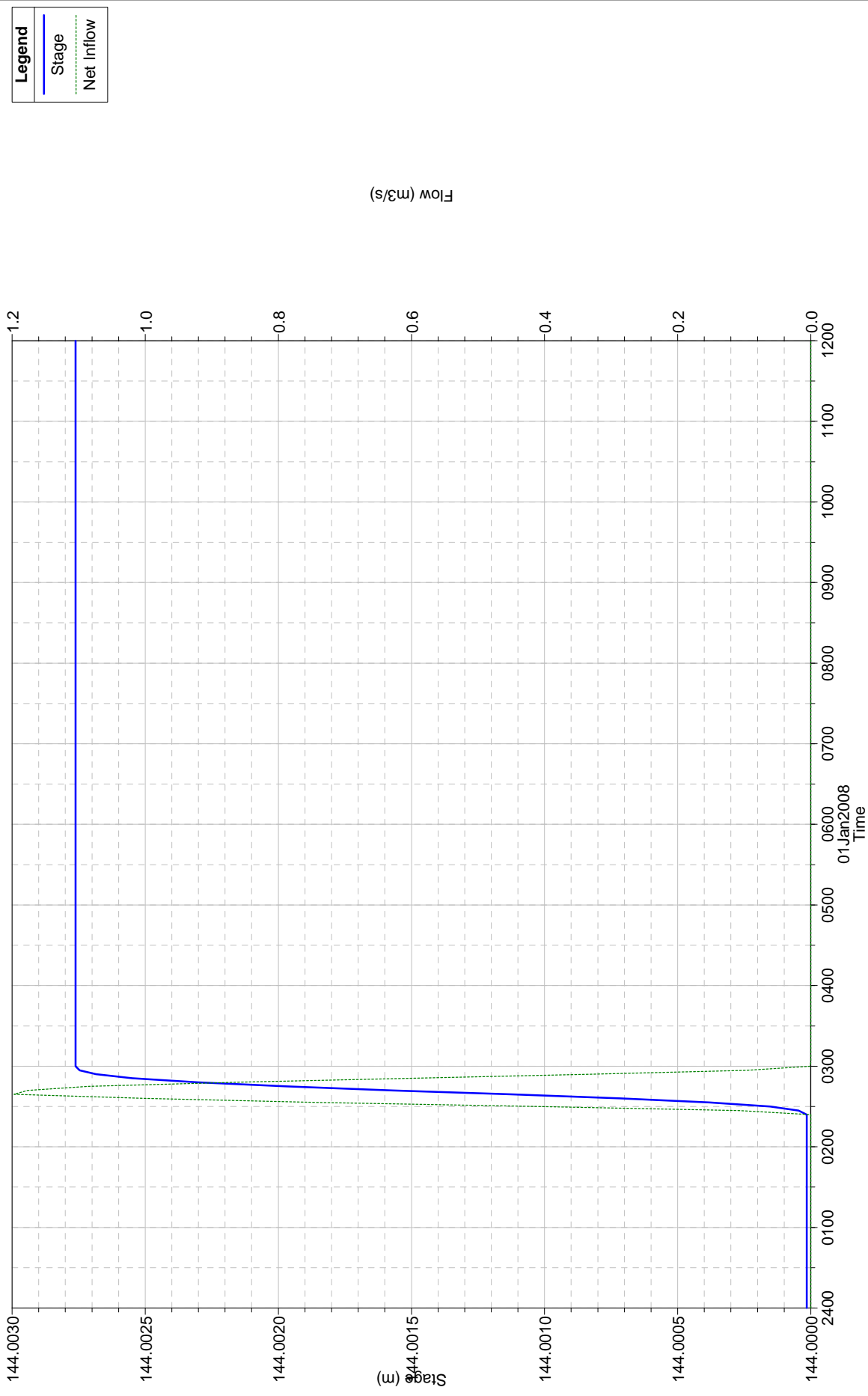
Plan: DSA_100_cr Storage Area: Dogana_dx_1



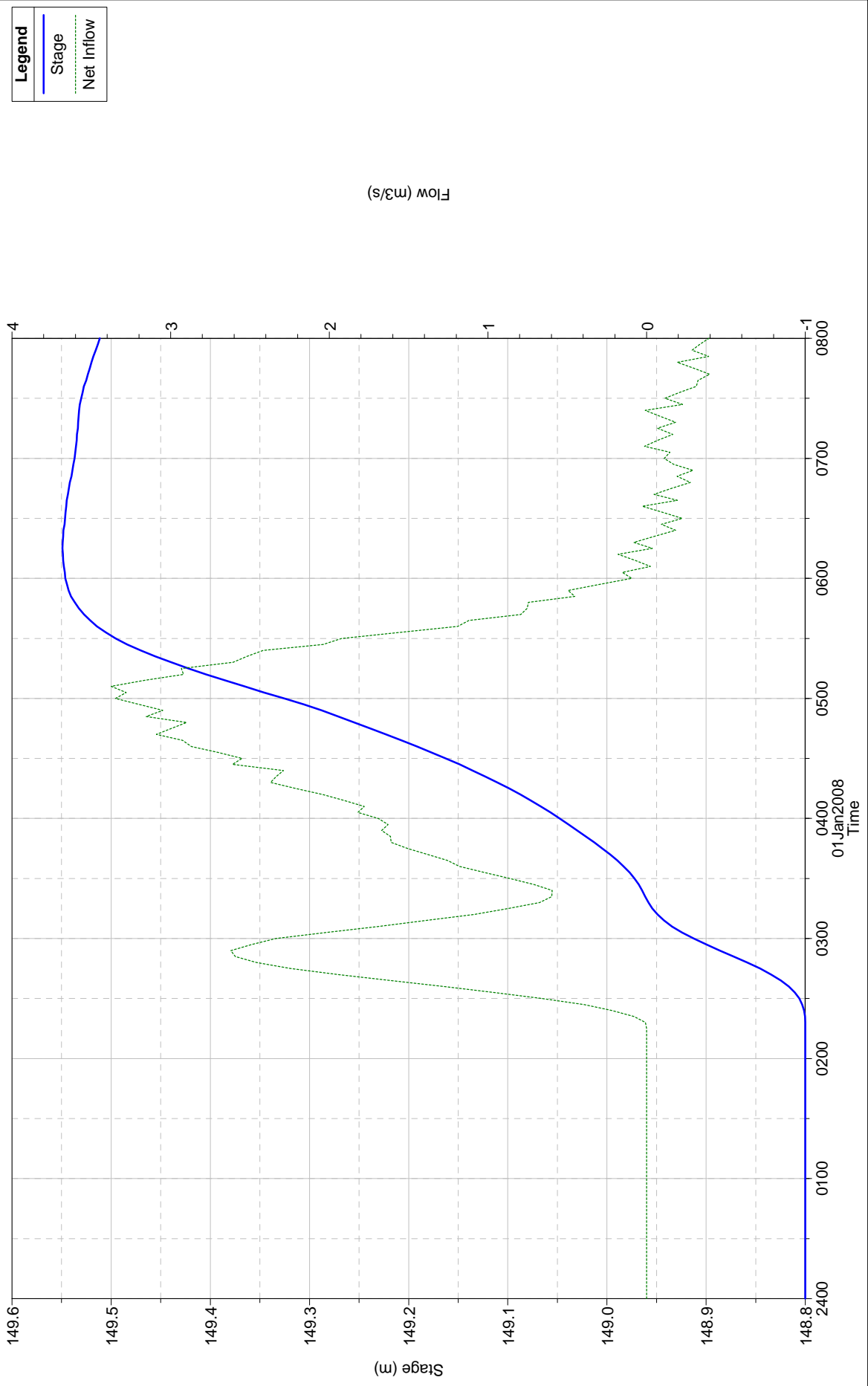
Plan: DSA_100_cr Storage Area: Dogana_dx_2



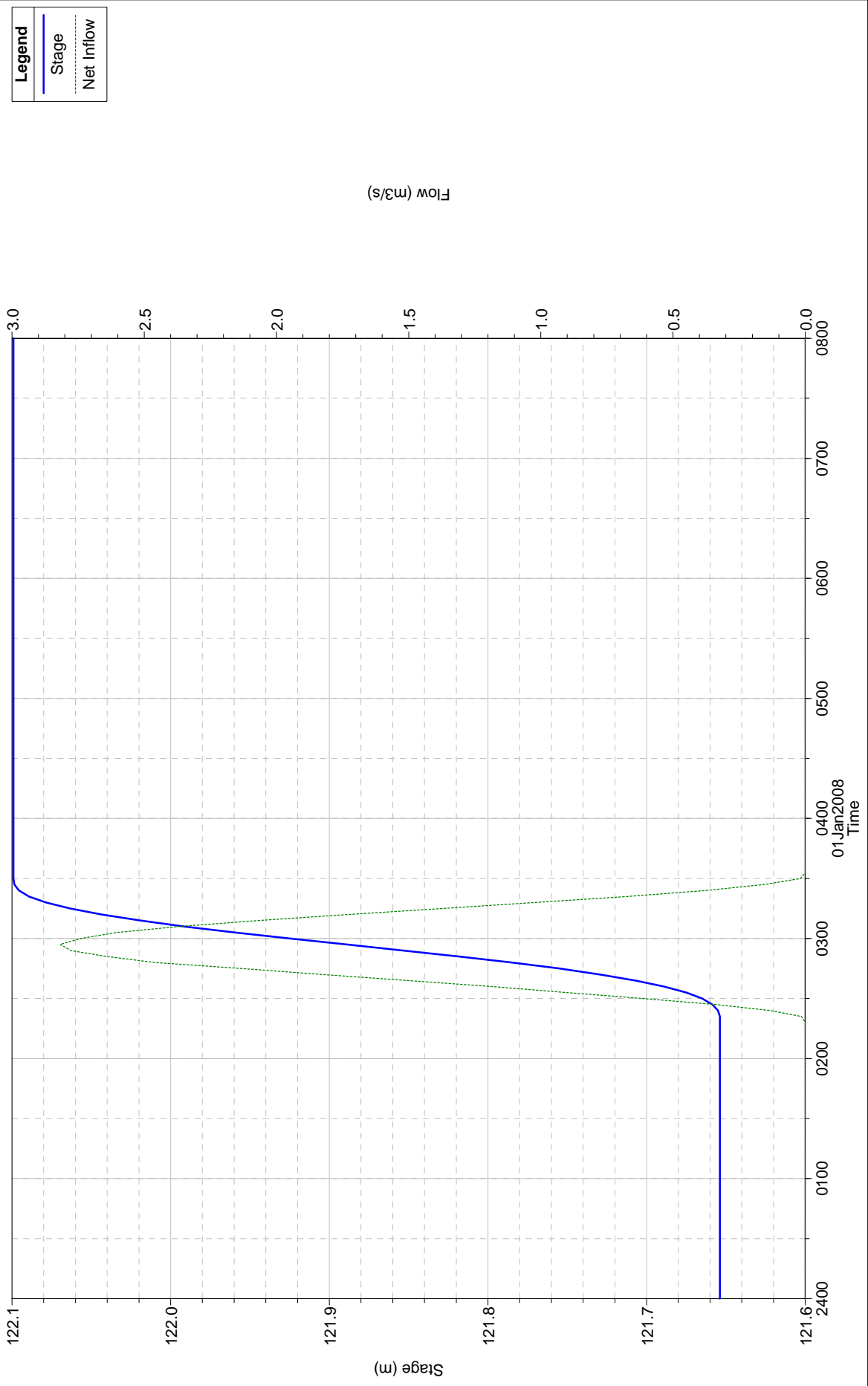
Plan: DSA_100_cr Storage Area: Dogana_sx_1



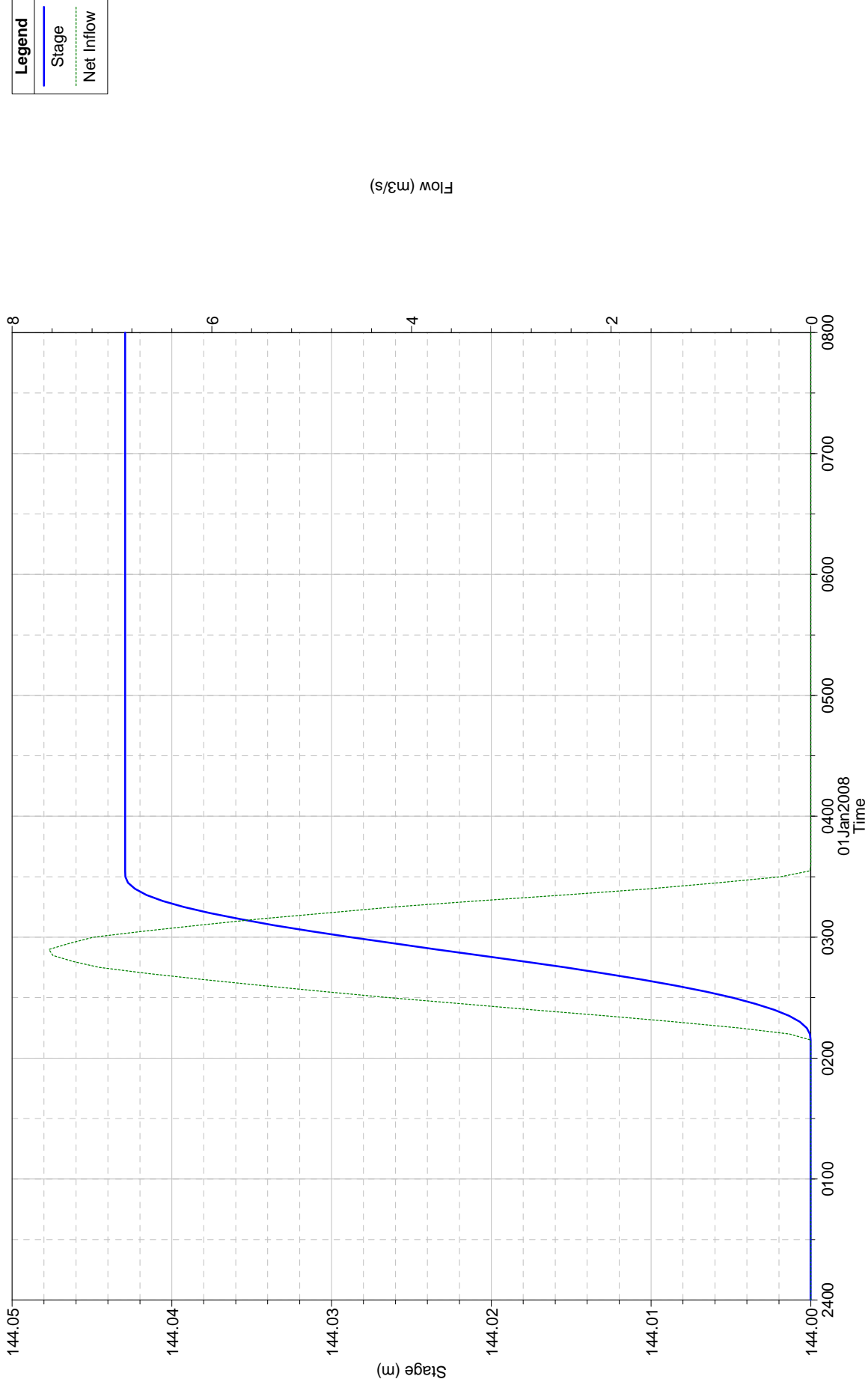
Plan: DSA_200_cr Storage Area: Dogana_dx_1



Plan: DSA_200_cr Storage Area: Dogana_dx_2

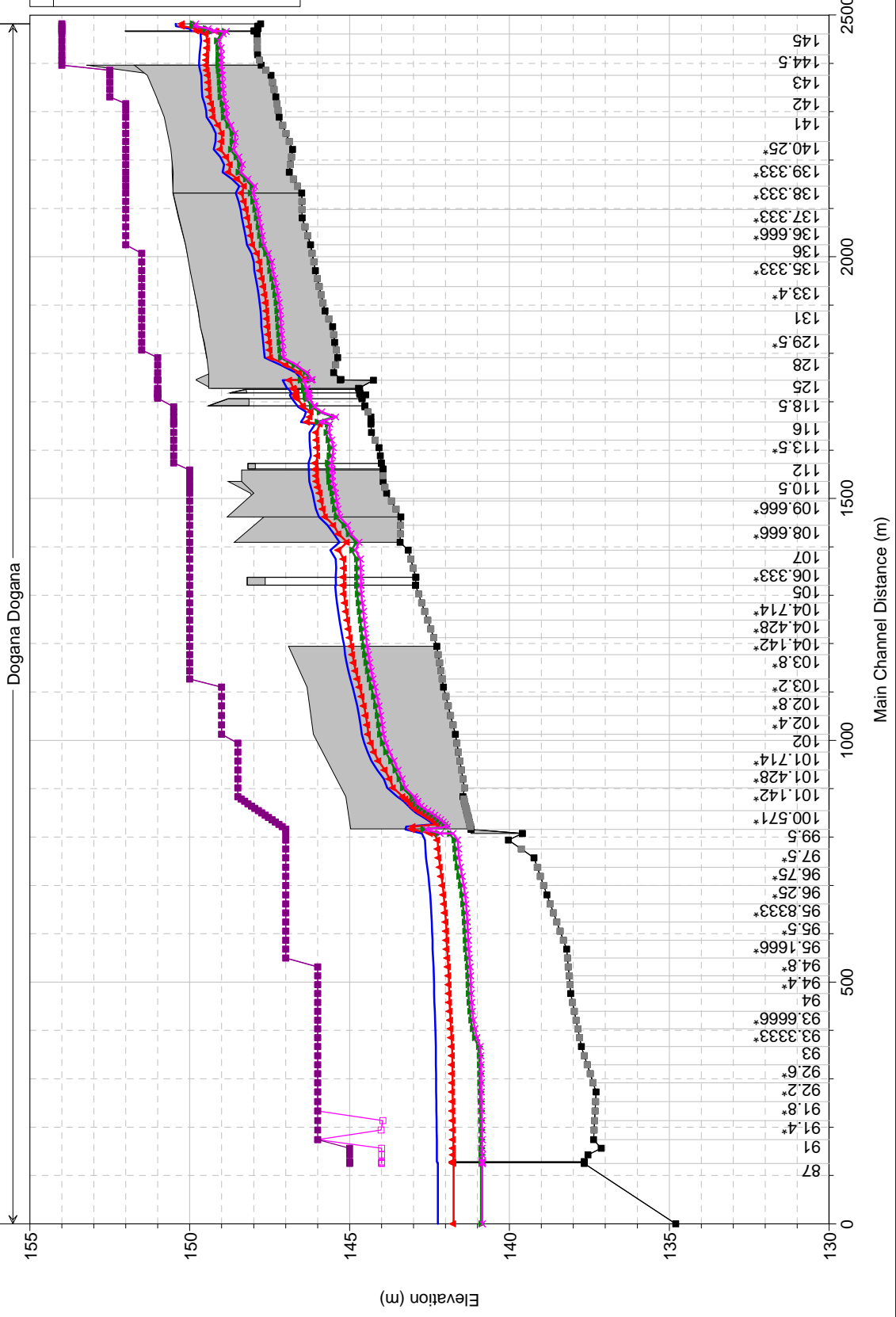


Plan: DSA_200_cr Storage Area: Dogana_sx_1

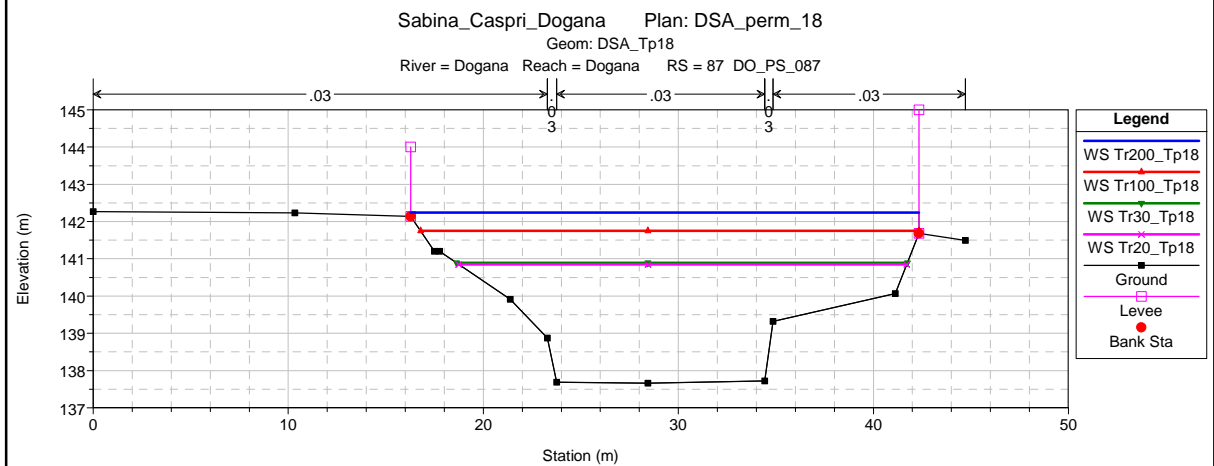
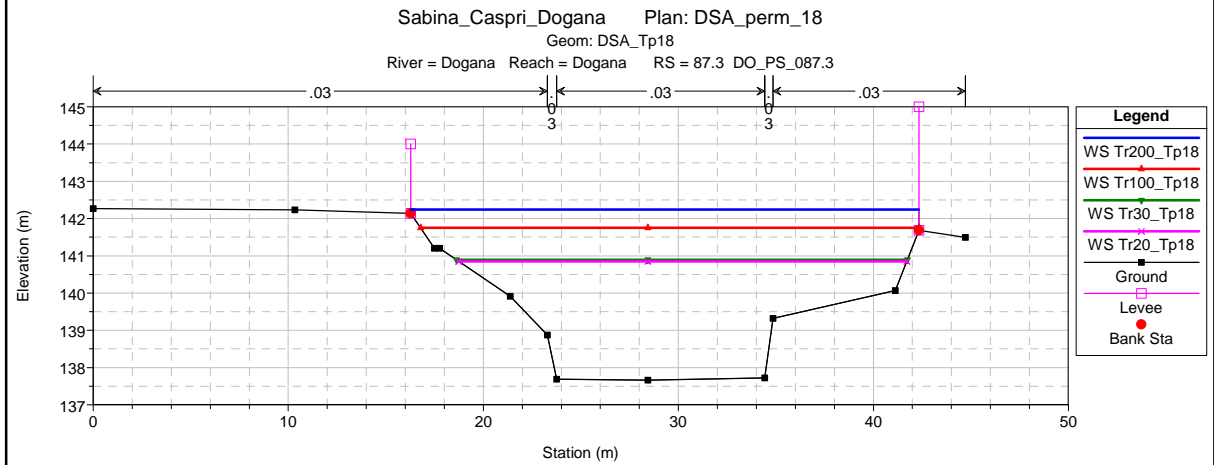
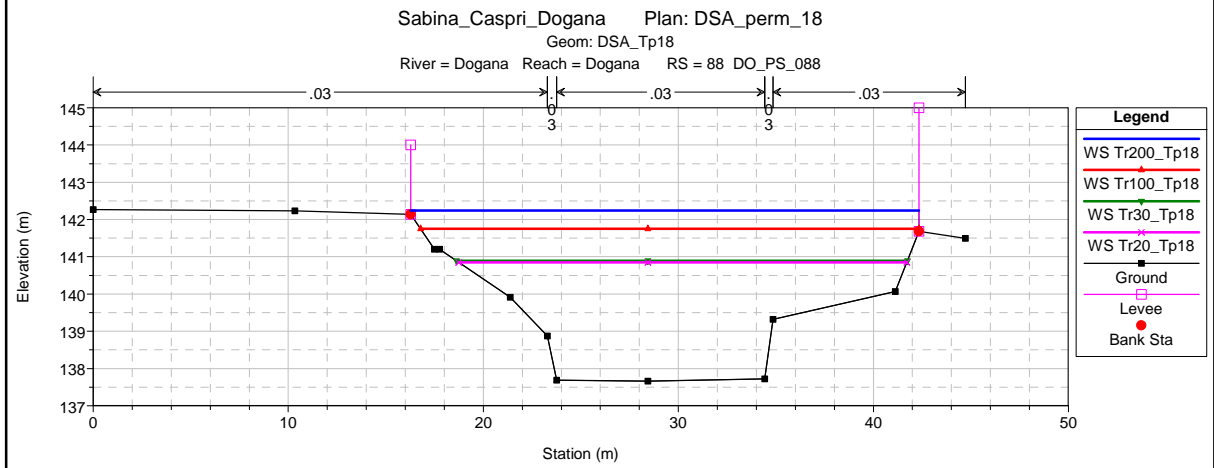
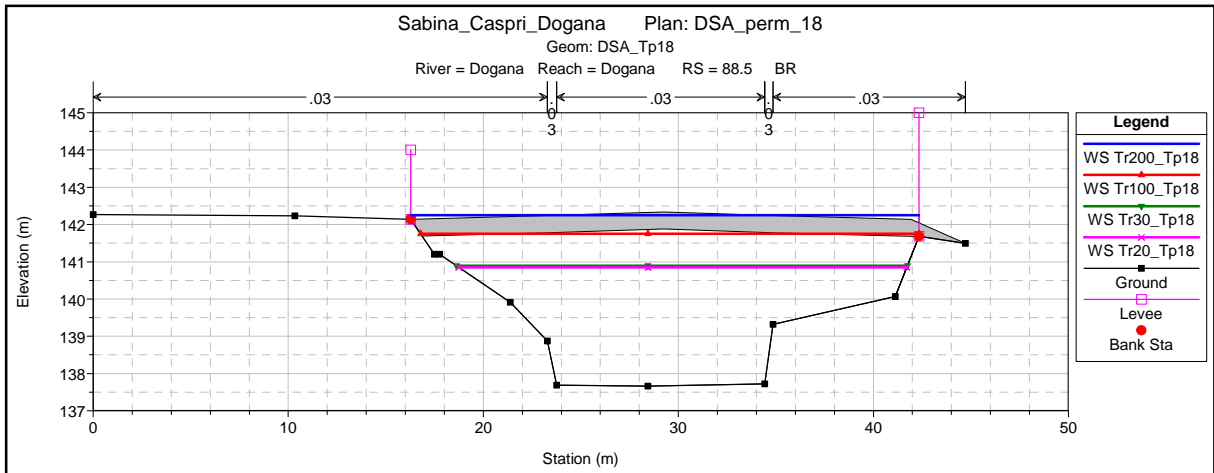


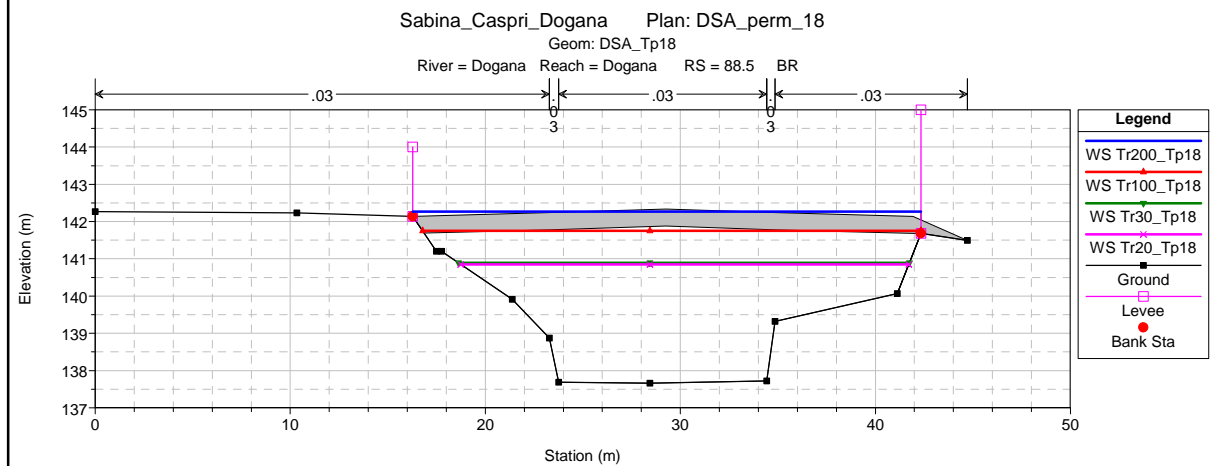
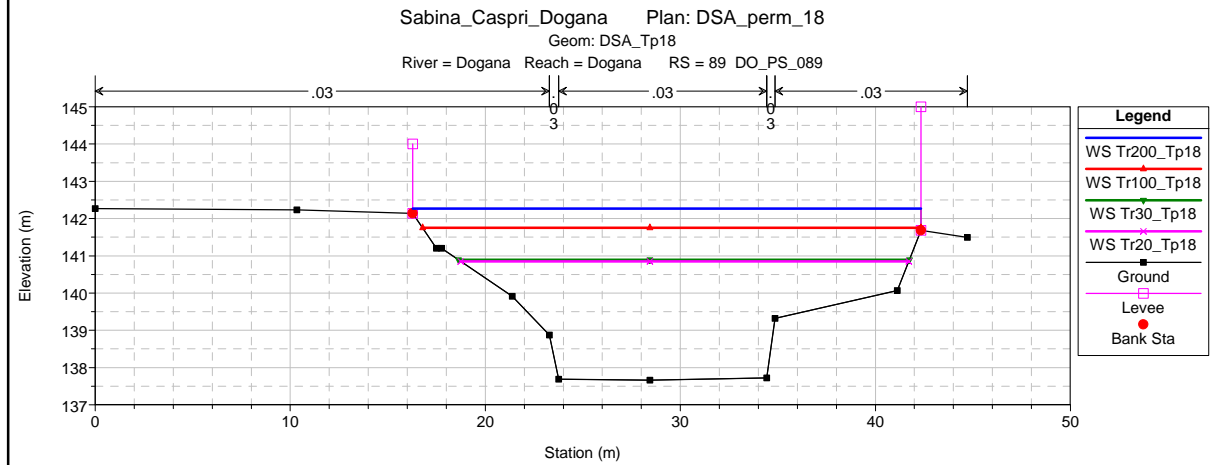
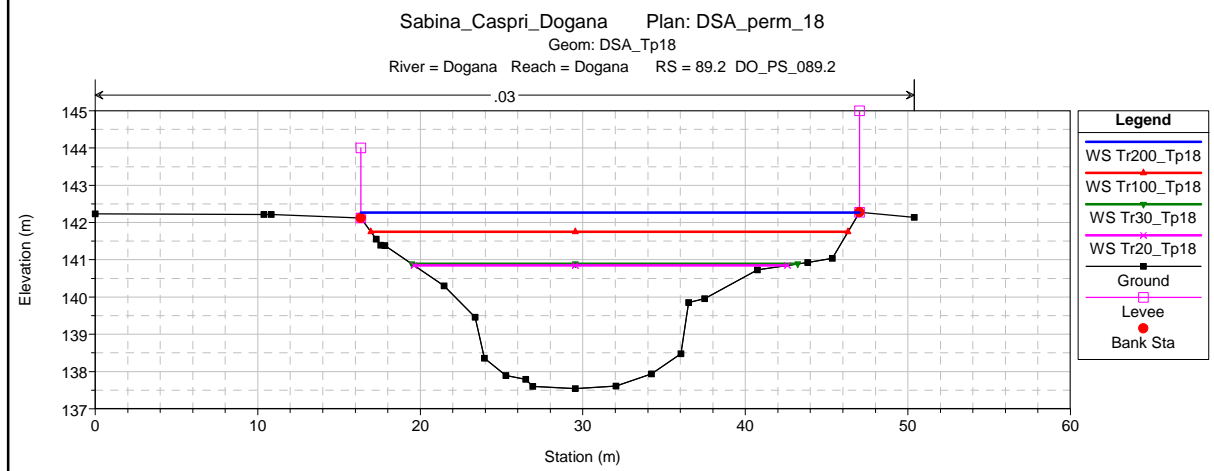
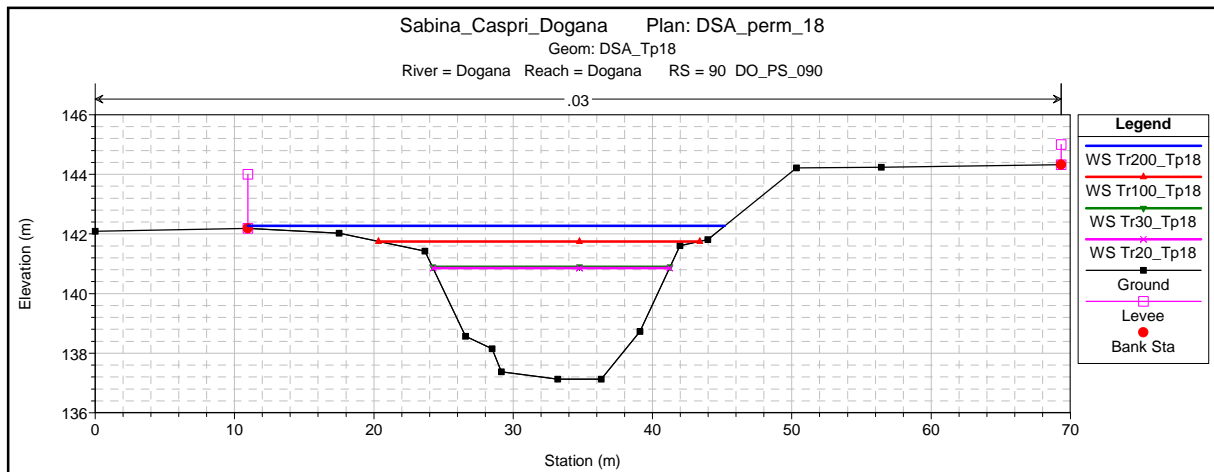
Sabina_Caspri_Dogana Plan: DSA_perm_18

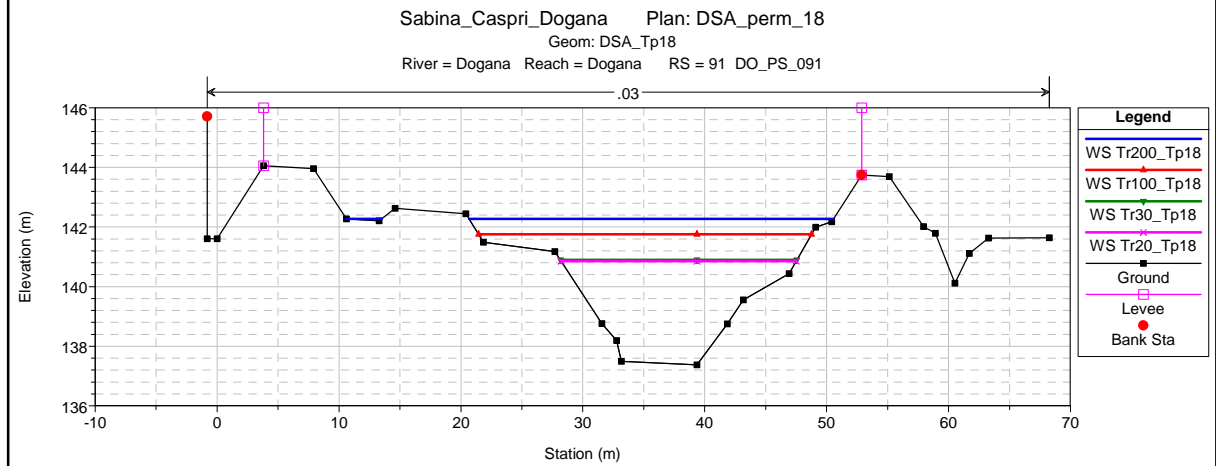
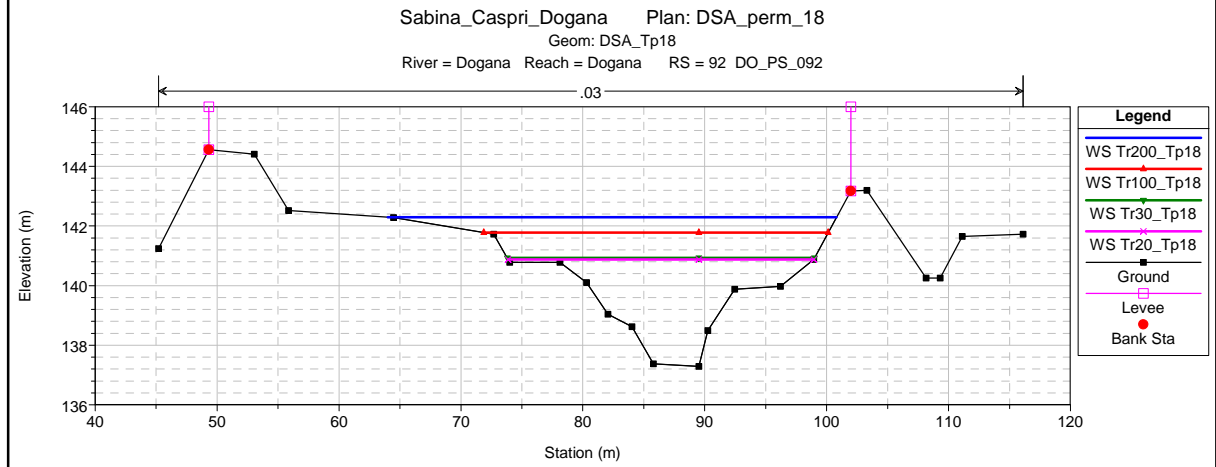
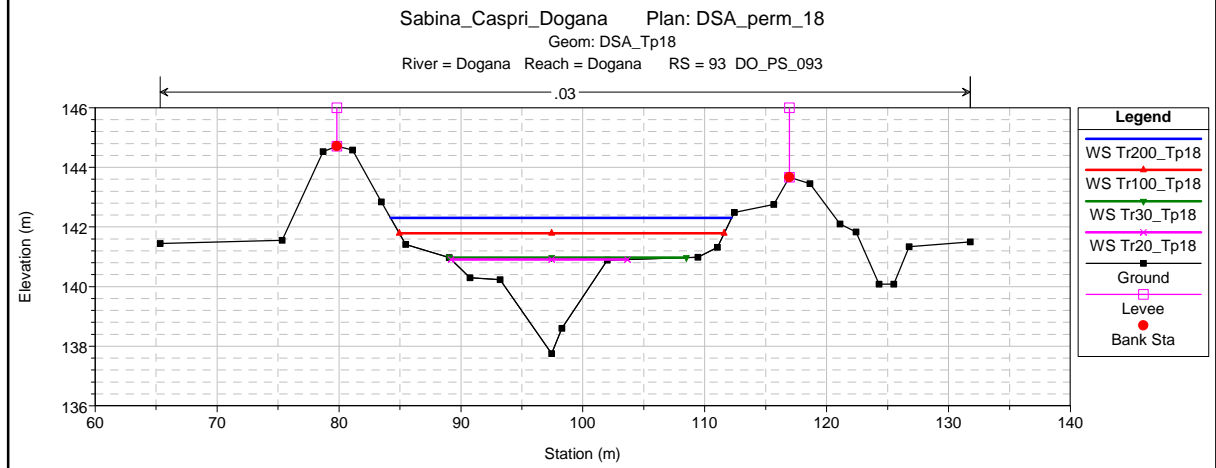
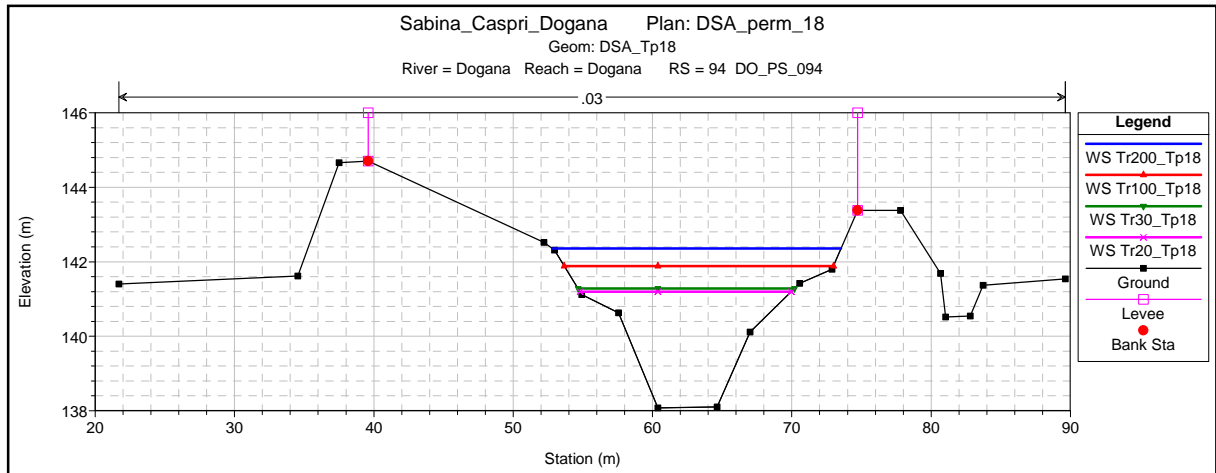
Geom: DSA_Tp18

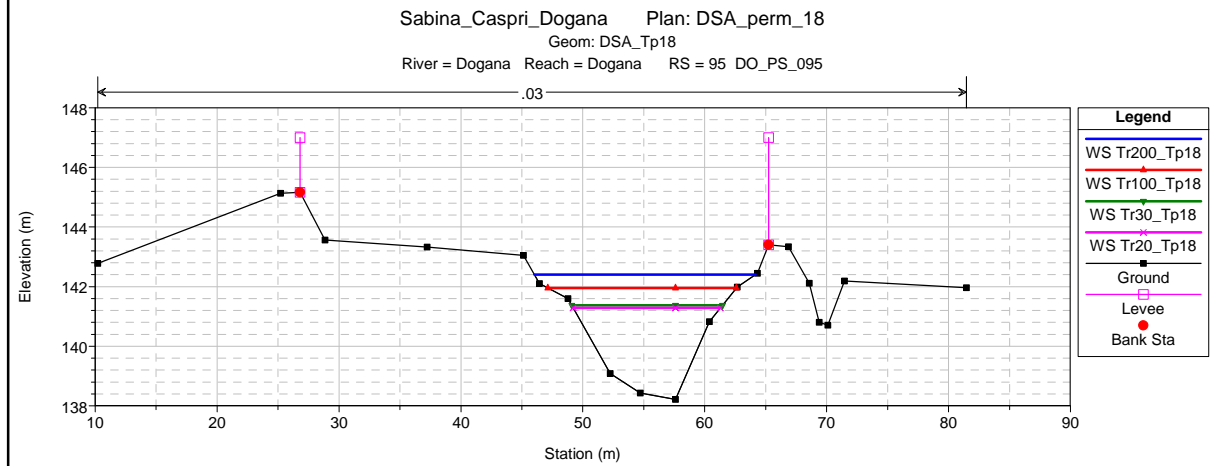
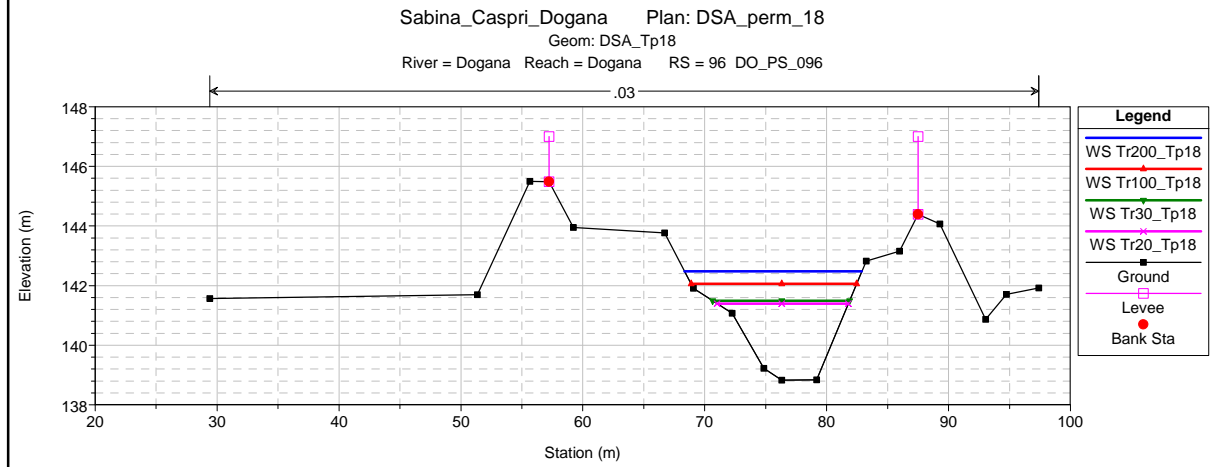
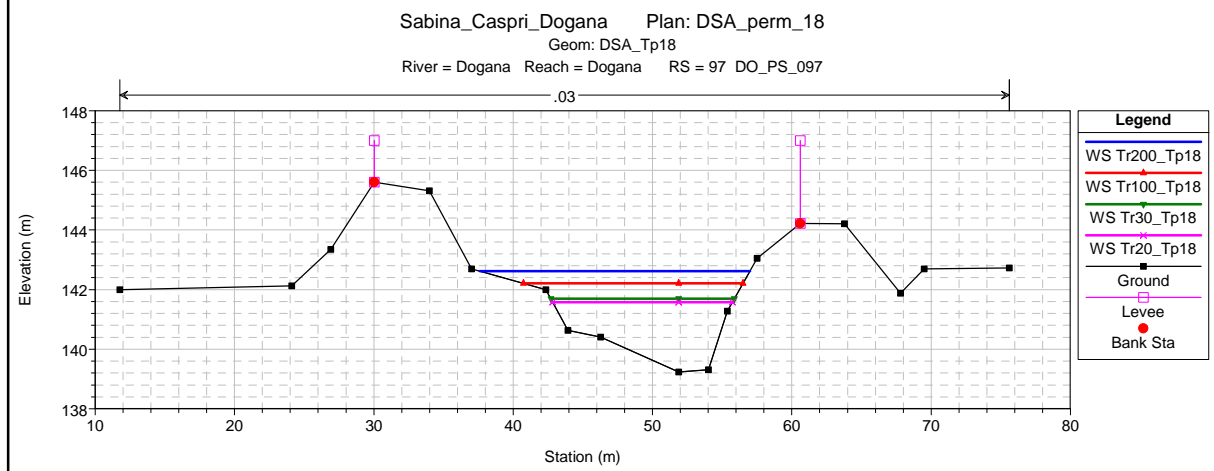
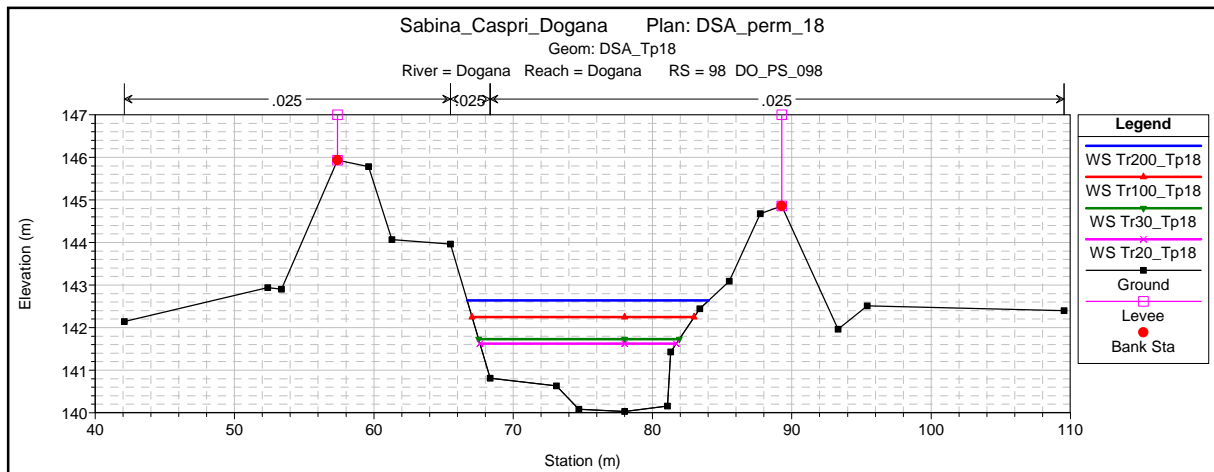


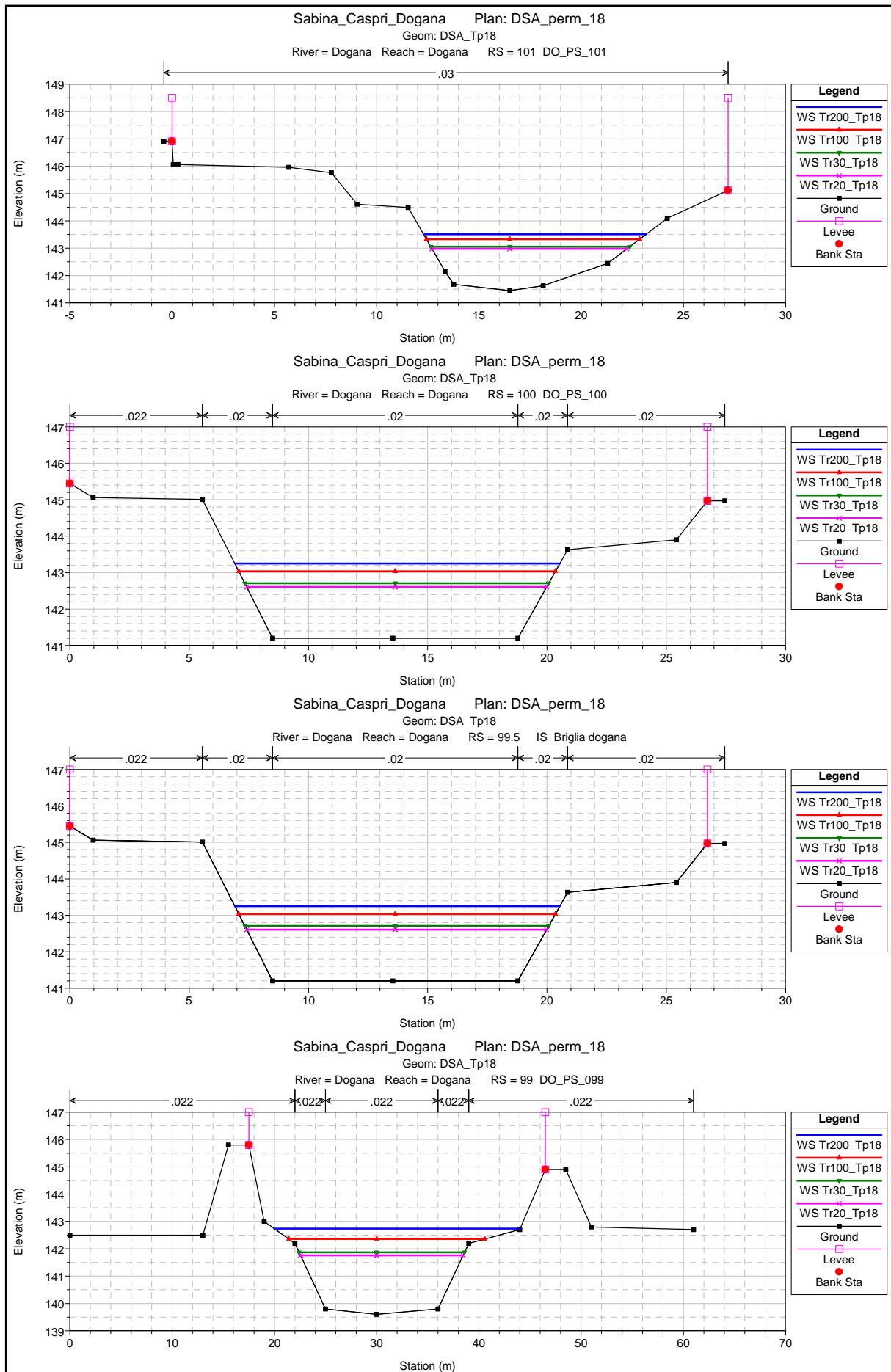
Legend	
WS Tr200_Tp18	(Blue line with circles)
WS Tr100_Tp18	(Red line with triangles)
WS Tr30_Tp18	(Green line with diamonds)
WS Tr20_Tp18	(Magenta line with crosses)
Ground	(Black line with squares)
Left Levee	(Pink line with squares)
Right Levee	(Purple line with squares)

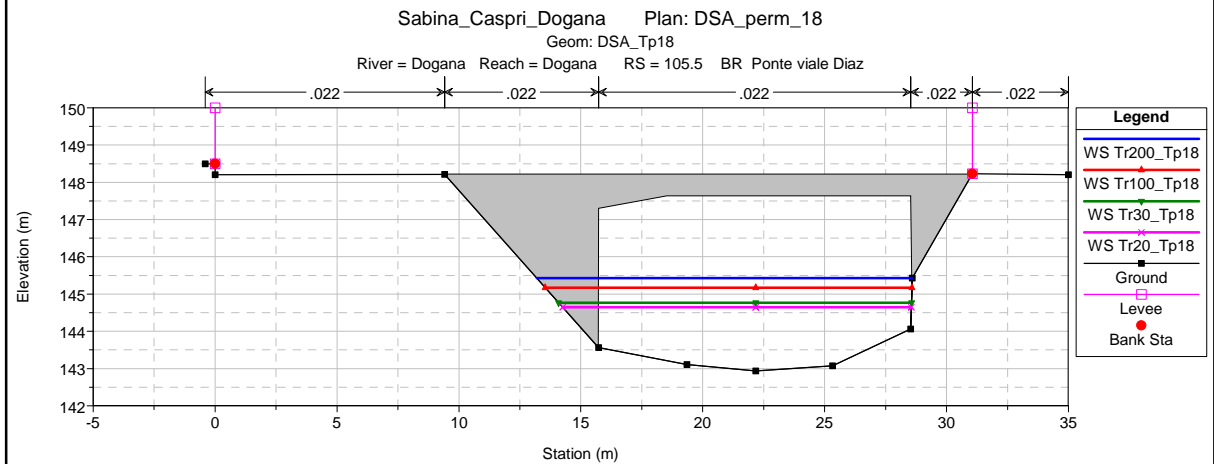
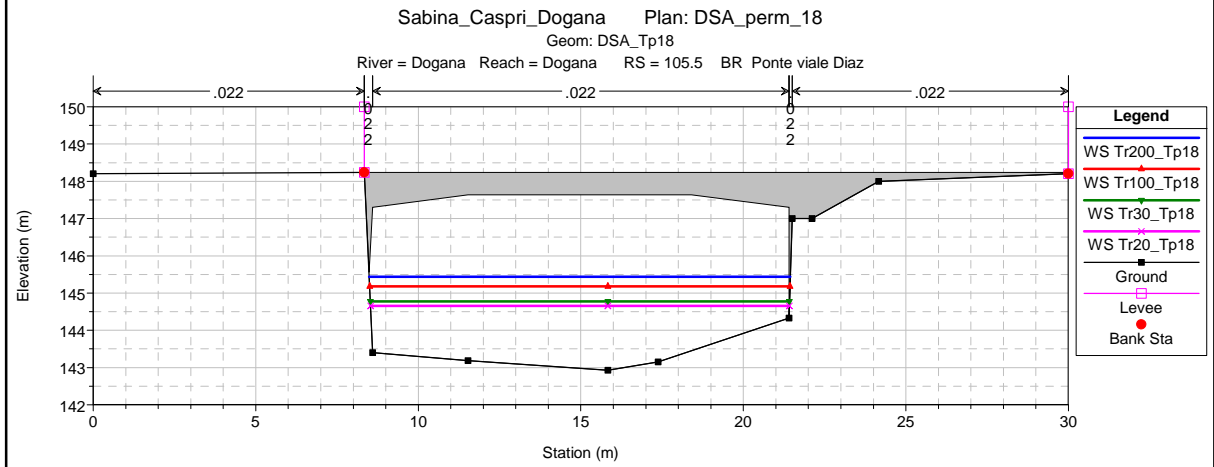
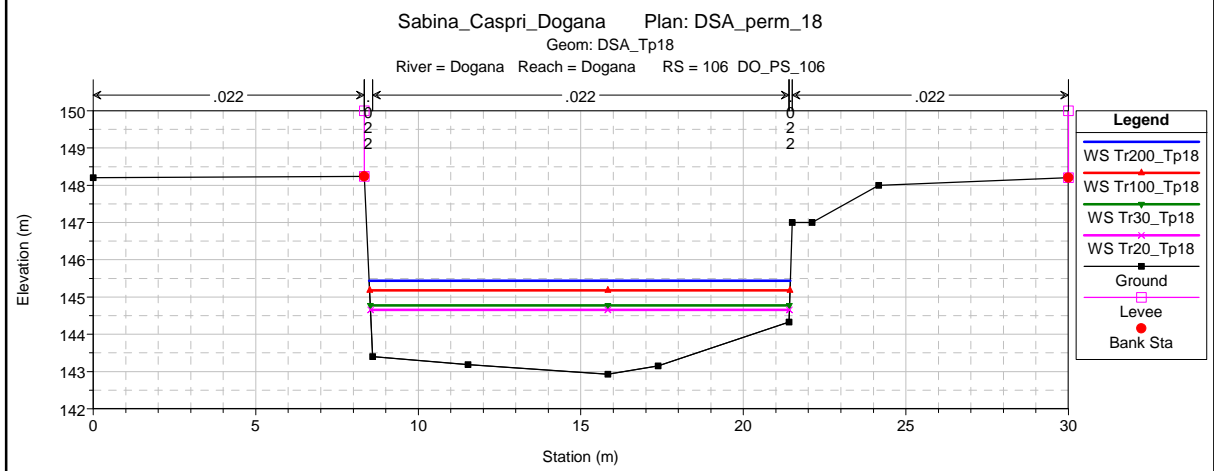
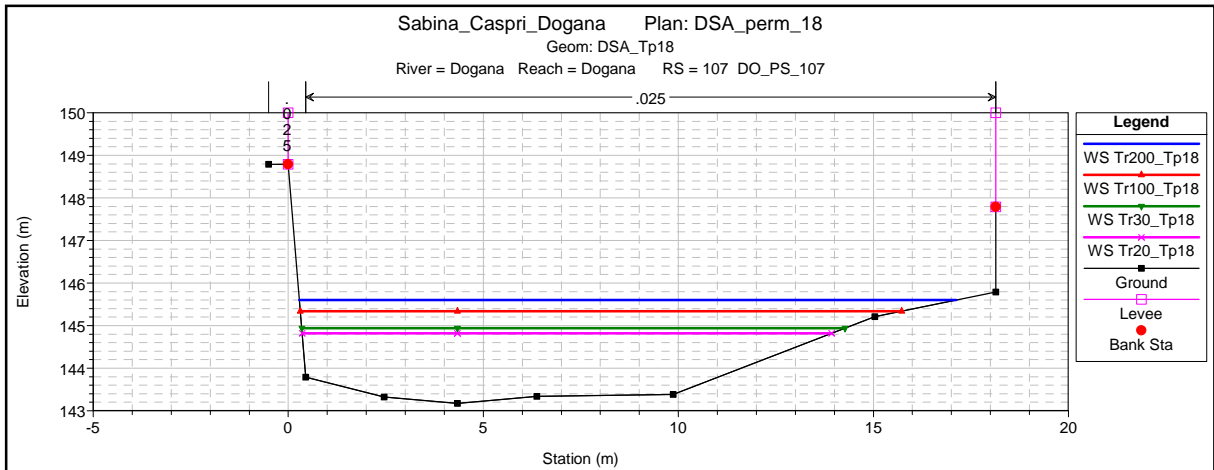


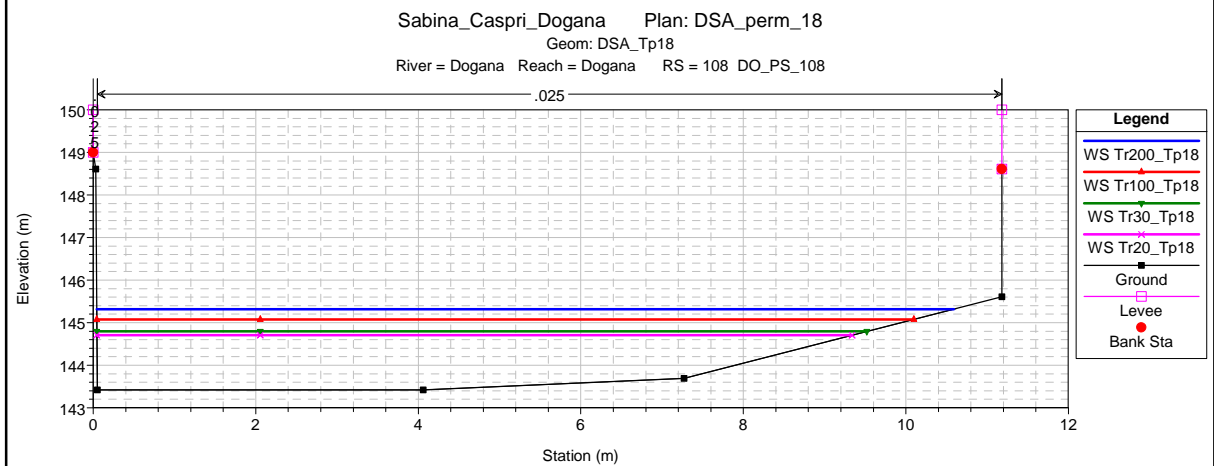
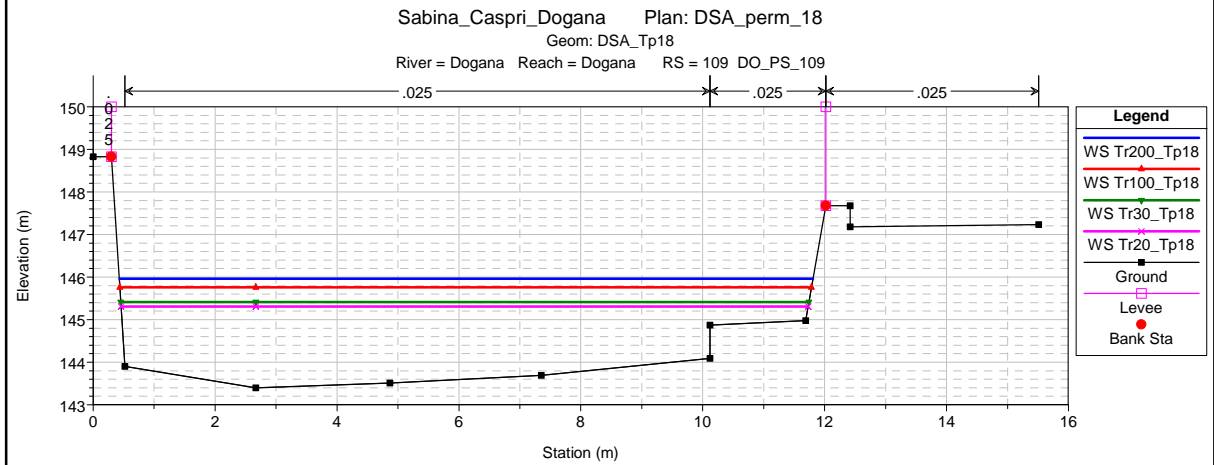
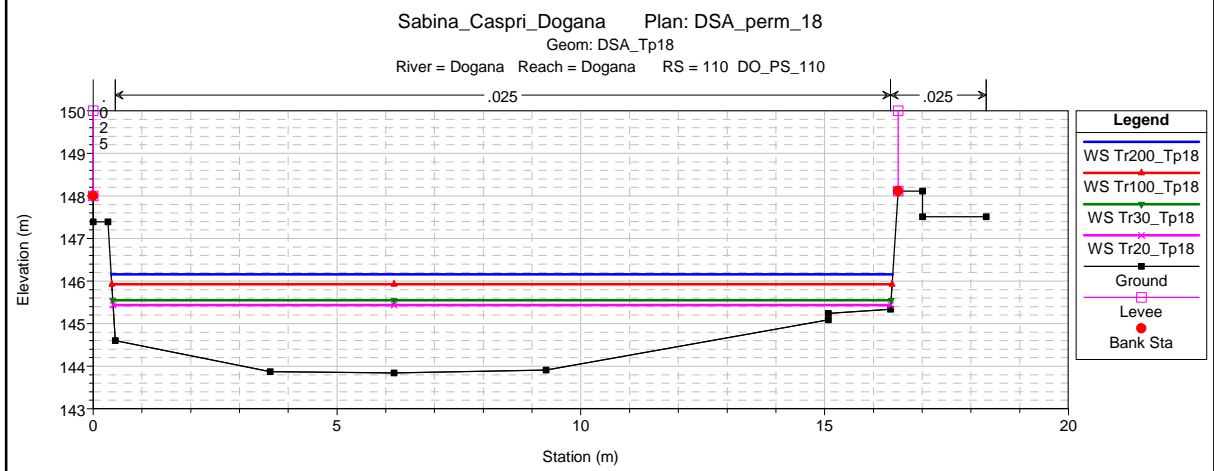
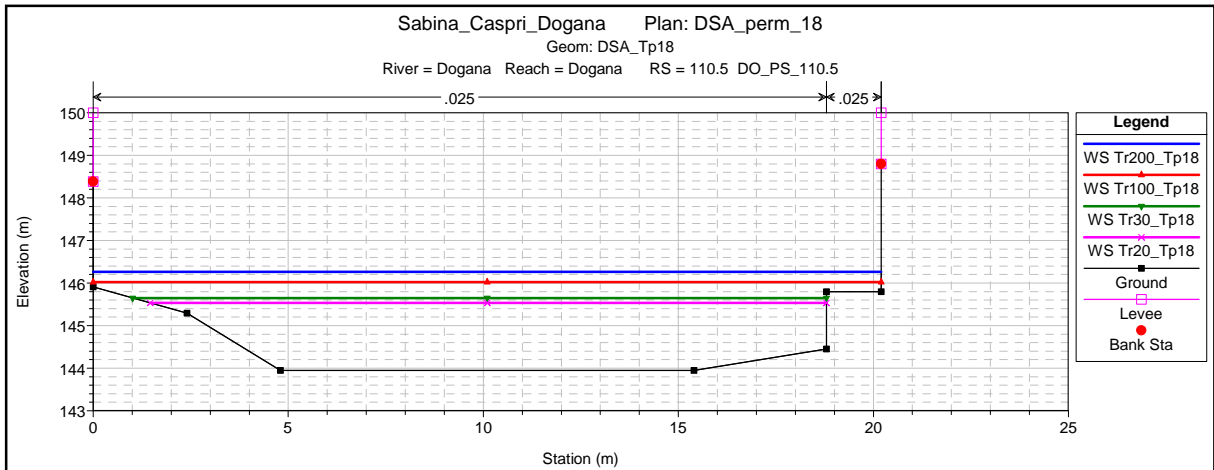


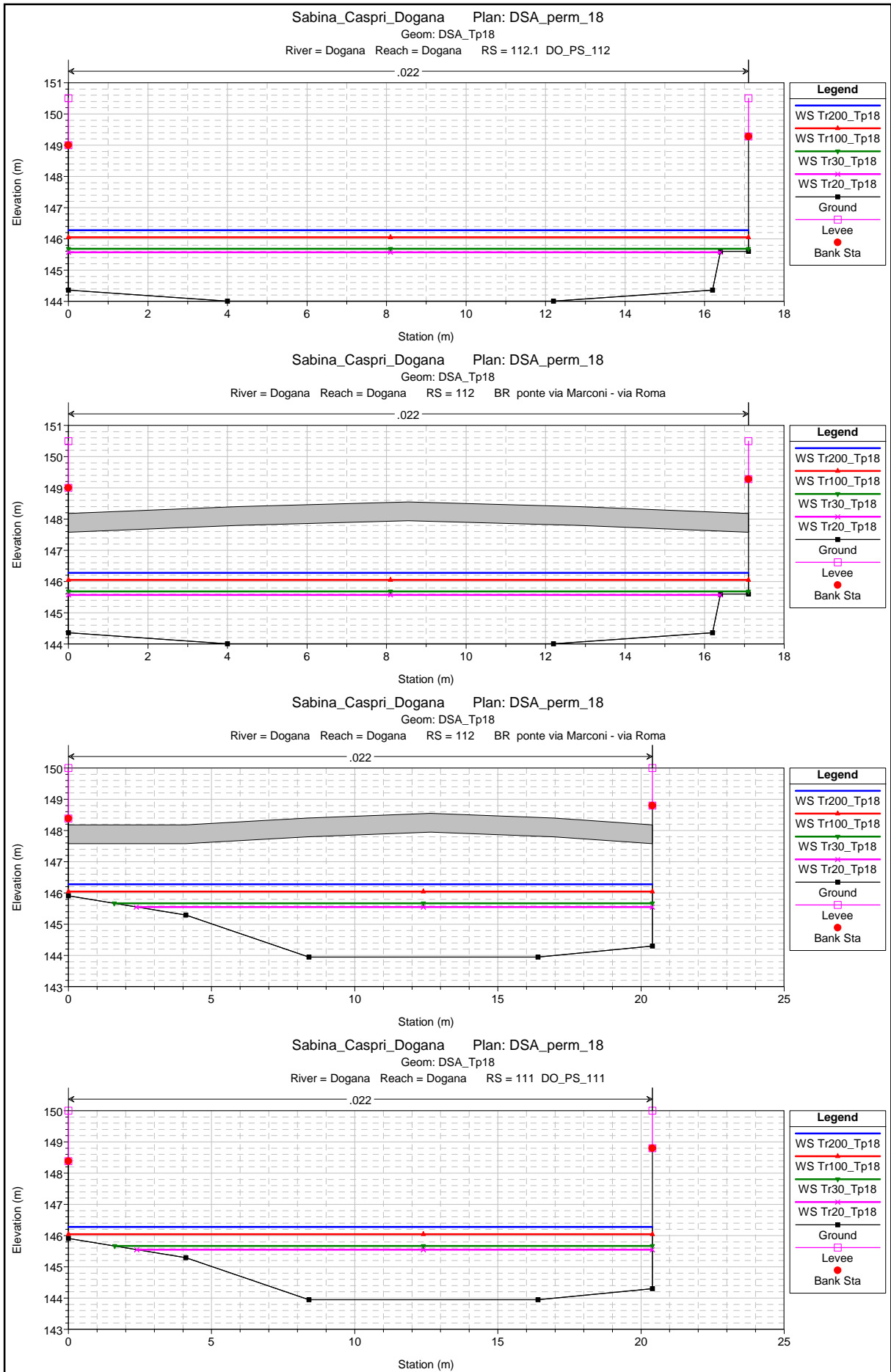


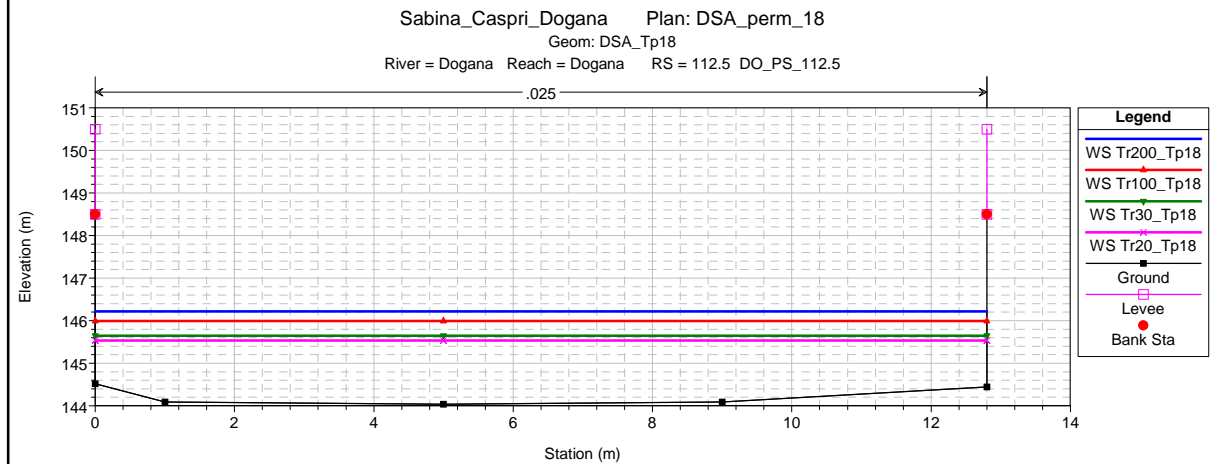
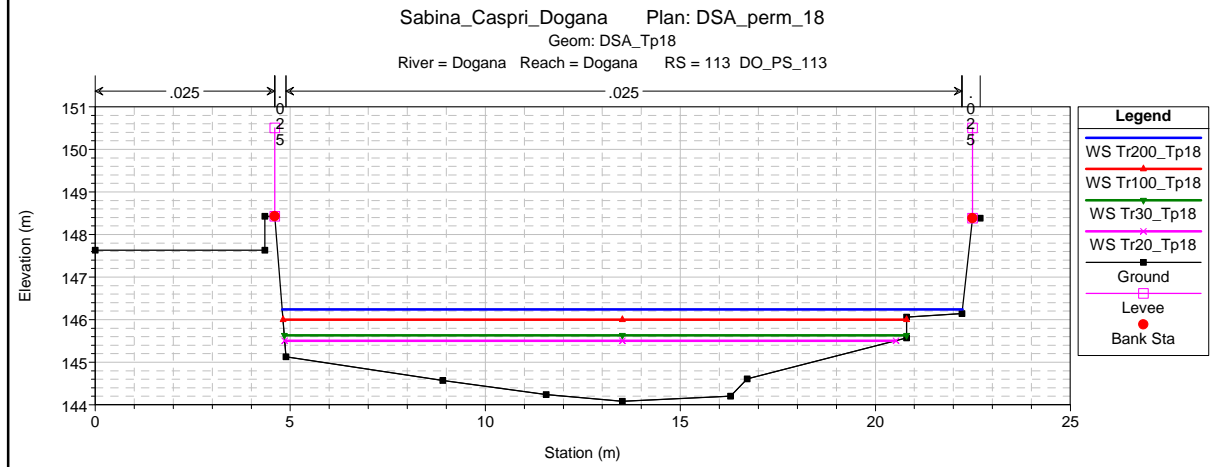
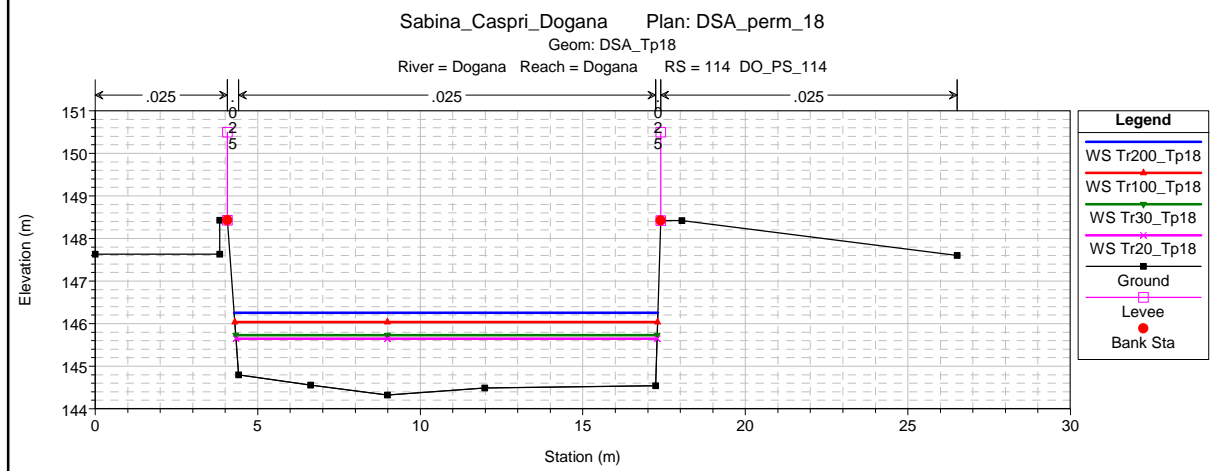
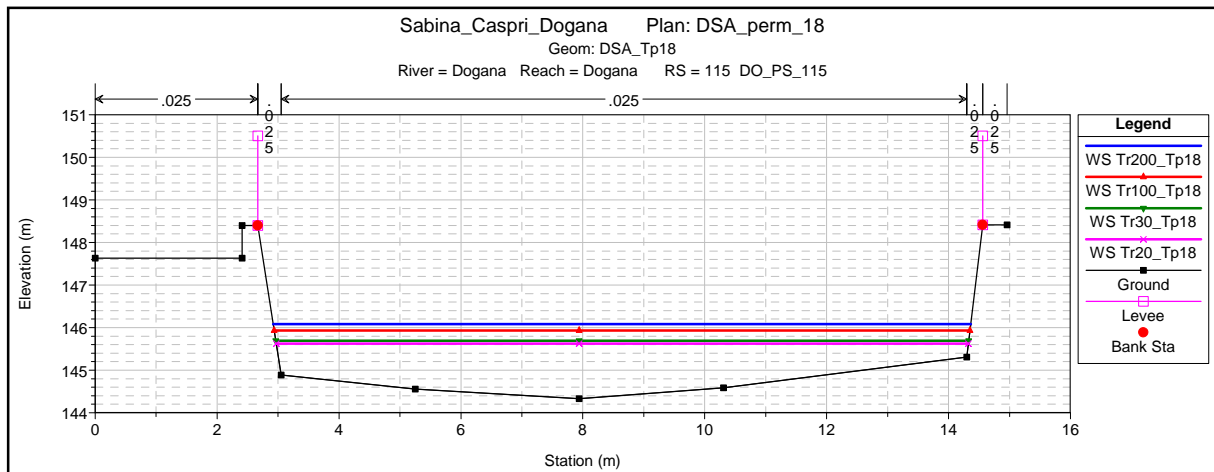


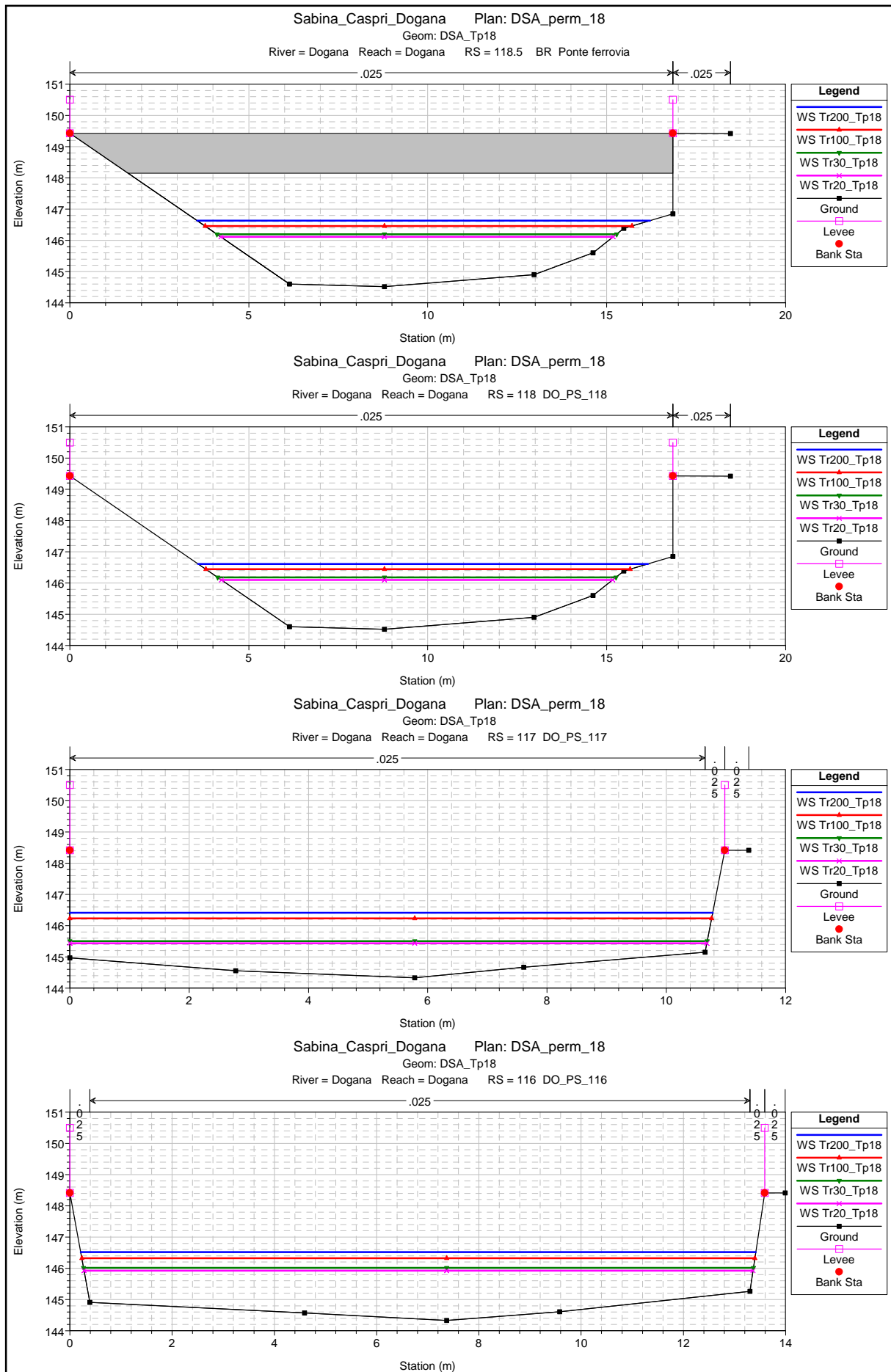


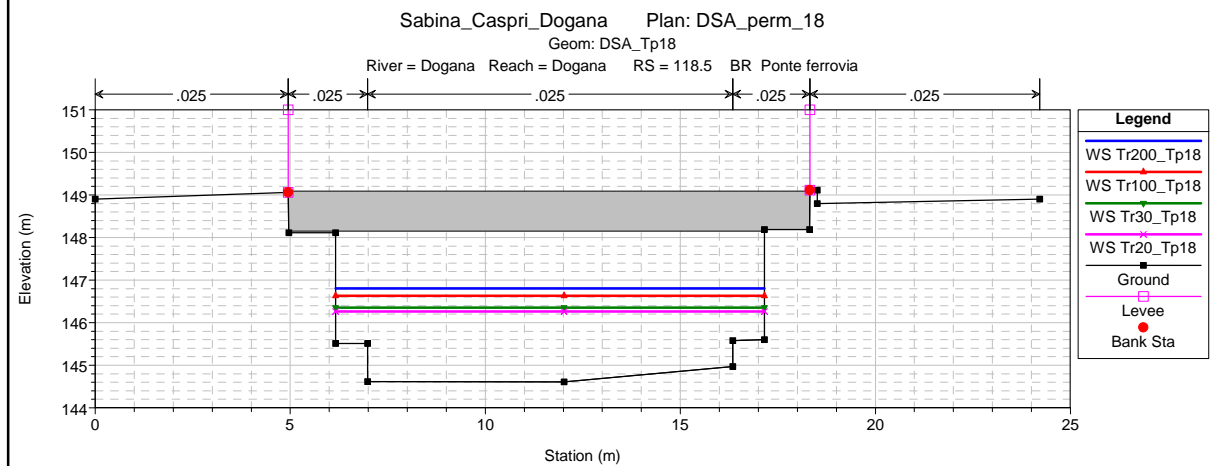
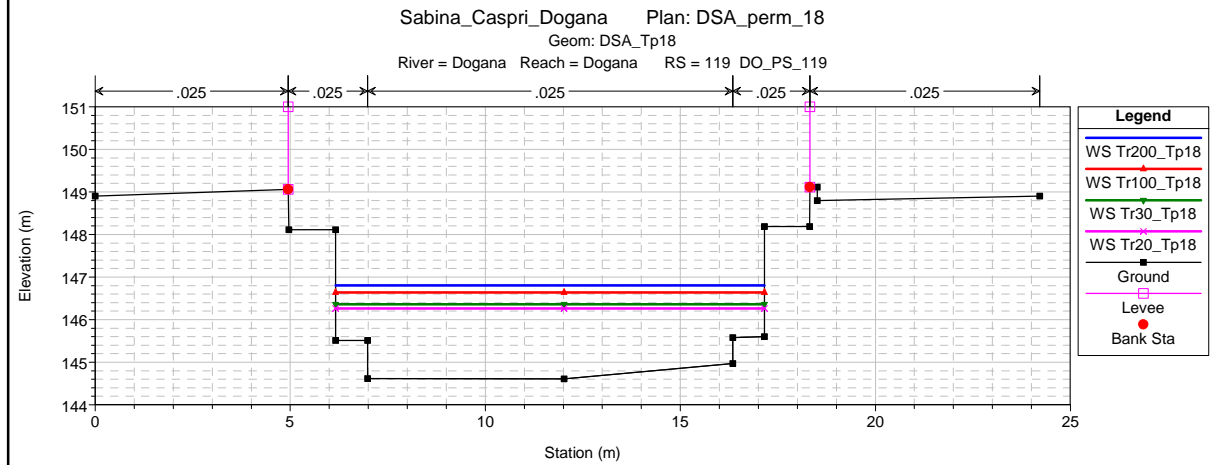
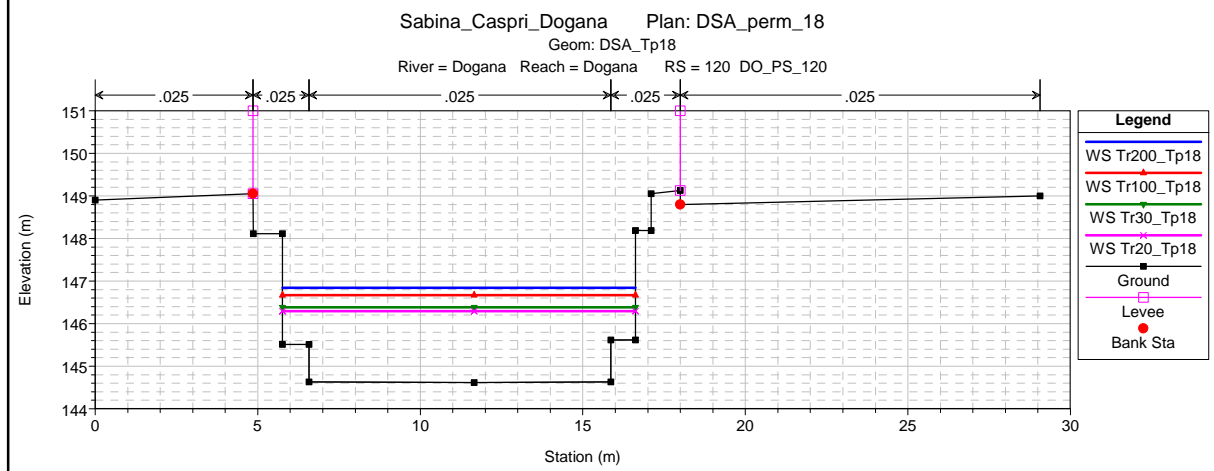
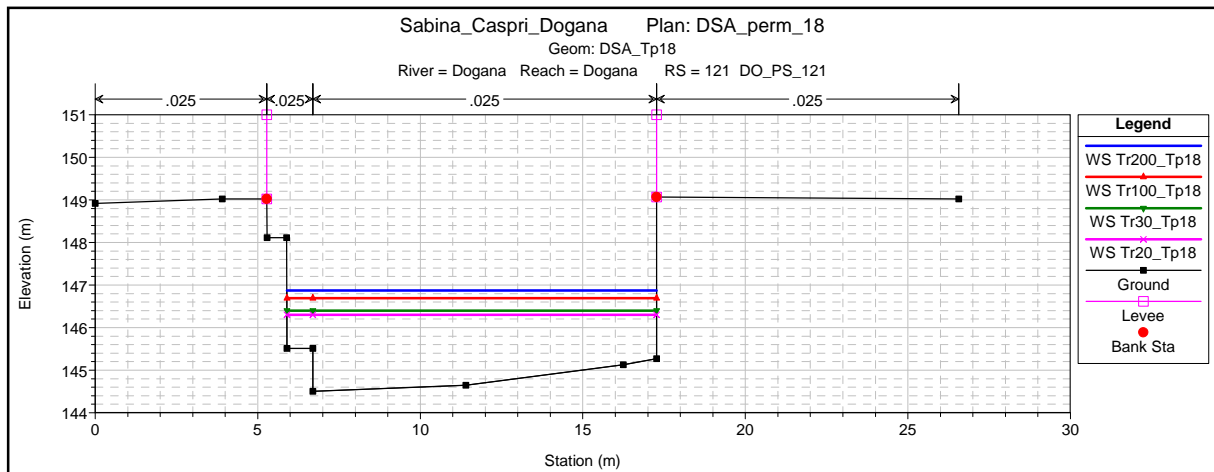


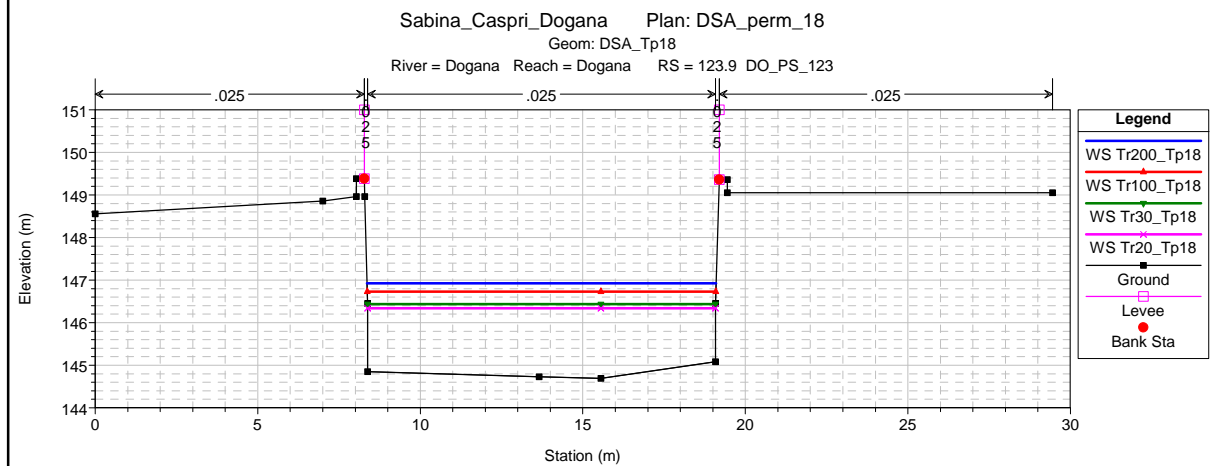
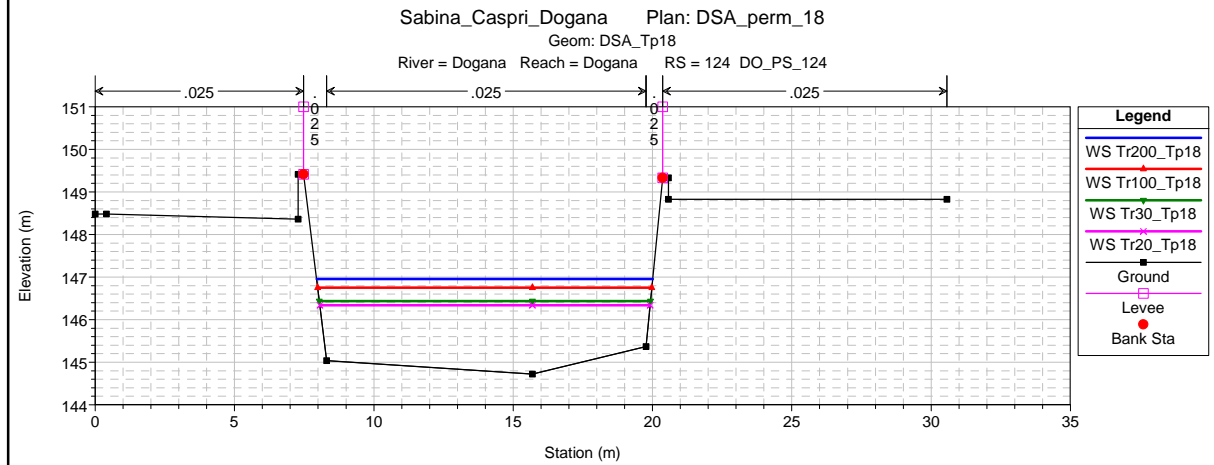
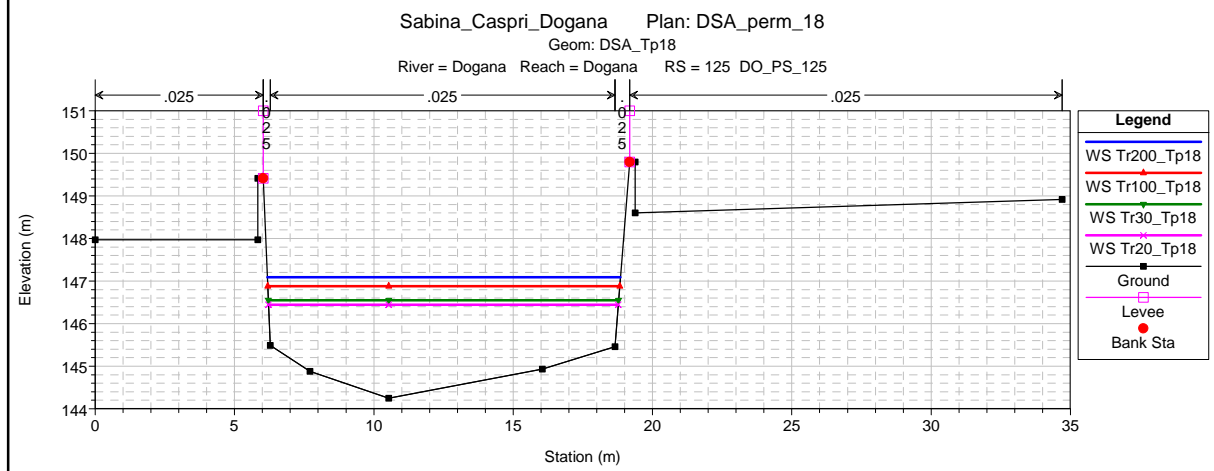
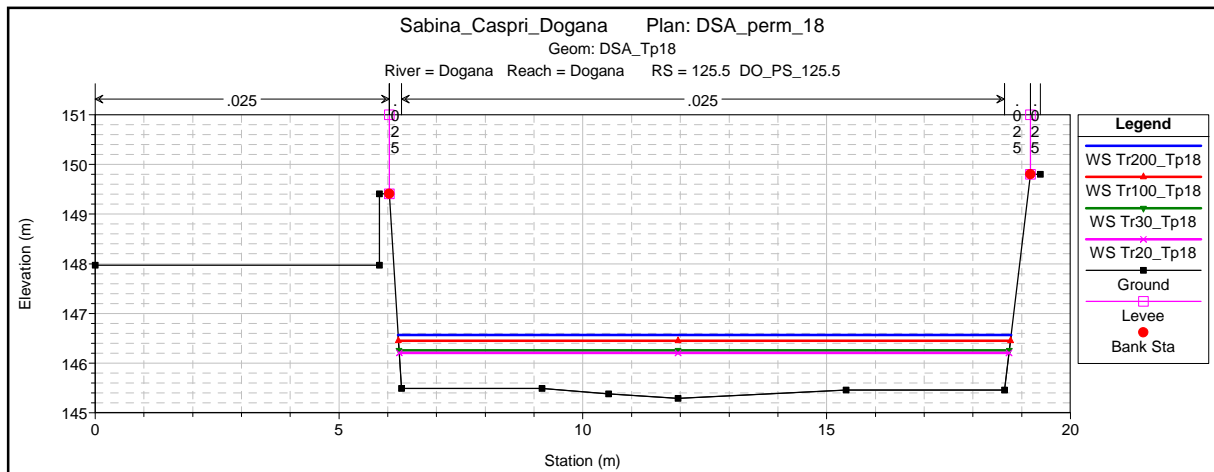


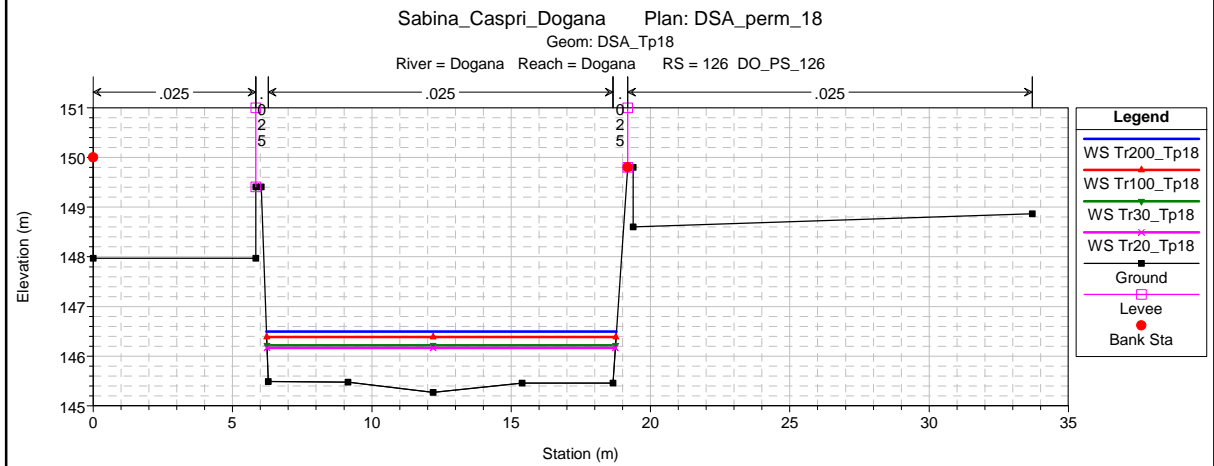
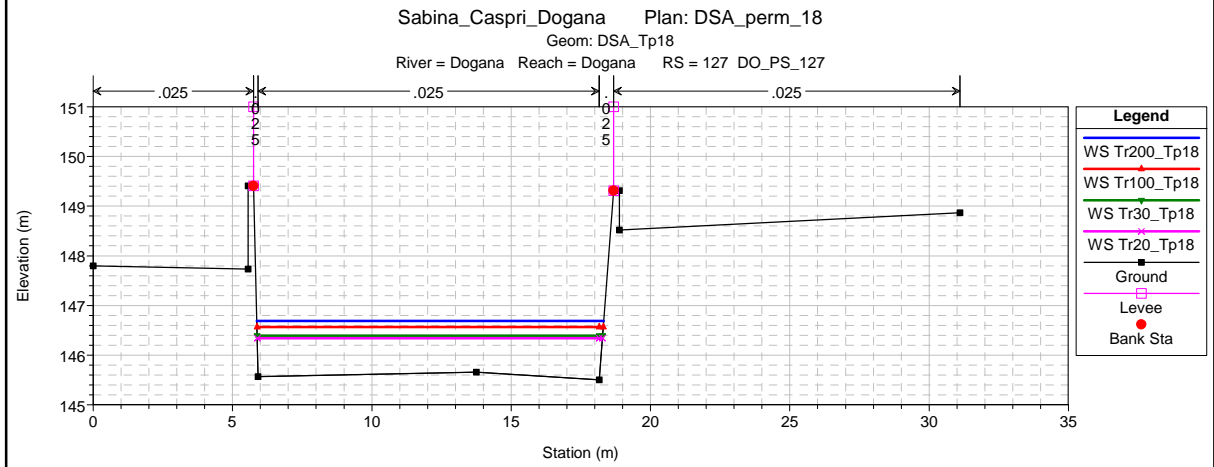
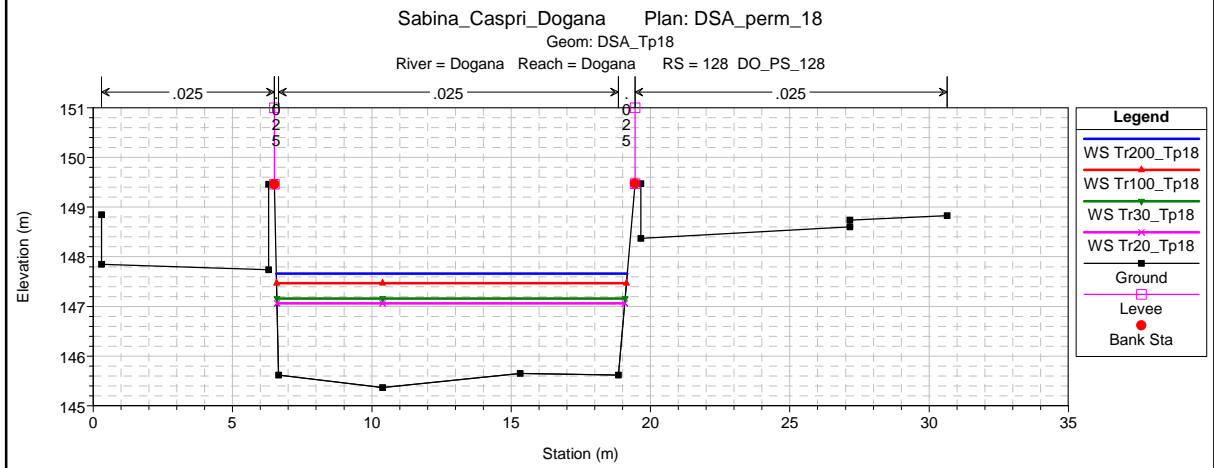
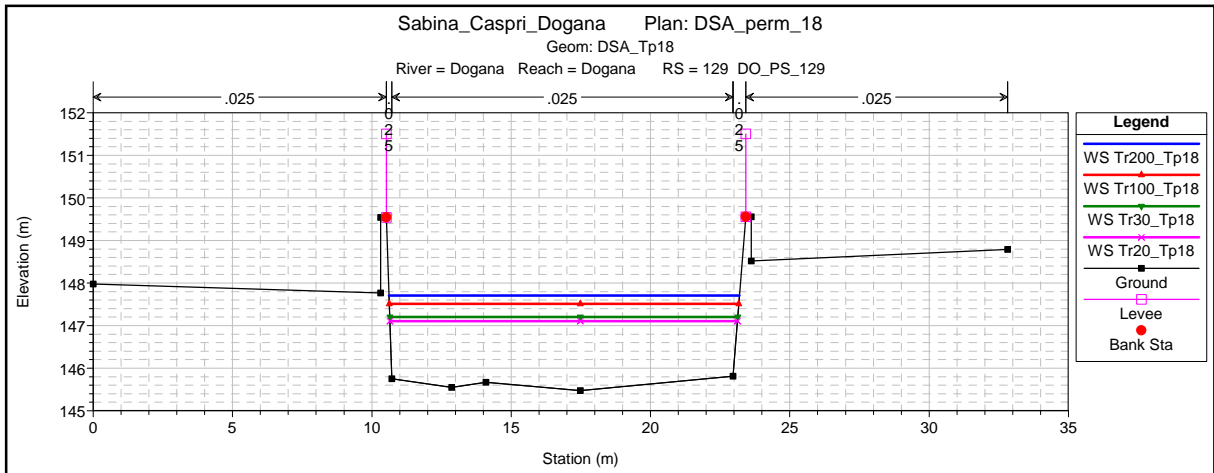


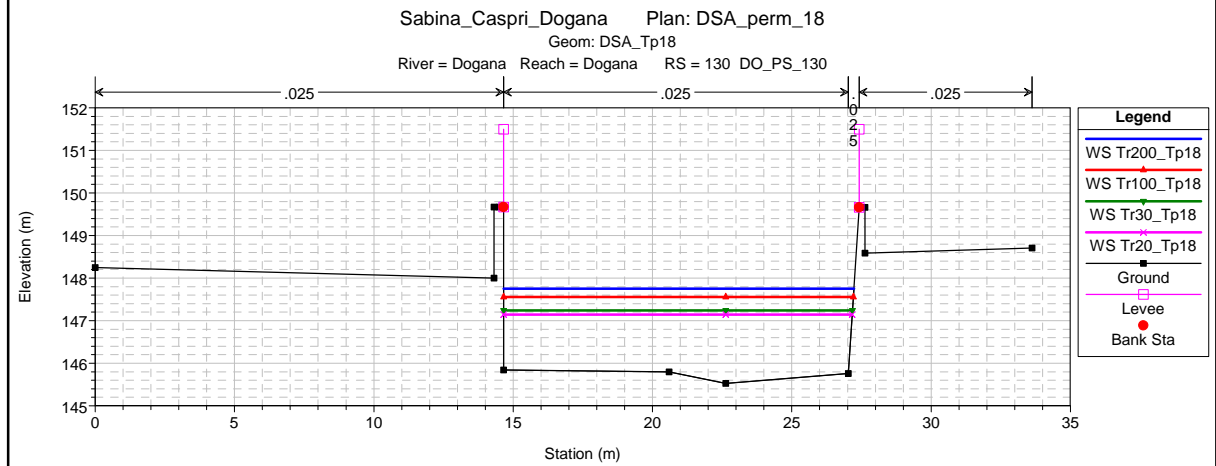
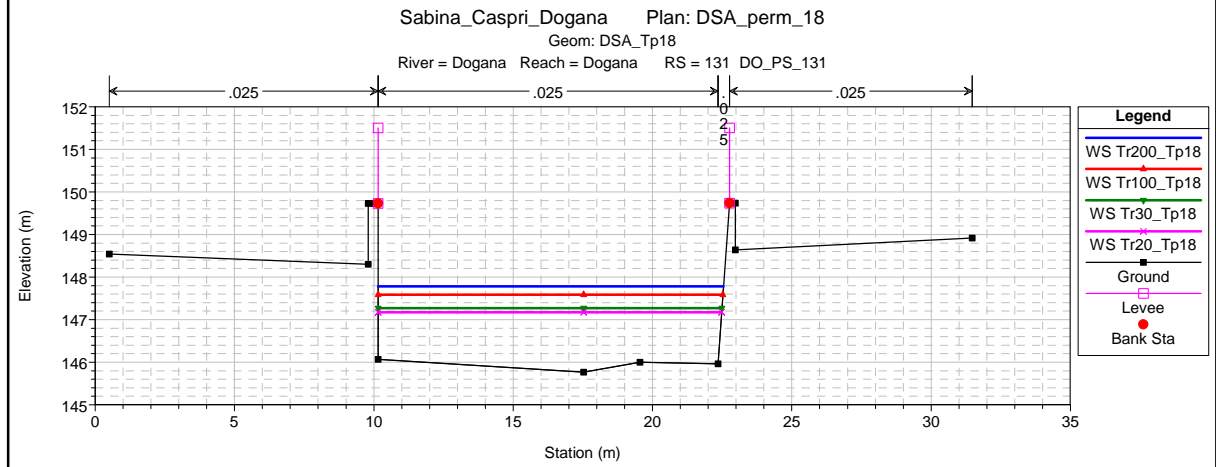
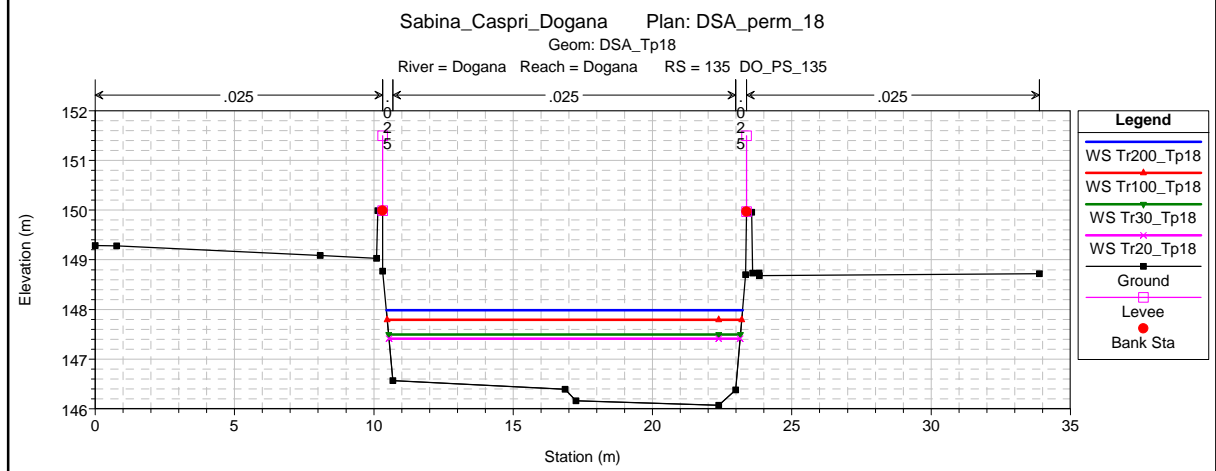
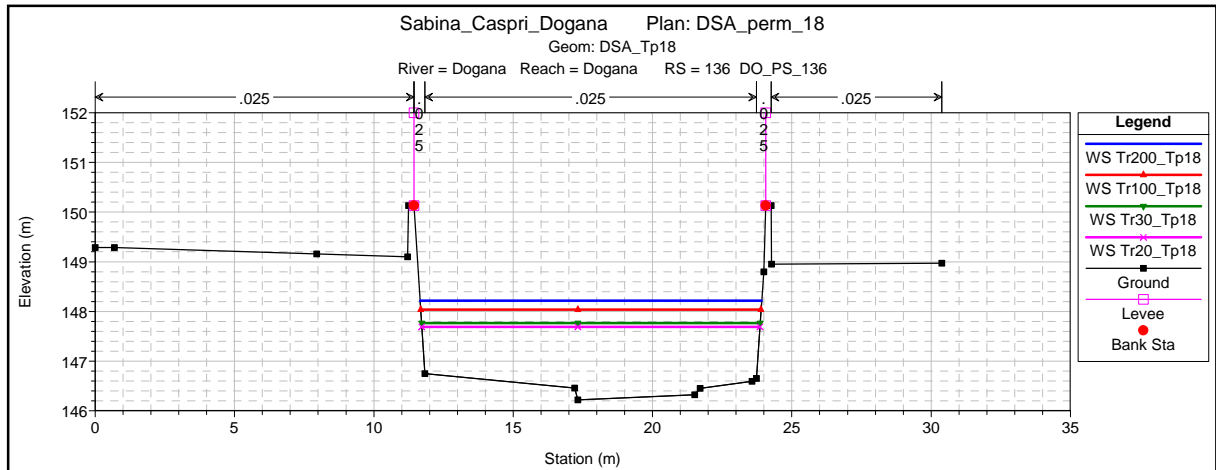


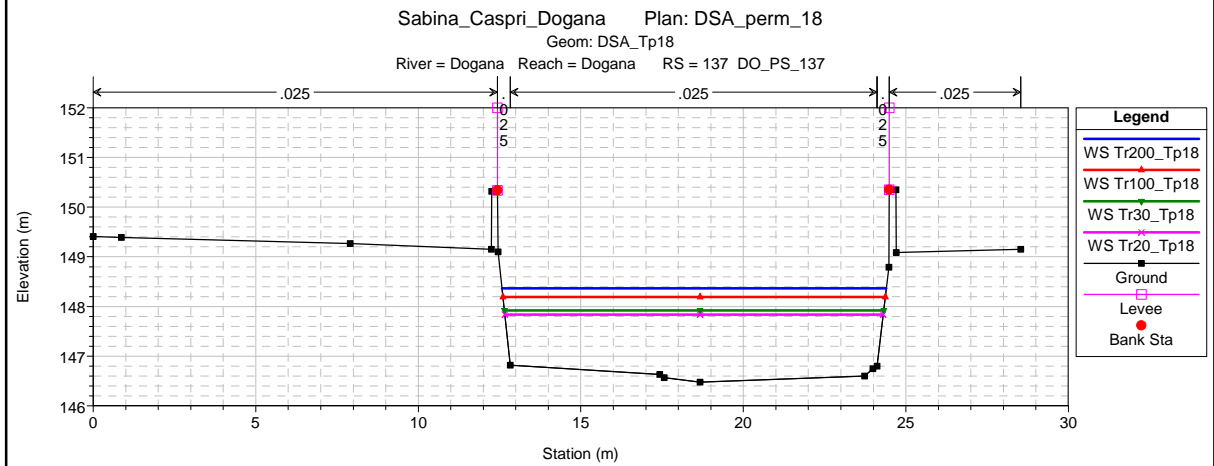
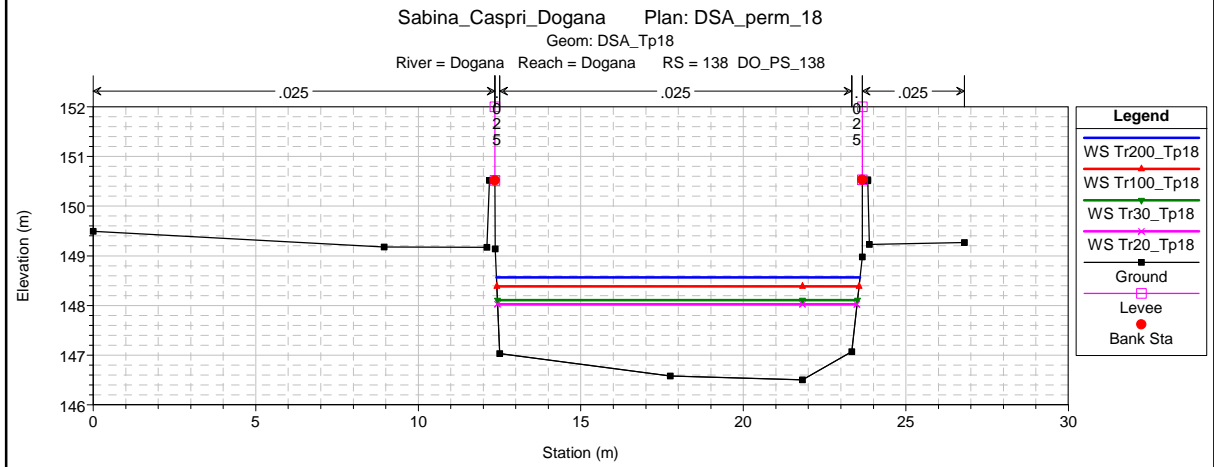
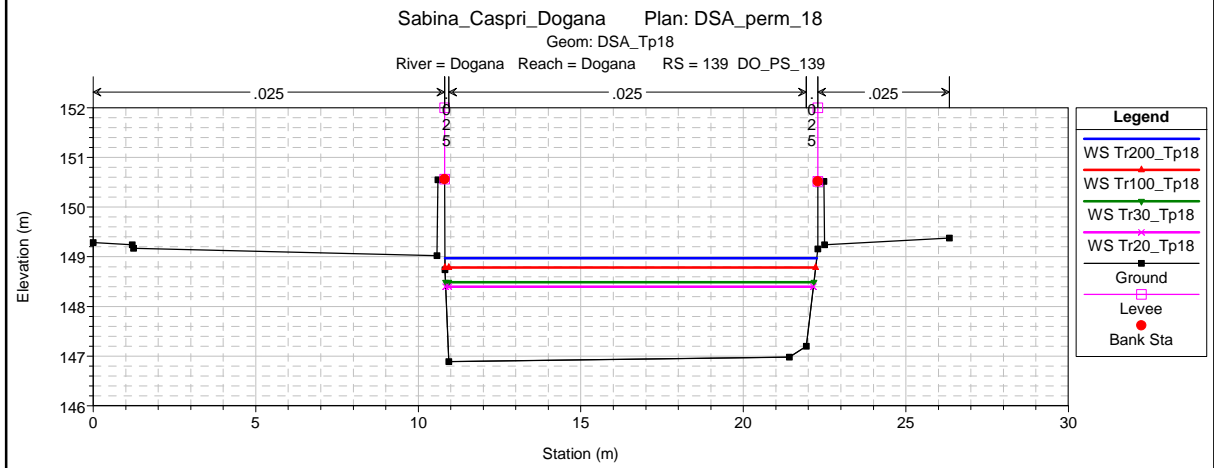
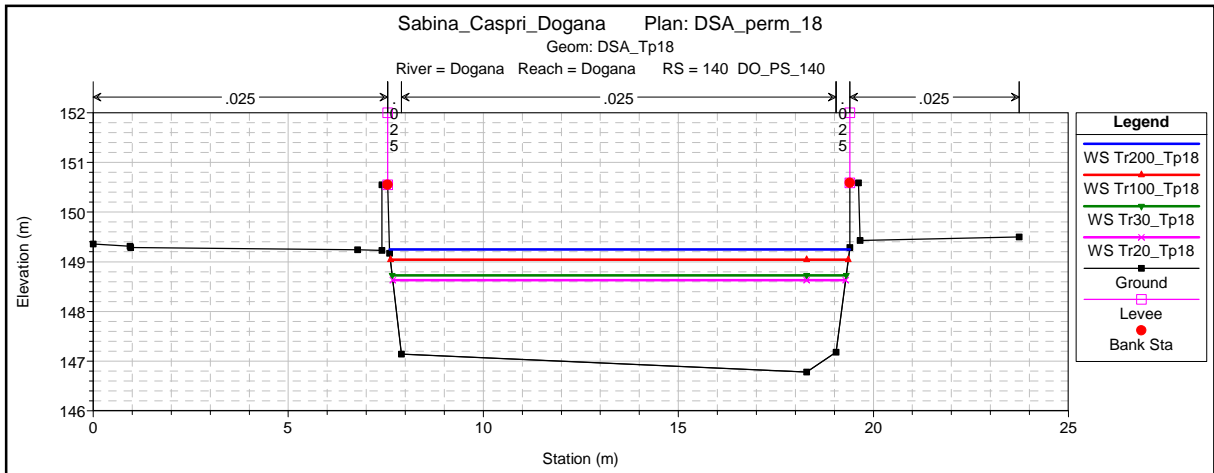


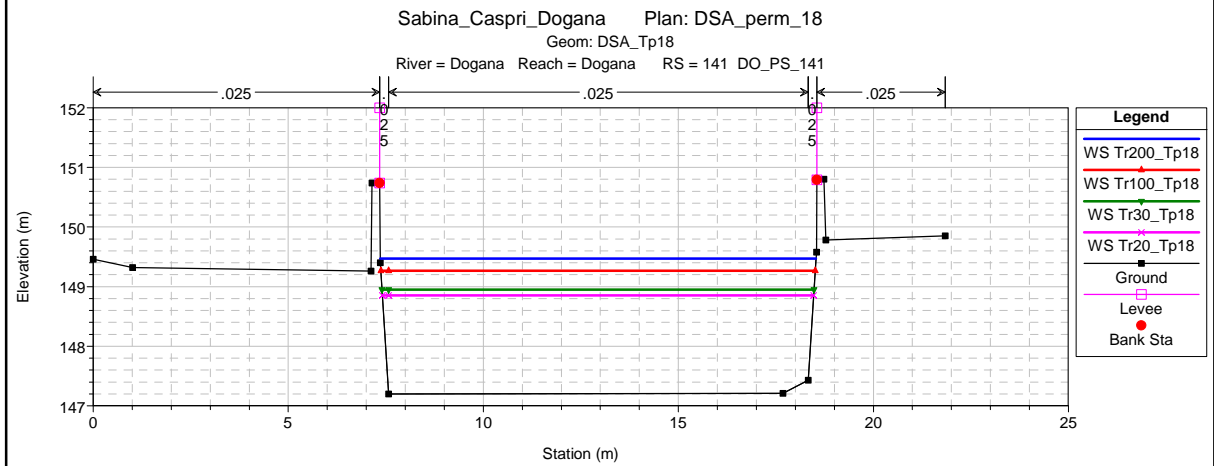
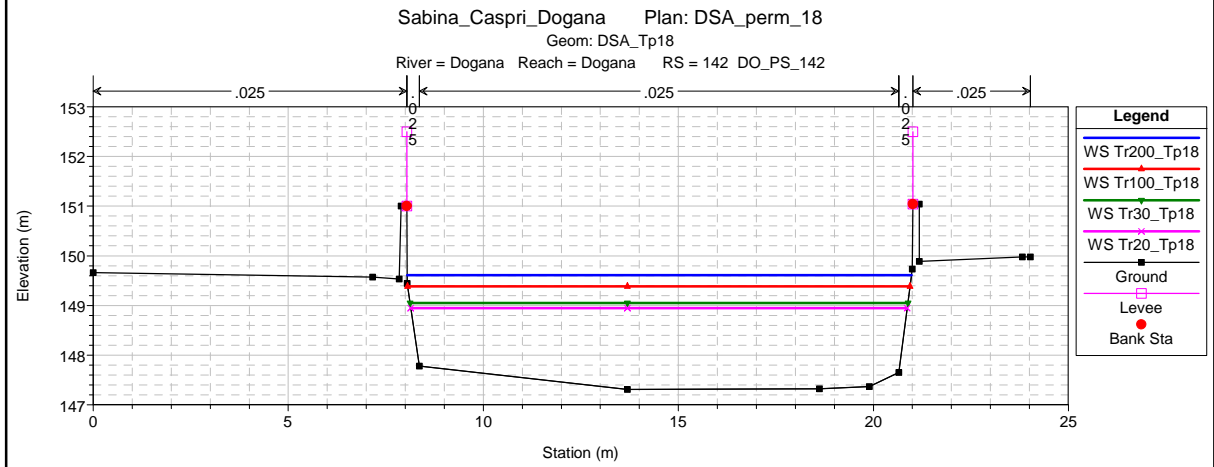
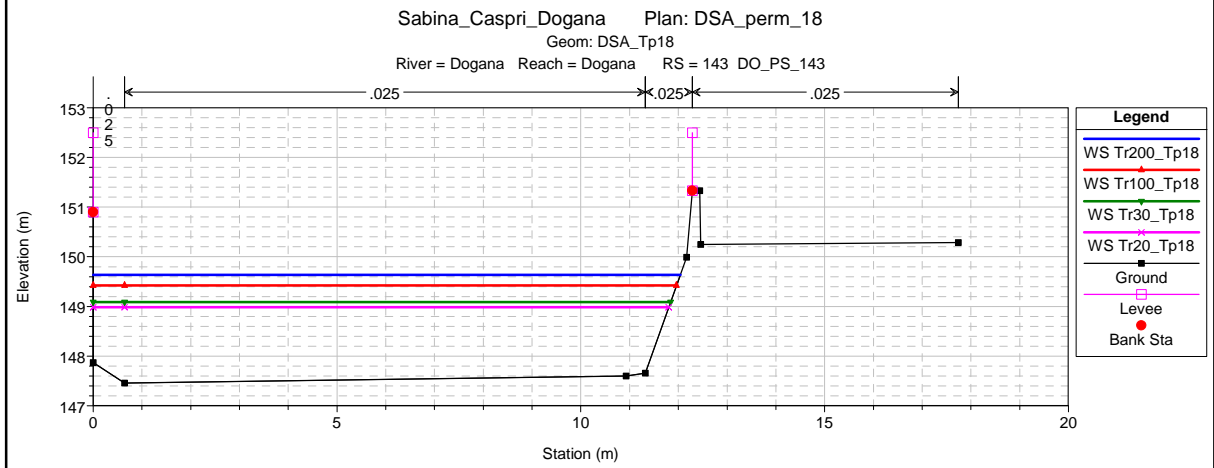
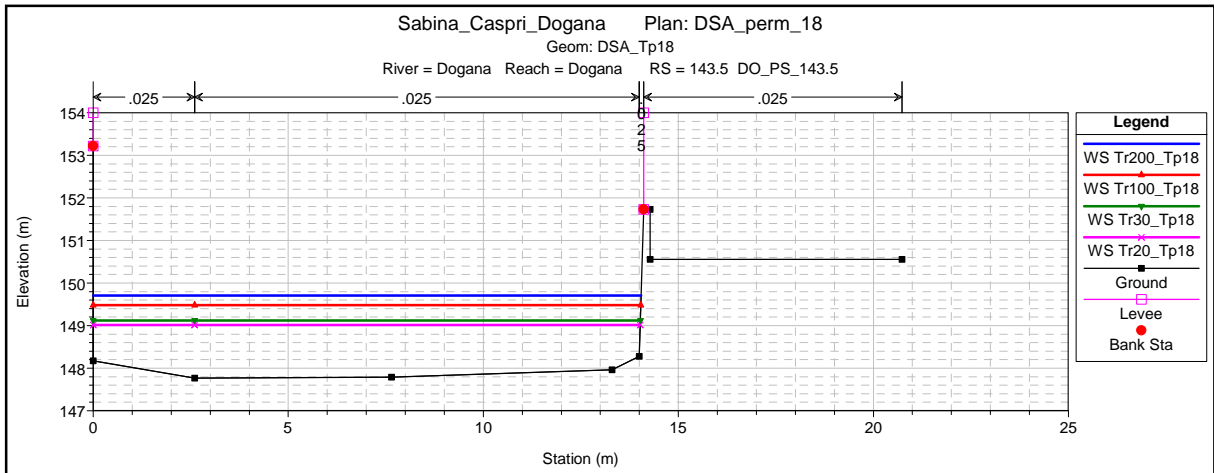


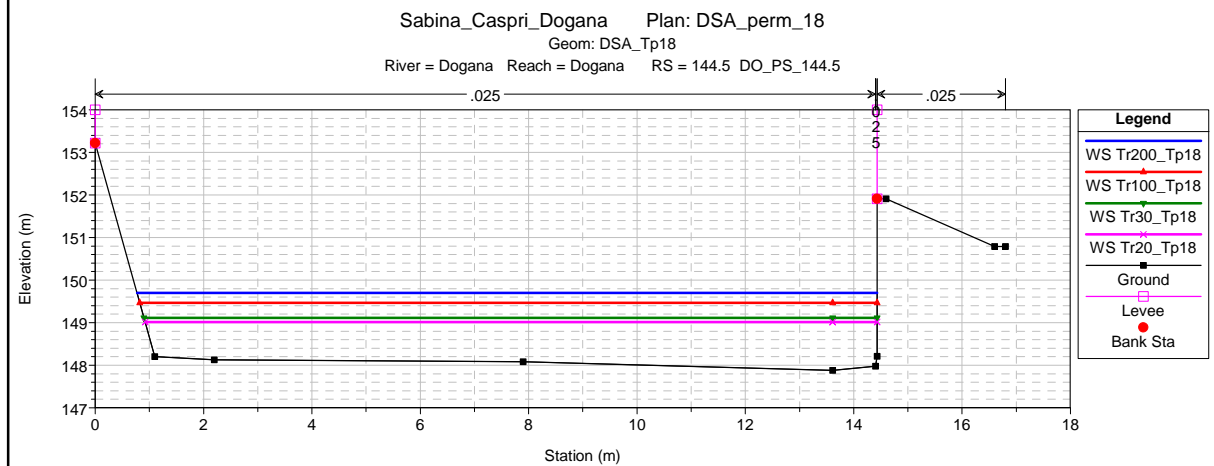
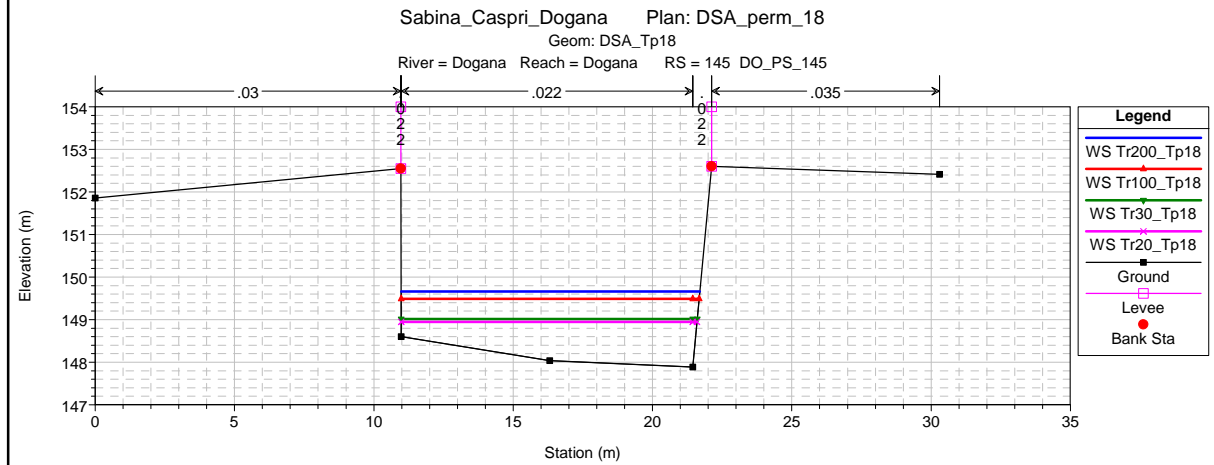
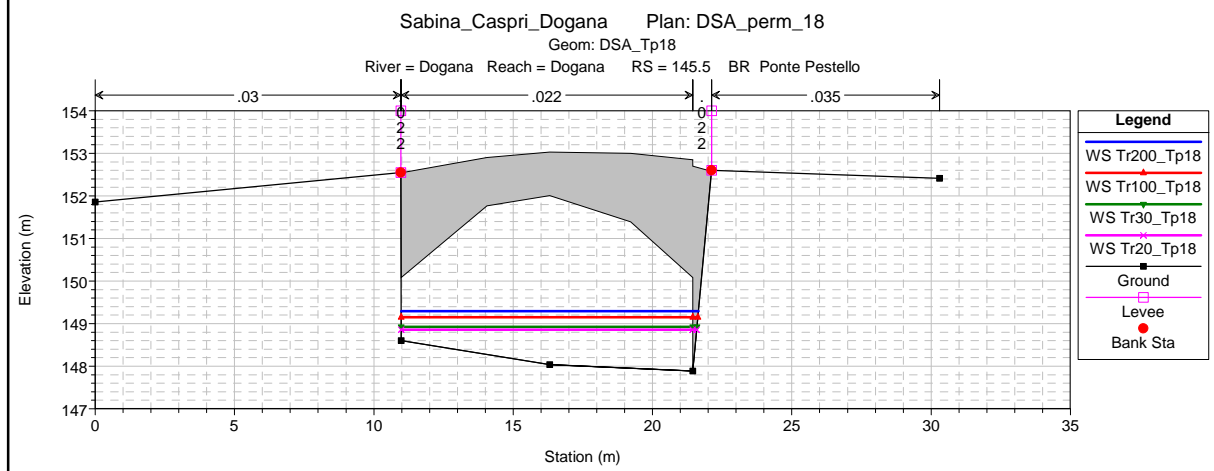
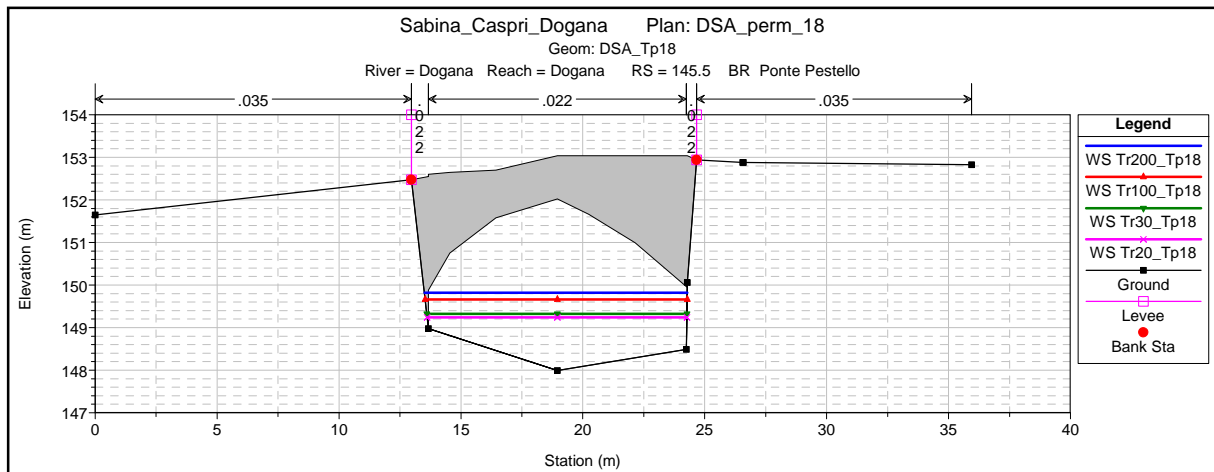


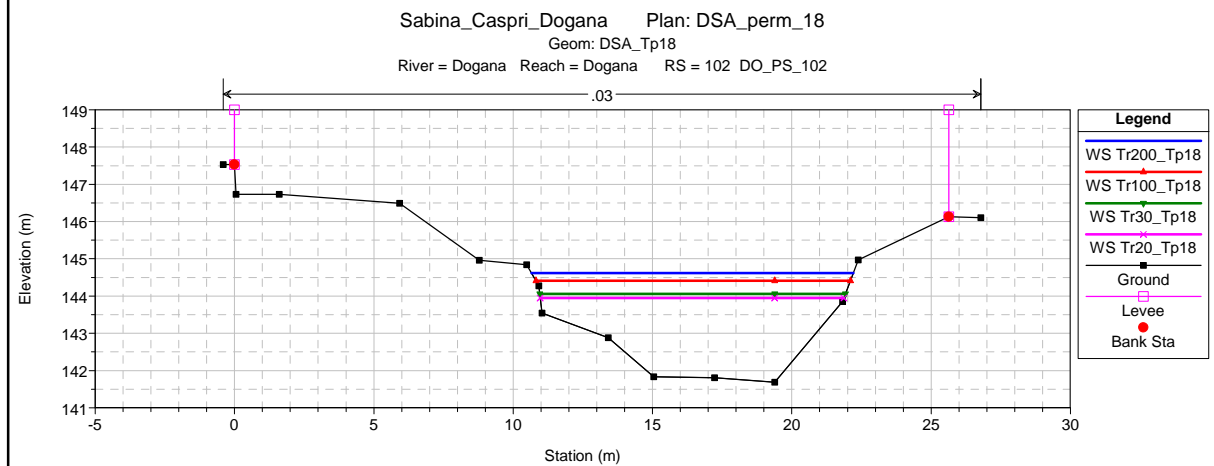
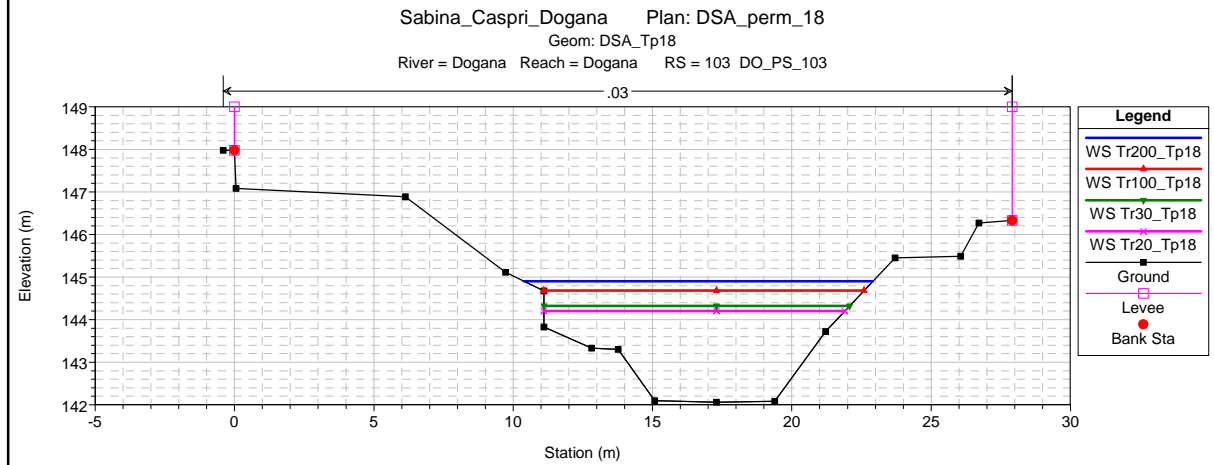
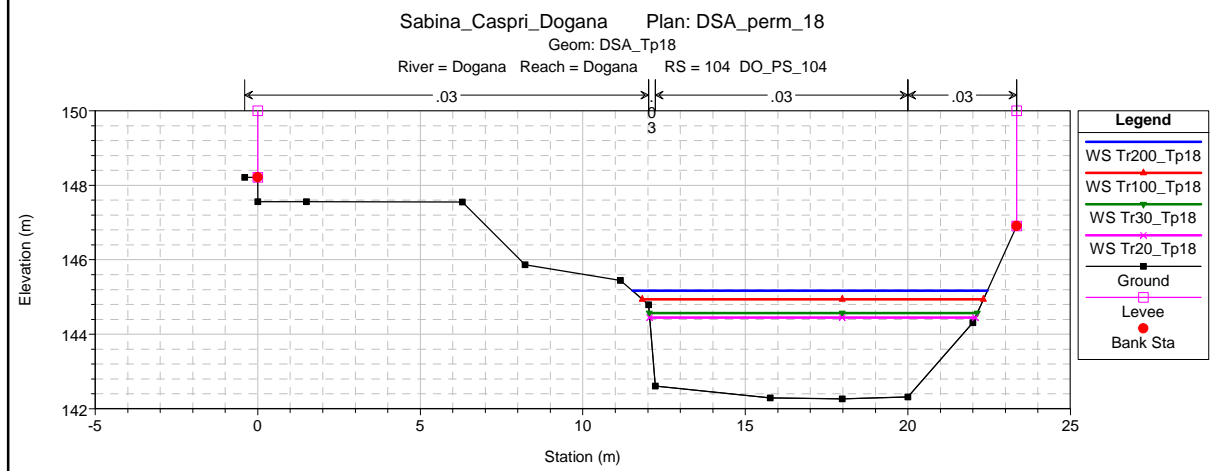
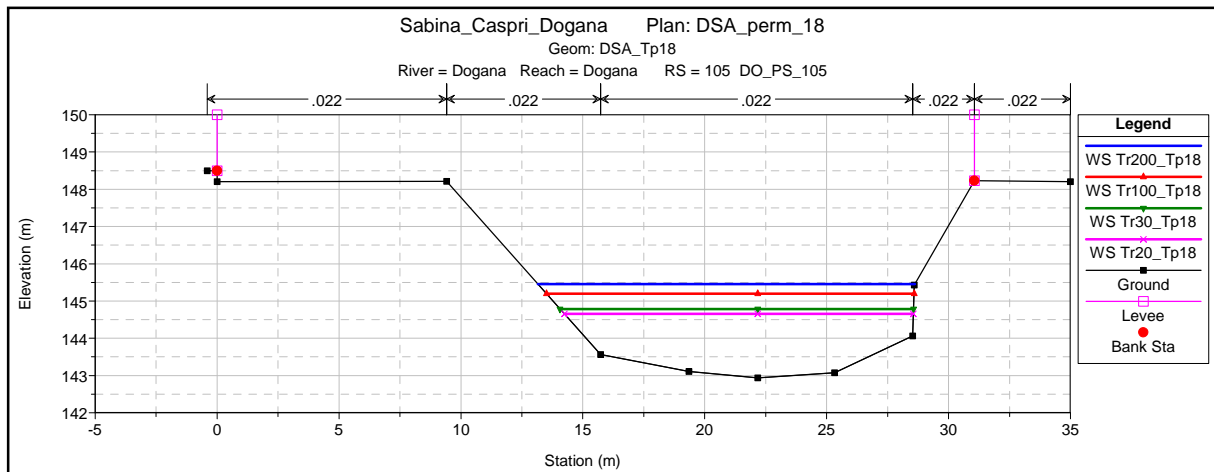


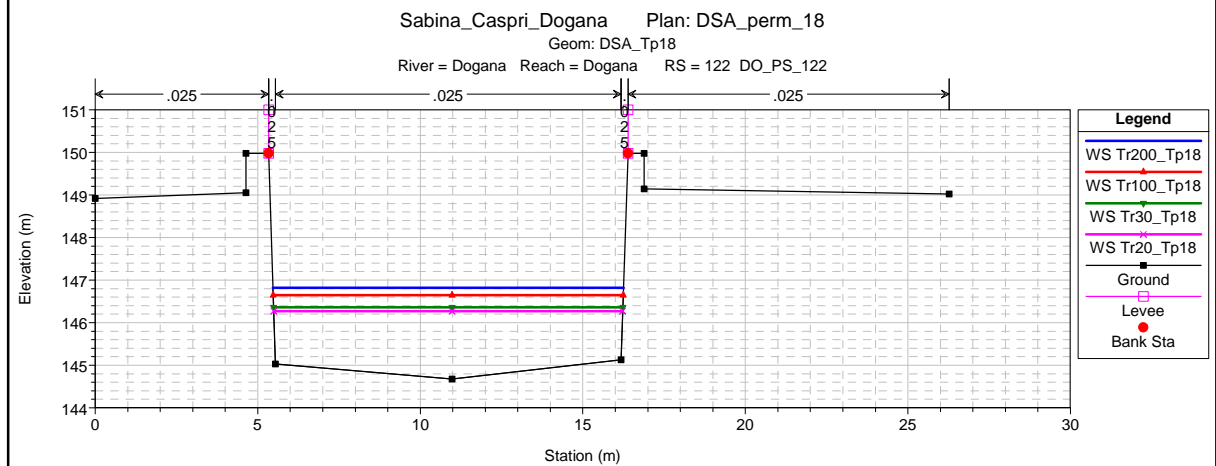
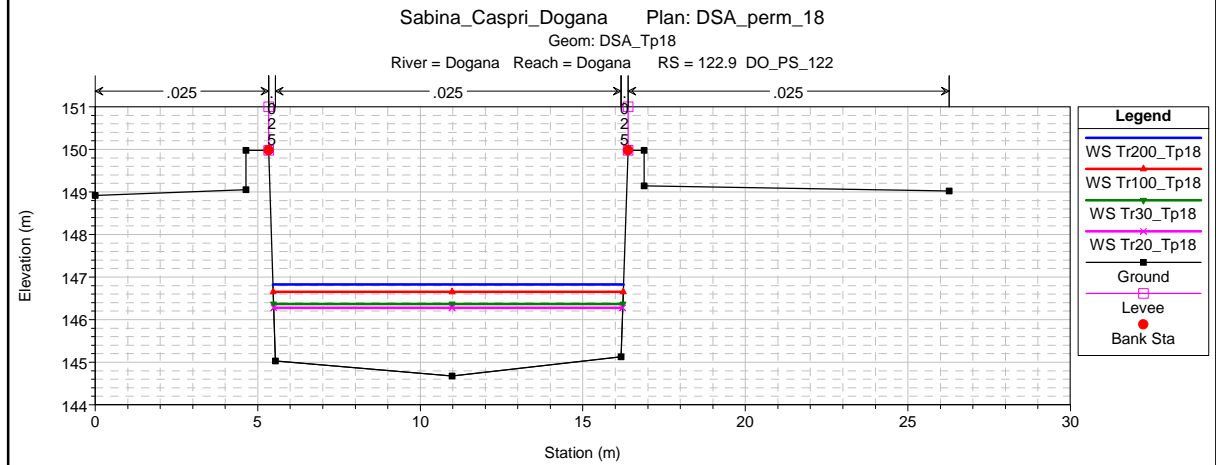
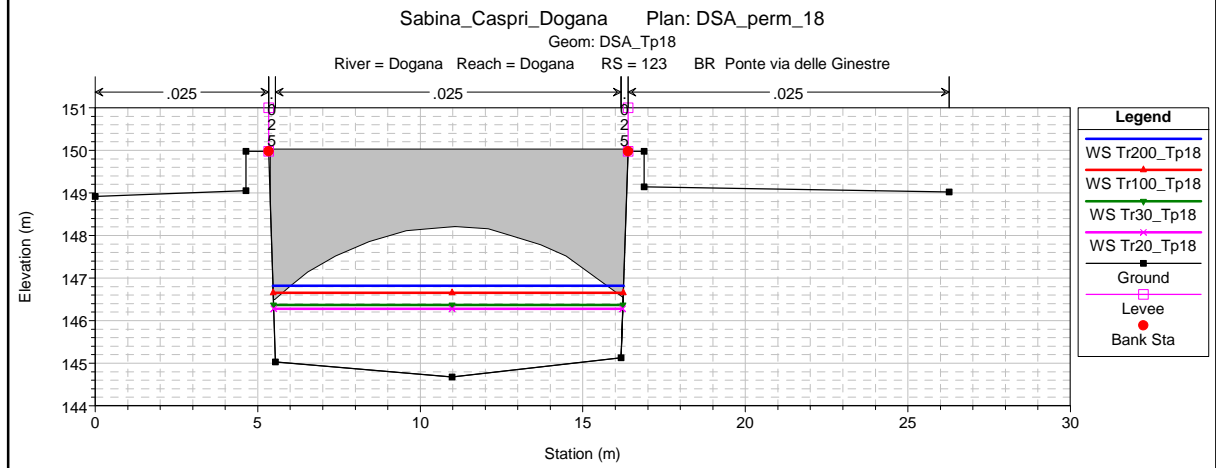
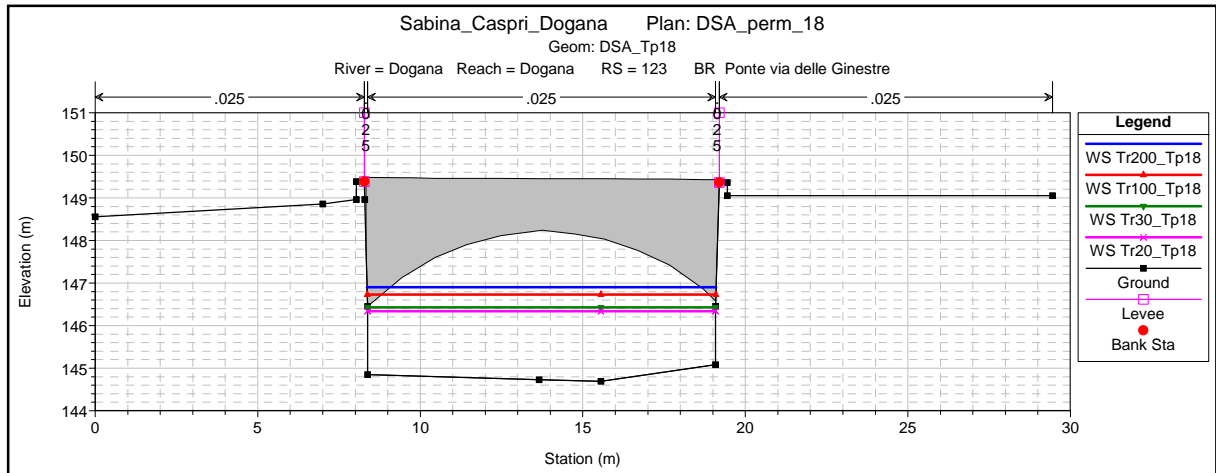


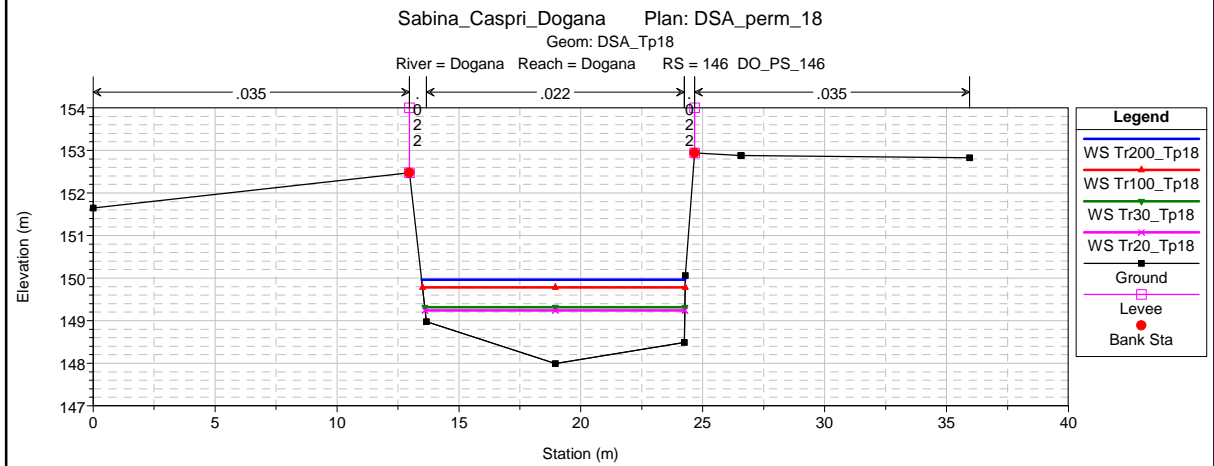
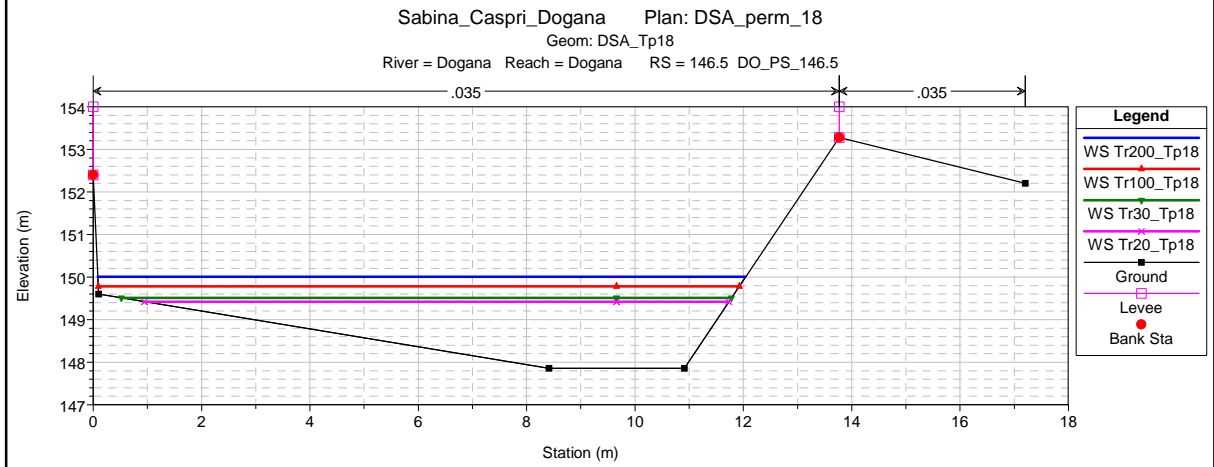
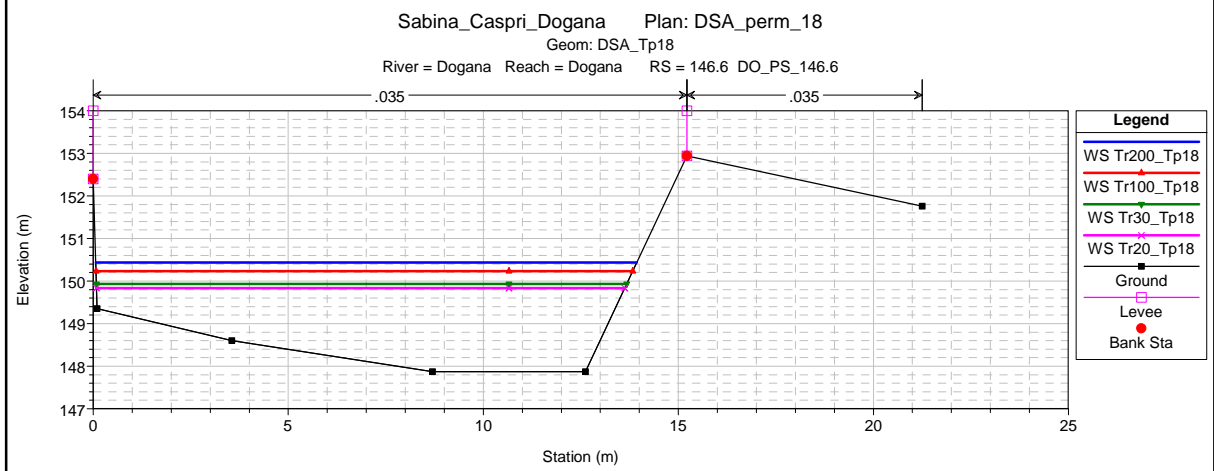
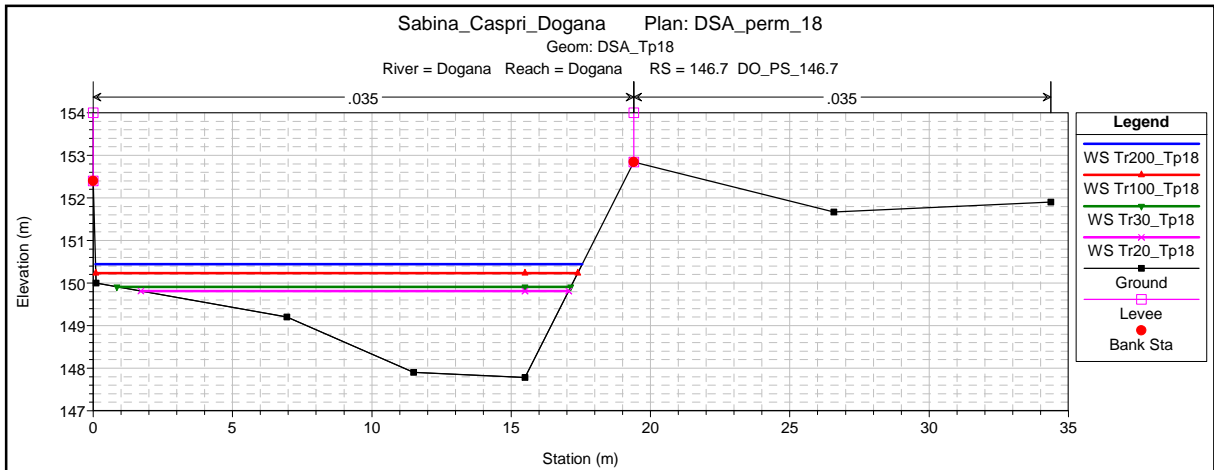








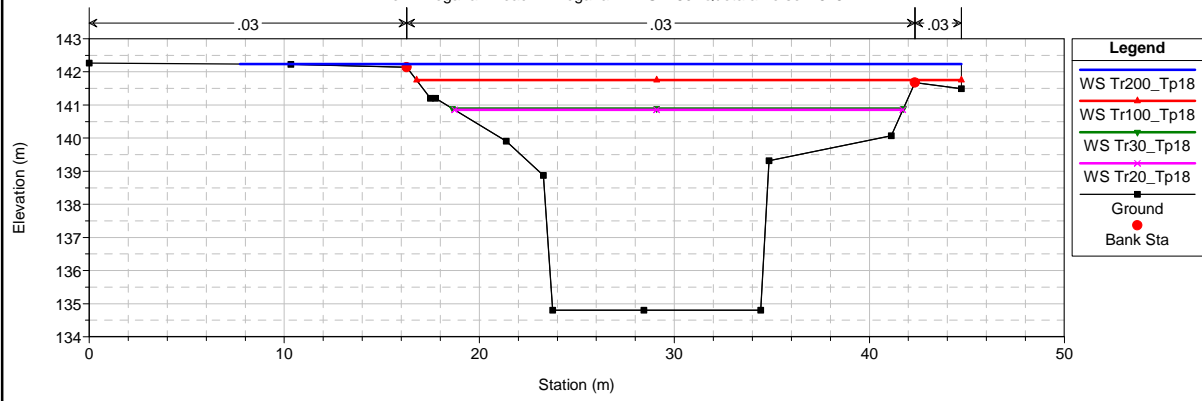




Sabina_Caspri_Dogana Plan: DSA_perm_18

Geom: DSA_Tp18

River = Dogana Reach = Dogana RS = 80 Quota arno sez. 878



HEC-RAS Plan: DSA_perm_18 River: Dogana Reach: Dogana

Reach	River Sta	Profile	Q Total (m3/s)	Min Ch El (m)	W.S. Elev (m)	Crit W.S. (m)	E.G. Elev (m)	E.G. Slope (m/m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Froude # Chl
Dogana	146.7	Tr200_Tp18	58.35	147.78	150.44	149.87	150.67	0.003465	2.12	27.52	17.47	0.54
Dogana	146.7	Tr100_Tp18	48.98	147.78	150.23	149.70	150.45	0.003794	2.05	23.87	17.30	0.56
Dogana	146.7	Tr30_Tp18	35.74	147.78	149.91	149.42	150.10	0.004338	1.94	18.41	16.29	0.58
Dogana	146.7	Tr20_Tp18	32.02	147.78	149.81	149.32	150.00	0.004354	1.90	16.82	15.35	0.58
Dogana	146.6	Tr200_Tp18	58.35	147.87	150.43	149.60	150.65	0.002620	2.08	28.11	13.87	0.47
Dogana	146.6	Tr100_Tp18	48.98	147.87	150.23	149.46	150.42	0.002517	1.93	25.35	13.76	0.45
Dogana	146.6	Tr30_Tp18	35.74	147.87	149.93	149.23	150.07	0.002308	1.69	21.19	13.60	0.43
Dogana	146.6	Tr20_Tp18	32.02	147.87	149.83	149.15	149.97	0.002251	1.61	19.88	13.54	0.42
Dogana	146.5	Tr200_Tp18	58.35	147.86	150.00	149.91	150.59	0.010589	3.40	17.17	11.96	0.91
Dogana	146.5	Tr100_Tp18	48.98	147.86	149.78	149.75	150.36	0.012367	3.37	14.55	11.83	0.97
Dogana	146.5	Tr30_Tp18	35.74	147.86	149.51	149.51	150.02	0.013629	3.14	11.37	11.26	1.00
Dogana	146.5	Tr20_Tp18	32.02	147.86	149.42	149.42	149.91	0.013930	3.08	10.39	10.79	1.00
Dogana	146	Tr200_Tp18	58.35	147.99	149.96	149.82	150.56	0.004027	3.42	17.04	10.81	0.87
Dogana	146	Tr100_Tp18	48.98	147.99	149.78	149.66	150.32	0.004114	3.25	15.07	10.77	0.88
Dogana	146	Tr30_Tp18	35.74	147.99	149.31	149.42	149.95	0.007539	3.54	10.09	10.67	1.16
Dogana	146	Tr20_Tp18	32.02	147.99	149.24	149.34	149.84	0.007837	3.45	9.29	10.65	1.18
Dogana	145.5	Bridge										
Dogana	145	Tr200_Tp18	58.35	147.89	149.66	149.61	150.33	0.004938	3.62	16.12	10.72	0.94
Dogana	145	Tr100_Tp18	48.98	147.89	149.49	149.44	150.09	0.005103	3.45	14.21	10.70	0.95
Dogana	145	Tr30_Tp18	35.74	147.89	149.02	149.20	149.79	0.010493	3.89	9.19	10.63	1.33
Dogana	145	Tr20_Tp18	32.02	147.89	148.95	149.13	149.67	0.010843	3.77	8.49	10.62	1.35
Dogana	144.5	Tr200_Tp18	58.35	147.88	149.70	149.29	150.05	0.002907	2.62	22.23	13.66	0.66
Dogana	144.5	Tr100_Tp18	48.98	147.88	149.47	149.16	149.80	0.003270	2.56	19.10	13.61	0.69
Dogana	144.5	Tr30_Tp18	35.74	147.88	149.12	148.95	149.43	0.004249	2.49	14.36	13.53	0.77
Dogana	144.5	Tr20_Tp18	32.02	147.88	149.01	148.88	149.32	0.004726	2.47	12.95	13.51	0.81
Dogana	143.5	Tr200_Tp18	58.35	147.77	149.71	149.08	149.97	0.001847	2.26	25.79	14.05	0.53
Dogana	143.5	Tr100_Tp18	48.98	147.77	149.48	148.95	149.72	0.001966	2.17	22.54	14.04	0.55
Dogana	143.5	Tr30_Tp18	35.74	147.77	149.12	148.74	149.34	0.002269	2.04	17.56	14.03	0.58

HEC-RAS Plan: DSA_perm_18 River: Dogana Reach: Dogana (Continued)

Reach	River Sta	Profile	Q Total (m3/s)	Min Ch El (m)	W.S. Elev (m)	Crit W.S. (m)	E.G. Elev (m)	E.G. Slope (m/m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Froude #	Chl
Dogana	143.5	Tr20_Tp18	32.02	147.77	149.02	148.68	149.22	0.002409	1.99	16.06	14.02	0.59	
Dogana	143.49	Lat Struct											
Dogana	143.48	Lat Struct											
Dogana	143	Tr200_Tp18	58.35	147.46	149.64	148.92	149.93	0.001908	2.39	24.45	12.04	0.53	
Dogana	143	Tr100_Tp18	48.98	147.46	149.42	148.78	149.68	0.001884	2.24	21.84	11.96	0.53	
Dogana	143	Tr30_Tp18	35.74	147.46	149.09	148.54	149.29	0.001843	2.00	17.85	11.84	0.52	
Dogana	143	Tr20_Tp18	32.02	147.46	148.98	148.47	149.17	0.001835	1.93	16.63	11.80	0.52	
Dogana	142	Tr200_Tp18	58.35	147.31	149.61	148.75	149.84	0.001407	2.13	27.40	12.93	0.47	
Dogana	142	Tr100_Tp18	48.98	147.31	149.39	148.60	149.59	0.001376	1.99	24.56	12.88	0.46	
Dogana	142	Tr30_Tp18	35.74	147.31	149.05	148.38	149.21	0.001322	1.77	20.21	12.76	0.45	
Dogana	142	Tr20_Tp18	32.02	147.31	148.94	148.32	149.09	0.001306	1.70	18.88	12.73	0.44	
Dogana	141	Tr200_Tp18	58.35	147.20	149.47	148.65	149.75	0.001801	2.36	24.75	11.17	0.51	
Dogana	141	Tr100_Tp18	48.98	147.20	149.27	148.49	149.51	0.001688	2.18	22.48	11.14	0.49	
Dogana	141	Tr30_Tp18	35.74	147.20	148.95	148.25	149.13	0.001498	1.89	18.94	11.08	0.46	
Dogana	141	Tr20_Tp18	32.02	147.20	148.85	148.18	149.01	0.001436	1.79	17.86	11.06	0.45	
Dogana	140	Tr200_Tp18	58.35	146.78	149.25	148.36	149.50	0.001539	2.23	26.19	11.80	0.48	
Dogana	140	Tr100_Tp18	48.98	146.78	149.05	148.21	149.26	0.001443	2.06	23.78	11.74	0.46	
Dogana	140	Tr30_Tp18	35.74	146.78	148.73	147.98	148.89	0.001277	1.78	20.06	11.64	0.43	
Dogana	140	Tr20_Tp18	32.02	146.78	148.63	147.91	148.78	0.001221	1.69	18.93	11.61	0.42	
Dogana	139	Tr200_Tp18	58.35	146.89	148.97	148.36	149.31	0.002343	2.56	22.76	11.44	0.58	
Dogana	139	Tr100_Tp18	48.98	146.89	148.78	148.20	149.07	0.002229	2.38	20.58	11.40	0.57	
Dogana	139	Tr30_Tp18	35.74	146.89	148.49	147.97	148.71	0.002032	2.08	17.22	11.33	0.54	
Dogana	139	Tr20_Tp18	32.02	146.89	148.40	147.89	148.60	0.001966	1.98	16.20	11.31	0.53	
Dogana	138	Tr200_Tp18	58.35	146.50	148.56	148.14	148.98	0.003092	2.86	20.41	11.18	0.68	
Dogana	138	Tr100_Tp18	48.98	146.50	148.38	147.98	148.74	0.002965	2.66	18.41	11.14	0.66	
Dogana	138	Tr30_Tp18	35.74	146.50	148.11	147.74	148.38	0.002746	2.33	15.34	11.08	0.63	
Dogana	138	Tr20_Tp18	32.02	146.50	148.02	147.67	148.27	0.002671	2.22	14.40	11.06	0.62	

HEC-RAS Plan: DSA_perm_18 River: Dogana Reach: Dogana (Continued)

Reach	River Sta	Profile	Q Total (m3/s)	Min Ch El (m)	W.S. Elev (m)	Crit W.S. (m)	E.G. Elev (m)	E.G. Slope (m/m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Froude #	Chl
Dogana	137.99	Lat Struct											
Dogana	137.98	Lat Struct											
Dogana	137	Tr200_Tp18	58.35	146.48	148.37	148.01	148.80	0.003393	2.90	20.13	11.83	0.71	
Dogana	137	Tr100_Tp18	48.98	146.48	148.19	147.86	148.57	0.003338	2.72	18.03	11.77	0.70	
Dogana	137	Tr30_Tp18	35.74	146.48	147.92	147.63	148.21	0.003214	2.41	14.86	11.67	0.68	
Dogana	137	Tr20_Tp18	32.02	146.48	147.84	147.56	148.11	0.003174	2.30	13.89	11.64	0.67	
Dogana	136	Tr200_Tp18	58.35	146.22	148.21	147.81	148.61	0.003101	2.77	21.05	12.26	0.68	
Dogana	136	Tr100_Tp18	48.98	146.22	148.04	147.67	148.38	0.003042	2.59	18.88	12.22	0.67	
Dogana	136	Tr30_Tp18	35.74	146.22	147.77	147.44	148.04	0.002902	2.29	15.62	12.15	0.64	
Dogana	136	Tr20_Tp18	32.02	146.22	147.69	147.37	147.93	0.002853	2.19	14.63	12.13	0.64	
Dogana	135	Tr200_Tp18	58.35	146.07	147.98	147.62	148.38	0.003229	2.78	20.98	12.78	0.69	
Dogana	135	Tr100_Tp18	48.98	146.07	147.79	147.48	148.15	0.003316	2.64	18.55	12.72	0.70	
Dogana	135	Tr30_Tp18	35.74	146.07	147.50	147.26	147.79	0.003554	2.42	14.80	12.63	0.71	
Dogana	135	Tr20_Tp18	32.02	146.07	147.41	147.19	147.69	0.003653	2.34	13.67	12.60	0.72	
Dogana	131	Tr200_Tp18	58.35	145.77	147.78	147.25	148.12	0.002495	2.56	22.82	12.40	0.60	
Dogana	131	Tr100_Tp18	48.98	145.77	147.59	147.11	147.88	0.002471	2.40	20.40	12.38	0.60	
Dogana	131	Tr30_Tp18	35.74	145.77	147.27	146.88	147.51	0.002517	2.16	16.51	12.35	0.60	
Dogana	131	Tr20_Tp18	32.02	145.77	147.18	146.82	147.40	0.002559	2.09	15.30	12.33	0.60	
Dogana	130	Tr200_Tp18	58.35	145.53	147.76	147.04	148.03	0.001871	2.31	25.22	12.57	0.52	
Dogana	130	Tr100_Tp18	48.98	145.53	147.56	146.90	147.80	0.001796	2.15	22.77	12.55	0.51	
Dogana	130	Tr30_Tp18	35.74	145.53	147.24	146.68	147.43	0.001711	1.90	18.81	12.52	0.49	
Dogana	130	Tr20_Tp18	32.02	145.53	147.14	146.61	147.31	0.001694	1.82	17.57	12.51	0.49	
Dogana	129	Tr200_Tp18	58.35	145.47	147.71	146.94	147.97	0.001696	2.26	25.87	12.58	0.50	
Dogana	129	Tr100_Tp18	48.98	145.47	147.51	146.80	147.74	0.001605	2.09	23.45	12.54	0.49	
Dogana	129	Tr30_Tp18	35.74	145.47	147.20	146.57	147.37	0.001486	1.83	19.54	12.49	0.47	
Dogana	129	Tr20_Tp18	32.02	145.47	147.10	146.51	147.26	0.001454	1.75	18.32	12.47	0.46	

HEC-RAS Plan: DSA_perm_18 River: Dogana Reach: Dogana (Continued)

Reach	River Sta	Profile	Q Total (m3/s)	Min Ch El (m)	W.S. Elev (m)	Crit W.S. (m)	E.G. Elev (m)	E.G. Slope (m/m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Froude # Chl
Dogana	128	Tr200_Tp18	58.35	145.37	147.66	146.87	147.91	0.001641	2.22	26.24	12.60	0.49
Dogana	128	Tr100_Tp18	48.98	145.37	147.47	146.72	147.68	0.001539	2.05	23.85	12.56	0.48
Dogana	128	Tr30_Tp18	35.74	145.37	147.16	146.49	147.32	0.001399	1.79	20.00	12.50	0.45
Dogana	128	Tr20_Tp18	32.02	145.37	147.06	146.43	147.21	0.001360	1.70	18.78	12.48	0.44
Dogana	127	Tr200_Tp18	58.35	145.50	146.69	146.92	147.65	0.013189	4.35	13.42	12.45	1.34
Dogana	127	Tr100_Tp18	48.98	145.50	146.57	146.77	147.43	0.013548	4.12	11.90	12.43	1.34
Dogana	127	Tr30_Tp18	35.74	145.50	146.39	146.55	147.08	0.013800	3.69	9.70	12.40	1.33
Dogana	127	Tr20_Tp18	32.02	145.50	146.34	146.49	146.97	0.013727	3.53	9.07	12.39	1.32
Dogana	126	Tr200_Tp18	58.35	145.27	146.50	146.73	147.46	0.013079	4.35	13.40	12.56	1.35
Dogana	126	Tr100_Tp18	48.98	145.27	146.38	146.58	147.23	0.013103	4.09	11.98	12.54	1.33
Dogana	126	Tr30_Tp18	35.74	145.27	146.22	146.37	146.88	0.012691	3.60	9.92	12.51	1.29
Dogana	126	Tr20_Tp18	32.02	145.27	146.17	146.30	146.77	0.012598	3.45	9.28	12.50	1.28
Dogana	125.5	Tr200_Tp18	58.35	145.29	146.56	146.74	147.43	0.010942	4.11	14.19	12.57	1.24
Dogana	125.5	Tr100_Tp18	48.98	145.29	146.45	146.59	147.20	0.010719	3.83	12.78	12.55	1.21
Dogana	125.5	Tr30_Tp18	35.74	145.29	146.25	146.37	146.87	0.011265	3.47	10.30	12.52	1.22
Dogana	125.5	Tr20_Tp18	32.02	145.29	146.20	146.31	146.76	0.011101	3.32	9.66	12.51	1.20
Dogana	125	Tr200_Tp18	58.35	144.25	147.09	146.10	147.30	0.001156	2.02	28.85	12.67	0.43
Dogana	125	Tr100_Tp18	48.98	144.25	146.88	145.95	147.06	0.001091	1.87	26.15	12.63	0.42
Dogana	125	Tr30_Tp18	35.74	144.25	146.55	145.73	146.68	0.000979	1.63	21.96	12.57	0.39
Dogana	125	Tr20_Tp18	32.02	144.25	146.44	145.66	146.57	0.000945	1.55	20.66	12.55	0.39
Dogana	124	Tr200_Tp18	58.35	144.72	146.95	146.32	147.27	0.002088	2.47	23.64	12.06	0.56
Dogana	124	Tr100_Tp18	48.98	144.72	146.75	146.17	147.02	0.002039	2.31	21.20	11.99	0.55
Dogana	124	Tr30_Tp18	35.74	144.72	146.44	145.94	146.65	0.001960	2.05	17.44	11.89	0.54
Dogana	124	Tr20_Tp18	32.02	144.72	146.34	145.87	146.54	0.001945	1.97	16.28	11.85	0.54
Dogana	123.9	Tr200_Tp18	58.35	144.69	146.92	146.25	147.26	0.002319	2.58	22.65	10.74	0.57
Dogana	123.9	Tr100_Tp18	48.98	144.69	146.73	146.09	147.02	0.002163	2.38	20.60	10.72	0.55
Dogana	123.9	Tr30_Tp18	35.74	144.69	146.43	145.85	146.65	0.001905	2.05	17.41	10.70	0.51
Dogana	123.9	Tr20_Tp18	32.02	144.69	146.34	145.78	146.53	0.001836	1.95	16.39	10.70	0.50

HEC-RAS Plan: DSA_perm_18 River: Dogana Reach: Dogana (Continued)

Reach	River Sta	Profile	Q Total (m3/s)	Min Ch El (m)	W.S. Elev (m)	Crit W.S. (m)	E.G. Elev (m)	E.G. Slope (m/m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Froude #	Chl
Dogana	123		Bridge										
Dogana	122.9	Tr200_Tp18	58.35	144.68	146.82	146.33	147.22	0.002938	2.80	20.82	10.79	0.64	
Dogana	122.9	Tr100_Tp18	48.98	144.68	146.65	146.17	146.99	0.002735	2.58	18.96	10.77	0.62	
Dogana	122.9	Tr30_Tp18	35.74	144.68	146.37	145.93	146.62	0.002476	2.25	15.90	10.75	0.59	
Dogana	122.9	Tr20_Tp18	32.02	144.68	146.27	145.85	146.51	0.002418	2.15	14.91	10.74	0.58	
Dogana	122	Tr200_Tp18	58.35	144.68	146.82	146.33	147.22	0.002972	2.81	20.74	10.79	0.65	
Dogana	122	Tr100_Tp18	48.98	144.68	146.65	146.17	146.99	0.002767	2.59	18.89	10.77	0.63	
Dogana	122	Tr30_Tp18	35.74	144.68	146.36	145.93	146.62	0.002506	2.26	15.84	10.75	0.59	
Dogana	122	Tr20_Tp18	32.02	144.68	146.27	145.85	146.51	0.002448	2.16	14.85	10.74	0.59	
Dogana	121	Tr200_Tp18	58.35	144.50	146.87	146.22	147.19	0.002292	2.52	23.18	11.38	0.56	
Dogana	121	Tr100_Tp18	48.98	144.50	146.69	146.07	146.96	0.002130	2.32	21.13	11.37	0.54	
Dogana	121	Tr30_Tp18	35.74	144.50	146.40	145.83	146.60	0.001908	2.01	17.79	11.37	0.51	
Dogana	121	Tr20_Tp18	32.02	144.50	146.30	145.76	146.49	0.001853	1.92	16.71	11.37	0.50	
Dogana	120	Tr200_Tp18	58.35	144.62	146.84	146.19	147.18	0.002486	2.59	22.56	10.86	0.57	
Dogana	120	Tr100_Tp18	48.98	144.62	146.67	146.04	146.95	0.002269	2.37	20.69	10.86	0.55	
Dogana	120	Tr30_Tp18	35.74	144.62	146.38	145.80	146.59	0.001963	2.03	17.61	10.86	0.51	
Dogana	120	Tr20_Tp18	32.02	144.62	146.29	145.72	146.48	0.001883	1.93	16.60	10.86	0.50	
Dogana	119	Tr200_Tp18	58.35	144.61	146.81	146.24	147.17	0.002717	2.67	21.82	11.00	0.61	
Dogana	119	Tr100_Tp18	48.98	144.61	146.64	146.09	146.94	0.002501	2.45	19.95	11.00	0.58	
Dogana	119	Tr30_Tp18	35.74	144.61	146.36	145.85	146.59	0.002210	2.12	16.88	11.00	0.55	
Dogana	119	Tr20_Tp18	32.02	144.61	146.27	145.78	146.47	0.002140	2.02	15.87	11.00	0.54	
Dogana	118.5		Bridge										
Dogana	118	Tr200_Tp18	58.35	144.52	146.61	146.37	147.10	0.003961	3.10	18.82	12.57	0.81	
Dogana	118	Tr100_Tp18	48.98	144.52	146.44	146.20	146.88	0.003816	2.93	16.73	11.86	0.79	
Dogana	118	Tr30_Tp18	35.74	144.52	146.18	145.94	146.53	0.003526	2.59	13.78	11.14	0.74	
Dogana	118	Tr20_Tp18	32.02	144.52	146.10	145.86	146.42	0.003468	2.49	12.85	10.94	0.73	
Dogana	117	Tr200_Tp18	58.35	144.33	146.42	146.12	146.91	0.003950	3.12	18.67	10.78	0.76	

HEC-RAS Plan: DSA_perm_18 River: Dogana Reach: Dogana (Continued)

Reach	River Sta	Profile	Q Total (m3/s)	Min Ch El (m)	W.S. Elev (m)	Crit W.S. (m)	E.G. Elev (m)	E.G. Slope (m/m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Froude # Chl
Dogana	111	Tr200_Tp18	58.35	143.95	146.28	145.26	146.40	0.000633	1.57	37.11	20.40	0.37
Dogana	111	Tr100_Tp18	48.98	143.95	146.04	145.13	146.16	0.000687	1.52	32.32	20.40	0.38
Dogana	111	Tr30_Tp18	35.74	143.95	145.67	144.93	145.77	0.000769	1.44	24.85	18.79	0.40
Dogana	111	Tr20_Tp18	32.02	143.95	145.55	144.86	145.65	0.000785	1.41	22.71	18.02	0.40
Dogana	110.99		Lat Struct									
Dogana	110.5	Tr200_Tp18	58.35	143.95	146.26	145.18	146.38	0.000769	1.55	37.68	20.20	0.36
Dogana	110.5	Tr100_Tp18	48.98	143.95	146.03	145.06	146.14	0.000827	1.49	32.91	20.20	0.37
Dogana	110.5	Tr30_Tp18	35.74	143.95	145.65	144.86	145.75	0.000836	1.39	25.66	17.79	0.37
Dogana	110.5	Tr20_Tp18	32.02	143.95	145.53	144.80	145.63	0.000850	1.36	23.62	17.34	0.37
Dogana	110.49		Lat Struct									
Dogana	110	Tr200_Tp18	58.35	143.84	146.16	145.39	146.35	0.001271	1.95	29.87	16.03	0.46
Dogana	110	Tr100_Tp18	48.98	143.84	145.93	145.24	146.11	0.001345	1.87	26.18	16.01	0.47
Dogana	110	Tr30_Tp18	35.74	143.84	145.55	145.04	145.71	0.001611	1.77	20.18	15.96	0.50
Dogana	110	Tr20_Tp18	32.02	143.84	145.43	144.97	145.59	0.001765	1.75	18.28	15.95	0.52
Dogana	109	Tr200_Tp18	58.35	143.40	145.96	145.24	146.26	0.002037	2.45	23.84	11.38	0.54
Dogana	109	Tr100_Tp18	48.98	143.40	145.76	145.09	146.02	0.001942	2.27	21.53	11.35	0.53
Dogana	109	Tr30_Tp18	35.74	143.40	145.42	144.79	145.63	0.001870	2.02	17.69	11.29	0.52
Dogana	109	Tr20_Tp18	32.02	143.40	145.31	144.71	145.50	0.001875	1.95	16.44	11.27	0.51
Dogana	108	Tr200_Tp18	58.35	143.42	145.32	145.26	146.00	0.006203	3.65	15.99	10.55	0.95
Dogana	108	Tr100_Tp18	48.98	143.42	145.08	145.08	145.75	0.007051	3.63	13.51	10.05	1.00
Dogana	108	Tr30_Tp18	35.74	143.42	144.79	144.79	145.36	0.007243	3.33	10.74	9.48	1.00
Dogana	108	Tr20_Tp18	32.02	143.42	144.70	144.70	145.24	0.007379	3.24	9.89	9.29	1.00
Dogana	107	Tr200_Tp18	58.35	143.17	145.60	144.82	145.81	0.001530	2.05	28.42	16.83	0.50
Dogana	107	Tr100_Tp18	48.98	143.17	145.34	144.67	145.55	0.001625	2.02	24.21	15.41	0.52
Dogana	107	Tr30_Tp18	35.74	143.17	144.94	144.43	145.13	0.001849	1.94	18.39	13.92	0.54
Dogana	107	Tr20_Tp18	32.02	143.17	144.82	144.36	145.00	0.001955	1.92	16.71	13.57	0.55

HEC-RAS Plan: DSA_perm_18 River: Dogana Reach: Dogana (Continued)

Reach	River Sta	Profile	Q Total (m3/s)	Min Ch El (m)	W.S. Elev (m)	Crit W.S. (m)	E.G. Elev (m)	E.G. Slope (m/m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Froude # Chl
Dogana	106	Tr200_Tp18	58.35	142.93	145.44	144.61	145.67	0.001119	2.15	27.15	12.95	0.47
Dogana	106	Tr100_Tp18	48.98	142.93	145.18	144.47	145.40	0.001161	2.05	23.86	12.93	0.48
Dogana	106	Tr30_Tp18	35.74	142.93	144.78	144.24	144.97	0.001305	1.91	18.67	12.89	0.51
Dogana	106	Tr20_Tp18	32.02	142.93	144.65	144.17	144.83	0.001386	1.88	17.05	12.88	0.52
Dogana	105.5	Bridge										
Dogana	105	Tr200_Tp18	58.35	142.94	145.45	144.52	145.64	0.000825	1.90	30.77	15.46	0.43
Dogana	105	Tr100_Tp18	48.98	142.94	145.19	144.38	145.36	0.000871	1.83	26.81	15.08	0.44
Dogana	105	Tr30_Tp18	35.74	142.94	144.78	144.17	144.93	0.000996	1.72	20.75	14.50	0.46
Dogana	105	Tr20_Tp18	32.02	142.94	144.66	144.10	144.80	0.001061	1.69	18.90	14.32	0.47
Dogana	104	Tr200_Tp18	58.35	142.27	145.17	144.08	145.42	0.002029	2.23	26.12	10.92	0.46
Dogana	104	Tr100_Tp18	48.98	142.27	144.94	143.89	145.16	0.001875	2.07	23.64	10.50	0.44
Dogana	104	Tr30_Tp18	35.74	142.27	144.57	143.61	144.73	0.001632	1.80	19.87	10.09	0.41
Dogana	104	Tr20_Tp18	32.02	142.27	144.45	143.52	144.60	0.001570	1.72	18.67	10.02	0.40
Dogana	103.99	Lat Struct										
Dogana	103	Tr200_Tp18	58.35	142.06	144.91	144.20	145.22	0.002988	2.47	23.62	12.53	0.57
Dogana	103	Tr100_Tp18	48.98	142.06	144.68	144.03	144.96	0.002832	2.34	20.94	11.50	0.55
Dogana	103	Tr30_Tp18	35.74	142.06	144.32	143.75	144.55	0.002788	2.11	16.90	10.98	0.54
Dogana	103	Tr20_Tp18	32.02	142.06	144.20	143.66	144.42	0.002816	2.05	15.61	10.81	0.54
Dogana	102	Tr200_Tp18	58.35	141.69	144.62	143.85	144.92	0.002557	2.42	24.14	11.56	0.53
Dogana	102	Tr100_Tp18	48.98	141.69	144.41	143.68	144.67	0.002436	2.25	21.73	11.29	0.52
Dogana	102	Tr30_Tp18	35.74	141.69	144.06	143.40	144.26	0.002309	2.00	17.85	10.97	0.50
Dogana	102	Tr20_Tp18	32.02	141.69	143.94	143.30	144.13	0.002301	1.93	16.60	10.90	0.50
Dogana	101	Tr200_Tp18	58.35	141.45	143.51	143.51	144.22	0.009068	3.74	15.59	10.89	1.00
Dogana	101	Tr100_Tp18	48.98	141.45	143.33	143.33	143.98	0.009229	3.58	13.68	10.43	1.00
Dogana	101	Tr30_Tp18	35.74	141.45	143.05	143.05	143.60	0.009489	3.29	10.87	9.72	0.99
Dogana	101	Tr20_Tp18	32.02	141.45	142.97	142.96	143.48	0.009388	3.17	10.10	9.52	0.98
Dogana	100	Tr200_Tp18	58.35	141.20	143.25	142.63	143.54	0.001240	2.38	24.50	13.62	0.57

HEC-RAS Plan: DSA_perm_18 River: Dogana Reach: Dogana (Continued)

Reach	River Sta	Profile	Q Total (m3/s)	Min Ch El (m)	W.S. Elev (m)	Crit W.S. (m)	E.G. Elev (m)	E.G. Slope (m/m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Froude #	Chl
Dogana	100	Tr100_Tp18	48.98	141.20	143.04	142.48	143.30	0.001260	2.26	21.64	13.27		0.57
Dogana	100	Tr30_Tp18	35.74	141.20	142.71	142.24	142.92	0.001299	2.06	17.34	12.74		0.56
Dogana	100	Tr20_Tp18	32.02	141.20	142.60	142.17	142.81	0.001319	2.00	16.04	12.57		0.56
Dogana	99.5		Inl Struct										
Dogana	99	Tr200_Tp18	58.35	139.60	142.74	141.06	142.82	0.000367	1.27	45.79	24.05		0.29
Dogana	99	Tr100_Tp18	48.98	139.60	142.36	140.92	142.44	0.000377	1.30	37.55	19.17		0.30
Dogana	99	Tr30_Tp18	35.74	139.60	141.87	140.70	141.95	0.000367	1.22	29.27	16.18		0.29
Dogana	99	Tr20_Tp18	32.02	139.60	141.76	140.63	141.83	0.000354	1.17	27.48	15.90		0.28
Dogana	98	Tr200_Tp18	58.35	140.03	142.64	141.64	142.80	0.001015	1.79	32.60	17.35		0.42
Dogana	98	Tr100_Tp18	48.98	140.03	142.25	141.50	142.43	0.001339	1.88	26.08	15.94		0.47
Dogana	98	Tr30_Tp18	35.74	140.03	141.73	141.28	141.93	0.002013	1.96	18.27	14.41		0.55
Dogana	98	Tr20_Tp18	32.02	140.03	141.62	141.21	141.81	0.002113	1.92	16.69	14.08		0.56
Dogana	97	Tr200_Tp18	58.35	139.23	142.61	141.31	142.75	0.001257	1.65	35.45	19.38		0.39
Dogana	97	Tr100_Tp18	48.98	139.23	142.21	141.15	142.36	0.001443	1.73	28.36	15.78		0.41
Dogana	97	Tr30_Tp18	35.74	139.23	141.69	140.91	141.84	0.001634	1.70	21.05	13.17		0.43
Dogana	97	Tr20_Tp18	32.02	139.23	141.58	140.84	141.72	0.001610	1.63	19.61	12.90		0.42
Dogana	96	Tr200_Tp18	58.35	138.83	142.48	141.12	142.65	0.001326	1.84	31.71	14.55		0.40
Dogana	96	Tr100_Tp18	48.98	138.83	142.06	140.91	142.24	0.001681	1.90	25.76	13.59		0.44
Dogana	96	Tr30_Tp18	35.74	138.83	141.49	140.58	141.68	0.002031	1.91	18.70	11.25		0.47
Dogana	96	Tr20_Tp18	32.02	138.83	141.39	140.48	141.56	0.001890	1.82	17.59	10.76		0.45
Dogana	95	Tr200_Tp18	58.35	138.21	142.40	140.53	142.51	0.000796	1.46	39.88	18.13		0.31
Dogana	95	Tr100_Tp18	48.98	138.21	141.95	140.33	142.07	0.000933	1.52	32.26	15.46		0.34
Dogana	95	Tr30_Tp18	35.74	138.21	141.37	140.02	141.48	0.000960	1.47	24.36	12.38		0.33
Dogana	95	Tr20_Tp18	32.02	138.21	141.28	139.92	141.38	0.000872	1.38	23.24	12.08		0.32
Dogana	94	Tr200_Tp18	58.35	138.08	142.35	140.29	142.43	0.000544	1.24	47.01	20.73		0.26
Dogana	94	Tr100_Tp18	48.98	138.08	141.88	140.07	141.97	0.000728	1.30	37.61	19.33		0.30
Dogana	94	Tr30_Tp18	35.74	138.08	141.28	139.75	141.37	0.000873	1.32	27.15	15.54		0.32
Dogana	94	Tr20_Tp18	32.02	138.08	141.20	139.64	141.28	0.000801	1.24	25.84	15.17		0.30

HEC-RAS Plan: DSA_perm_18 River: Dogana Reach: Dogana (Continued)

Reach	River Sta	Profile	Q Total (m3/s)	Min Ch El (m)	W.S. Elev (m)	Crit W.S. (m)	E.G. Elev (m)	E.G. Slope (m/m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Froude #	Chl
Dogana	93	Tr200_Tp18	58.35	137.75	142.30	141.05	142.36	0.000559	1.12	51.92	27.98	0.26	
Dogana	93	Tr100_Tp18	48.98	137.75	141.79	140.71	141.88	0.001033	1.29	38.01	26.66	0.34	
Dogana	93	Tr30_Tp18	35.74	137.75	140.97	140.44	141.17	0.004561	2.00	17.84	19.44	0.67	
Dogana	93	Tr20_Tp18	32.02	137.75	140.91	140.35	141.09	0.003097	1.90	16.85	14.45	0.56	
Dogana	92	Tr200_Tp18	58.35	137.29	142.29	139.64	142.32	0.000213	0.76	77.04	36.81	0.17	
Dogana	92	Tr100_Tp18	48.98	137.29	141.78	139.45	141.81	0.000244	0.81	60.29	28.26	0.18	
Dogana	92	Tr30_Tp18	35.74	137.29	140.92	139.16	140.97	0.000520	0.94	37.84	25.19	0.25	
Dogana	92	Tr20_Tp18	32.02	137.29	140.88	139.06	140.92	0.000460	0.87	36.67	25.06	0.23	
Dogana	91	Tr200_Tp18	58.35	137.37	142.27	139.24	142.30	0.000184	0.76	77.00	32.78	0.16	
Dogana	91	Tr100_Tp18	48.98	137.37	141.75	139.07	141.79	0.000209	0.79	62.15	27.30	0.17	
Dogana	91	Tr30_Tp18	35.74	137.37	140.90	138.79	140.93	0.000262	0.85	42.13	19.39	0.18	
Dogana	91	Tr20_Tp18	32.02	137.37	140.85	138.71	140.88	0.000222	0.77	41.34	19.27	0.17	
Dogana	90	Tr200_Tp18	58.35	137.13	142.27	138.88	142.30	0.000196	0.75	77.37	34.22	0.16	
Dogana	90	Tr100_Tp18	48.98	137.13	141.75	138.73	141.78	0.000172	0.78	62.73	23.07	0.15	
Dogana	90	Tr30_Tp18	35.74	137.13	140.90	138.48	140.93	0.000166	0.76	46.81	17.06	0.15	
Dogana	90	Tr20_Tp18	32.02	137.13	140.86	138.39	140.88	0.000139	0.69	46.11	16.98	0.13	
Dogana	89.2	Tr200_Tp18	58.35	137.54	142.27	139.13	142.30	0.000128	0.69	84.13	30.68	0.13	
Dogana	89.2	Tr100_Tp18	48.98	137.54	141.75	138.99	141.78	0.000167	0.71	68.53	29.36	0.15	
Dogana	89.2	Tr30_Tp18	35.74	137.54	140.89	138.76	140.92	0.000277	0.80	44.81	23.75	0.19	
Dogana	89.2	Tr20_Tp18	32.02	137.54	140.85	138.69	140.88	0.000229	0.73	43.86	22.99	0.17	
Dogana	89	Tr200_Tp18	58.35	137.66	142.27	139.12	142.29	0.000117	0.70	82.92	26.05	0.13	
Dogana	89	Tr100_Tp18	48.98	137.66	141.75	138.96	141.78	0.000140	0.70	69.54	25.55	0.14	
Dogana	89	Tr30_Tp18	35.74	137.66	140.89	138.72	140.92	0.000214	0.74	48.41	23.11	0.16	
Dogana	89	Tr20_Tp18	32.02	137.66	140.85	138.64	140.87	0.000182	0.67	47.48	22.97	0.15	
Dogana	88.5	Bridge											
Dogana	88	Tr200_Tp18	58.35	137.66	142.24	139.12	142.27	0.000120	0.71	82.19	26.05	0.13	
Dogana	88	Tr100_Tp18	48.98	137.66	141.75	138.96	141.78	0.000140	0.70	69.53	25.54	0.14	

HEC-RAS Plan: DSA_perm_18 River: Dogana Reach: Dogana (Continued)

Reach	River Sta	Profile	Q Total (m3/s)	Min Ch El (m)	W.S. Elev (m)	Crit W.S. (m)	E.G. Elev (m)	E.G. Slope (m/m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Froude # Chl
Dogana	88	Tr30_Tp18	35.74	137.66	140.89	138.72	140.92	0.000215	0.74	48.40	23.11	0.16
Dogana	88	Tr20_Tp18	32.02	137.66	140.85	138.64	140.87	0.000182	0.67	47.47	22.97	0.15
Dogana	87.3	Tr200_Tp18	58.35	137.66	142.24	139.12	142.27	0.000120	0.71	82.19	26.05	0.13
Dogana	87.3	Tr100_Tp18	48.98	137.66	141.75	138.96	141.78	0.000140	0.70	69.52	25.54	0.14
Dogana	87.3	Tr30_Tp18	35.74	137.66	140.89	138.72	140.92	0.000215	0.74	48.40	23.11	0.16
Dogana	87.3	Tr20_Tp18	32.02	137.66	140.85	138.64	140.87	0.000182	0.67	47.47	22.97	0.15
Dogana	87	Tr200_Tp18	58.35	137.66	142.24	139.12	142.27	0.000120	0.71	82.19	26.05	0.13
Dogana	87	Tr100_Tp18	48.98	137.66	141.75	138.96	141.78	0.000140	0.70	69.52	25.54	0.14
Dogana	87	Tr30_Tp18	35.74	137.66	140.89	138.72	140.92	0.000215	0.74	48.39	23.11	0.16
Dogana	87	Tr20_Tp18	32.02	137.66	140.85	138.64	140.87	0.000182	0.67	47.47	22.97	0.15
Dogana	80	Tr200_Tp18	58.35	134.80	142.24	136.24	142.25	0.000049	0.51	116.14	36.99	0.08
Dogana	80	Tr100_Tp18	48.98	134.80	141.75	136.08	141.76	0.000050	0.48	101.96	27.93	0.08
Dogana	80	Tr30_Tp18	35.74	134.80	140.89	135.84	140.90	0.000051	0.44	80.47	23.11	0.08
Dogana	80	Tr20_Tp18	32.02	134.80	140.85	135.77	140.86	0.000043	0.40	79.54	22.97	0.07

borro dell'Ornaccio

verifiche con Tpioggia critico per il Borro dell'Ornaccio

- moto vario

Tr=200, 100, 30 e 20 anni

profilo

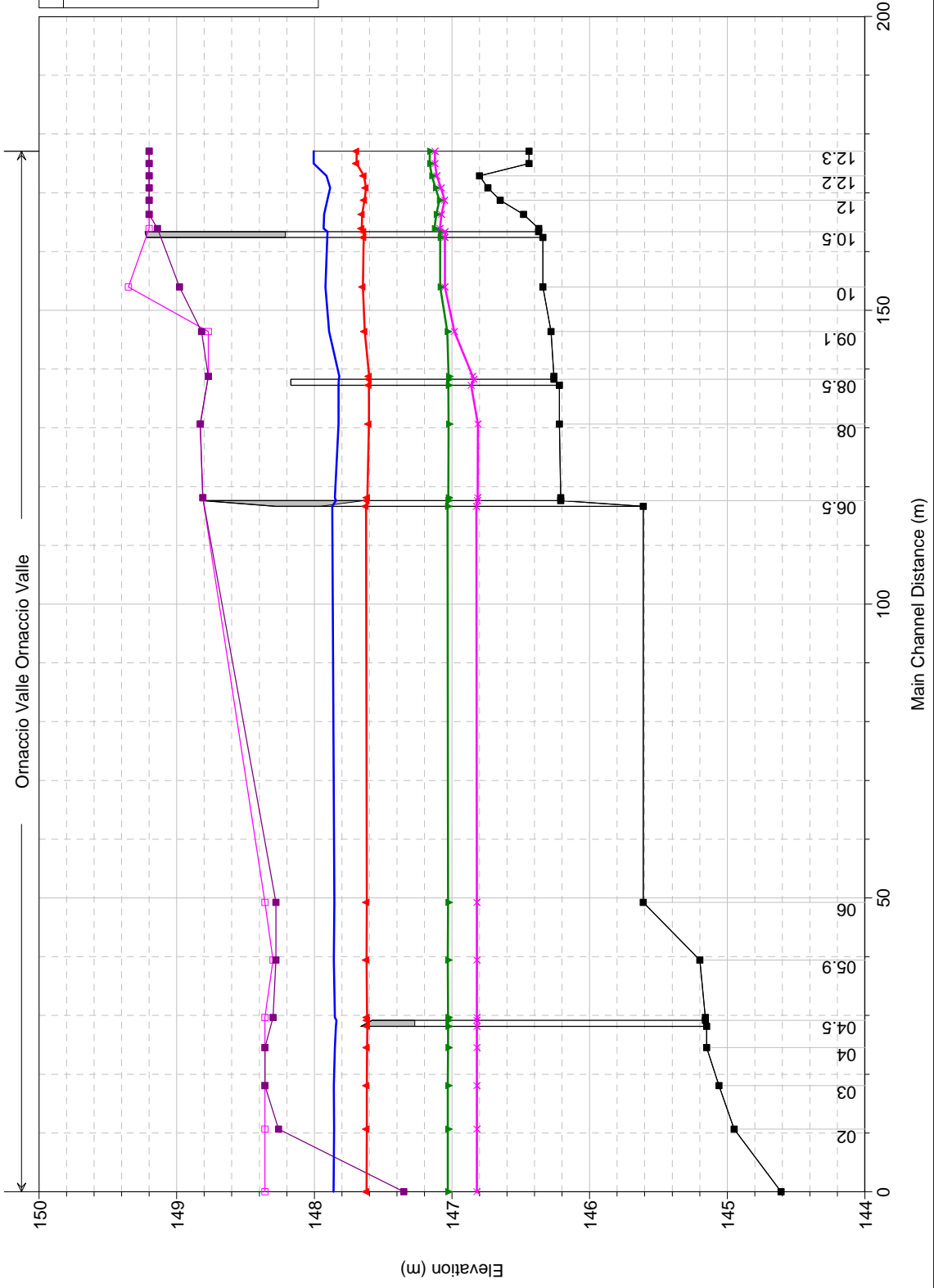
livelli idrici nelle sezioni di verifica

tabella di output del software Hec-ras 4.0

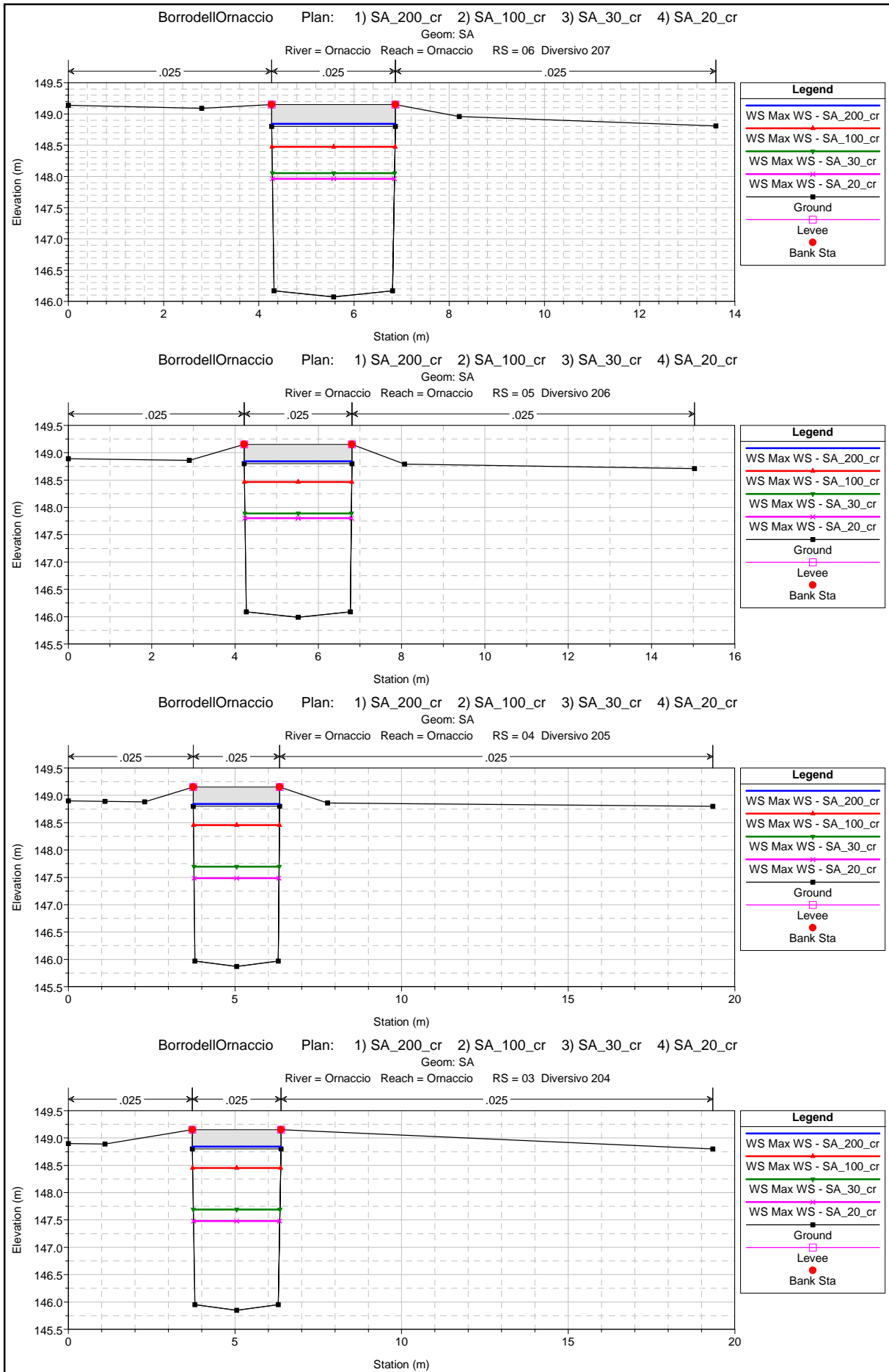
livelli e portate in ingresso alle aree di accumulo

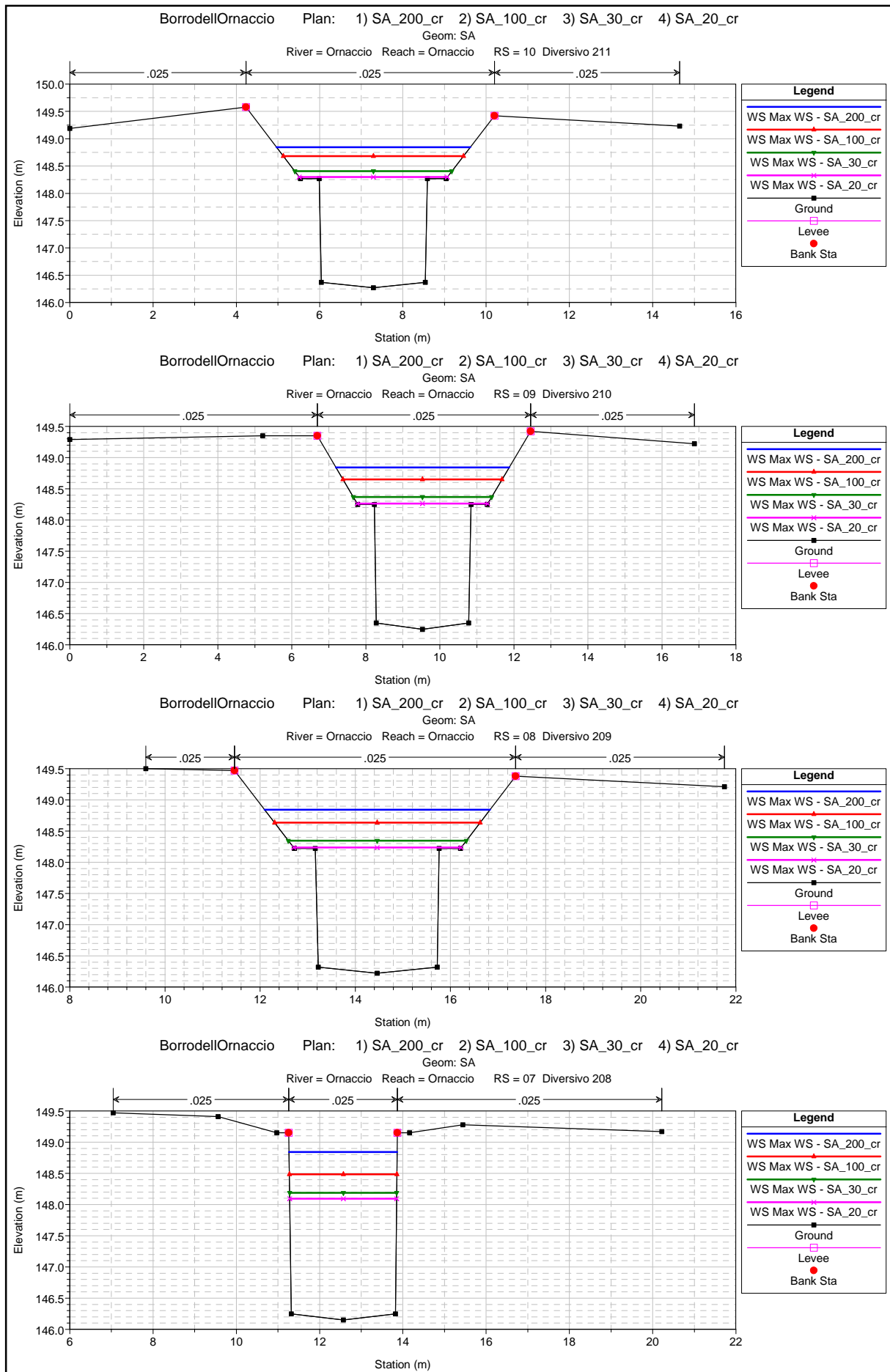
BorrodellOrnaccio Plan: 1) SA_200_cr 2) SA_100_cr 3) SA_30_cr 4) SA_20_cr

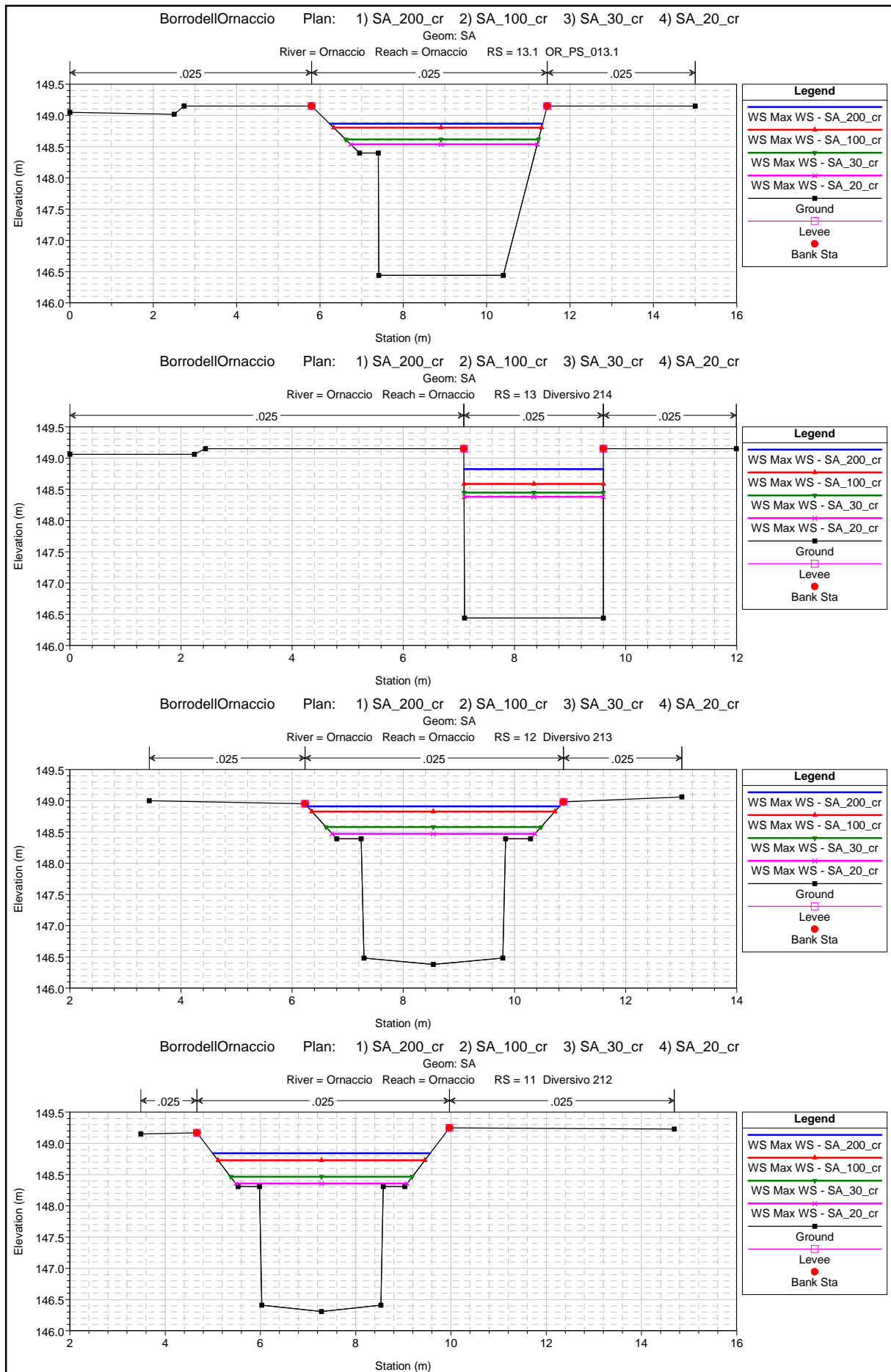
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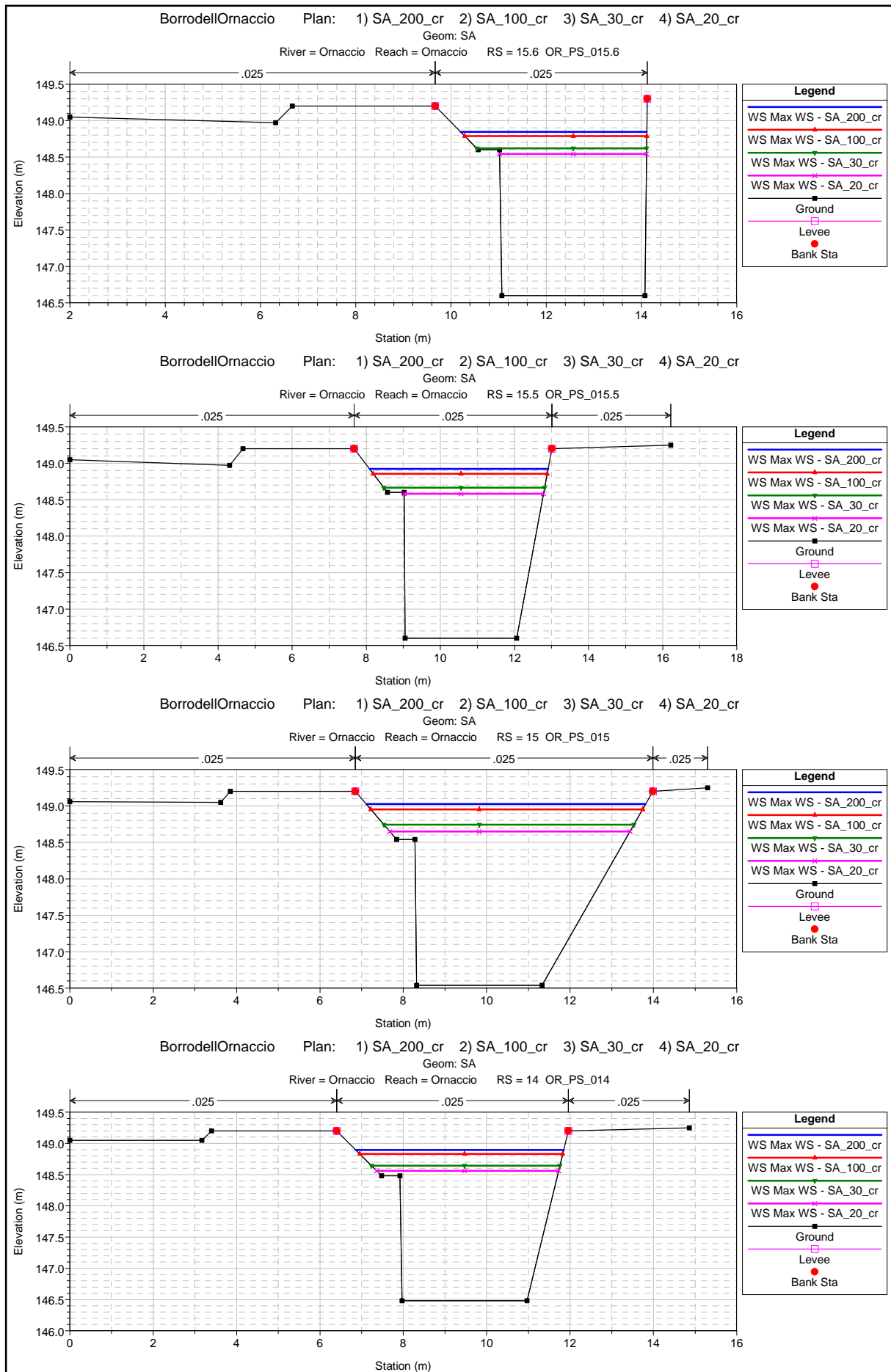


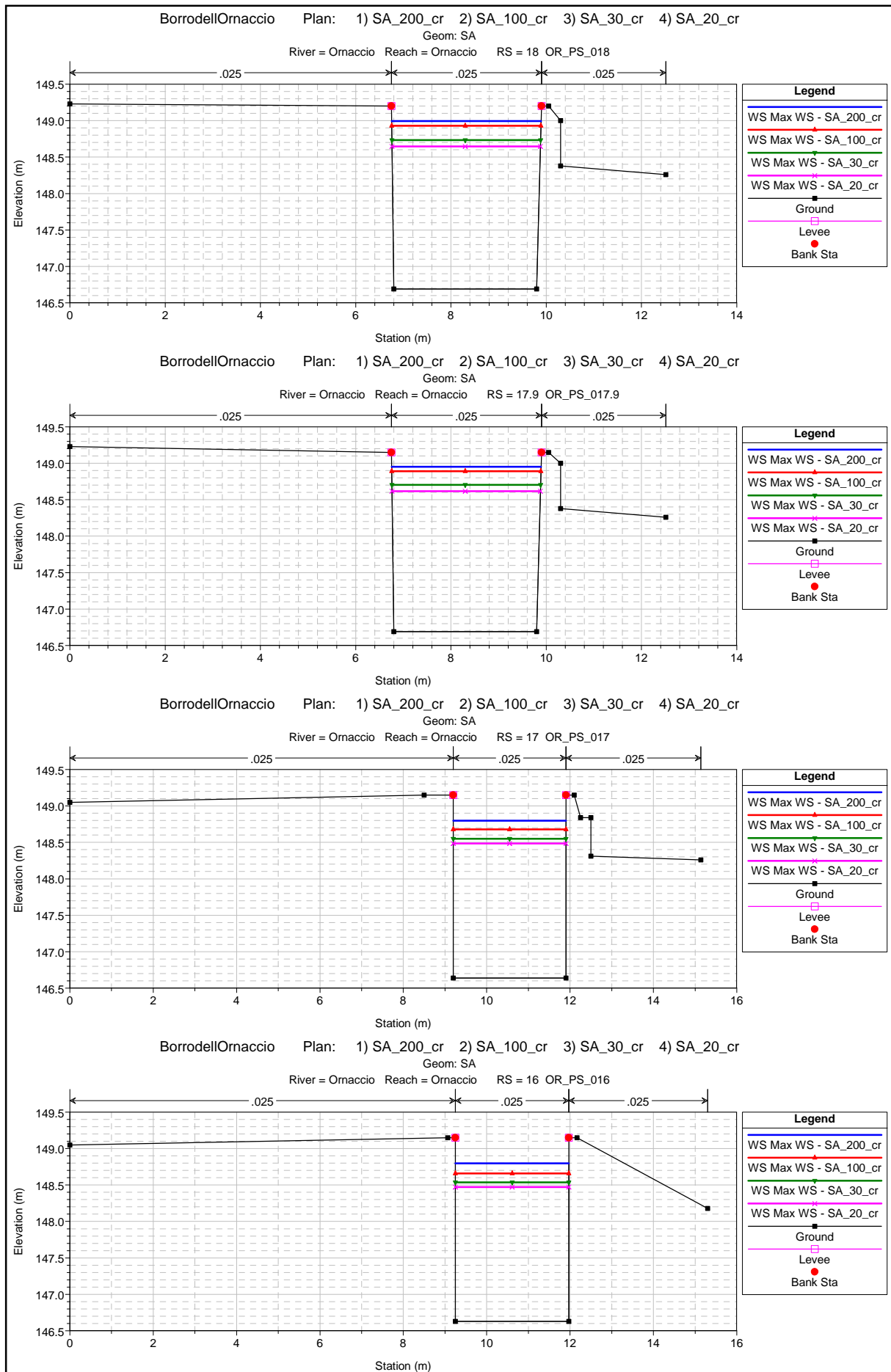
Legend	
WS Max WS - SA_200_cr	Blue line with triangle markers
WS Max WS - SA_100_cr	Red line with triangle markers
WS Max WS - SA_30_cr	Green line with triangle markers
WS Max WS - SA_20_cr	Magenta line with 'x' markers
Ground	Black line with square markers
Left Levee	Magenta line with square markers
Right Levee	Purple line with square markers

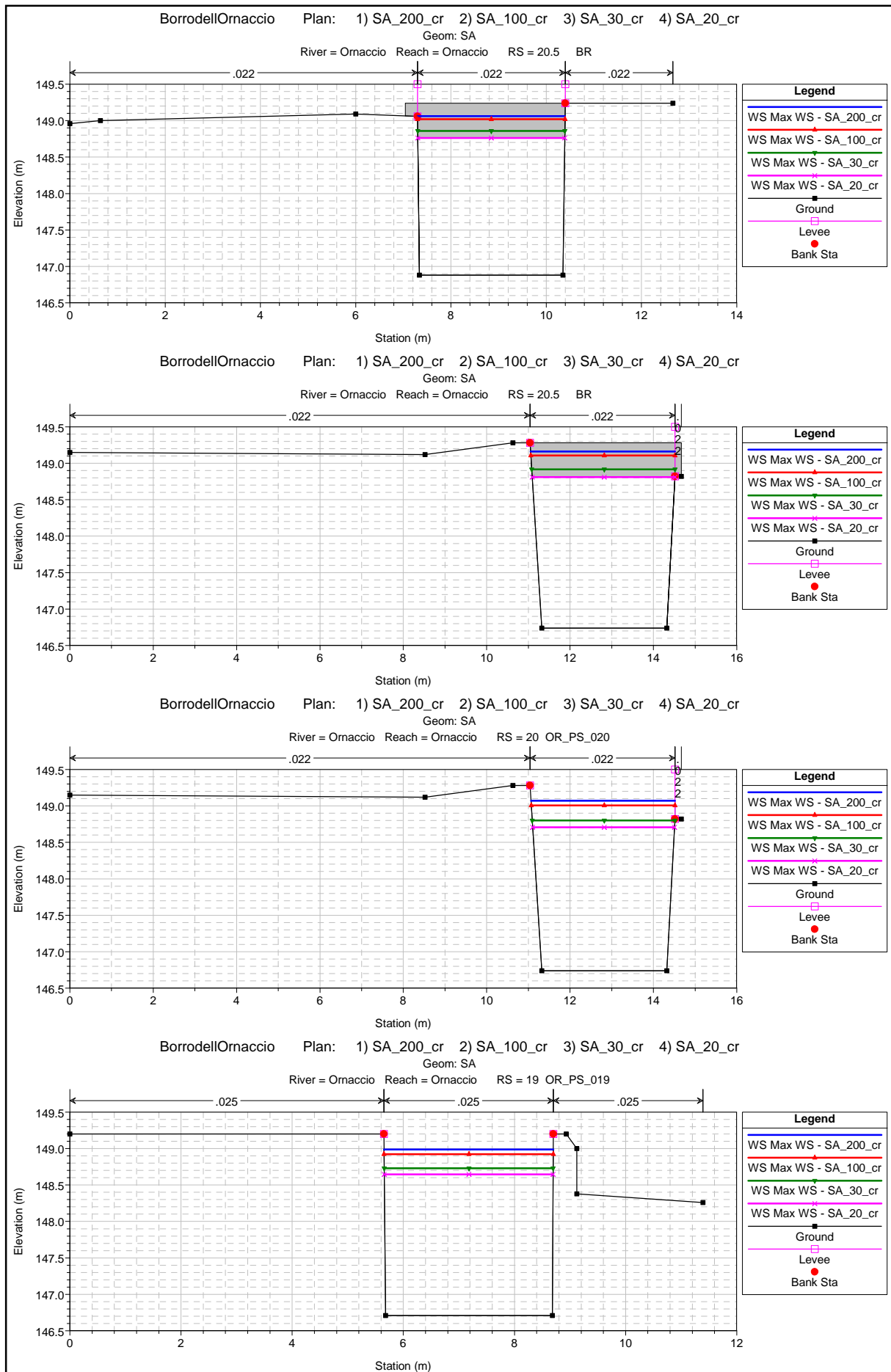


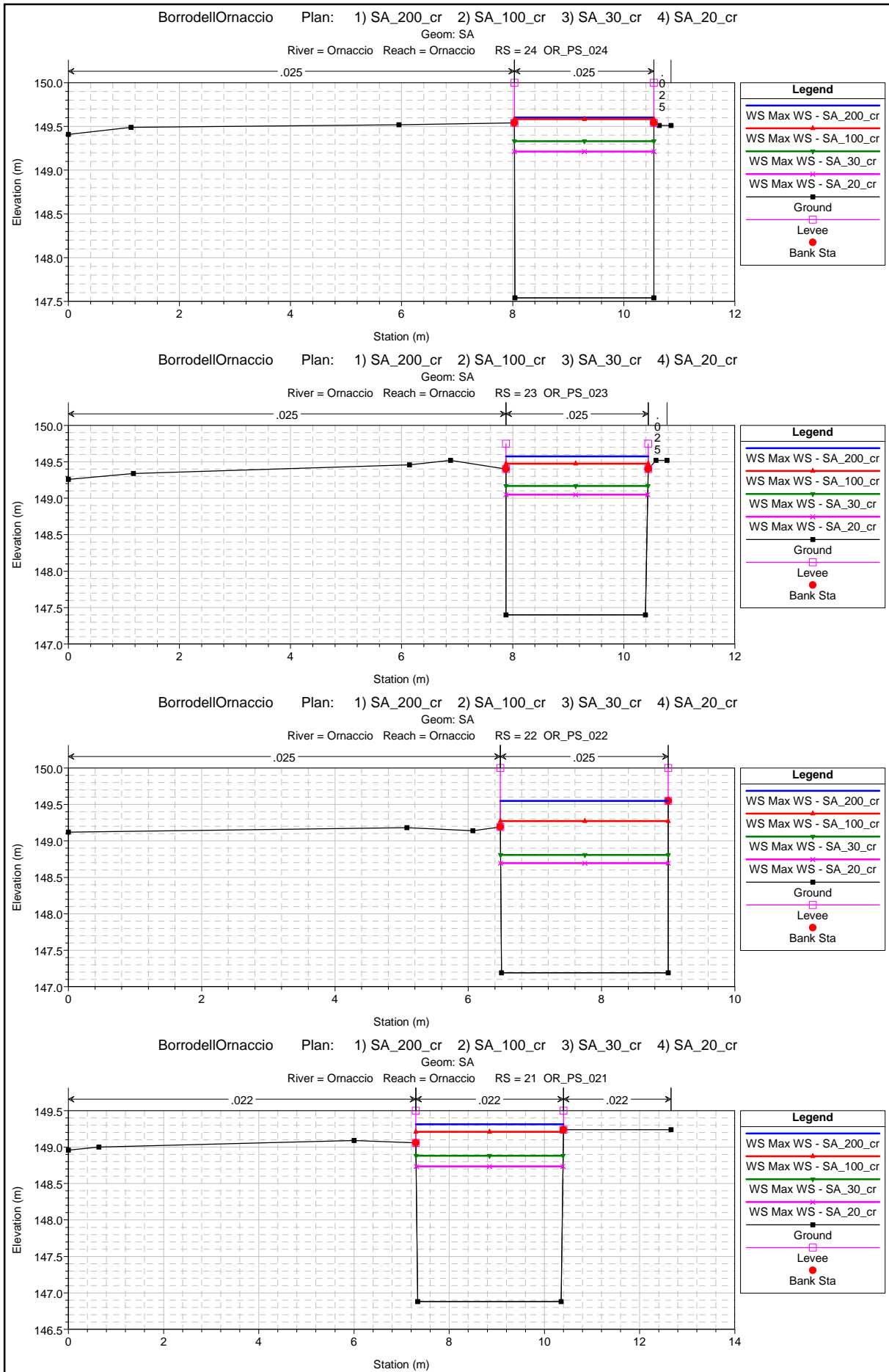


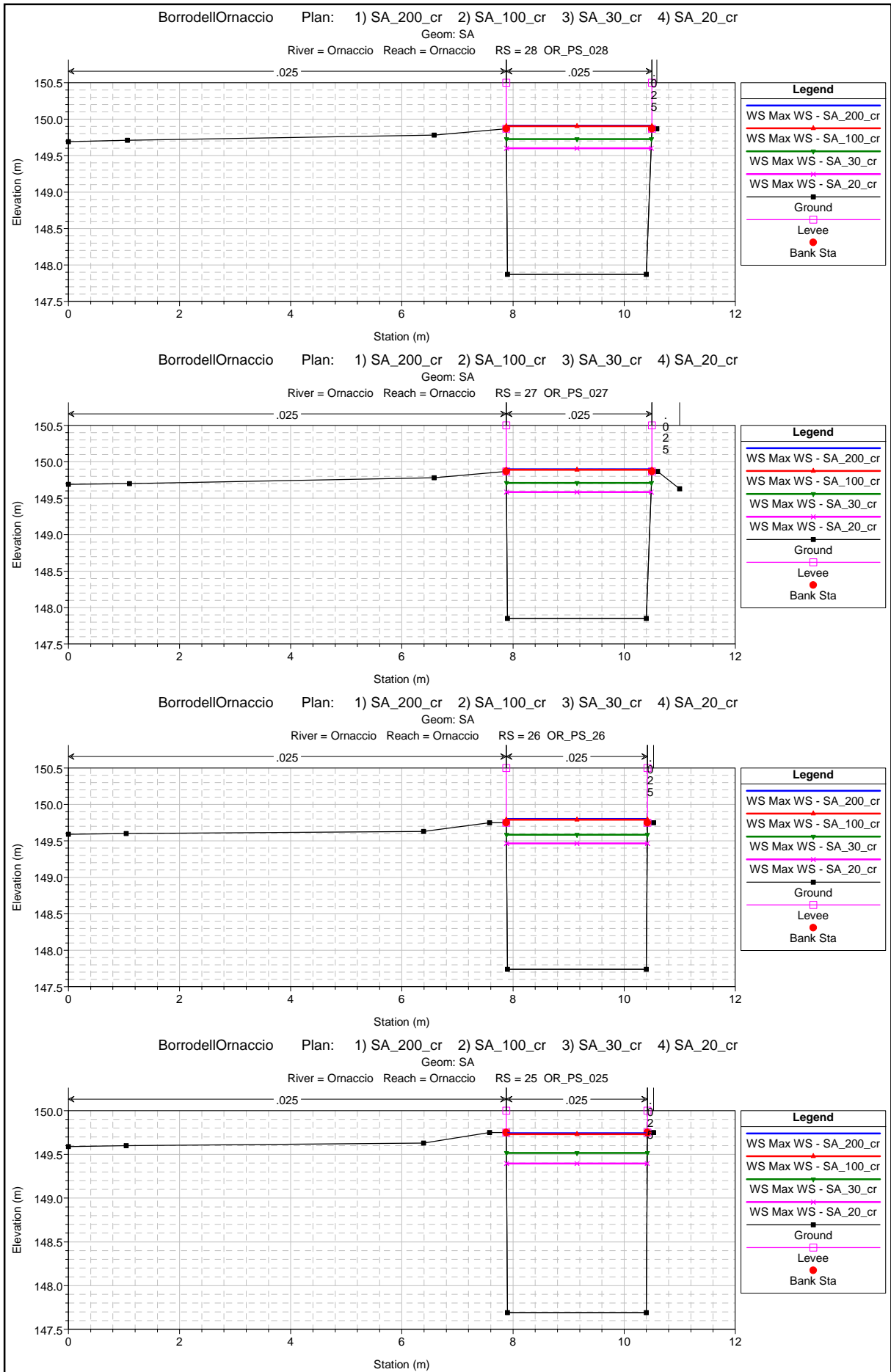


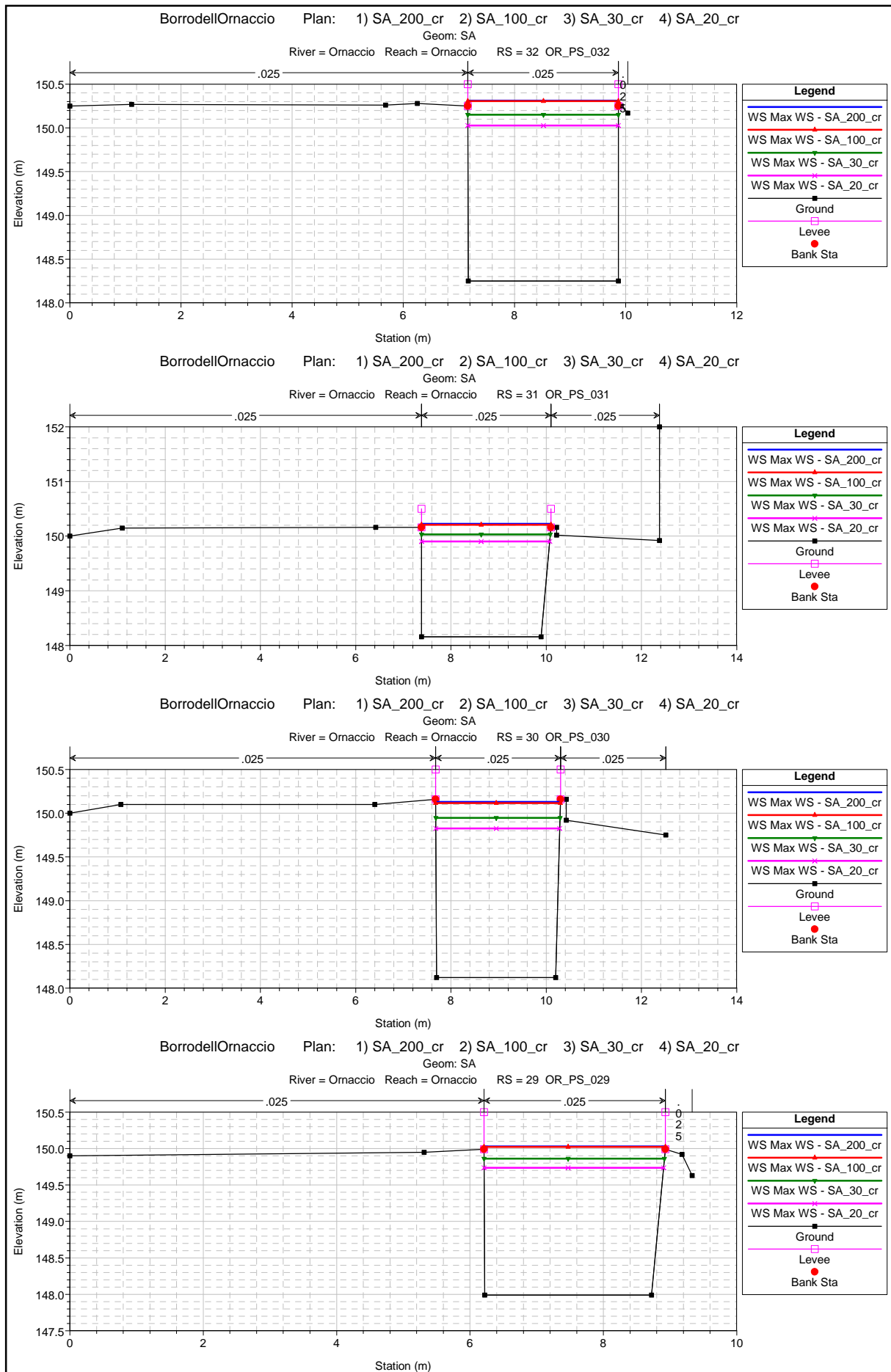


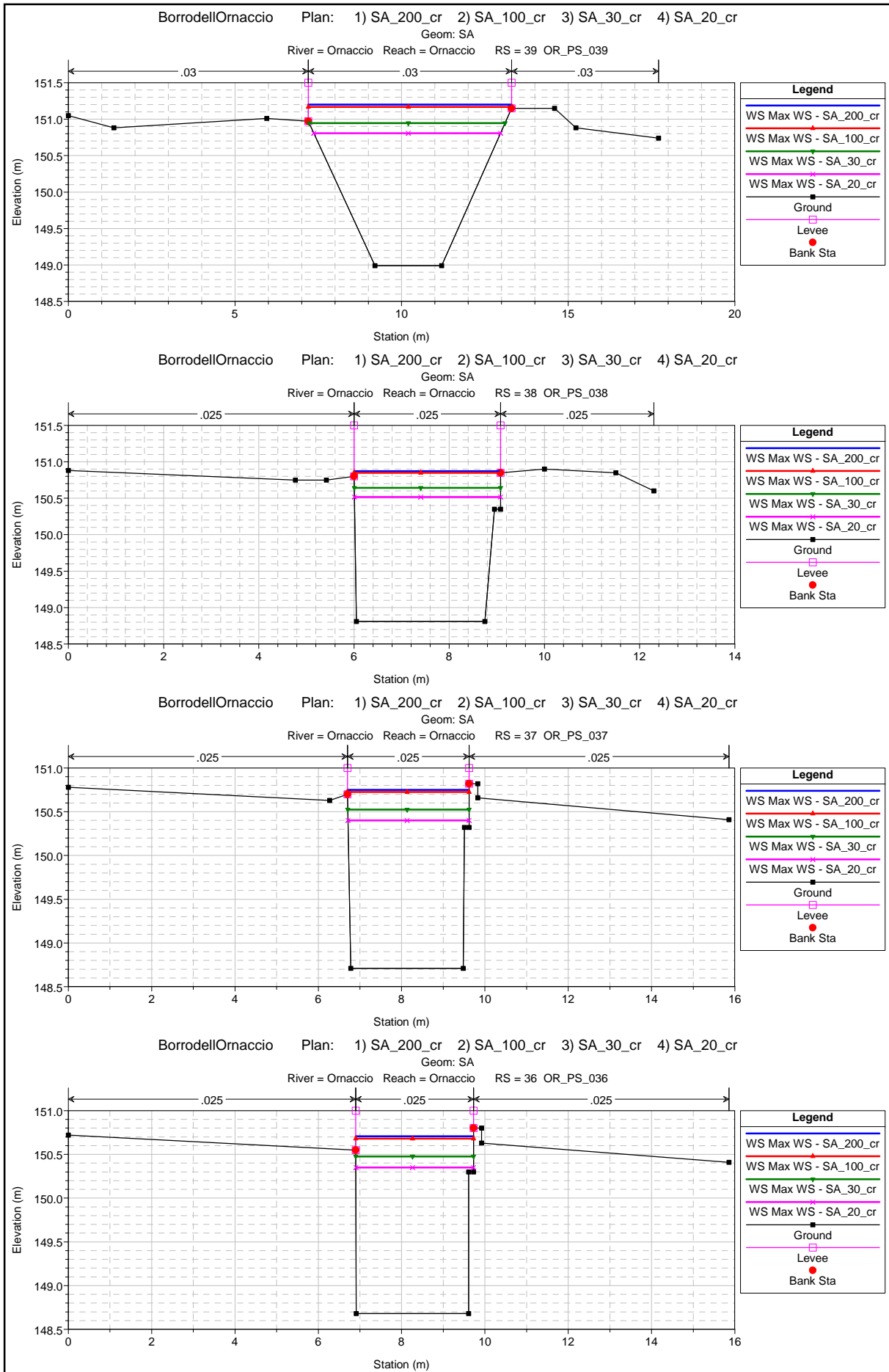


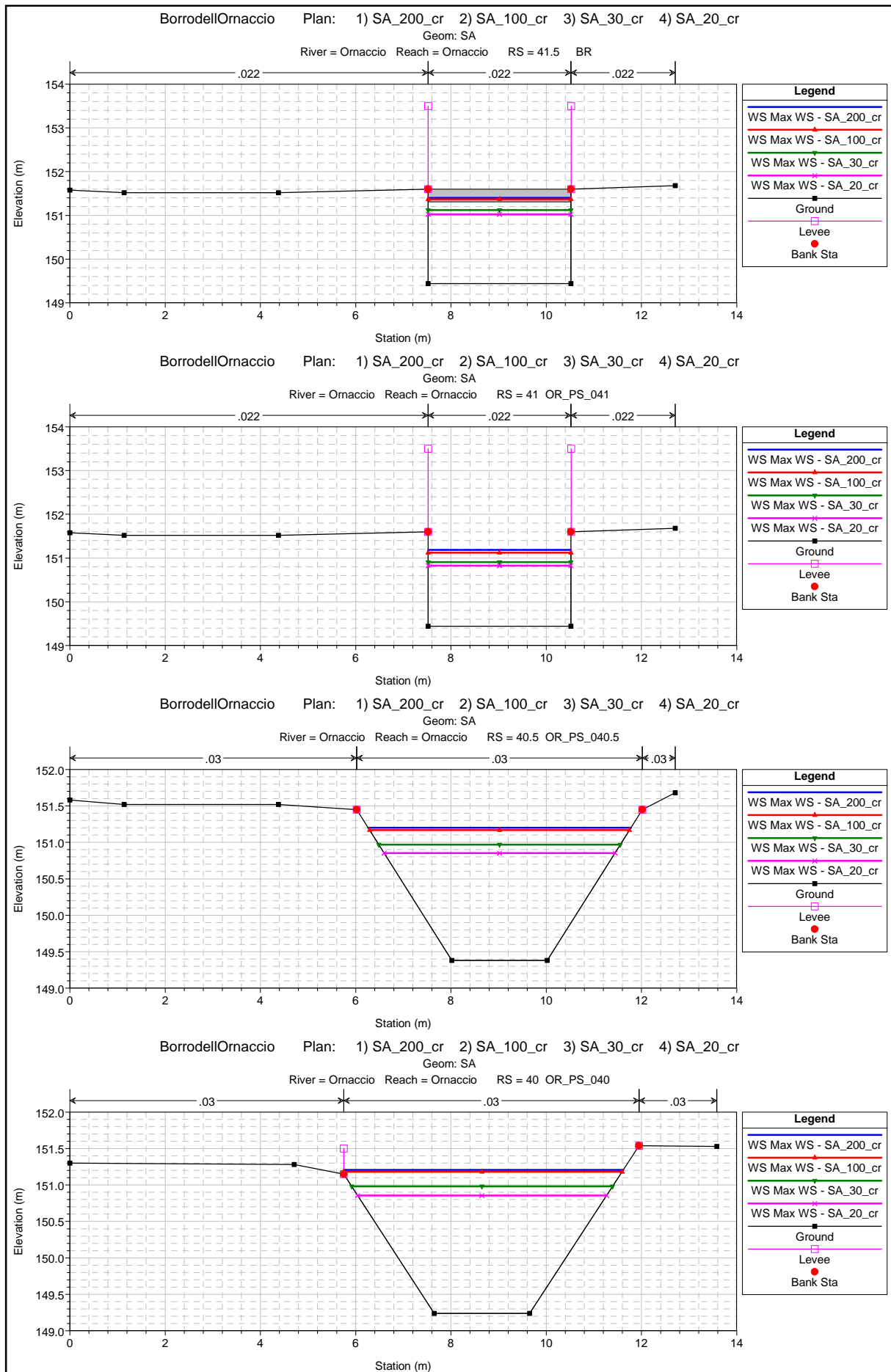


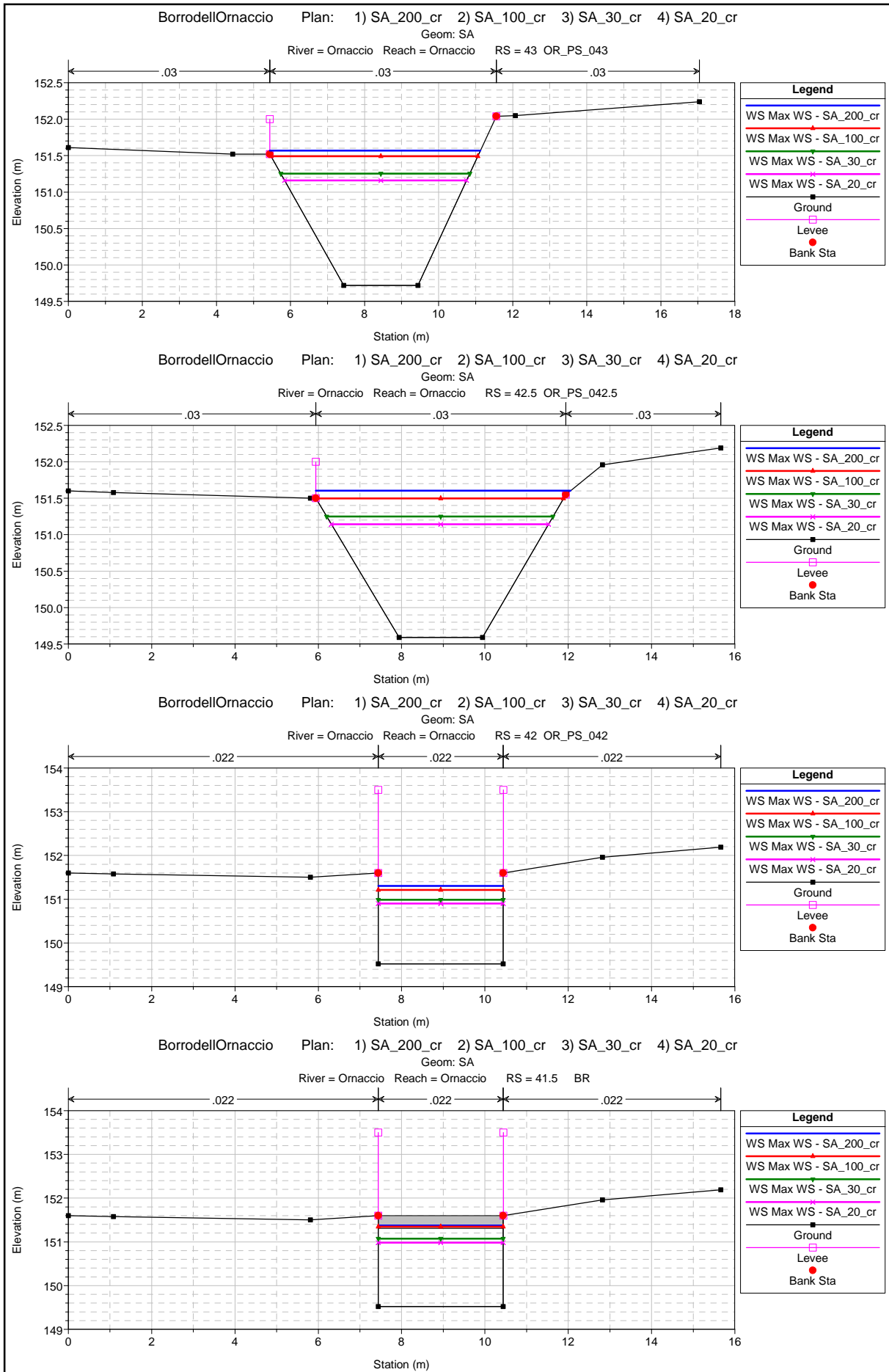


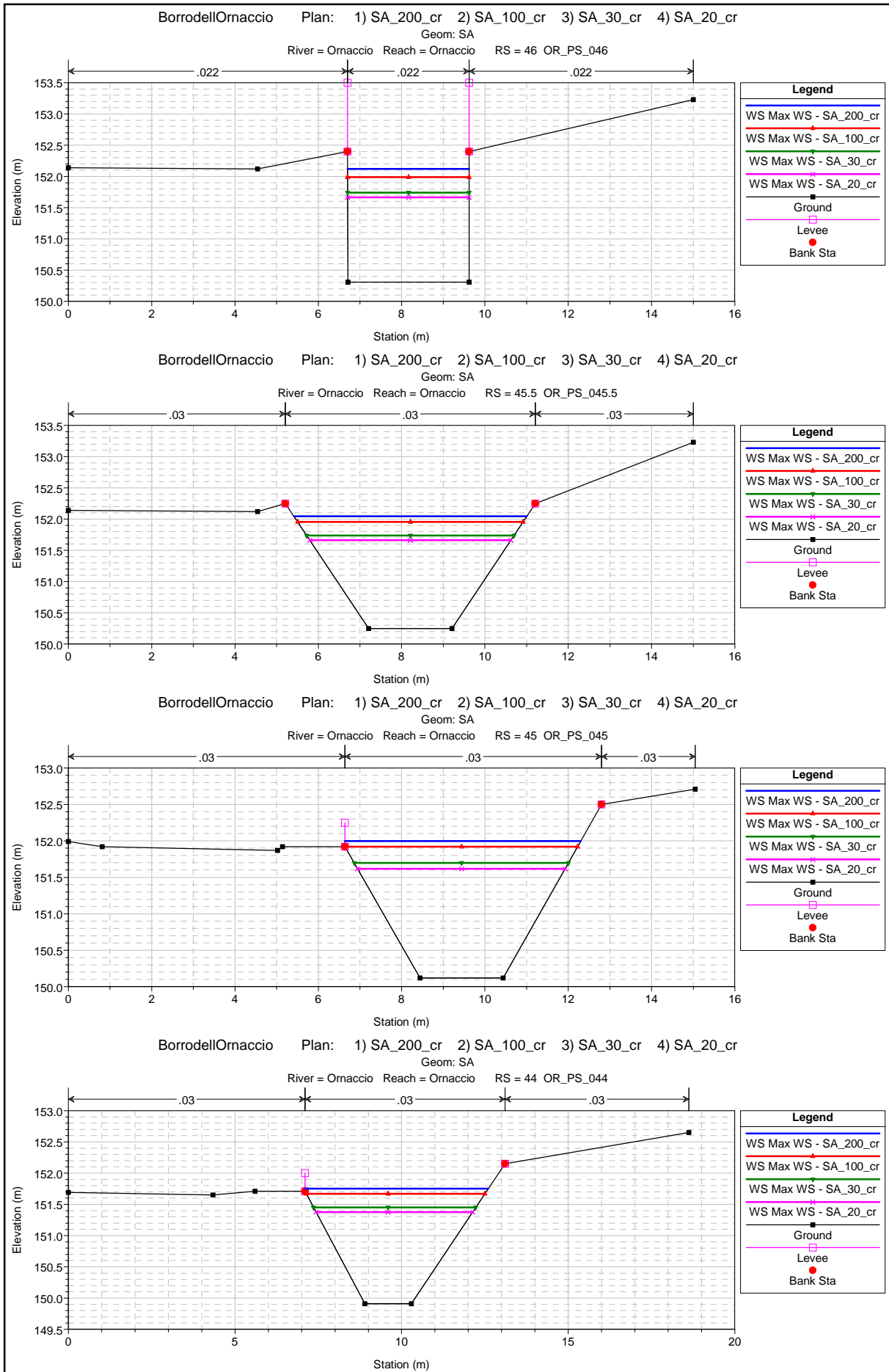


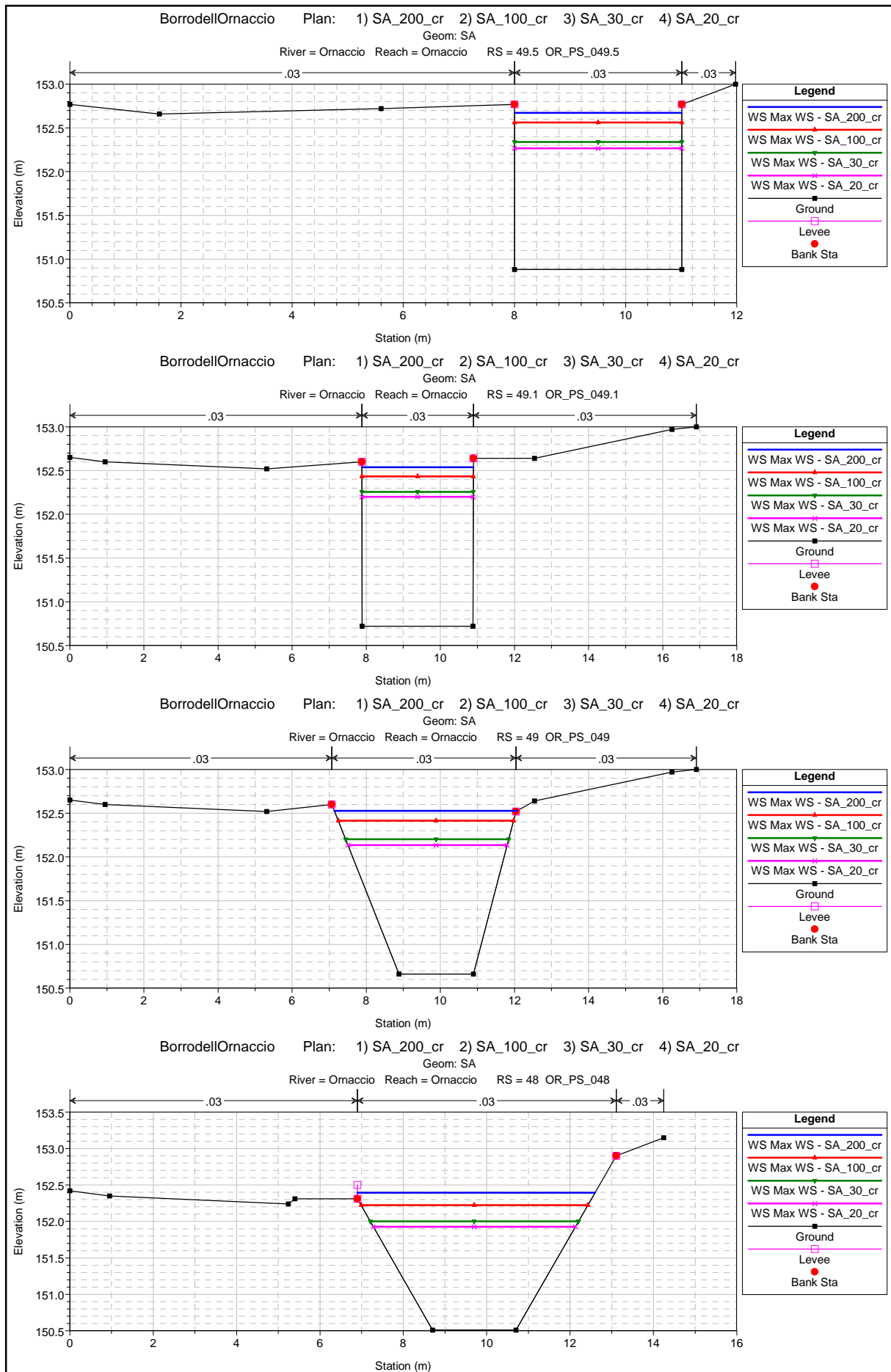


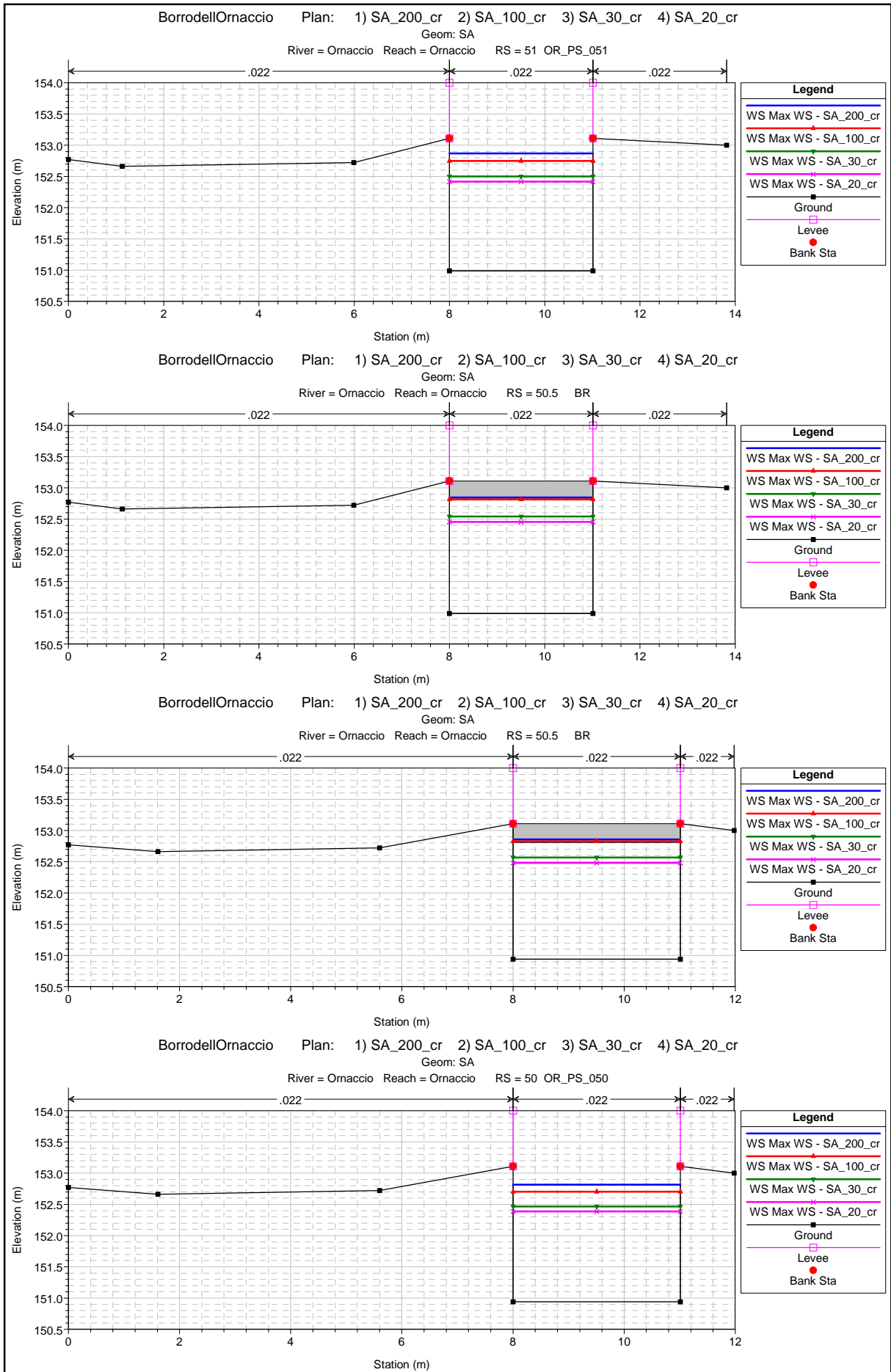


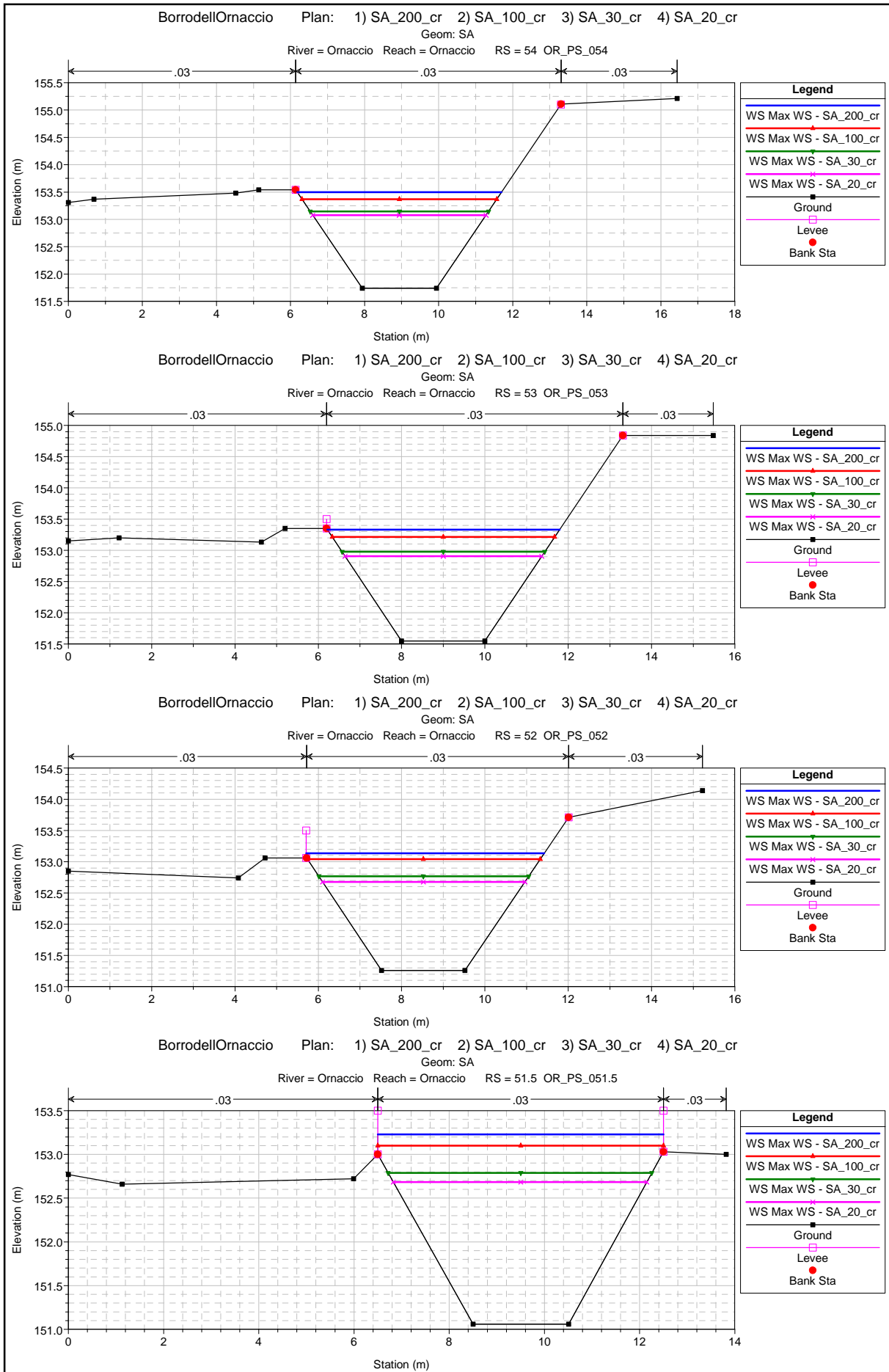


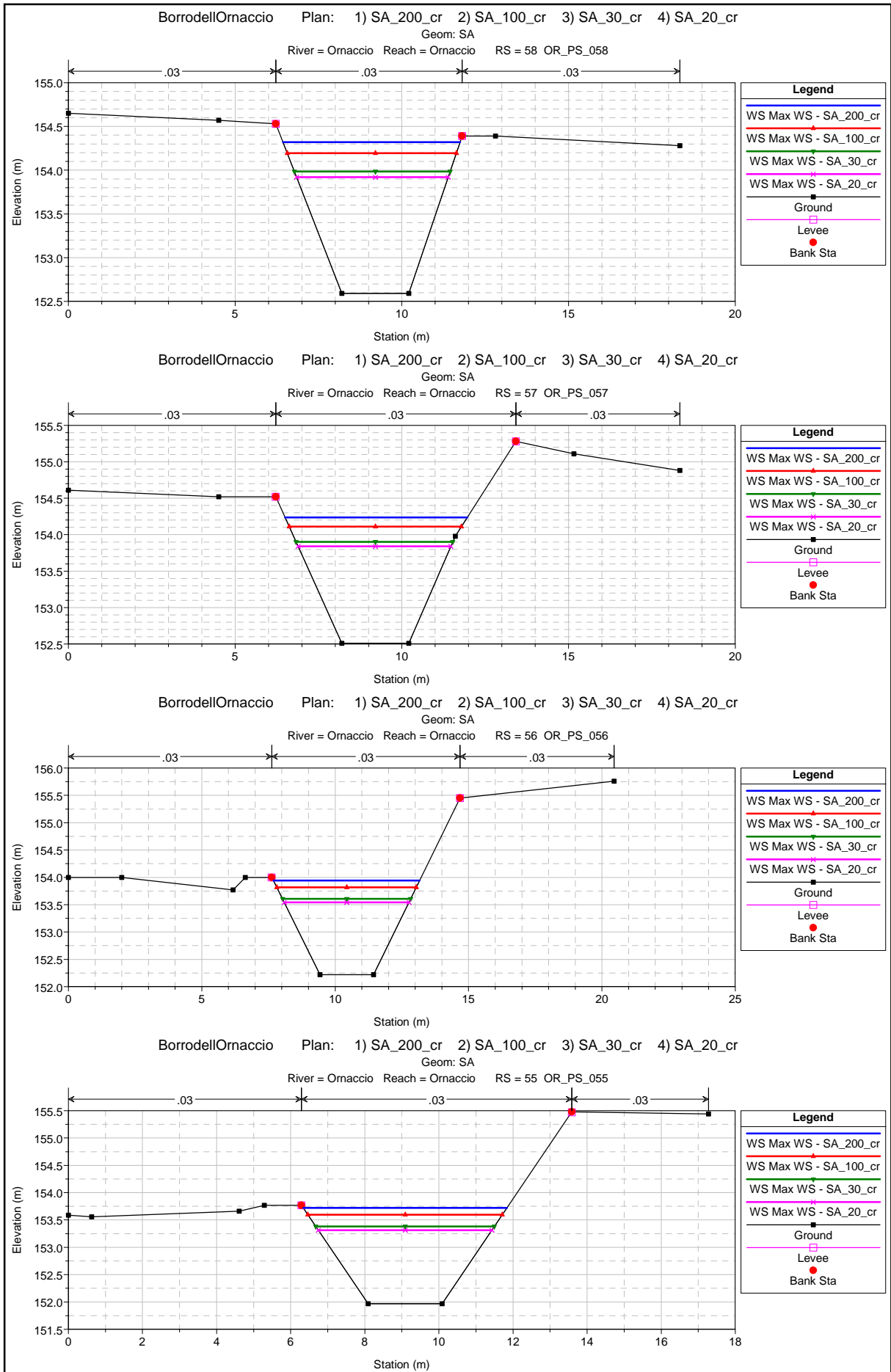


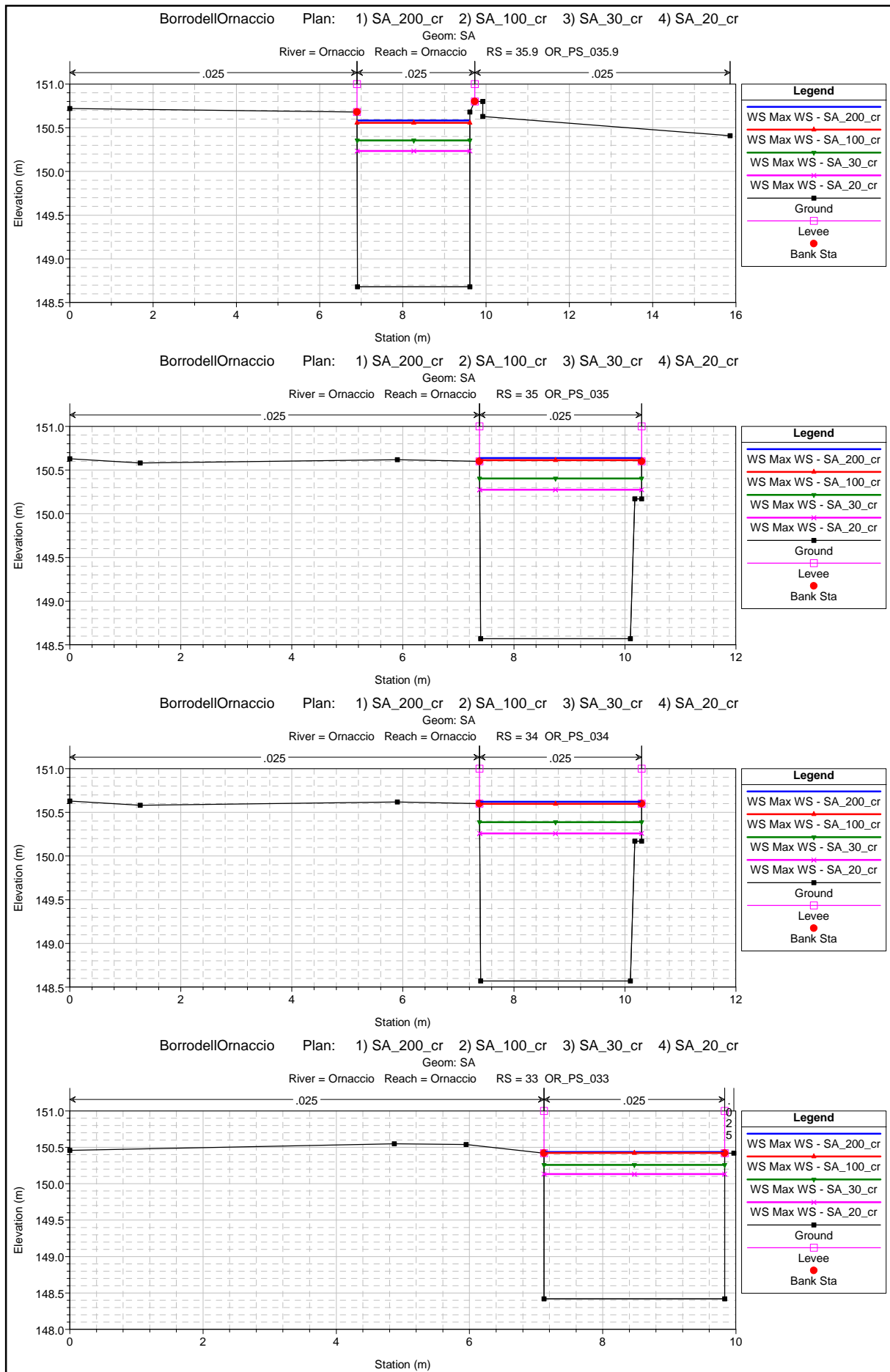


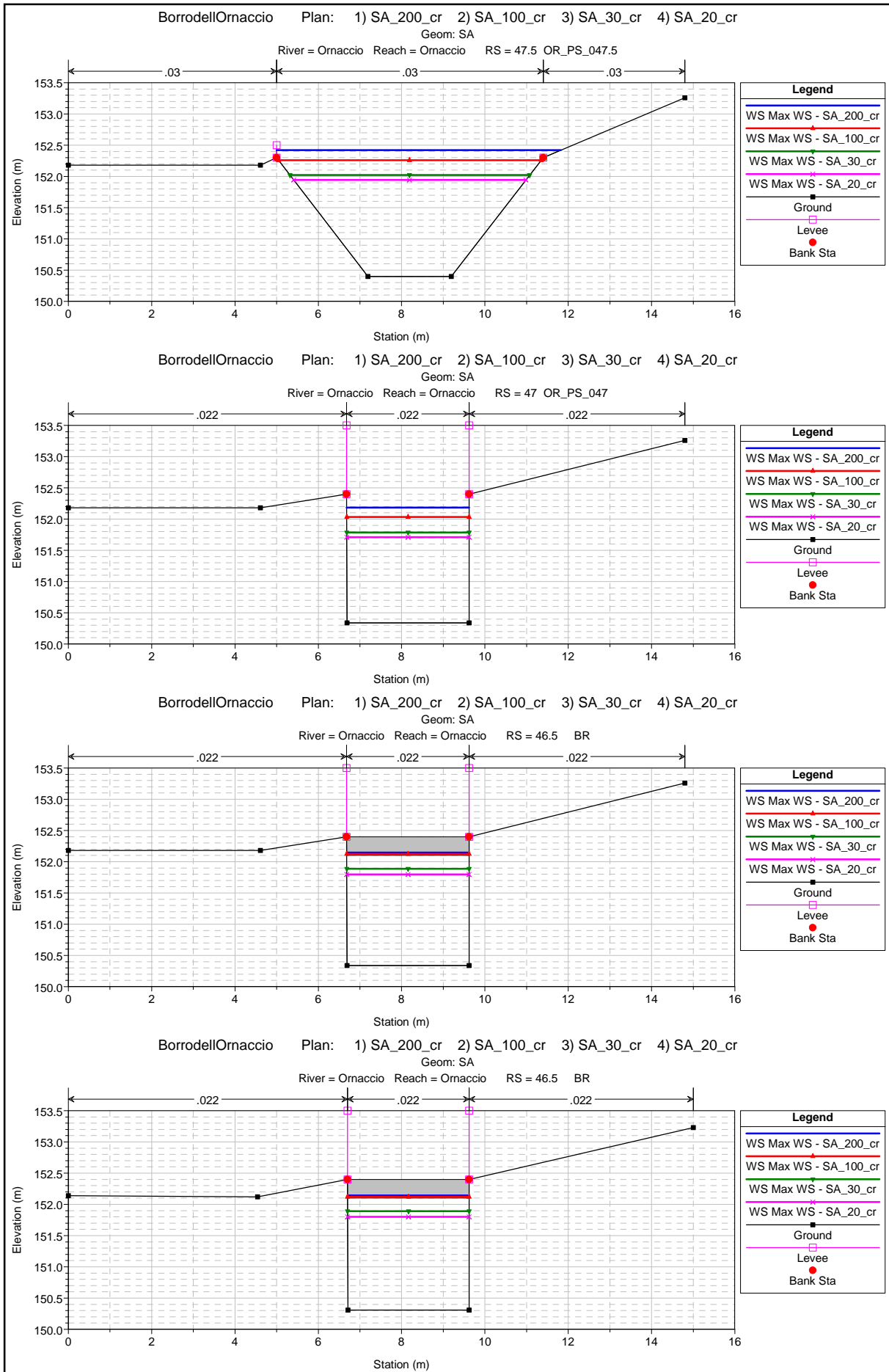


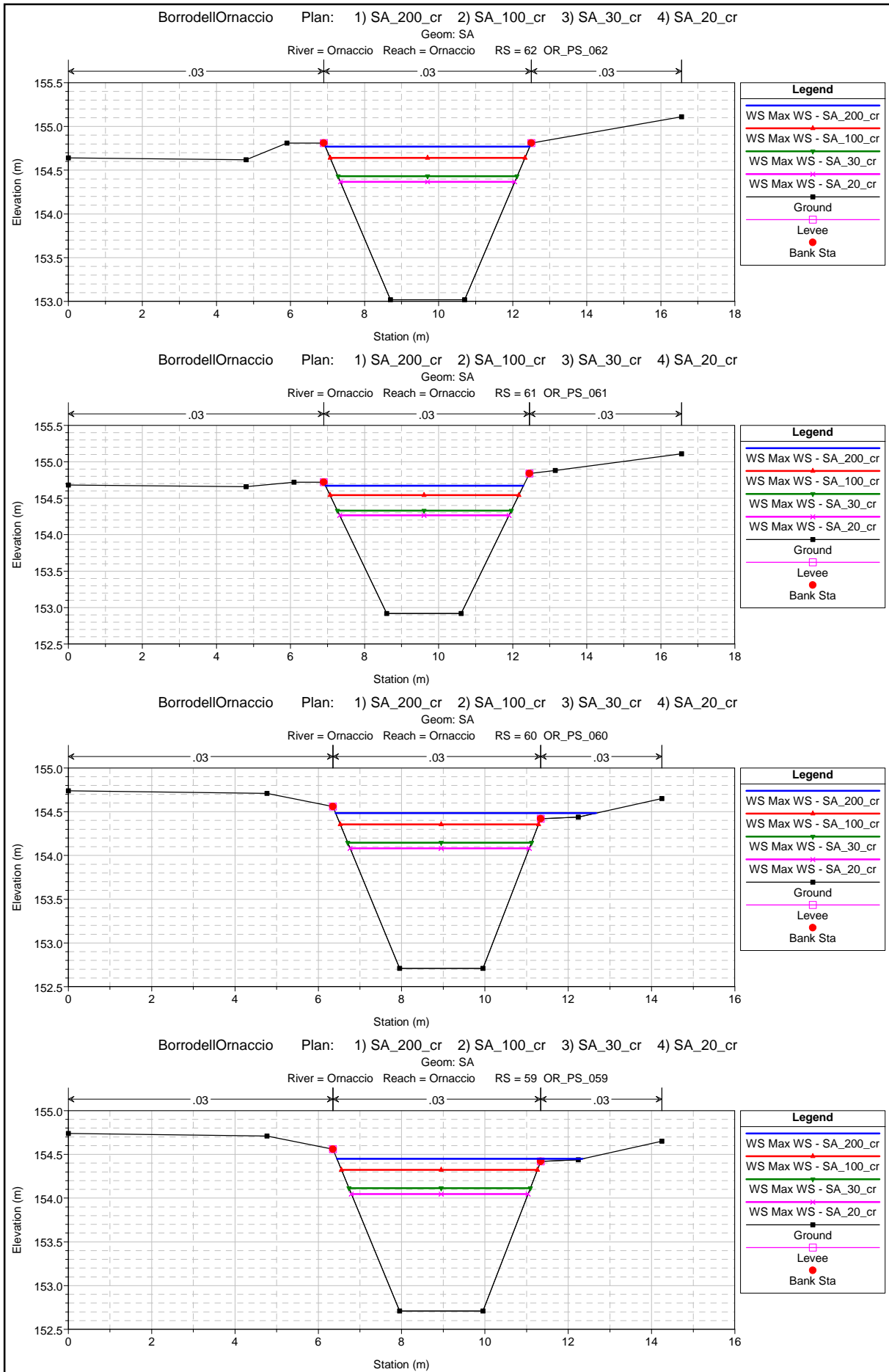


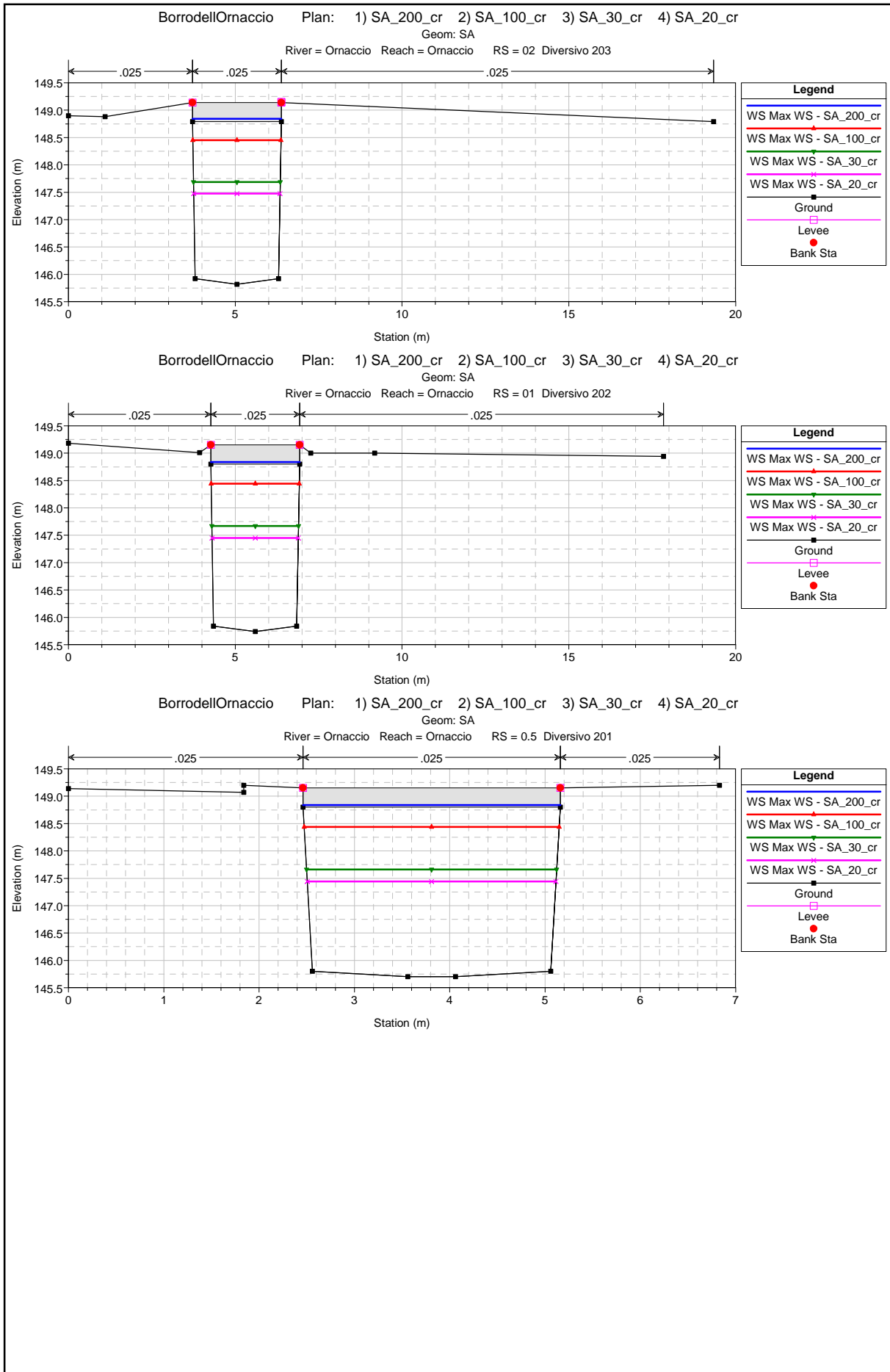


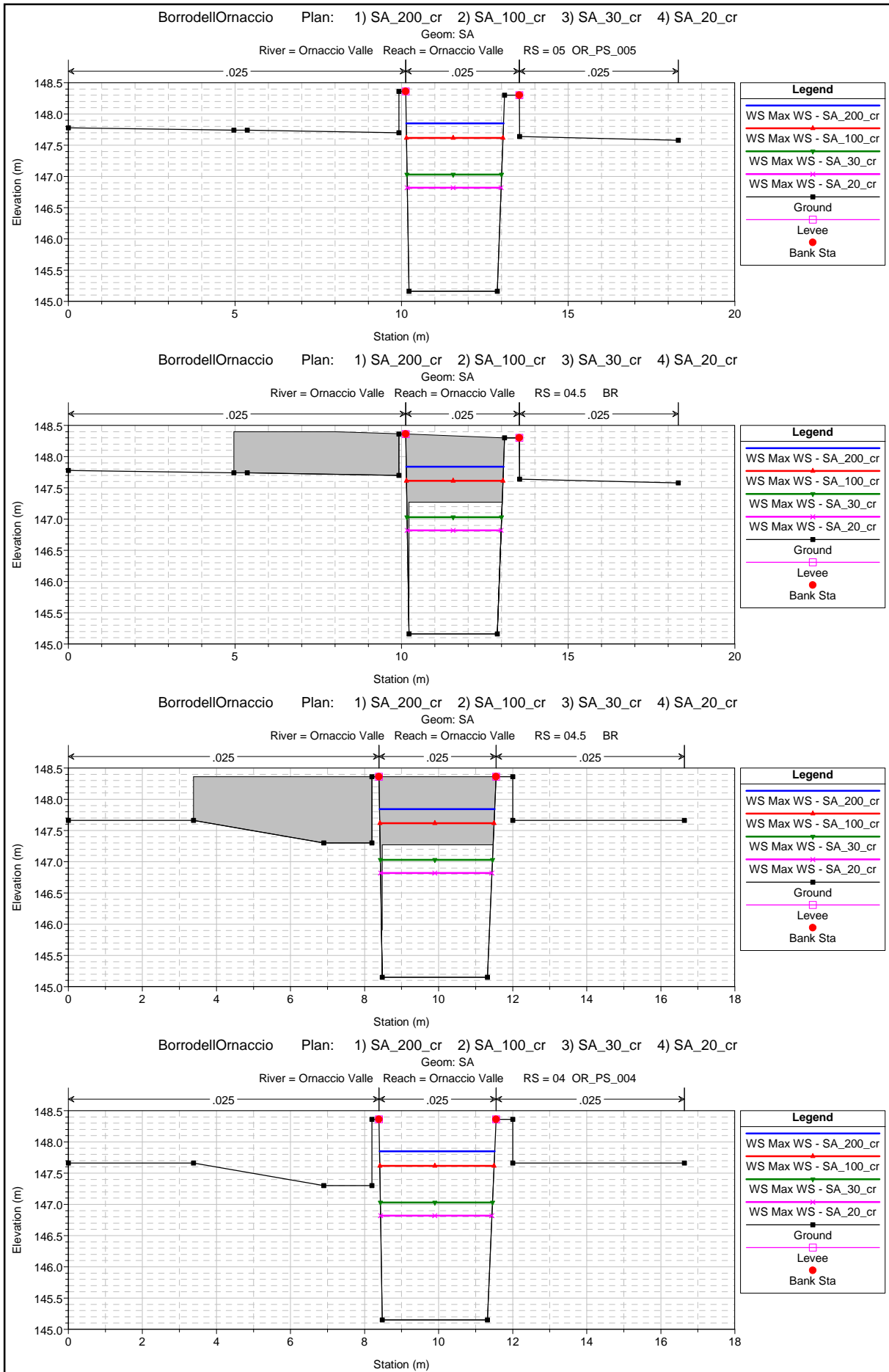


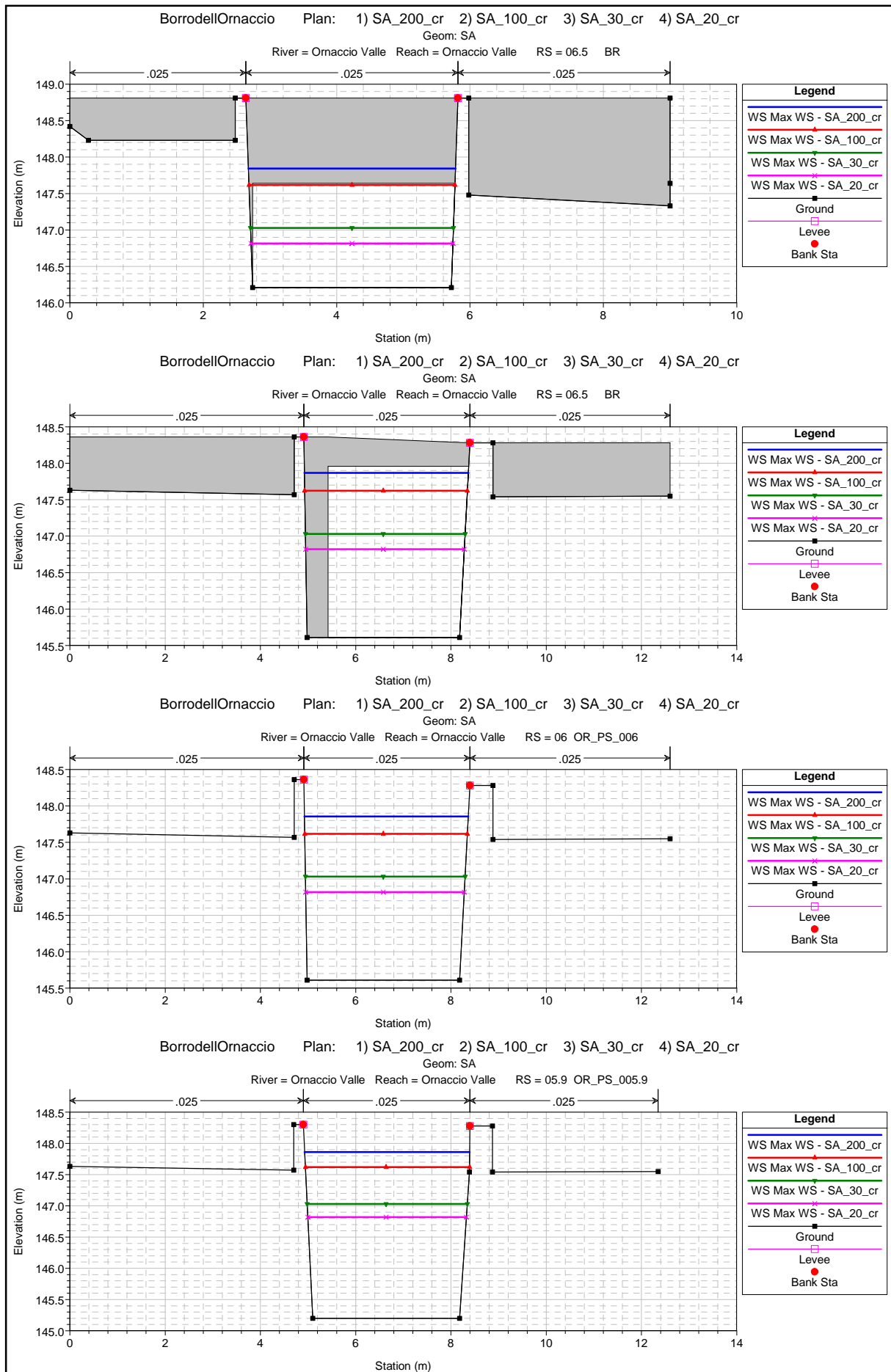


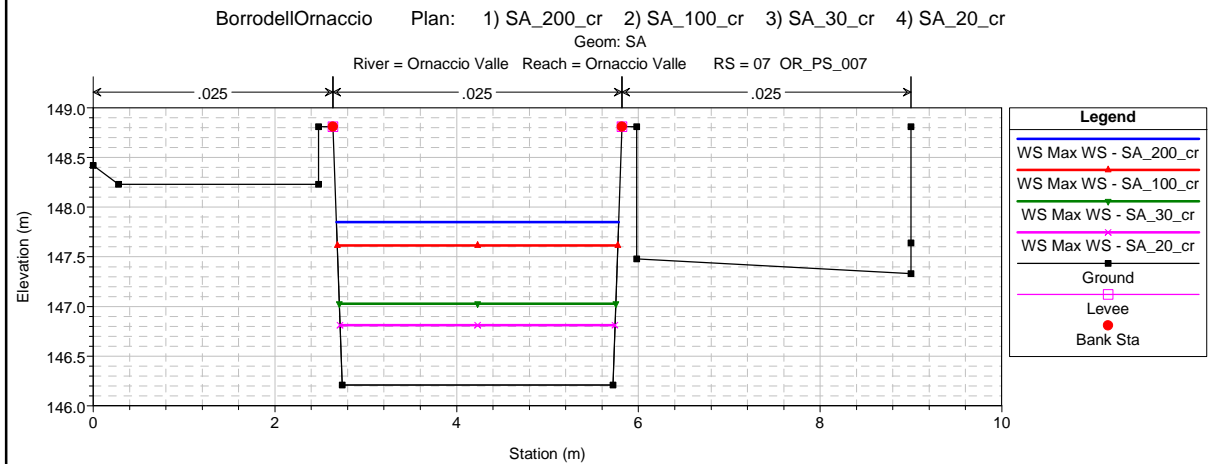
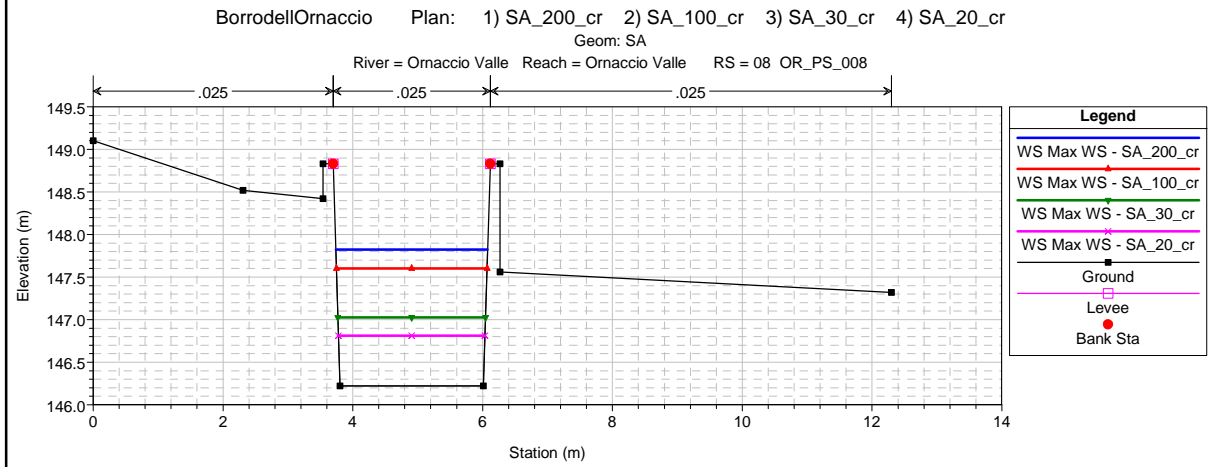
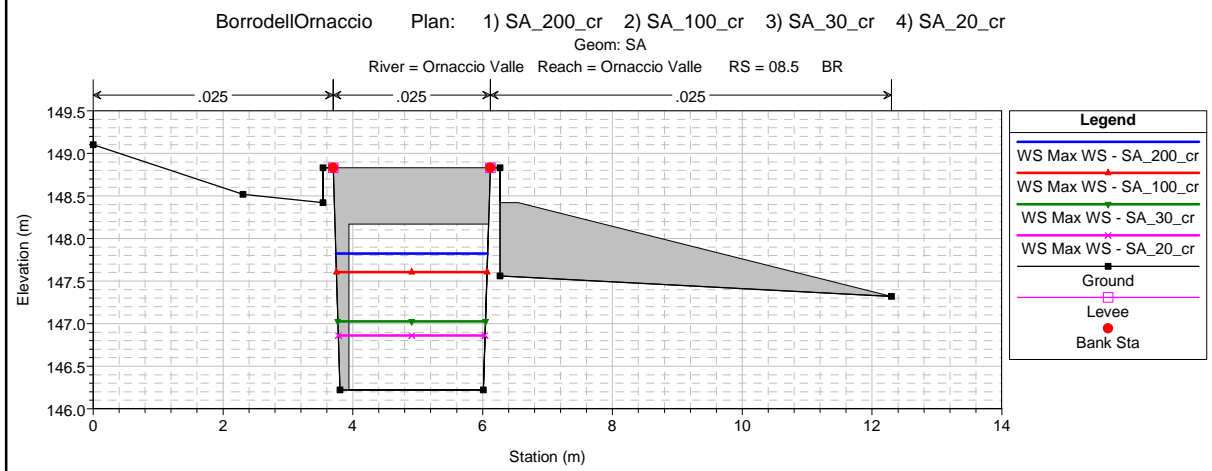
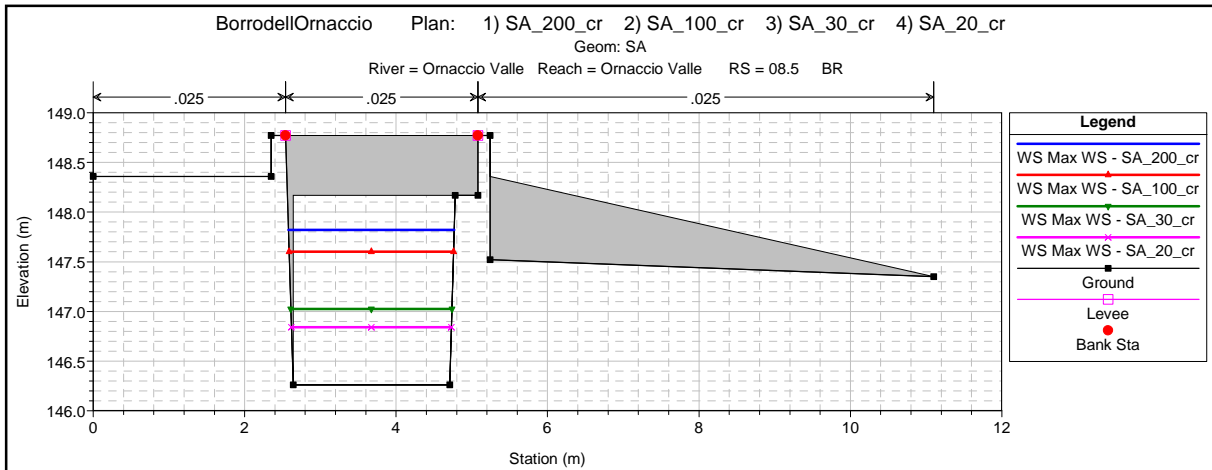


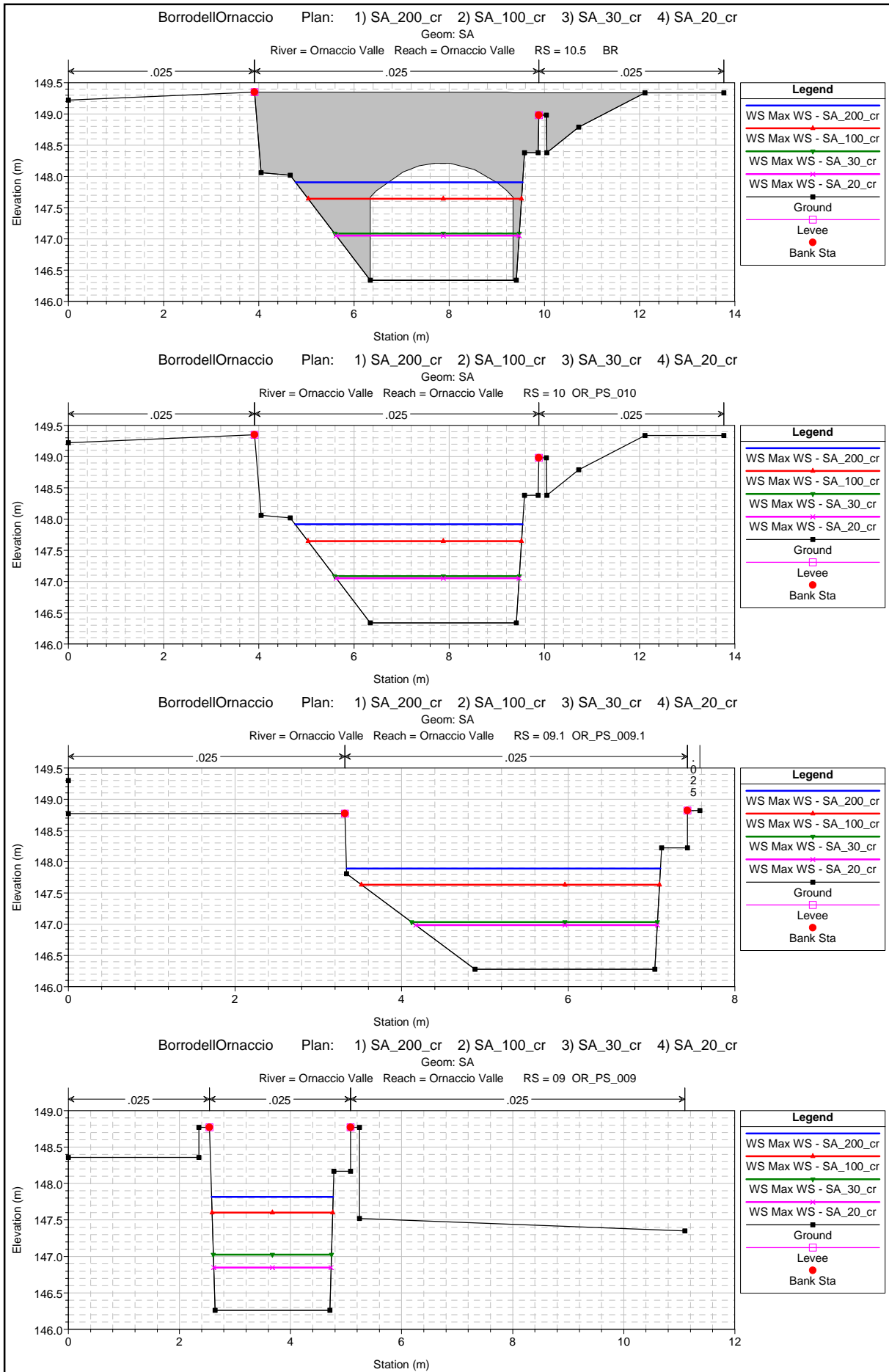


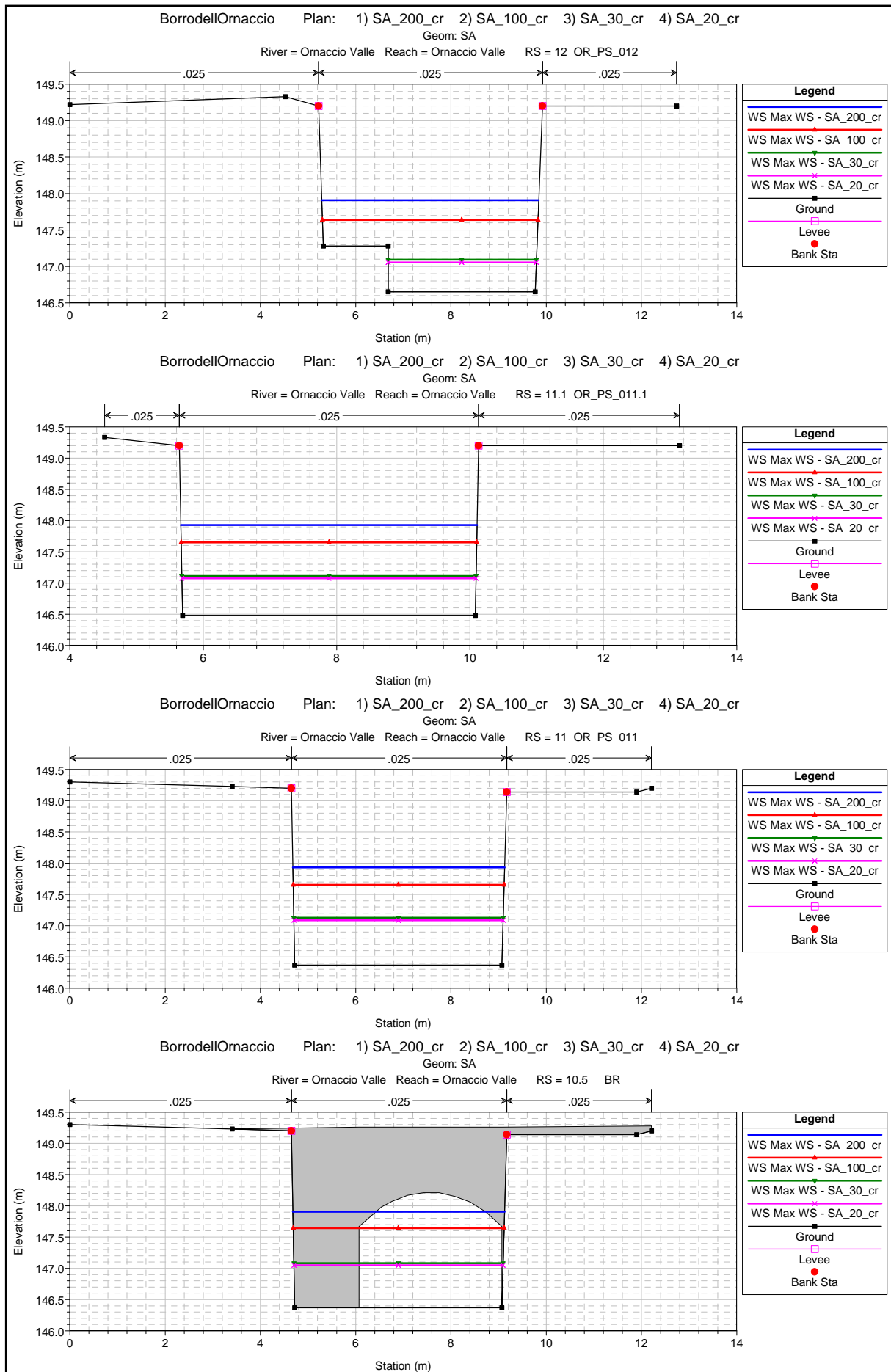


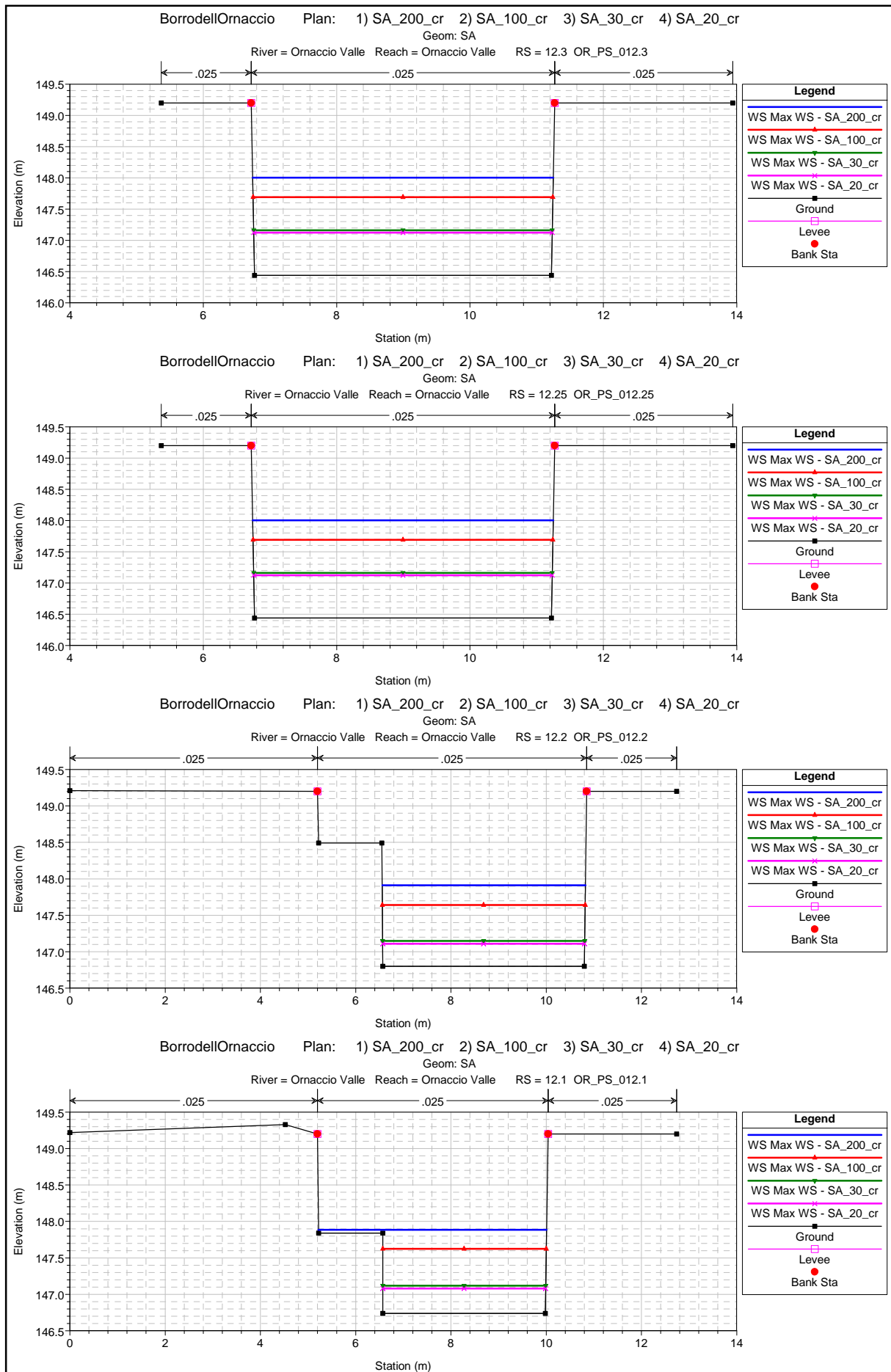


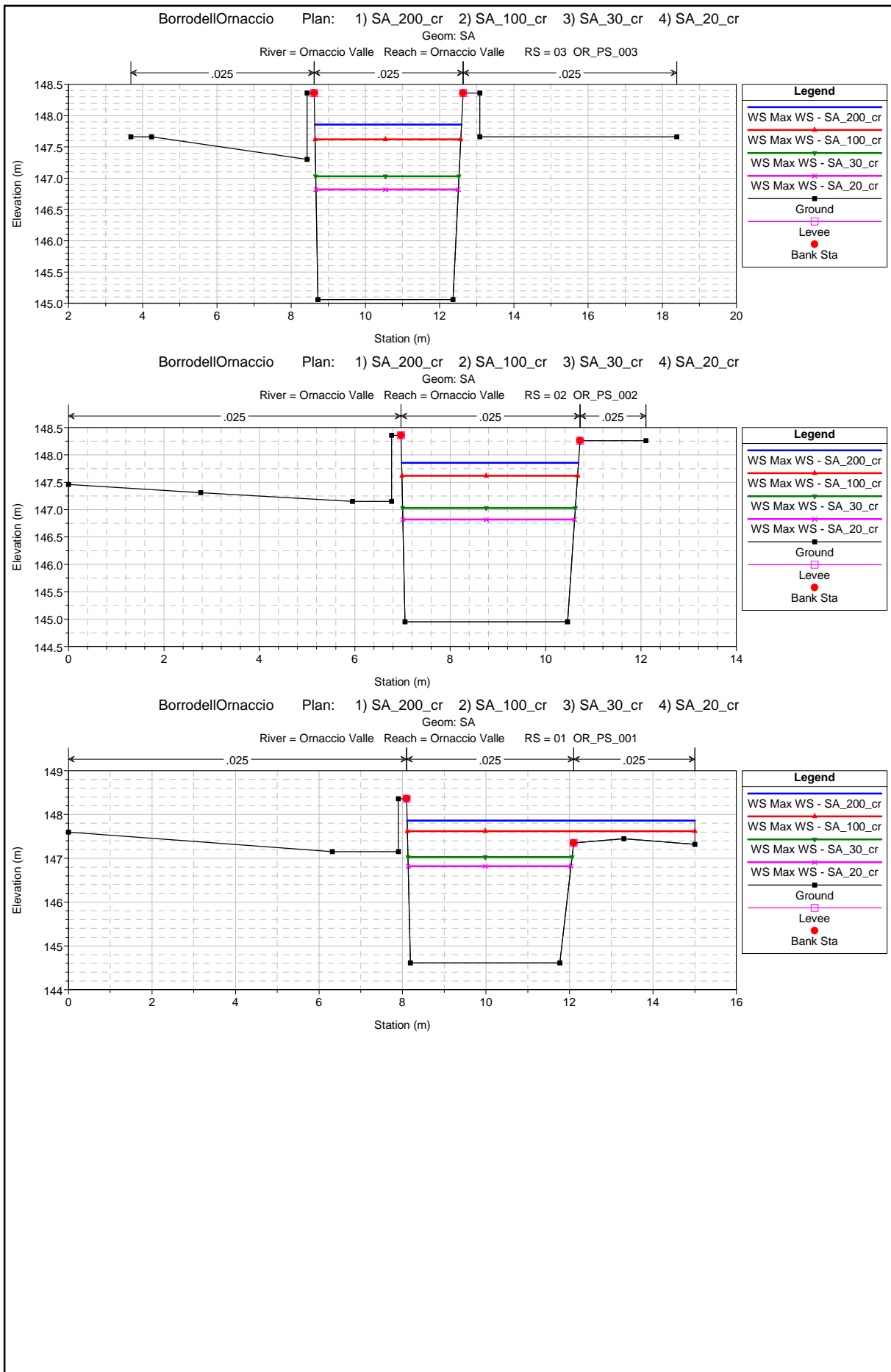












HEC-RAS River: Ornaccio Valle Reach: Ornaccio Valle Profile: Max WS

Reach	River Sta	Profile	Plan	Q Total (m3/s)	Min Ch El (m)	W.S. Elev (m)	Crit W.S. (m)	E.G. Elev (m)	E.G. Slope (m/m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Froude #	Chl
Ornaccio Valle	12.3	Max WS	SA_200_cr	1.00	146.44	148.00		148.01	0.000014	0.14	7.01	4.51	0.14	0.04
Ornaccio Valle	12.3	Max WS	SA_100_cr	1.00	146.44	147.69		147.69	0.000027	0.18	5.60	4.50	0.18	0.05
Ornaccio Valle	12.3	Max WS	SA_30_cr	1.00	146.44	147.16		147.17	0.000135	0.31	3.22	4.48	0.31	0.12
Ornaccio Valle	12.3	Max WS	SA_20_cr	1.00	146.44	147.12		147.13	0.000159	0.33	3.05	4.47	0.33	0.13
Ornaccio Valle	12.25	Max WS	SA_200_cr	1.00	146.44	148.00		148.01	0.000014	0.14	7.01	4.51	0.14	0.04
Ornaccio Valle	12.25	Max WS	SA_100_cr	1.00	146.44	147.69		147.69	0.000027	0.18	5.60	4.50	0.18	0.05
Ornaccio Valle	12.25	Max WS	SA_30_cr	1.00	146.44	147.16		147.17	0.000135	0.31	3.22	4.48	0.31	0.12
Ornaccio Valle	12.25	Max WS	SA_20_cr	1.00	146.44	147.12		147.13	0.000159	0.33	3.05	4.47	0.33	0.13
Ornaccio Valle	12.2	Max WS	SA_200_cr	5.05	146.80	147.91		147.97	0.001084	1.07	4.72	4.27	1.07	0.32
Ornaccio Valle	12.2	Max WS	SA_100_cr	2.96	146.80	147.64		147.68	0.000845	0.83	3.57	4.26	0.83	0.29
Ornaccio Valle	12.2	Max WS	SA_30_cr	2.93	146.80	147.15	147.17	147.35	0.012410	1.99	1.47	4.24	1.99	1.08
Ornaccio Valle	12.2	Max WS	SA_20_cr	2.55	146.80	147.11	147.13	147.30	0.013519	1.95	1.31	4.24	1.95	1.12
Ornaccio Valle	12.1	Max WS	SA_200_cr	5.05	146.74	147.89		147.97	0.002157	1.27	3.98	4.79	1.27	0.44
Ornaccio Valle	12.1	Max WS	SA_100_cr	2.96	146.74	147.62		147.67	0.001224	0.98	3.03	3.43	0.98	0.33
Ornaccio Valle	12.1	Max WS	SA_30_cr	2.93	146.74	147.12	147.16	147.38	0.015149	2.26	1.30	3.42	2.26	1.17
Ornaccio Valle	12.1	Max WS	SA_20_cr	2.55	146.74	147.08	147.12	147.33	0.016116	2.20	1.16	3.42	2.20	1.20
Ornaccio Valle	12	Max WS	SA_200_cr	5.05	146.65	147.91		147.96	0.001144	1.05	4.79	4.56	1.05	0.33
Ornaccio Valle	12	Max WS	SA_100_cr	2.96	146.65	147.64		147.67	0.000947	0.83	3.56	4.53	0.83	0.30
Ornaccio Valle	12	Max WS	SA_30_cr	2.61	146.65	147.09		147.28	0.009339	1.90	1.37	3.12	1.90	0.91
Ornaccio Valle	12	Max WS	SA_20_cr	2.55	146.65	147.05	147.06	147.27	0.011892	2.04	1.25	3.11	2.04	1.03
Ornaccio Valle	11.1	Max WS	SA_200_cr	5.05	146.48	147.93		147.96	0.000463	0.79	6.40	4.44	0.79	0.21
Ornaccio Valle	11.1	Max WS	SA_100_cr	2.96	146.48	147.65		147.67	0.000291	0.57	5.17	4.43	0.57	0.17
Ornaccio Valle	11.1	Max WS	SA_30_cr	2.93	146.48	147.11		147.17	0.001762	1.05	2.79	4.41	1.05	0.42
Ornaccio Valle	11.1	Max WS	SA_20_cr	2.55	146.48	147.08		147.12	0.001626	0.97	2.62	4.41	0.97	0.40
Ornaccio Valle	11	Max WS	SA_200_cr	5.05	146.37	147.93	146.89	147.96	0.000378	0.74	6.87	4.44	0.74	0.19
Ornaccio Valle	11	Max WS	SA_100_cr	2.96	146.37	147.65	146.73	147.67	0.000227	0.53	5.64	4.43	0.53	0.15
Ornaccio Valle	11	Max WS	SA_30_cr	2.93	146.37	147.13	146.73	147.17	0.001050	0.88	3.31	4.40	0.88	0.33
Ornaccio Valle	11	Max WS	SA_20_cr	2.55	146.37	147.09	146.70	147.12	0.000941	0.82	3.13	4.39	0.82	0.31
Ornaccio Valle	10.5			Bridge										
Ornaccio Valle	10	Max WS	SA_200_cr	5.05	146.34	147.92		147.95	0.000479	0.82	6.20	4.78	0.82	0.23

HEC-RAS River: Ornaccio Valle Reach: Ornaccio Valle Profile: Max WS (Continued)

Reach	River Sta	Profile	Plan	Q Total (m3/s)	Min Ch El (m)	W.S. Elev (m)	Crit W.S. (m)	E.G. Elev (m)	E.G. Slope (m/m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Froude # Chl
Ornaccio Valle	10	Max WS	SA_100_cr	2.96	146.34	147.65		147.67	0.000306	0.60	4.94	4.49	0.18
Ornaccio Valle	10	Max WS	SA_30_cr	2.93	146.34	147.09		147.15	0.001847	1.13	2.59	3.88	0.44
Ornaccio Valle	10	Max WS	SA_20_cr	2.55	146.34	147.05		147.11	0.001638	1.04	2.46	3.84	0.41
Ornaccio Valle	09.1	Max WS	SA_200_cr	5.05	146.28	147.89		147.95	0.000912	1.04	4.84	3.77	0.29
Ornaccio Valle	09.1	Max WS	SA_100_cr	2.96	146.28	147.63		147.66	0.000569	0.76	3.88	3.58	0.23
Ornaccio Valle	09.1	Max WS	SA_30_cr	1.00	146.28	147.03		147.05	0.000438	0.52	1.93	2.95	0.20
Ornaccio Valle	09.1	Max WS	SA_20_cr	2.55	146.28	146.98		147.09	0.003618	1.44	1.78	2.90	0.58
Ornaccio Valle	09	Max WS	SA_200_cr	5.05	146.26	147.82	147.10	147.94	0.002630	1.52	3.32	2.19	0.39
Ornaccio Valle	09	Max WS	SA_100_cr	2.96	146.26	147.60	146.85	147.66	0.001342	1.04	2.84	2.17	0.29
Ornaccio Valle	09	Max WS	SA_30_cr	0.99	146.26	147.02	146.55	147.04	0.000705	0.62	1.60	2.13	0.23
Ornaccio Valle	09	Max WS	SA_20_cr	2.55	146.26	146.85	146.80	147.07	0.009778	2.07	1.23	2.12	0.87
Ornaccio Valle	08.5			Bridge									
Ornaccio Valle	08	Max WS	SA_200_cr	5.05	146.22	147.82		147.92	0.002030	1.38	3.65	2.34	0.35
Ornaccio Valle	08	Max WS	SA_100_cr	2.96	146.22	147.60		147.65	0.001033	0.94	3.13	2.32	0.26
Ornaccio Valle	08	Max WS	SA_30_cr	0.99	146.22	147.02		147.04	0.000515	0.55	1.81	2.27	0.20
Ornaccio Valle	08	Max WS	SA_20_cr	2.01	146.22	146.81		146.93	0.005077	1.52	1.32	2.26	0.63
Ornaccio Valle	07	Max WS	SA_200_cr	5.05	146.21	147.85	146.87	147.90	0.000867	1.01	4.99	3.11	0.25
Ornaccio Valle	07	Max WS	SA_100_cr	2.96	146.21	147.61	146.67	147.64	0.000454	0.69	4.26	3.09	0.19
Ornaccio Valle	07	Max WS	SA_30_cr	0.99	146.21	147.03	146.43	147.04	0.000236	0.40	2.46	3.04	0.14
Ornaccio Valle	07	Max WS	SA_20_cr	1.00	146.21	146.81	146.43	146.83	0.000577	0.55	1.81	3.03	0.23
Ornaccio Valle	06.5			Bridge									
Ornaccio Valle	06	Max WS	SA_200_cr	5.05	145.61	147.86		147.88	0.000299	0.68	7.46	3.44	0.15
Ornaccio Valle	06	Max WS	SA_100_cr	2.95	145.61	147.62		147.63	0.000138	0.44	6.64	3.42	0.10
Ornaccio Valle	06	Max WS	SA_30_cr	0.98	145.61	147.03		147.03	0.000039	0.21	4.65	3.35	0.06
Ornaccio Valle	06	Max WS	SA_20_cr	0.98	145.61	146.82		146.82	0.000062	0.25	3.95	3.33	0.07
Ornaccio Valle	05.9	Max WS	SA_200_cr	5.05	145.20	147.86		147.88	0.000199	0.58	8.73	3.47	0.12
Ornaccio Valle	05.9	Max WS	SA_100_cr	2.95	145.20	147.62		147.63	0.000087	0.37	7.91	3.45	0.08
Ornaccio Valle	05.9	Max WS	SA_30_cr	0.98	145.20	147.03		147.03	0.000021	0.17	5.89	3.36	0.04
Ornaccio Valle	05.9	Max WS	SA_20_cr	0.98	145.20	146.82		146.82	0.000029	0.19	5.19	3.33	0.05

HEC-RAS River: Ornaccio Valle Reach: Ornaccio Valle Profile: Max WS (Continued)

Reach	River Sta	Profile	Plan	Q Total (m3/s)	Min Ch El (m)	W.S. Elev (m)	Crit W.S. (m)	E.G. Elev (m)	E.G. Slope (m/m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Froude #	Chl
Ornaccio Valle	05	Max WS	SA_200_cr	5.02	145.16	147.85	145.87	147.87	0.000308	0.67	7.50	2.92	0.13	
Ornaccio Valle	05	Max WS	SA_100_cr	2.95	145.16	147.62	145.66	147.63	0.000135	0.43	6.81	2.90	0.09	
Ornaccio Valle	05	Max WS	SA_30_cr	0.97	145.16	147.03	145.40	147.03	0.000030	0.19	5.13	2.84	0.05	
Ornaccio Valle	05	Max WS	SA_20_cr	0.98	145.16	146.82	145.40	146.82	0.000042	0.22	4.53	2.82	0.05	
Ornaccio Valle	04.5			Bridge										
Ornaccio Valle	04	Max WS	SA_200_cr	5.02	145.15	147.85	147.85	147.87	0.000253	0.62	8.03	3.11	0.12	
Ornaccio Valle	04	Max WS	SA_100_cr	2.95	145.15	147.62	145.66	147.63	0.000111	0.40	7.31	3.09	0.08	
Ornaccio Valle	04	Max WS	SA_30_cr	0.97	145.15	147.03	145.40	147.03	0.000025	0.18	5.51	3.03	0.04	
Ornaccio Valle	04	Max WS	SA_20_cr	0.98	145.15	146.82	145.40	146.82	0.000034	0.20	4.88	3.01	0.05	
Ornaccio Valle	03	Max WS	SA_200_cr	5.05	145.06	147.86	147.86	147.87	0.000117	0.48	10.62	3.95	0.09	
Ornaccio Valle	03	Max WS	SA_100_cr	2.95	145.06	147.62	145.66	147.62	0.000051	0.30	9.68	3.93	0.06	
Ornaccio Valle	03	Max WS	SA_30_cr	0.97	145.06	147.03	145.40	147.03	0.000011	0.13	7.39	3.86	0.03	
Ornaccio Valle	03	Max WS	SA_20_cr	0.97	145.06	146.82	145.40	146.82	0.000015	0.15	6.58	3.84	0.04	
Ornaccio Valle	02	Max WS	SA_200_cr	5.02	144.95	147.86	147.86	147.87	0.000126	0.49	10.34	3.71	0.09	
Ornaccio Valle	02	Max WS	SA_100_cr	2.95	144.95	147.62	145.66	147.62	0.000055	0.31	9.46	3.68	0.06	
Ornaccio Valle	02	Max WS	SA_30_cr	0.97	144.95	147.03	145.40	147.03	0.000012	0.13	7.31	3.62	0.03	
Ornaccio Valle	02	Max WS	SA_20_cr	0.97	144.95	146.82	145.40	146.82	0.000016	0.15	6.55	3.60	0.04	
Ornaccio Valle	01	Max WS	SA_200_cr	5.01	144.61	147.86	145.19	147.87	0.000066	0.39	13.74	6.89	0.07	
Ornaccio Valle	01	Max WS	SA_100_cr	2.93	144.61	147.62	145.02	147.62	0.000030	0.25	12.09	6.88	0.05	
Ornaccio Valle	01	Max WS	SA_30_cr	0.97	144.61	147.03	144.81	147.03	0.000006	0.11	9.09	3.93	0.02	
Ornaccio Valle	01	Max WS	SA_20_cr	0.97	144.61	146.82	144.81	146.82	0.000008	0.12	8.26	3.90	0.03	

HEC-RAS River: Ornaccio Reach: Ornaccio Profile: Max WS

Reach	River Sta	Profile	Plan	Q Total (m3/s)	Min Ch El (m)	W.S. Elev (m)	Crit W.S. (m)	E.G. Elev (m)	E.G. Slope (m/m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Froude # Chl
Ornaccio	62	Max WS	SA_200_cr	22.67	153.02	154.77	154.93	155.37	0.011503	3.44	6.58	5.52	1.01
Ornaccio	62	Max WS	SA_100_cr	19.40	153.02	154.64	154.63	155.19	0.011381	3.30	5.89	5.26	0.99
Ornaccio	62	Max WS	SA_30_cr	14.89	153.02	154.43	154.42	154.92	0.011503	3.09	4.82	4.84	0.99
Ornaccio	62	Max WS	SA_20_cr	13.62	153.02	154.37	154.35	154.83	0.011499	3.02	4.51	4.71	0.98
Ornaccio	61	Max WS	SA_200_cr	22.66	152.92	154.67	154.88	155.30	0.012053	3.51	6.45	5.35	1.02
Ornaccio	61	Max WS	SA_100_cr	19.40	152.92	154.54	154.55	155.12	0.011915	3.36	5.77	5.10	1.01
Ornaccio	61	Max WS	SA_30_cr	14.89	152.92	154.33	154.33	154.84	0.011995	3.15	4.73	4.69	1.00
Ornaccio	61	Max WS	SA_20_cr	13.62	152.92	154.27	154.27	154.75	0.011988	3.08	4.43	4.57	1.00
Ornaccio	60	Max WS	SA_200_cr	22.65	152.71	154.49	154.60	155.16	0.012948	3.65	6.25	6.26	1.04
Ornaccio	60	Max WS	SA_100_cr	19.39	152.71	154.36	154.38	154.97	0.012867	3.48	5.57	4.76	1.03
Ornaccio	60	Max WS	SA_30_cr	14.89	152.71	154.15	154.16	154.68	0.012674	3.24	4.60	4.41	1.01
Ornaccio	60	Max WS	SA_20_cr	13.61	152.71	154.08	154.09	154.59	0.012564	3.15	4.32	4.30	1.00
Ornaccio	59	Max WS	SA_200_cr	22.65	152.71	154.45	154.60	155.17	0.014095	3.76	6.04	5.90	1.08
Ornaccio	59	Max WS	SA_100_cr	19.39	152.71	154.32	154.38	154.98	0.013925	3.59	5.41	4.71	1.07
Ornaccio	59	Max WS	SA_30_cr	14.89	152.71	154.11	154.15	154.68	0.013835	3.34	4.46	4.35	1.05
Ornaccio	59	Max WS	SA_20_cr	13.61	152.71	154.05	154.09	154.59	0.013764	3.26	4.18	4.24	1.05
Ornaccio	58	Max WS	SA_200_cr	22.64	152.59	154.32	154.54	154.97	0.012628	3.57	6.33	5.31	1.04
Ornaccio	58	Max WS	SA_100_cr	19.38	152.59	154.19	154.22	154.79	0.012428	3.41	5.68	5.07	1.03
Ornaccio	58	Max WS	SA_30_cr	14.89	152.59	153.98	154.00	154.50	0.012522	3.20	4.66	4.67	1.02
Ornaccio	58	Max WS	SA_20_cr	13.61	152.59	153.92	153.93	154.42	0.012497	3.12	4.36	4.55	1.02
Ornaccio	57	Max WS	SA_200_cr	22.64	152.51	154.24	154.29	154.88	0.012648	3.55	6.37	5.46	1.05
Ornaccio	57	Max WS	SA_100_cr	19.38	152.51	154.11	154.14	154.70	0.012384	3.40	5.70	5.16	1.03
Ornaccio	57	Max WS	SA_30_cr	14.89	152.51	153.90	153.92	154.42	0.012409	3.19	4.67	4.70	1.02
Ornaccio	57	Max WS	SA_20_cr	13.61	152.51	153.84	153.85	154.33	0.012389	3.11	4.38	4.58	1.01
Ornaccio	56	Max WS	SA_200_cr	22.62	152.22	153.94	153.97	154.57	0.012154	3.51	6.44	5.48	1.03
Ornaccio	56	Max WS	SA_100_cr	19.36	152.22	153.82	153.83	154.39	0.011866	3.34	5.79	5.23	1.01
Ornaccio	56	Max WS	SA_30_cr	14.89	152.22	153.61	153.62	154.11	0.012130	3.15	4.73	4.80	1.01
Ornaccio	56	Max WS	SA_20_cr	13.61	152.22	153.54	153.55	154.03	0.012176	3.08	4.42	4.67	1.01
Ornaccio	55	Max WS	SA_200_cr	22.59	151.97	153.72	153.73	154.32	0.011455	3.44	6.57	5.50	1.00
Ornaccio	55	Max WS	SA_100_cr	19.36	151.97	153.60	153.59	154.15	0.011234	3.28	5.90	5.25	0.99
Ornaccio	55	Max WS	SA_30_cr	14.88	151.97	153.38	153.37	153.87	0.011512	3.09	4.81	4.82	0.99

HEC-RAS River: Ornaccio Reach: Ornaccio Profile: Max WS (Continued)

Reach	River Sta	Profile	Plan	Q Total (m3/s)	Min Ch El (m)	W.S. Elev (m)	Crit W.S. (m)	E.G. Elev (m)	E.G. Slope (m/m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Froude # Chl
Ornaccio	55	Max WS	SA_20_cr	13.60	151.97	153.32	153.31	153.78	0.011570	3.03	4.50	4.69	0.99
Ornaccio	54	Max WS	SA_200_cr	22.57	151.74	153.50	153.50	154.09	0.011314	3.42	6.60	5.51	1.00
Ornaccio	54	Max WS	SA_100_cr	19.36	151.74	153.37	153.36	153.92	0.011149	3.27	5.92	5.26	0.98
Ornaccio	54	Max WS	SA_30_cr	14.88	151.74	153.15	153.14	153.64	0.011644	3.10	4.79	4.81	0.99
Ornaccio	54	Max WS	SA_20_cr	13.60	151.74	153.08	153.07	153.55	0.011821	3.05	4.46	4.67	1.00
Ornaccio	53	Max WS	SA_200_cr	22.56	151.55	153.33	153.30	153.90	0.010651	3.34	6.75	5.58	0.97
Ornaccio	53	Max WS	SA_100_cr	19.36	151.55	153.21	153.17	153.73	0.010264	3.17	6.11	5.34	0.95
Ornaccio	53	Max WS	SA_30_cr	14.88	151.55	152.98	152.95	153.45	0.010934	3.03	4.91	4.87	0.96
Ornaccio	53	Max WS	SA_20_cr	13.60	151.55	152.90	152.88	153.36	0.011204	2.99	4.55	4.72	0.97
Ornaccio	52.99			Lat Struct									
Ornaccio	52	Max WS	SA_200_cr	22.36	151.26	153.14	153.14	153.61	0.008344	3.07	7.30	5.72	0.87
Ornaccio	52	Max WS	SA_100_cr	19.35	151.26	153.04	153.04	153.46	0.007800	2.86	6.76	5.59	0.83
Ornaccio	52	Max WS	SA_30_cr	14.87	151.26	152.77	152.77	153.17	0.008889	2.81	5.30	5.04	0.87
Ornaccio	52	Max WS	SA_20_cr	13.60	151.26	152.68	152.68	153.08	0.009399	2.80	4.86	4.86	0.89
Ornaccio	51.99			Lat Struct									
Ornaccio	51.5	Max WS	SA_200_cr	21.47	151.06	153.23	153.23	153.51	0.004212	2.36	9.12	6.00	0.61
Ornaccio	51.5	Max WS	SA_100_cr	19.21	151.06	153.10	153.10	153.37	0.004349	2.30	8.33	6.00	0.62
Ornaccio	51.5	Max WS	SA_30_cr	14.87	151.06	152.79	152.79	153.05	0.005101	2.28	6.52	5.54	0.67
Ornaccio	51.5	Max WS	SA_20_cr	13.60	151.06	152.68	152.68	152.95	0.005450	2.29	5.95	5.32	0.69
Ornaccio	51	Max WS	SA_200_cr	21.16	150.99	152.87	152.71	153.58	0.008632	3.75	5.65	3.01	0.87
Ornaccio	51	Max WS	SA_100_cr	19.17	150.99	152.75	152.59	153.42	0.008417	3.63	5.29	3.01	0.87
Ornaccio	51	Max WS	SA_30_cr	14.87	150.99	152.50	152.34	153.05	0.007573	3.28	4.54	3.01	0.85
Ornaccio	51	Max WS	SA_20_cr	13.60	150.99	152.42	152.27	152.93	0.007335	3.16	4.30	3.01	0.85
Ornaccio	50.5			Bridge									
Ornaccio	50	Max WS	SA_200_cr	21.15	150.94	152.81	152.81	153.53	0.008664	3.75	5.64	3.01	0.87
Ornaccio	50	Max WS	SA_100_cr	19.17	150.94	152.70	152.70	153.37	0.008359	3.62	5.30	3.01	0.87
Ornaccio	50	Max WS	SA_30_cr	14.87	150.94	152.46	152.46	153.00	0.007364	3.24	4.59	3.01	0.84
Ornaccio	50	Max WS	SA_20_cr	13.60	150.94	152.39	152.39	152.88	0.007069	3.12	4.36	3.01	0.83

HEC-RAS River: Ornaccio Reach: Ornaccio Profile: Max WS (Continued)

Reach	River Sta	Profile	Plan	Q Total (m3/s)	Min Ch El (m)	W.S. Elev (m)	Crit W.S. (m)	E.G. Elev (m)	E.G. Slope (m/m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Froude # Chl
Ornaccio	49.5	Max WS	SA_200_cr	21.15	150.88	152.67		153.46	0.018069	3.92	5.40	3.01	0.93
Ornaccio	49.5	Max WS	SA_100_cr	19.17	150.88	152.56		153.29	0.017510	3.78	5.07	3.01	0.93
Ornaccio	49.5	Max WS	SA_30_cr	14.87	150.88	152.34		152.92	0.015415	3.39	4.39	3.01	0.90
Ornaccio	49.5	Max WS	SA_20_cr	13.59	150.88	152.27		152.81	0.014754	3.26	4.17	3.01	0.88
Ornaccio	49.1	Max WS	SA_200_cr	20.74	150.72	152.54		153.27	0.016895	3.80	5.45	3.01	0.90
Ornaccio	49.1	Max WS	SA_100_cr	19.17	150.72	152.43		153.14	0.016850	3.73	5.14	3.01	0.91
Ornaccio	49.1	Max WS	SA_30_cr	14.87	150.72	152.26		152.79	0.013560	3.23	4.60	3.01	0.83
Ornaccio	49.1	Max WS	SA_20_cr	13.59	150.72	152.20		152.68	0.012522	3.07	4.43	3.01	0.81
Ornaccio	49	Max WS	SA_200_cr	21.18	150.66	152.53		153.08	0.010248	3.28	6.46	4.94	0.91
Ornaccio	49	Max WS	SA_100_cr	19.17	150.66	152.41		152.95	0.010677	3.24	5.91	4.73	0.93
Ornaccio	49	Max WS	SA_30_cr	14.87	150.66	152.20		152.66	0.010357	3.01	4.95	4.40	0.90
Ornaccio	49	Max WS	SA_20_cr	13.59	150.66	152.14		152.57	0.010216	2.92	4.65	4.30	0.90
Ornaccio	48.99			Lat Struct									
Ornaccio	48	Max WS	SA_200_cr	20.83	150.51	152.39		152.81	0.007246	2.84	7.33	5.70	0.80
Ornaccio	48	Max WS	SA_100_cr	19.16	150.51	152.22		152.68	0.008969	3.01	6.37	5.44	0.89
Ornaccio	48	Max WS	SA_30_cr	14.87	150.51	152.00		152.42	0.009254	2.85	5.22	5.00	0.89
Ornaccio	48	Max WS	SA_20_cr	13.59	150.51	151.93		152.33	0.009395	2.80	4.85	4.85	0.89
Ornaccio	47.5	Max WS	SA_200_cr	21.42	150.40	152.42		152.73	0.004731	2.45	8.77	6.83	0.67
Ornaccio	47.5	Max WS	SA_100_cr	19.11	150.40	152.26		152.57	0.005477	2.47	7.73	6.31	0.71
Ornaccio	47.5	Max WS	SA_30_cr	14.87	150.40	152.02		152.31	0.005760	2.36	6.29	5.76	0.72
Ornaccio	47.5	Max WS	SA_20_cr	13.59	150.40	151.94		152.22	0.005880	2.33	5.84	5.57	0.73
Ornaccio	47	Max WS	SA_200_cr	21.55	150.34	152.18	152.10	152.99	0.010057	3.99	5.41	2.94	0.94
Ornaccio	47	Max WS	SA_100_cr	18.95	150.34	152.03	151.96	152.77	0.009682	3.81	4.97	2.94	0.94
Ornaccio	47	Max WS	SA_30_cr	14.87	150.34	151.79	151.72	152.41	0.009059	3.50	4.24	2.94	0.93
Ornaccio	47	Max WS	SA_20_cr	13.59	150.34	151.71	151.64	152.29	0.008735	3.38	4.02	2.94	0.92
Ornaccio	46.5		Bridge										
Ornaccio	46	Max WS	SA_200_cr	21.54	150.31	152.12	152.08	152.97	0.010699	4.08	5.28	2.92	0.97
Ornaccio	46	Max WS	SA_100_cr	18.94	150.31	151.99	151.94	152.75	0.010109	3.87	4.89	2.92	0.96
Ornaccio	46	Max WS	SA_30_cr	14.87	150.31	151.74	151.70	152.39	0.009485	3.56	4.17	2.92	0.95
Ornaccio	46	Max WS	SA_20_cr	13.59	150.31	151.67	151.62	152.27	0.009144	3.44	3.95	2.92	0.94

HEC-RAS River: Ornaccio Reach: Ornaccio Profile: Max WS (Continued)

Reach	River Sta	Profile	Plan	Q Total (m3/s)	Min Ch El (m)	W.S. Elev (m)	Crit W.S. (m)	E.G. Elev (m)	E.G. Slope (m/m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Froude # Chl
Ornaccio	45.5	Max WS	SA_200_cr	21.59	150.25	152.05		152.56	0.009496	3.17	6.82	5.59	0.92
Ornaccio	45.5	Max WS	SA_100_cr	19.17	150.25	151.96		152.42	0.009151	3.03	6.33	5.41	0.89
Ornaccio	45.5	Max WS	SA_30_cr	14.87	150.25	151.74		152.16	0.009367	2.86	5.19	4.98	0.89
Ornaccio	45.5	Max WS	SA_20_cr	13.59	150.25	151.66		152.07	0.009545	2.82	4.82	4.83	0.90
Ornaccio	45.49			Lat Struct									
Ornaccio	45	Max WS	SA_200_cr	21.57	150.12	152.00		152.45	0.007963	2.97	7.26	5.66	0.84
Ornaccio	45	Max WS	SA_100_cr	19.17	150.12	151.92		152.32	0.007463	2.81	6.82	5.58	0.81
Ornaccio	45	Max WS	SA_30_cr	14.86	150.12	151.70		152.05	0.007497	2.64	5.64	5.14	0.80
Ornaccio	45	Max WS	SA_20_cr	13.59	150.12	151.62		151.96	0.007657	2.60	5.23	4.98	0.81
Ornaccio	44	Max WS	SA_200_cr	21.19	149.91	151.75	151.74	152.31	0.011066	3.32	6.38	5.50	0.98
Ornaccio	44	Max WS	SA_100_cr	19.17	149.91	151.67	151.65	152.20	0.011027	3.23	5.94	5.36	0.98
Ornaccio	44	Max WS	SA_30_cr	14.86	149.91	151.45	151.44	151.94	0.011525	3.08	4.83	4.87	0.99
Ornaccio	44	Max WS	SA_20_cr	13.59	149.91	151.38	151.37	151.85	0.011869	3.04	4.46	4.70	1.00
Ornaccio	43	Max WS	SA_200_cr	20.95	149.72	151.57		152.01	0.007830	2.93	7.16	5.69	0.83
Ornaccio	43	Max WS	SA_100_cr	19.16	149.72	151.49		151.91	0.007786	2.85	6.72	5.59	0.83
Ornaccio	43	Max WS	SA_30_cr	14.86	149.72	151.25		151.63	0.008251	2.73	5.45	5.10	0.84
Ornaccio	43	Max WS	SA_20_cr	13.59	149.72	151.16		151.54	0.008805	2.73	4.98	4.91	0.87
Ornaccio	42.5	Max WS	SA_200_cr	20.71	149.59	151.60		151.93	0.005210	2.52	8.22	6.12	0.69
Ornaccio	42.5	Max WS	SA_100_cr	19.16	149.59	151.50		151.82	0.005647	2.53	7.59	5.95	0.71
Ornaccio	42.5	Max WS	SA_30_cr	14.86	149.59	151.25		151.55	0.005919	2.41	6.17	5.43	0.72
Ornaccio	42.5	Max WS	SA_20_cr	13.58	149.59	151.14		151.44	0.006412	2.42	5.60	5.21	0.75
Ornaccio	42	Max WS	SA_200_cr	20.67	149.52	151.30	151.21	152.06	0.009477	3.86	5.35	3.00	0.92
Ornaccio	42	Max WS	SA_100_cr	19.16	149.52	151.21	151.13	151.94	0.009324	3.77	5.08	3.00	0.92
Ornaccio	42	Max WS	SA_30_cr	14.86	149.52	150.99	150.88	151.57	0.008213	3.38	4.40	3.00	0.89
Ornaccio	42	Max WS	SA_20_cr	13.58	149.52	150.90	150.80	151.45	0.008043	3.27	4.15	3.00	0.89
Ornaccio	41.5			Bridge									
Ornaccio	41	Max WS	SA_200_cr	20.67	149.44	151.19	151.13	151.98	0.010018	3.94	5.24	3.00	0.95
Ornaccio	41	Max WS	SA_100_cr	19.16	149.44	151.12		151.86	0.009554	3.80	5.04	3.00	0.94
Ornaccio	41	Max WS	SA_30_cr	14.86	149.44	150.91		151.49	0.008224	3.38	4.40	3.00	0.89

HEC-RAS River: Ornaccio Reach: Ornaccio Profile: Max WS (Continued)

Reach	River Sta	Profile	Plan	Q Total (m3/s)	Min Ch El (m)	W.S. Elev (m)	Crit W.S. (m)	E.G. Elev (m)	E.G. Slope (m/m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Froude # Chl
Ornaccio	41	Max WS	SA_20_cr	13.58	149.44	150.83		151.37	0.008012	3.27	4.15	3.00	0.89
Ornaccio	40.5	Max WS	SA_200_cr	20.67	149.38	151.20		151.67	0.008549	3.02	6.85	5.52	0.87
Ornaccio	40.5	Max WS	SA_100_cr	19.16	149.38	151.17		151.59	0.007906	2.88	6.66	5.45	0.83
Ornaccio	40.5	Max WS	SA_30_cr	14.85	149.38	150.97		151.33	0.007507	2.64	5.62	5.07	0.80
Ornaccio	40.5	Max WS	SA_20_cr	13.58	149.38	150.85		151.22	0.008405	2.69	5.04	4.85	0.84
Ornaccio	40.49			Lat Struct									
Ornaccio	40.48			Lat Struct									
Ornaccio	40	Max WS	SA_200_cr	20.67	149.24	151.21		151.57	0.006058	2.65	7.79	5.87	0.74
Ornaccio	40	Max WS	SA_100_cr	19.15	149.24	151.18		151.50	0.005474	2.50	7.65	5.84	0.70
Ornaccio	40	Max WS	SA_30_cr	14.85	149.24	150.98		151.25	0.005067	2.28	6.52	5.48	0.67
Ornaccio	40	Max WS	SA_20_cr	13.57	149.24	150.86		151.13	0.005688	2.32	5.84	5.22	0.70
Ornaccio	39	Max WS	SA_200_cr	20.10	148.99	151.20		151.44	0.003581	2.18	9.24	6.10	0.56
Ornaccio	39	Max WS	SA_100_cr	18.78	148.99	151.17		151.39	0.003319	2.08	9.04	6.10	0.54
Ornaccio	39	Max WS	SA_30_cr	14.85	148.99	150.95		151.13	0.003233	1.93	7.70	5.88	0.54
Ornaccio	39	Max WS	SA_20_cr	13.57	148.99	150.81		151.00	0.003607	1.96	6.91	5.60	0.56
Ornaccio	38	Max WS	SA_200_cr	18.99	148.81	150.87		151.39	0.007865	3.19	5.95	3.08	0.73
Ornaccio	38	Max WS	SA_100_cr	18.02	148.81	150.85		151.33	0.007296	3.06	5.88	3.08	0.71
Ornaccio	38	Max WS	SA_30_cr	14.85	148.81	150.64		151.05	0.006702	2.83	5.24	3.08	0.69
Ornaccio	38	Max WS	SA_20_cr	13.57	148.81	150.52		150.91	0.006859	2.80	4.85	3.07	0.71
Ornaccio	37	Max WS	SA_200_cr	18.80	148.71	150.75		151.31	0.008892	3.31	5.67	2.92	0.76
Ornaccio	37	Max WS	SA_100_cr	17.92	148.71	150.73		151.25	0.008349	3.20	5.60	2.92	0.74
Ornaccio	37	Max WS	SA_30_cr	14.84	148.71	150.53		150.97	0.007612	2.96	5.02	2.91	0.72
Ornaccio	37	Max WS	SA_20_cr	13.57	148.71	150.40		150.83	0.007756	2.91	4.66	2.91	0.73
Ornaccio	36	Max WS	SA_200_cr	18.68	148.68	150.71		151.29	0.009511	3.38	5.53	2.83	0.77
Ornaccio	36	Max WS	SA_100_cr	17.85	148.68	150.68		151.23	0.008997	3.27	5.46	2.83	0.75
Ornaccio	36	Max WS	SA_30_cr	14.84	148.68	150.48		150.95	0.008335	3.04	4.88	2.83	0.74
Ornaccio	36	Max WS	SA_20_cr	13.57	148.68	150.35		150.81	0.008476	3.00	4.53	2.83	0.76
Ornaccio	35.9	Max WS	SA_200_cr	18.58	148.68	150.58		151.25	0.011134	3.61	5.15	2.71	0.84
Ornaccio	35.9	Max WS	SA_100_cr	17.78	148.68	150.56		151.18	0.010567	3.50	5.08	2.71	0.82

HEC-RAS River: Ornaccio Reach: Ornaccio Profile: Max WS (Continued)

Reach	River Sta	Profile	Plan	Q Total (m3/s)	Min Ch El (m)	W.S. Elev (m)	Crit W.S. (m)	E.G. Elev (m)	E.G. Slope (m/m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Froude # Chl
Ornaccio	35.9	Max WS	SA_30_cr	14.84	148.68	150.36		150.90	0.009844	3.27	4.53	2.71	0.81
Ornaccio	35.9	Max WS	SA_20_cr	13.57	148.68	150.24		150.77	0.009999	3.22	4.21	2.71	0.83
Ornaccio	35	Max WS	SA_200_cr	18.58	148.57	150.64		151.17	0.008363	3.23	5.76	2.92	0.73
Ornaccio	35	Max WS	SA_100_cr	17.78	148.57	150.61		151.11	0.007916	3.13	5.69	2.92	0.72
Ornaccio	35	Max WS	SA_30_cr	14.84	148.57	150.40		150.84	0.007406	2.92	5.08	2.92	0.71
Ornaccio	35	Max WS	SA_20_cr	13.57	148.57	150.27		150.70	0.007586	2.89	4.70	2.92	0.73
Ornaccio	34	Max WS	SA_200_cr	18.57	148.57	150.62		151.16	0.008533	3.25	5.71	2.92	0.74
Ornaccio	34	Max WS	SA_100_cr	17.78	148.57	150.60		151.10	0.008084	3.15	5.64	2.92	0.72
Ornaccio	34	Max WS	SA_30_cr	14.84	148.57	150.39		150.83	0.007568	2.95	5.04	2.92	0.72
Ornaccio	34	Max WS	SA_20_cr	13.57	148.57	150.26		150.69	0.007783	2.92	4.65	2.92	0.74
Ornaccio	33	Max WS	SA_200_cr	18.52	148.42	150.44		151.02	0.009489	3.39	5.47	2.71	0.76
Ornaccio	33	Max WS	SA_100_cr	17.78	148.42	150.42		150.97	0.008889	3.27	5.43	2.71	0.74
Ornaccio	33	Max WS	SA_30_cr	14.84	148.42	150.26		150.71	0.007711	2.98	4.98	2.71	0.70
Ornaccio	33	Max WS	SA_20_cr	13.57	148.42	150.13		150.57	0.007731	2.92	4.64	2.71	0.71
Ornaccio	32	Max WS	SA_200_cr	18.34	148.25	150.31		150.86	0.008831	3.29	5.58	2.71	0.73
Ornaccio	32	Max WS	SA_100_cr	17.66	148.25	150.31		150.82	0.008262	3.18	5.56	2.71	0.71
Ornaccio	32	Max WS	SA_30_cr	14.84	148.25	150.15		150.58	0.007125	2.89	5.14	2.71	0.67
Ornaccio	32	Max WS	SA_20_cr	13.56	148.25	150.03		150.43	0.007078	2.82	4.80	2.71	0.68
Ornaccio	31	Max WS	SA_200_cr	18.04	148.16	150.23		150.79	0.009172	3.34	5.41	2.72	0.76
Ornaccio	31	Max WS	SA_100_cr	17.45	148.16	150.21		150.75	0.008743	3.25	5.37	2.72	0.74
Ornaccio	31	Max WS	SA_30_cr	14.84	148.16	150.03		150.50	0.008069	3.04	4.88	2.71	0.72
Ornaccio	31	Max WS	SA_20_cr	13.56	148.16	149.90		150.36	0.008110	2.99	4.54	2.69	0.73
Ornaccio	30	Max WS	SA_200_cr	17.99	148.12	150.13		150.75	0.010502	3.50	5.14	2.62	0.80
Ornaccio	30	Max WS	SA_100_cr	17.42	148.12	150.12		150.71	0.010015	3.41	5.11	2.62	0.78
Ornaccio	30	Max WS	SA_30_cr	14.84	148.12	149.95		150.46	0.009144	3.18	4.67	2.61	0.76
Ornaccio	30	Max WS	SA_20_cr	13.56	148.12	149.82		150.32	0.009164	3.12	4.35	2.60	0.77
Ornaccio	29	Max WS	SA_200_cr	17.94	147.99	150.03		150.61	0.009404	3.37	5.33	2.72	0.77
Ornaccio	29	Max WS	SA_100_cr	17.39	147.99	150.02		150.57	0.008919	3.28	5.31	2.72	0.75
Ornaccio	29	Max WS	SA_30_cr	14.84	147.99	149.86		150.33	0.008076	3.04	4.87	2.71	0.72
Ornaccio	29	Max WS	SA_20_cr	13.56	147.99	149.74		150.19	0.008137	2.99	4.53	2.69	0.74

HEC-RAS River: Ornaccio Reach: Ornaccio Profile: Max WS (Continued)

Reach	River Sta	Profile	Plan	Q Total (m3/s)	Min Ch El (m)	W.S. Elev (m)	Crit W.S. (m)	E.G. Elev (m)	E.G. Slope (m/m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Froude # Chl
Ornaccio	28	Max WS	SA_200_cr	17.70	147.87	149.91		150.50	0.009745	3.39	5.23	2.62	0.77
Ornaccio	28	Max WS	SA_100_cr	17.21	147.87	149.91		150.46	0.009279	3.30	5.21	2.62	0.75
Ornaccio	28	Max WS	SA_30_cr	14.84	147.87	149.73		150.22	0.008756	3.13	4.75	2.61	0.74
Ornaccio	28	Max WS	SA_20_cr	13.56	147.87	149.60		150.08	0.008767	3.07	4.42	2.60	0.75
Ornaccio	27	Max WS	SA_200_cr	17.65	147.85	149.90		150.48	0.009611	3.36	5.25	2.62	0.76
Ornaccio	27	Max WS	SA_100_cr	17.18	147.85	149.89		150.44	0.009176	3.29	5.23	2.62	0.74
Ornaccio	27	Max WS	SA_30_cr	14.84	147.85	149.71		150.21	0.008717	3.12	4.75	2.61	0.74
Ornaccio	27	Max WS	SA_20_cr	13.56	147.85	149.59		150.06	0.008721	3.06	4.43	2.60	0.75
Ornaccio	26	Max WS	SA_200_cr	17.48	147.74	149.80		150.38	0.009793	3.37	5.19	2.54	0.75
Ornaccio	26	Max WS	SA_100_cr	17.04	147.74	149.79		150.34	0.009406	3.30	5.17	2.54	0.74
Ornaccio	26	Max WS	SA_30_cr	14.84	147.74	149.58		150.10	0.009343	3.19	4.65	2.54	0.75
Ornaccio	26	Max WS	SA_20_cr	13.56	147.74	149.46		149.96	0.009283	3.12	4.34	2.53	0.76
Ornaccio	25	Max WS	SA_200_cr	16.98	147.69	149.74		150.29	0.009334	3.28	5.17	2.54	0.73
Ornaccio	25	Max WS	SA_100_cr	17.01	147.69	149.73		150.29	0.009483	3.30	5.15	2.54	0.74
Ornaccio	25	Max WS	SA_30_cr	14.84	147.69	149.52		150.05	0.009586	3.23	4.60	2.54	0.76
Ornaccio	25	Max WS	SA_20_cr	13.56	147.69	149.40		149.90	0.009538	3.16	4.30	2.53	0.77
Ornaccio	24	Max WS	SA_200_cr	17.21	147.54	149.60		150.17	0.009657	3.33	5.17	2.51	0.74
Ornaccio	24	Max WS	SA_100_cr	16.89	147.54	149.58		150.14	0.009526	3.30	5.12	2.51	0.74
Ornaccio	24	Max WS	SA_30_cr	14.84	147.54	149.33		149.89	0.010251	3.31	4.49	2.51	0.79
Ornaccio	24	Max WS	SA_20_cr	13.56	147.54	149.21		149.75	0.010183	3.23	4.19	2.51	0.80
Ornaccio	23	Max WS	SA_200_cr	16.53	147.40	149.58		150.03	0.007492	2.99	5.52	2.56	0.65
Ornaccio	23	Max WS	SA_100_cr	16.80	147.40	149.48		149.99	0.008712	3.19	5.26	2.56	0.71
Ornaccio	23	Max WS	SA_30_cr	14.83	147.40	149.17		149.73	0.010228	3.31	4.48	2.55	0.80
Ornaccio	23	Max WS	SA_20_cr	13.56	147.40	149.05		149.59	0.010229	3.25	4.18	2.55	0.81
Ornaccio	22	Max WS	SA_200_cr	16.24	147.19	149.55		149.93	0.006113	2.74	5.92	2.52	0.57
Ornaccio	22	Max WS	SA_100_cr	16.64	147.19	149.27		149.79	0.008743	3.18	5.23	2.52	0.70
Ornaccio	22	Max WS	SA_30_cr	14.83	147.19	148.81		149.49	0.013272	3.66	4.06	2.52	0.92
Ornaccio	22	Max WS	SA_20_cr	13.56	147.19	148.69		149.35	0.013376	3.59	3.77	2.52	0.94
Ornaccio	21	Max WS	SA_200_cr	19.49	146.88	149.31	148.49	149.66	0.003581	2.62	7.44	3.10	0.54
Ornaccio	21	Max WS	SA_100_cr	18.22	146.88	149.21	148.42	149.54	0.003502	2.56	7.12	3.10	0.54
Ornaccio	21	Max WS	SA_30_cr	14.83	146.88	148.88	148.23	149.18	0.003440	2.43	6.10	3.09	0.55

HEC-RAS River: Ornaccio Reach: Ornaccio Profile: Max WS (Continued)

Reach	River Sta	Profile	Plan	Q Total (m3/s)	Min Ch El (m)	W.S. Elev (m)	Crit W.S. (m)	E.G. Elev (m)	E.G. Slope (m/m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Froude # Chl
Ornaccio	21	Max WS	SA_20_cr	13.55	146.88	148.74	148.15	149.03	0.003497	2.40	5.66	3.08	0.56
Ornaccio	20.5		Bridge										
Ornaccio	20	Max WS	SA_200_cr	19.49	146.74	149.07		149.41	0.003301	2.58	7.55	3.46	0.56
Ornaccio	20	Max WS	SA_100_cr	18.22	146.74	149.01		149.32	0.003109	2.48	7.34	3.45	0.54
Ornaccio	20	Max WS	SA_30_cr	14.83	146.74	148.80		149.06	0.002685	2.24	6.62	3.43	0.51
Ornaccio	20	Max WS	SA_20_cr	13.55	146.74	148.71		148.94	0.002555	2.15	6.30	3.41	0.50
Ornaccio	19.98		Lat Struct										
Ornaccio	19	Max WS	SA_200_cr	19.28	146.71	148.99		149.39	0.005540	2.80	6.89	3.05	0.59
Ornaccio	19	Max WS	SA_100_cr	18.12	146.71	148.92		149.30	0.005265	2.71	6.69	3.04	0.58
Ornaccio	19	Max WS	SA_30_cr	14.83	146.71	148.73		149.03	0.004460	2.43	6.11	3.04	0.55
Ornaccio	19	Max WS	SA_20_cr	13.55	146.71	148.65		148.92	0.004172	2.32	5.84	3.04	0.53
Ornaccio	18	Max WS	SA_200_cr	19.28	146.69	148.99		149.37	0.005120	2.73	7.07	3.14	0.58
Ornaccio	18	Max WS	SA_100_cr	18.12	146.69	148.93		149.28	0.004874	2.64	6.87	3.13	0.57
Ornaccio	18	Max WS	SA_30_cr	14.83	146.69	148.73		149.02	0.004147	2.37	6.26	3.12	0.53
Ornaccio	18	Max WS	SA_20_cr	13.55	146.69	148.65		148.91	0.003883	2.26	5.99	3.12	0.52
Ornaccio	17.9	Max WS	SA_200_cr	19.28	146.69	148.95		149.35	0.005364	2.78	6.94	3.14	0.60
Ornaccio	17.9	Max WS	SA_100_cr	18.12	146.69	148.89		149.26	0.005095	2.68	6.75	3.13	0.58
Ornaccio	17.9	Max WS	SA_30_cr	14.83	146.69	148.70		149.00	0.004312	2.41	6.16	3.12	0.55
Ornaccio	17.9	Max WS	SA_20_cr	13.55	146.69	148.62		148.89	0.004033	2.30	5.90	3.12	0.53
Ornaccio	17	Max WS	SA_200_cr	5.01	146.64	148.80		148.83	0.000592	0.86	5.82	2.70	0.19
Ornaccio	17	Max WS	SA_100_cr	18.11	146.64	148.68		149.23	0.008923	3.29	5.51	2.70	0.74
Ornaccio	17	Max WS	SA_30_cr	14.83	146.64	148.55		148.97	0.007070	2.88	5.15	2.70	0.66
Ornaccio	17	Max WS	SA_20_cr	13.54	146.64	148.48		148.86	0.006445	2.72	4.98	2.70	0.64
Ornaccio	16	Max WS	SA_200_cr	5.01	146.63	148.80		148.83	0.000574	0.85	5.89	2.72	0.18
Ornaccio	16	Max WS	SA_100_cr	18.10	146.63	148.66		149.21	0.008862	3.28	5.51	2.72	0.74
Ornaccio	16	Max WS	SA_30_cr	14.83	146.63	148.54		148.95	0.006966	2.86	5.18	2.72	0.66
Ornaccio	16	Max WS	SA_20_cr	13.54	146.63	148.47		148.84	0.006336	2.70	5.01	2.72	0.64
Ornaccio	15.6	Max WS	SA_200_cr	19.28	146.60	148.85		149.23	0.005786	2.75	7.00	3.91	0.66
Ornaccio	15.6	Max WS	SA_100_cr	18.11	146.60	148.79		149.15	0.005539	2.67	6.78	3.82	0.64

HEC-RAS River: Ornaccio Reach: Ornaccio Profile: Max WS (Continued)

Reach	River Sta	Profile	Plan	Q Total (m3/s)	Min Ch El (m)	W.S. Elev (m)	Crit W.S. (m)	E.G. Elev (m)	E.G. Slope (m/m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Froude # Chl
Ornaccio	15.6	Max WS	SA_30_cr	14.83	146.60	148.62		148.92	0.004722	2.41	6.16	3.57	0.59
Ornaccio	15.6	Max WS	SA_20_cr	13.54	146.60	148.54		148.81	0.004022	2.29	5.91	3.08	0.53
Ornaccio	15.5	Max WS	SA_200_cr	19.28	146.60	148.92		149.20	0.003579	2.34	8.23	4.82	0.57
Ornaccio	15.5	Max WS	SA_100_cr	18.11	146.60	148.86		149.12	0.003485	2.29	7.92	4.70	0.56
Ornaccio	15.5	Max WS	SA_30_cr	14.83	146.60	148.67		148.89	0.003136	2.10	7.06	4.34	0.53
Ornaccio	15.5	Max WS	SA_20_cr	13.54	146.60	148.58		148.79	0.002742	2.02	6.71	3.76	0.48
Ornaccio	15	Max WS	SA_200_cr	19.28	146.54	149.03		149.18	0.001644	1.75	11.02	6.70	0.44
Ornaccio	15	Max WS	SA_100_cr	18.11	146.54	148.95		149.10	0.001628	1.72	10.55	6.52	0.43
Ornaccio	15	Max WS	SA_30_cr	14.83	146.54	148.74		148.87	0.001549	1.61	9.22	5.99	0.41
Ornaccio	15	Max WS	SA_20_cr	13.55	146.54	148.65		148.77	0.001512	1.56	8.68	5.77	0.41
Ornaccio	14	Max WS	SA_200_cr	19.27	146.48	148.90		149.15	0.003101	2.22	8.70	4.99	0.54
Ornaccio	14	Max WS	SA_100_cr	18.11	146.48	148.83		149.07	0.003014	2.16	8.38	4.87	0.53
Ornaccio	14	Max WS	SA_30_cr	14.83	146.48	148.64		148.84	0.002692	1.98	7.49	4.52	0.49
Ornaccio	14	Max WS	SA_20_cr	13.55	146.48	148.56		148.74	0.002552	1.90	7.12	4.37	0.48
Ornaccio	13.1	Max WS	SA_200_cr	19.26	146.44	148.87		149.11	0.003024	2.19	8.80	5.11	0.53
Ornaccio	13.1	Max WS	SA_100_cr	18.11	146.44	148.80		149.04	0.002944	2.14	8.48	4.99	0.52
Ornaccio	13.1	Max WS	SA_30_cr	14.83	146.44	148.62		148.81	0.002632	1.96	7.58	4.63	0.49
Ornaccio	13.1	Max WS	SA_20_cr	13.54	146.44	148.54		148.72	0.002492	1.88	7.21	4.47	0.47
Ornaccio	13.01			Lat Struct									
Ornaccio	13	Max WS	SA_200_cr	3.00	146.44	148.82		148.84	0.000206	0.50	5.97	2.51	0.10
Ornaccio	13	Max WS	SA_100_cr	16.70	146.44	148.59		149.08	0.008253	3.11	5.37	2.51	0.68
Ornaccio	13	Max WS	SA_30_cr	13.84	146.44	148.45		148.83	0.006693	2.75	5.03	2.51	0.62
Ornaccio	13	Max WS	SA_20_cr	12.75	146.44	148.38		148.73	0.006182	2.62	4.86	2.51	0.60
Ornaccio	12	Max WS	SA_200_cr	16.14	146.38	148.91		149.18	0.004260	2.28	7.09	4.54	0.58
Ornaccio	12	Max WS	SA_100_cr	15.30	146.38	148.83		149.09	0.004423	2.28	6.71	4.37	0.59
Ornaccio	12	Max WS	SA_30_cr	12.90	146.38	148.58		148.84	0.004845	2.27	5.69	3.87	0.60
Ornaccio	12	Max WS	SA_20_cr	11.99	146.38	148.47		148.73	0.005093	2.27	5.28	3.65	0.60
Ornaccio	11	Max WS	SA_200_cr	0.96	146.31	148.84		148.84	0.000015	0.13	7.12	4.57	0.03
Ornaccio	11	Max WS	SA_100_cr	15.30	146.31	148.73		149.00	0.004602	2.31	6.61	4.34	0.60
Ornaccio	11	Max WS	SA_30_cr	12.89	146.31	148.46		148.74	0.005217	2.33	5.53	3.81	0.62

HEC-RAS River: Ornaccio Reach: Ornaccio Profile: Max WS (Continued)

Reach	River Sta	Profile	Plan	Q Total (m3/s)	Min Ch El (m)	W.S. Elev (m)	Crit W.S. (m)	E.G. Elev (m)	E.G. Slope (m/m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Froude # Chl
Ornaccio	11	Max WS	SA_20_cr	11.99	146.31	148.36		148.63	0.005496	2.34	5.13	3.59	0.62
Ornaccio	10	Max WS	SA_200_cr	0.96	146.27	148.84		148.84	0.000014	0.13	7.31	4.65	0.03
Ornaccio	10	Max WS	SA_100_cr	15.30	146.27	148.68		148.96	0.004669	2.33	6.58	4.33	0.60
Ornaccio	10	Max WS	SA_30_cr	12.89	146.27	148.41		148.69	0.005396	2.36	5.46	3.77	0.63
Ornaccio	10	Max WS	SA_20_cr	11.99	146.27	148.30		148.58	0.005683	2.37	5.07	3.55	0.63
Ornaccio	09	Max WS	SA_200_cr	0.96	146.25	148.84		148.84	0.000013	0.13	7.40	4.68	0.03
Ornaccio	09	Max WS	SA_100_cr	15.30	146.25	148.65		148.93	0.004717	2.34	6.54	4.30	0.61
Ornaccio	09	Max WS	SA_30_cr	12.89	146.25	148.37		148.66	0.005521	2.38	5.41	3.74	0.63
Ornaccio	09	Max WS	SA_20_cr	11.99	146.25	148.26		148.55	0.005769	2.38	5.03	3.53	0.64
Ornaccio	08	Max WS	SA_200_cr	0.96	146.22	148.84		148.84	0.000013	0.13	7.53	4.74	0.03
Ornaccio	08	Max WS	SA_100_cr	15.30	146.22	148.63		148.91	0.004646	2.32	6.59	4.32	0.60
Ornaccio	08	Max WS	SA_30_cr	12.89	146.22	148.35		148.63	0.005492	2.38	5.42	3.74	0.63
Ornaccio	08	Max WS	SA_20_cr	11.99	146.22	148.24		148.53	0.005794	2.39	5.02	3.52	0.64
Ornaccio	07	Max WS	SA_200_cr	0.95	146.15	148.84		148.84	0.000015	0.14	6.73	2.60	0.03
Ornaccio	07	Max WS	SA_100_cr	5.03	146.15	148.48		148.52	0.000599	0.87	5.81	2.58	0.18
Ornaccio	07	Max WS	SA_30_cr	12.89	146.15	148.19		148.52	0.005588	2.55	5.05	2.57	0.58
Ornaccio	07	Max WS	SA_20_cr	11.99	146.15	148.10		148.41	0.005469	2.50	4.80	2.57	0.58
Ornaccio	06	Max WS	SA_200_cr	0.95	146.07	148.84	146.37	148.84	0.000021	0.14	6.82		0.03
Ornaccio	06	Max WS	SA_100_cr	5.03	146.07	148.47	146.87	148.51	0.000558	0.84	5.98	2.59	0.18
Ornaccio	06	Max WS	SA_30_cr	12.89	146.07	148.05	147.51	148.41	0.006069	2.64	4.88	2.57	0.61
Ornaccio	06	Max WS	SA_20_cr	11.99	146.07	147.96	147.45	148.30	0.005933	2.58	4.65	2.56	0.61
Ornaccio	05	Max WS	SA_200_cr	0.95	145.99	148.84	146.29	148.84	0.000020	0.14	7.02		0.03
Ornaccio	05	Max WS	SA_100_cr	5.03	145.99	148.47	146.78	148.50	0.000519	0.82	6.16	2.58	0.17
Ornaccio	05	Max WS	SA_30_cr	12.89	145.99	147.89	147.43	148.28	0.006782	2.76	4.68	2.56	0.65
Ornaccio	05	Max WS	SA_20_cr	11.99	145.99	147.80	147.37	148.17	0.006618	2.69	4.46	2.56	0.65
Ornaccio	04	Max WS	SA_200_cr	0.95	145.87	148.84	146.17	148.84	0.000018	0.13	7.33		0.02
Ornaccio	04	Max WS	SA_100_cr	5.03	145.87	148.45	146.66	148.49	0.000466	0.78	6.43	2.58	0.16
Ornaccio	04	Max WS	SA_30_cr	5.00	145.87	147.69	146.66	147.76	0.001135	1.11	4.48	2.55	0.27
Ornaccio	04	Max WS	SA_20_cr	4.98	145.87	147.49	146.66	147.57	0.001554	1.26	3.95	2.55	0.32
Ornaccio	03	Max WS	SA_200_cr	0.95	145.85	148.84	146.15	148.84	0.000017	0.13	7.48		0.02

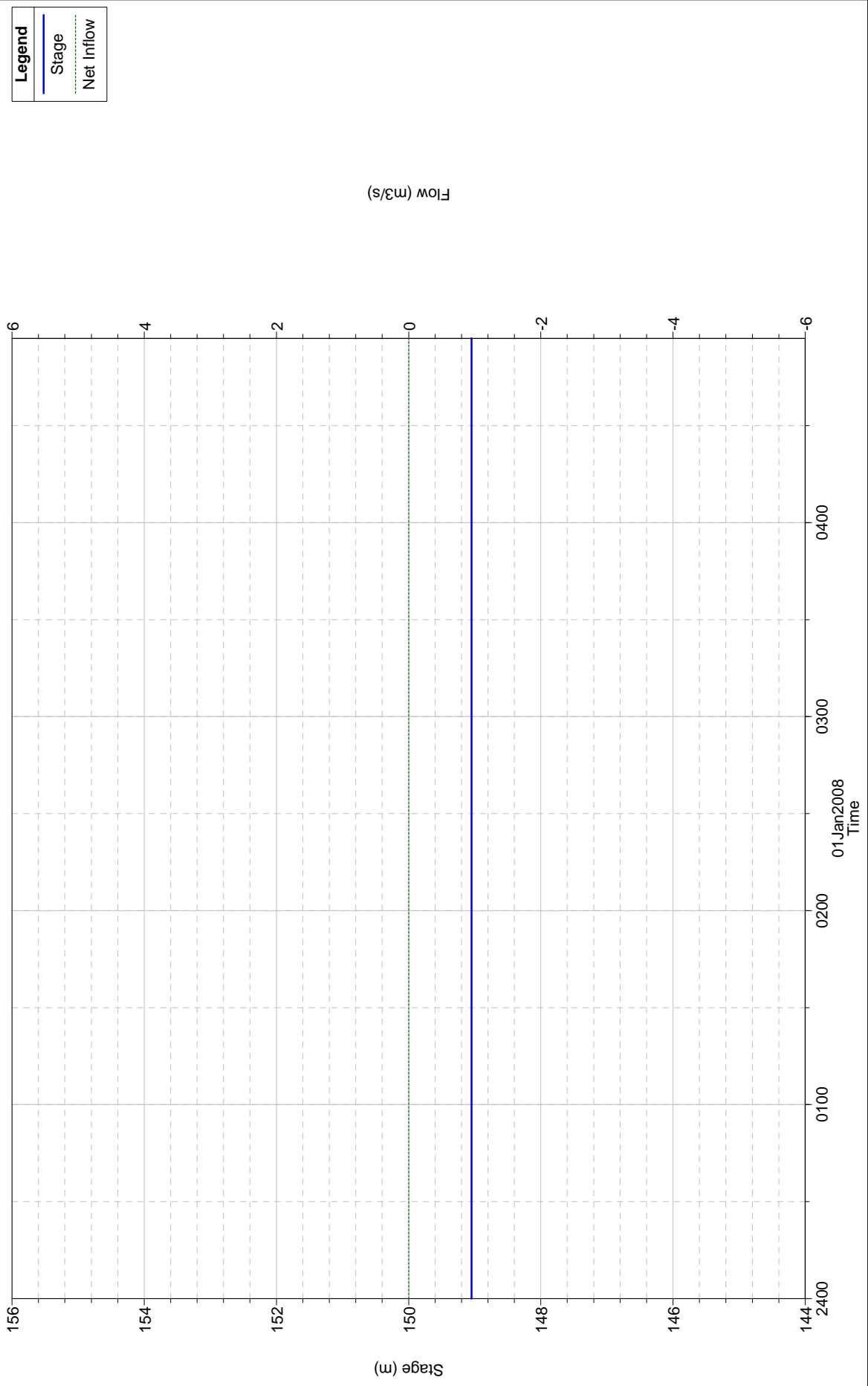
HEC-RAS River: Ornaccio Reach: Ornaccio Profile: Max WS (Continued)

Reach	River Sta	Profile	Plan	Q Total (m3/s)	Min Ch El (m)	W.S. Elev (m)	Crit W.S. (m)	E.G. Elev (m)	E.G. Slope (m/m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Froude # Chl
Ornaccio	03	Max WS	SA_100_cr	5.03	145.85	148.45	146.64	148.48	0.000441	0.77	6.56	2.64	0.16
Ornaccio	03	Max WS	SA_30_cr	4.99	145.85	147.69	146.64	147.75	0.001077	1.09	4.56	2.60	0.26
Ornaccio	03	Max WS	SA_20_cr	4.98	145.85	147.48	146.64	147.56	0.001481	1.24	4.02	2.59	0.32
Ornaccio	02	Max WS	SA_200_cr	0.95	145.82	148.84	146.12	148.84	0.000016	0.13	7.53		0.02
Ornaccio	02	Max WS	SA_100_cr	5.03	145.82	148.45	146.61	148.48	0.000429	0.76	6.63	2.64	0.15
Ornaccio	02	Max WS	SA_30_cr	4.99	145.82	147.69	146.61	147.75	0.001038	1.08	4.63	2.60	0.26
Ornaccio	02	Max WS	SA_20_cr	4.97	145.82	147.48	146.61	147.55	0.001420	1.22	4.08	2.59	0.31
Ornaccio	01	Max WS	SA_200_cr	0.95	145.74	148.84	146.04	148.84	0.000015	0.12	7.75		0.02
Ornaccio	01	Max WS	SA_100_cr	5.02	145.74	148.44	146.53	148.47	0.000401	0.74	6.80	2.64	0.15
Ornaccio	01	Max WS	SA_30_cr	5.00	145.74	147.67	146.53	147.72	0.000961	1.05	4.77	2.59	0.25
Ornaccio	01	Max WS	SA_20_cr	4.97	145.74	147.45	146.53	147.52	0.001310	1.18	4.21	2.58	0.29
Ornaccio	0.5	Max WS	SA_200_cr	0.91	145.70	148.84	145.98	148.84	0.000013	0.12	7.95		0.02
Ornaccio	0.5	Max WS	SA_100_cr	4.96	145.70	148.44	146.48	148.47	0.000365	0.71	6.98	2.68	0.14
Ornaccio	0.5	Max WS	SA_30_cr	4.96	145.70	147.66	146.48	147.71	0.000873	1.01	4.92	2.62	0.24
Ornaccio	0.5	Max WS	SA_20_cr	4.97	145.70	147.44	146.48	147.51	0.001204	1.15	4.34	2.61	0.28

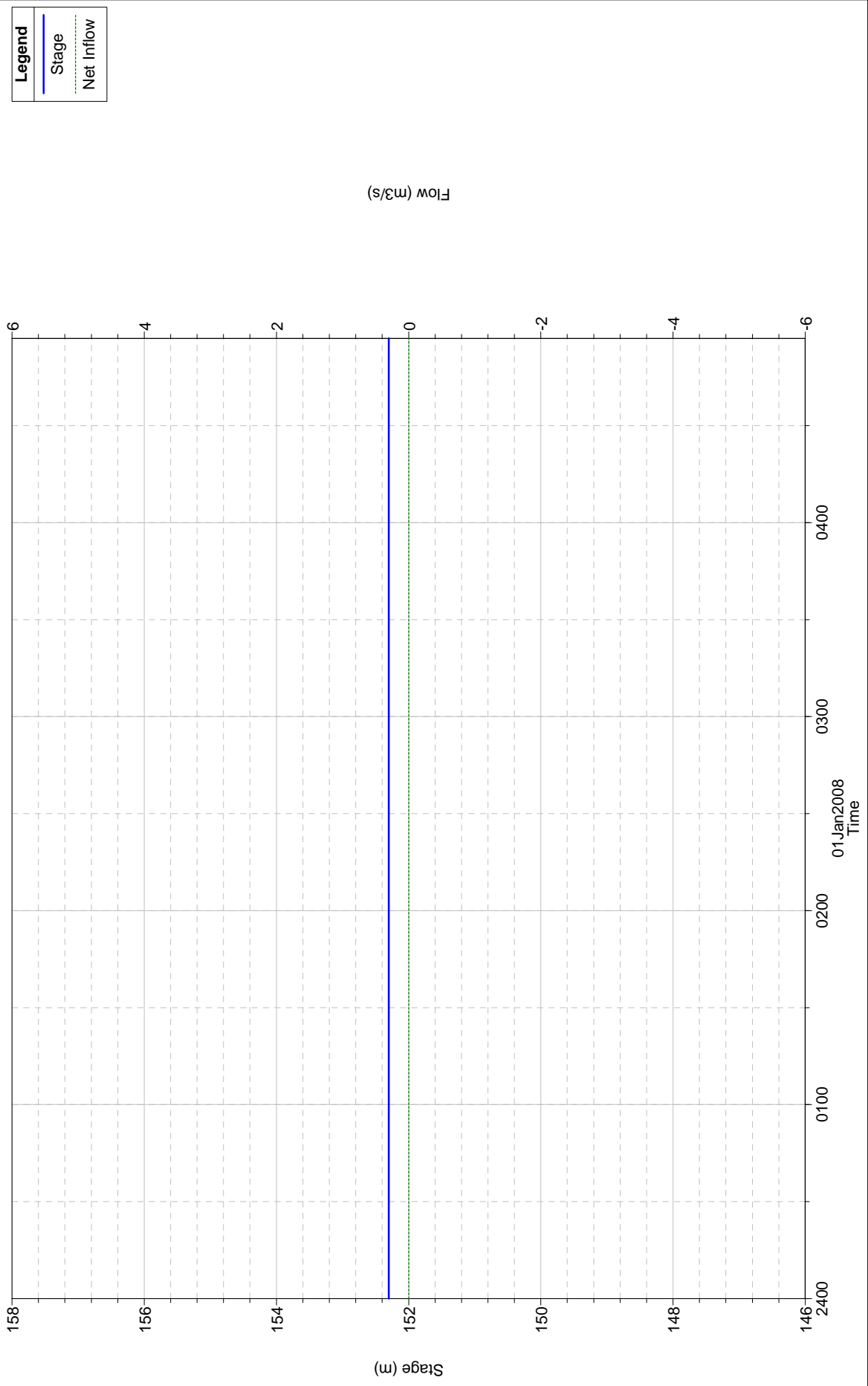
HEC-RAS Profile: Max WS

Storage Area	Profile	Plan	W.S. Elev (m)	SA Min El (m)	Net Flux (m3/s)	SA Area (1000 m2)	SA Volume (1000 m3)
dx_1	Max WS	SA_200_cr	153.07	153.00	0.10	2.50	0.16
dx_1	Max WS	SA_100_cr	153.00	153.00	0.01	2.50	0.00
dx_1	Max WS	SA_30_cr	153.00	153.00	0.00	2.50	0.00
dx_1	Max WS	SA_20_cr	153.00	153.00	0.00	2.50	0.00
dx_2	Max WS	SA_200_cr	147.65	147.50	2.42	15.00	2.20
dx_2	Max WS	SA_100_cr	147.53	147.50	0.55	15.00	0.50
dx_2	Max WS	SA_30_cr	147.50	147.50	0.00	15.00	0.00
dx_2	Max WS	SA_20_cr	147.50	147.50	0.00	15.00	0.00
dx_3	Max WS	SA_200_cr	148.41	148.10	0.21	1.00	0.31
dx_3	Max WS	SA_100_cr	148.20	148.10	0.10	1.00	0.10
dx_3	Max WS	SA_30_cr	148.10	148.10	0.00	1.00	0.00
dx_3	Max WS	SA_20_cr	148.10	148.10	0.00	1.00	0.00
sx_1	Max WS	SA_200_cr	152.43	152.30	0.50	5.25	0.70
sx_1	Max WS	SA_100_cr	152.31	152.30	0.15	5.25	0.07
sx_1	Max WS	SA_30_cr	152.30	152.30	0.00	5.25	0.00
sx_1	Max WS	SA_20_cr	152.30	152.30	0.00	5.25	0.00
sx_2	Max WS	SA_200_cr	149.52	149.05	5.62	2.44	1.14
sx_2	Max WS	SA_100_cr	149.28	149.05	0.30	2.44	0.55
sx_2	Max WS	SA_30_cr	149.05	149.05	0.00	2.44	0.00
sx_2	Max WS	SA_20_cr	149.05	149.05	0.00	2.44	0.00

Plan: SA_20_cr Storage Area: sx_2

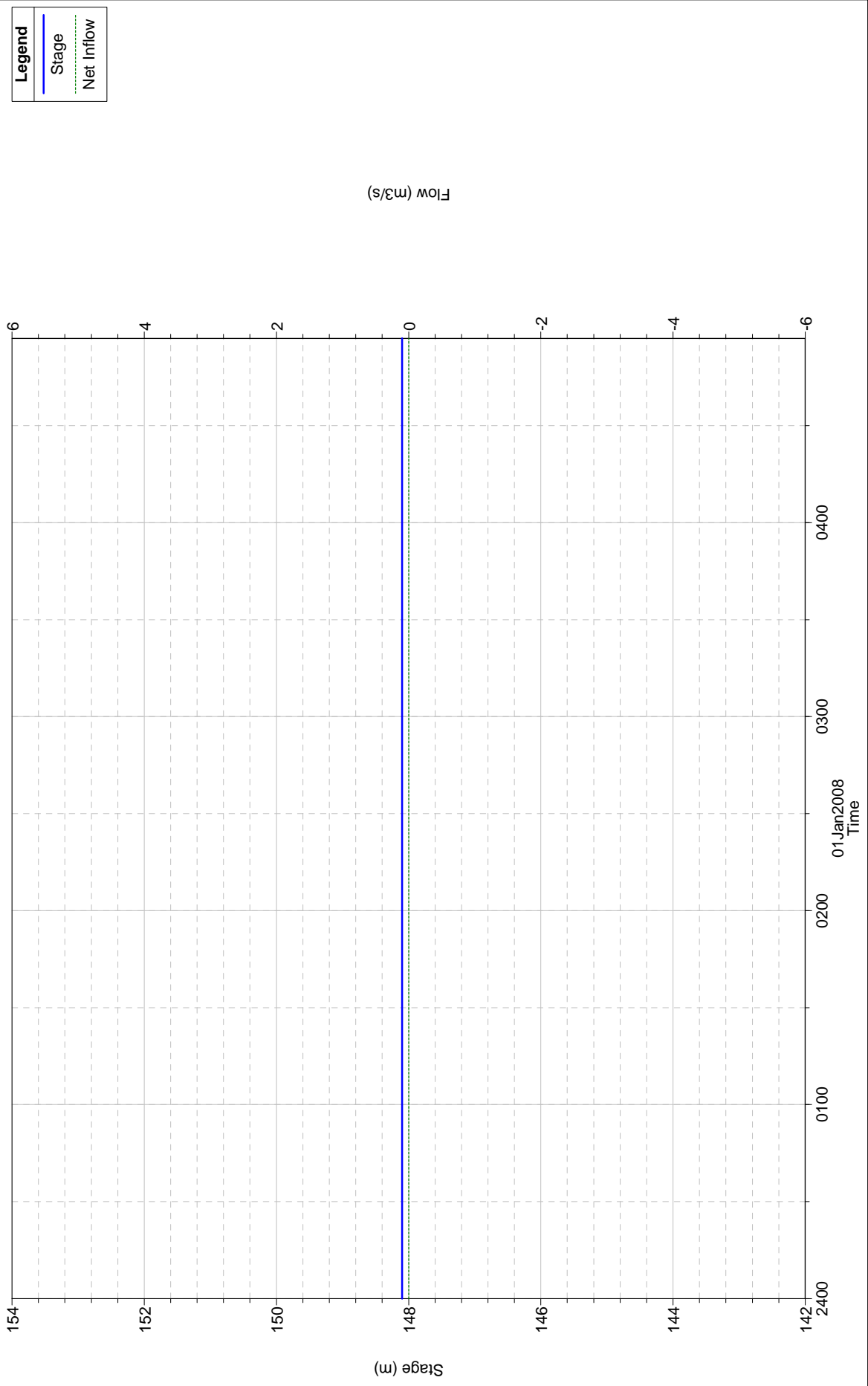


Plan: SA_20_cr Storage Area: sx_1



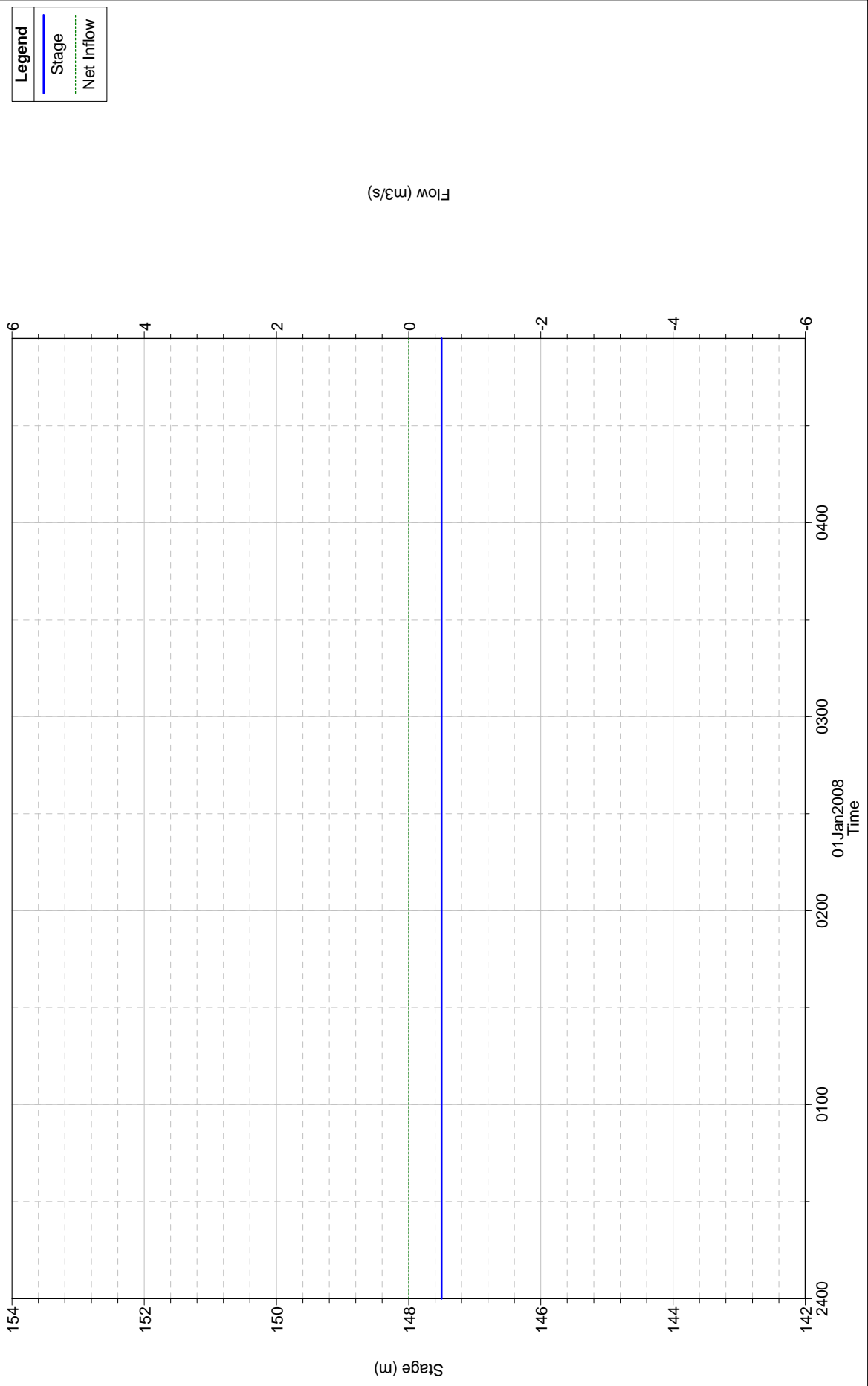
Legend	
—	Stage
- - -	Net Inflow

Plan: SA_20_cr Storage Area: dx_3



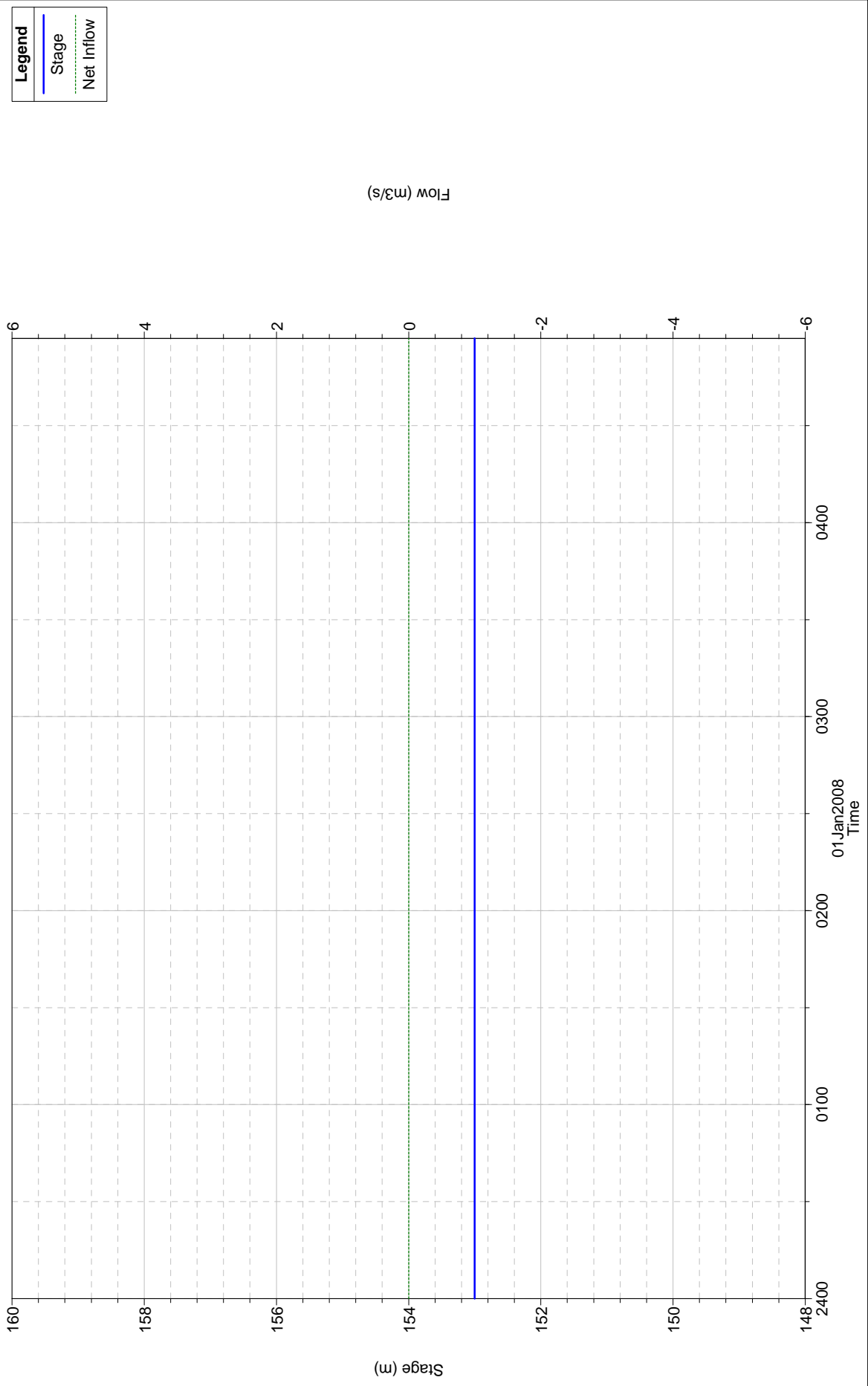
Legend	
—	Stage
- - -	Net Inflow

Plan: SA_20_cr Storage Area: dx_2

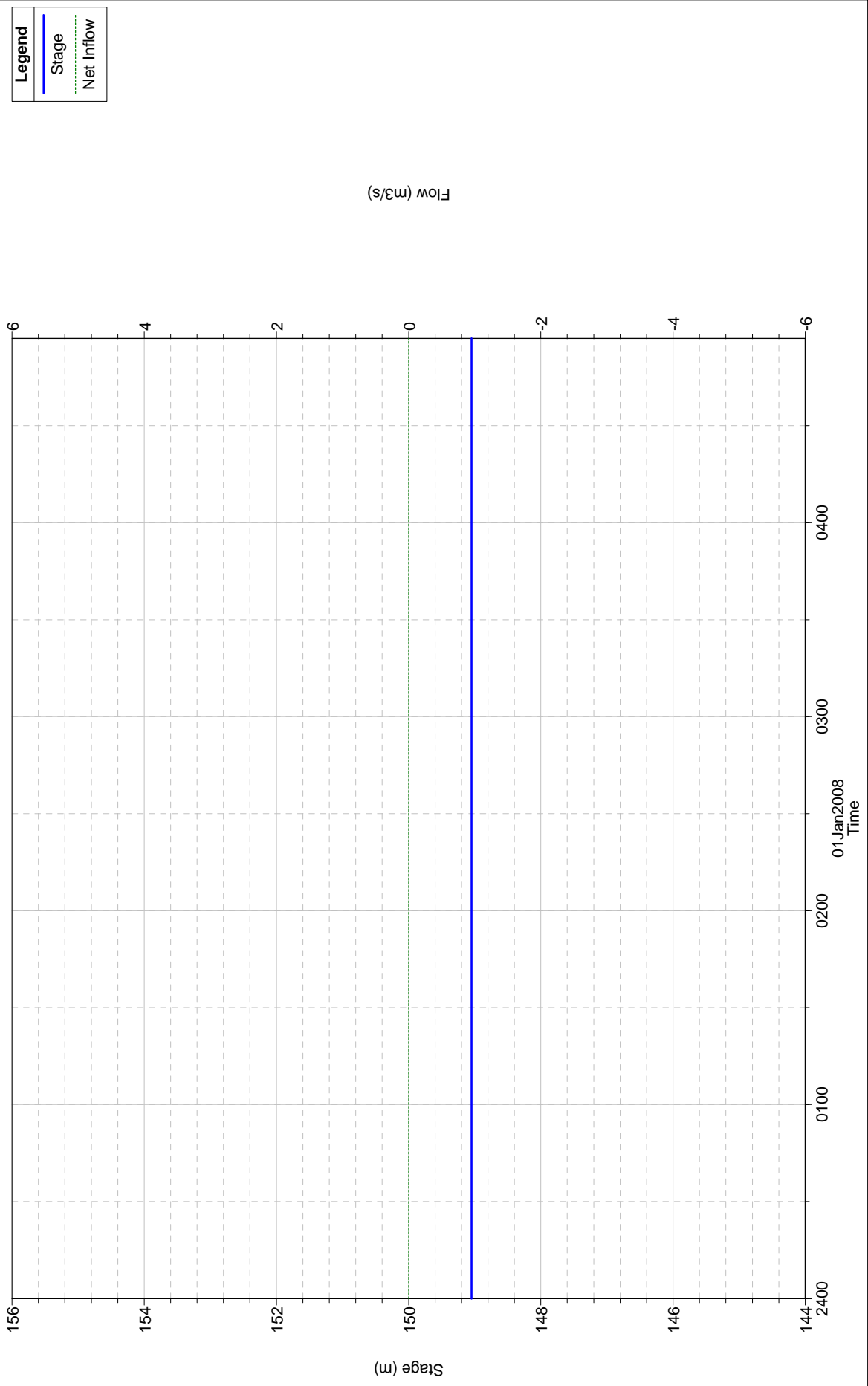


Legend	
—	Stage
...	Net Inflow

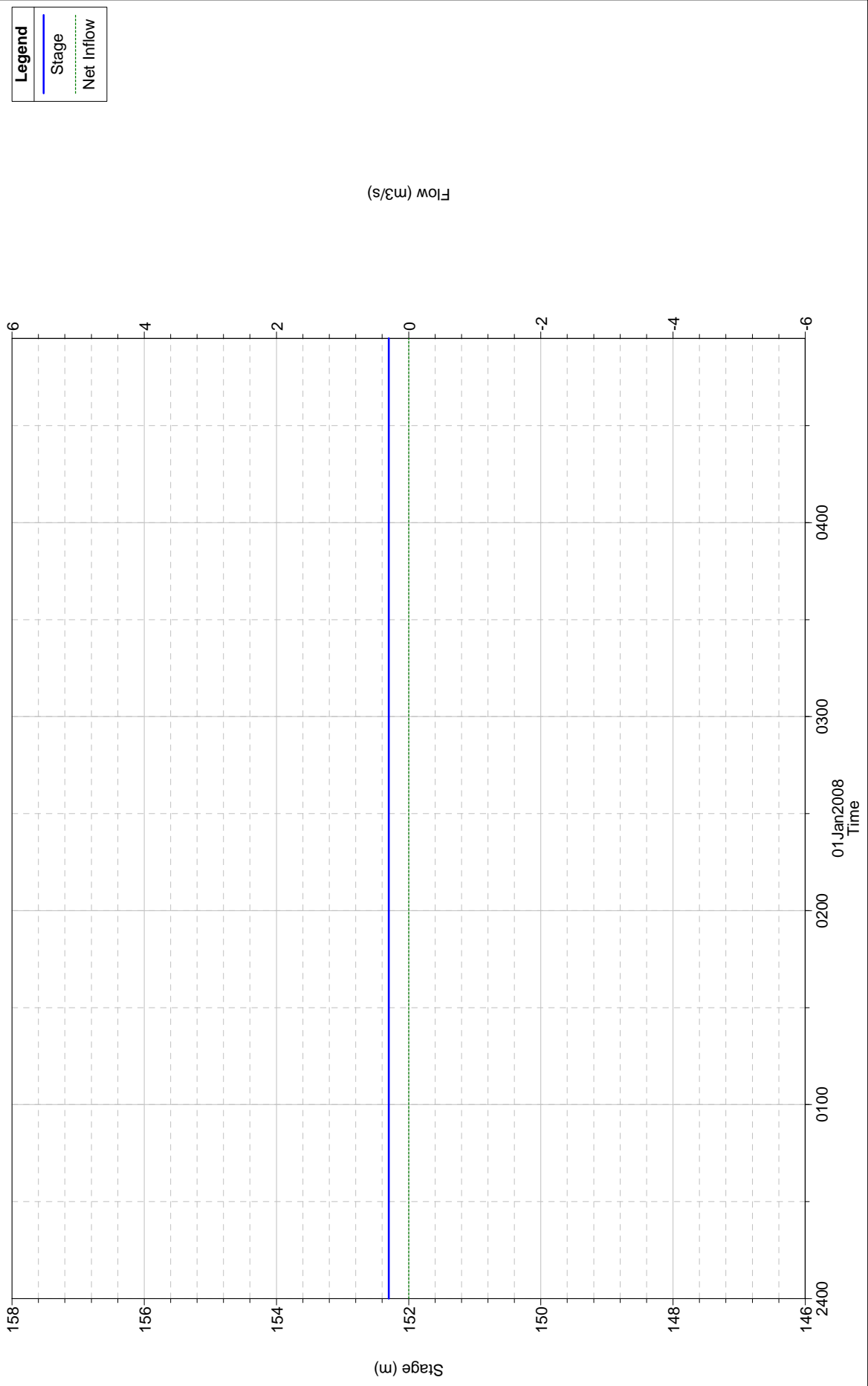
Plan: SA_20_cr Storage Area: dx_1



Plan: SA_30_cr Storage Area: sx_2

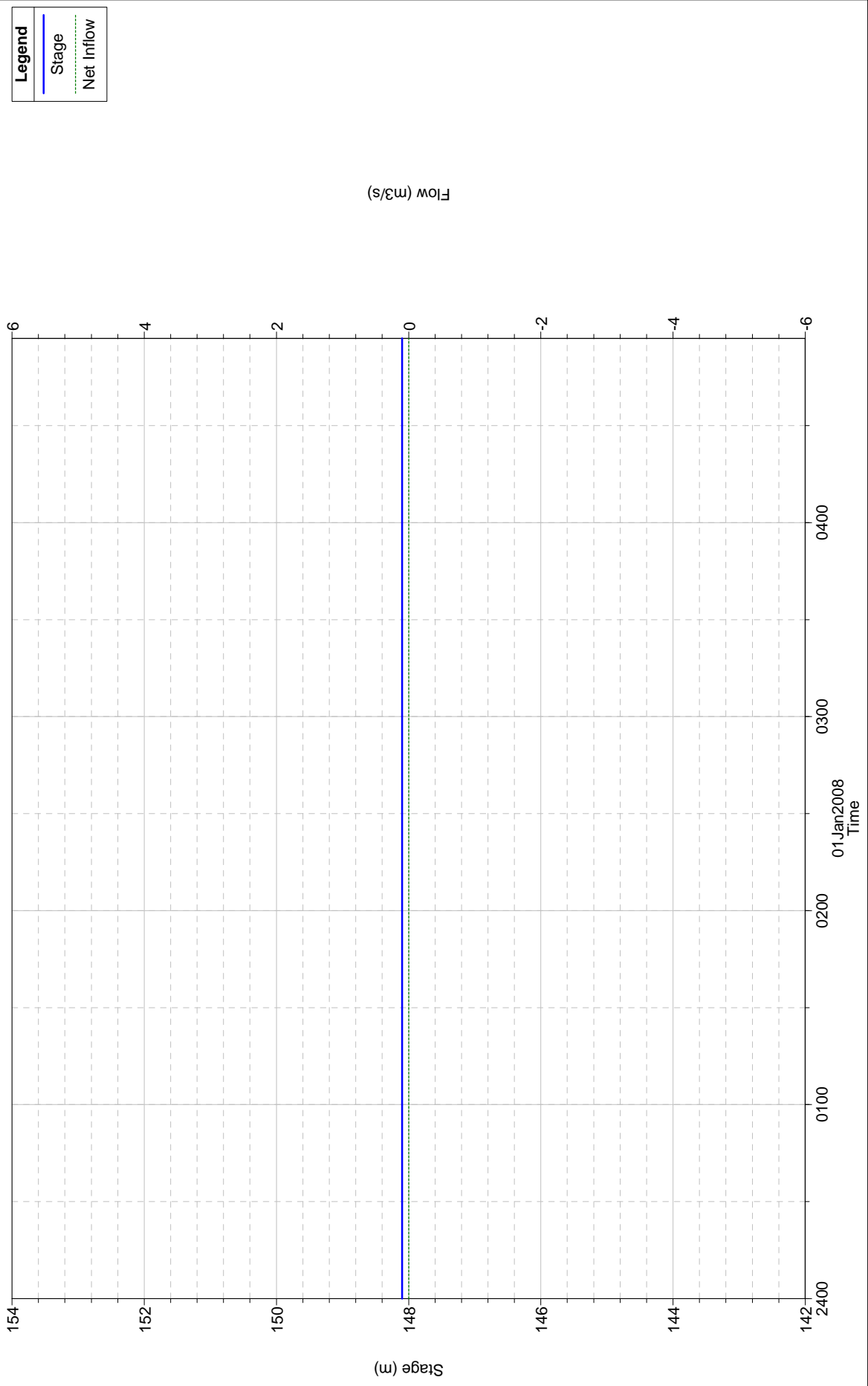


Plan: SA_30_cr Storage Area: sx_1



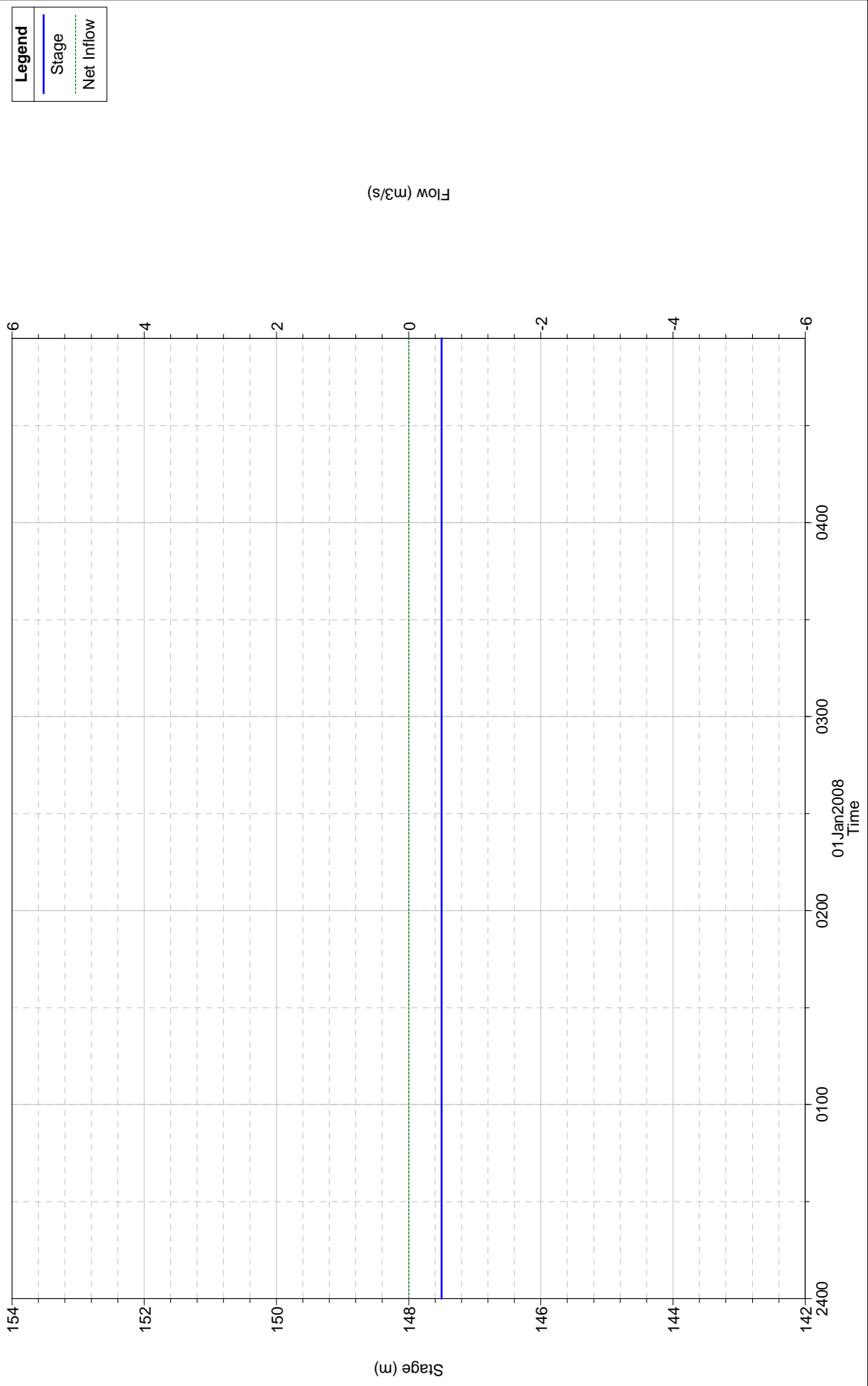
Legend	
—	Stage
- - -	Net Inflow

Plan: SA_30_cr Storage Area: dx_3



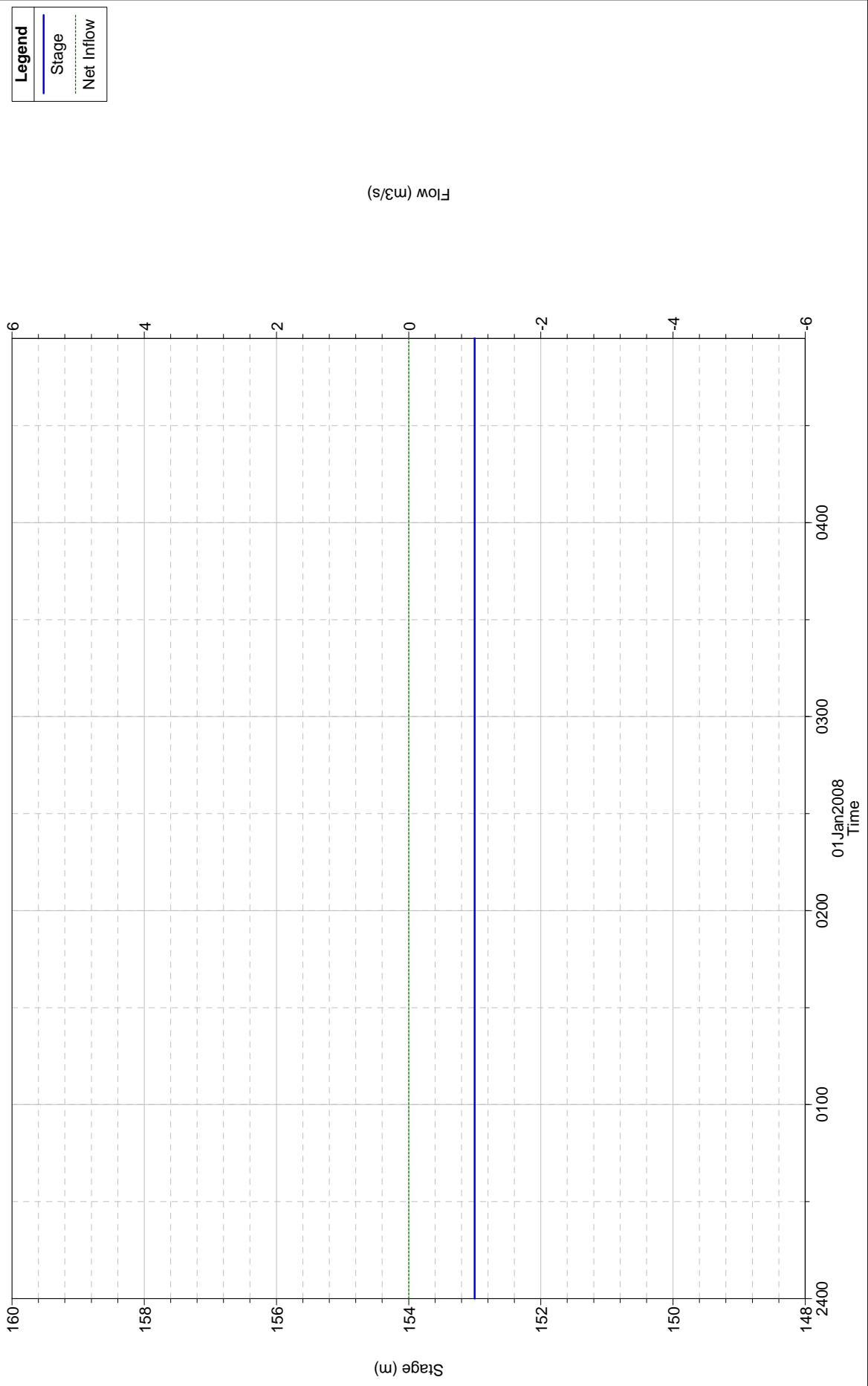
Legend
— Stage
- - - Net Inflow

Plan: SA_30_cr Storage Area: dx_2



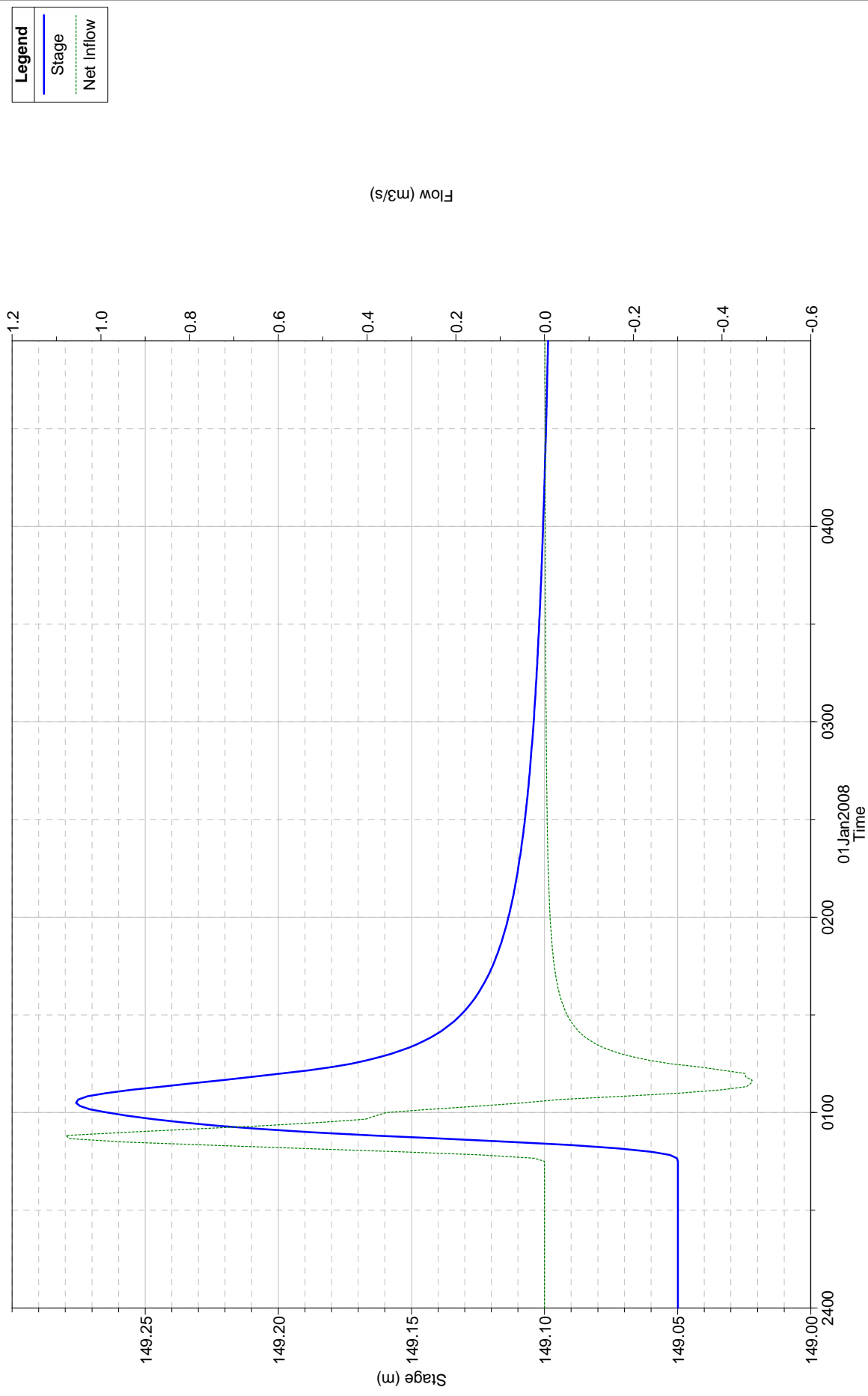
Legend	
—	Stage
...	Net Inflow

Plan: SA_30_cr Storage Area: dx_1

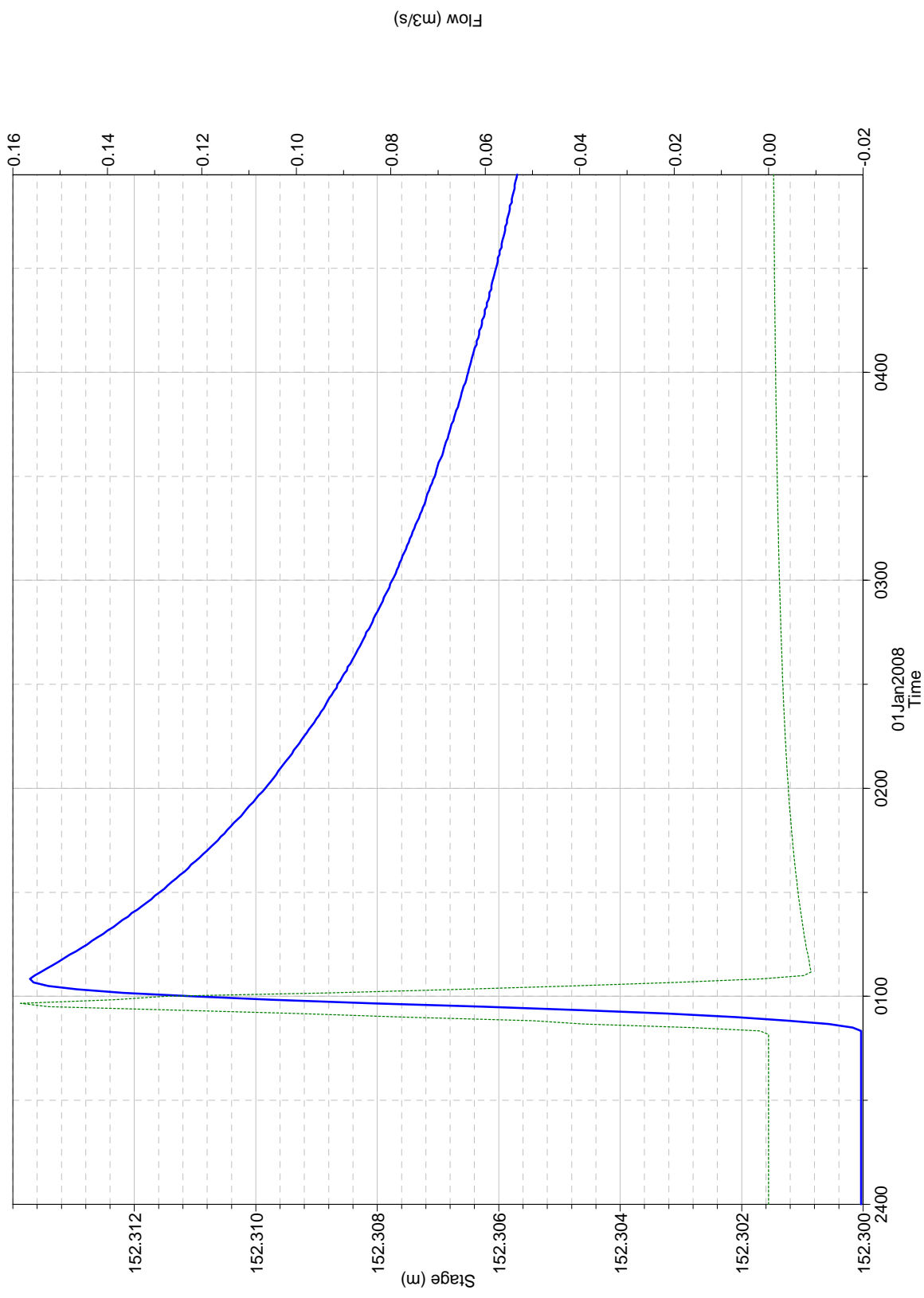
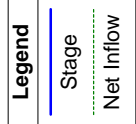


Legend	
—	Stage
...	Net Inflow

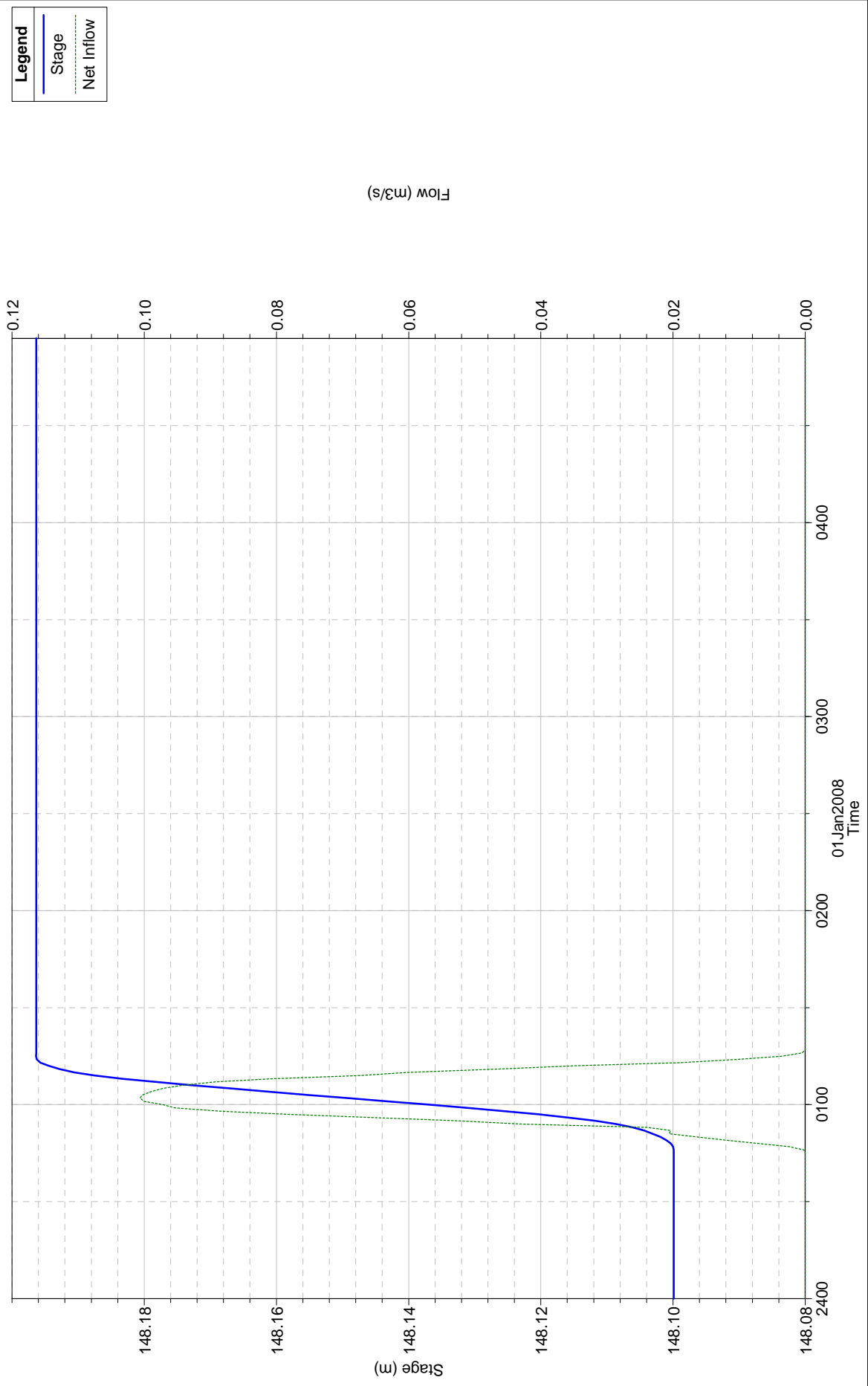
Plan: SA_100_cr Storage Area: sx_2



Plan: SA_100_cr Storage Area: sx_1



Plan: SA_100_cr Storage Area: dx_3



Legend
— Stage
- - - Net Inflow

Flow (m3/s)

0.12
0.10
0.08
0.06
0.04
0.02
0.00

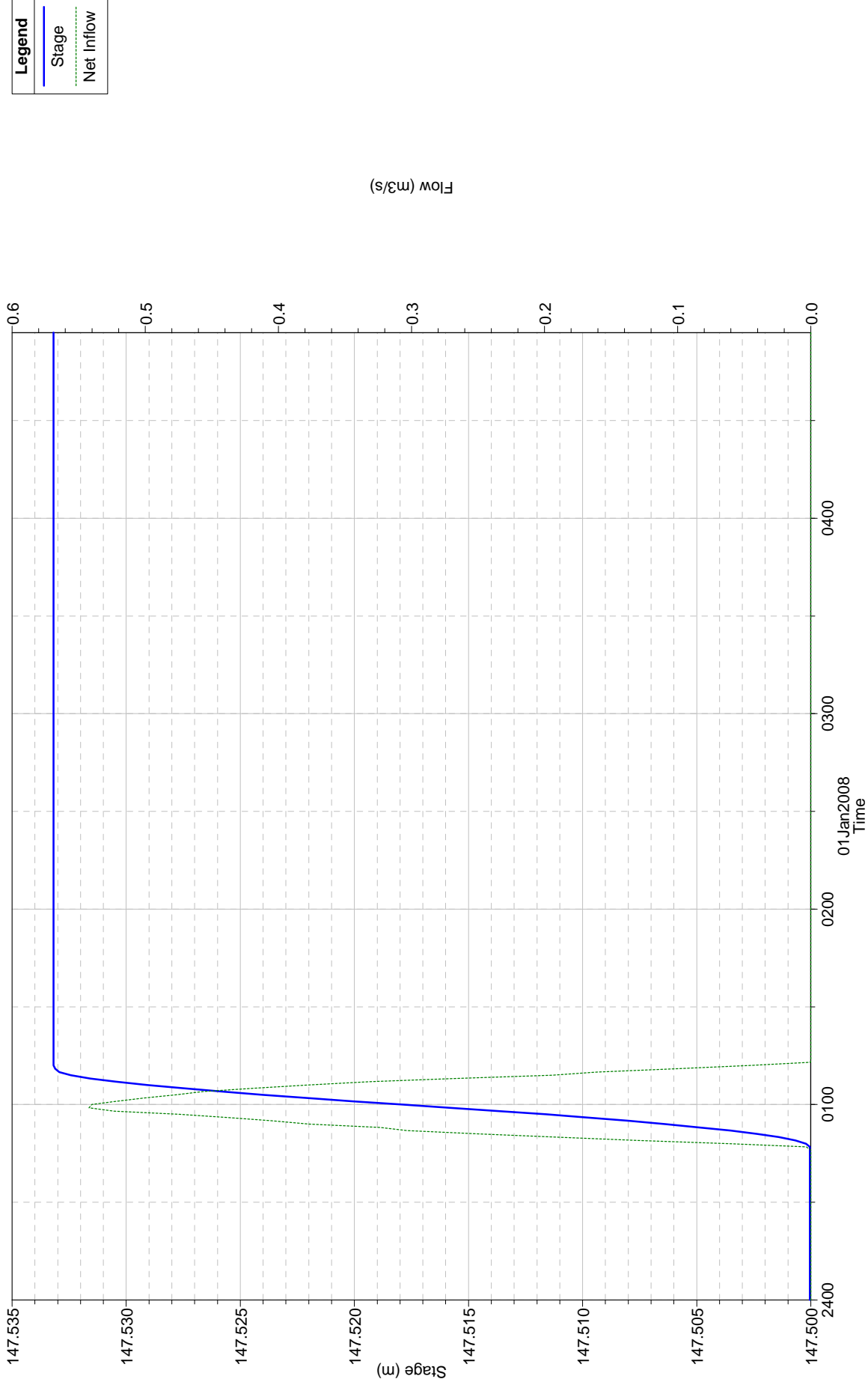
0400
0300
0200
0100
2400

01Jan2008
Time

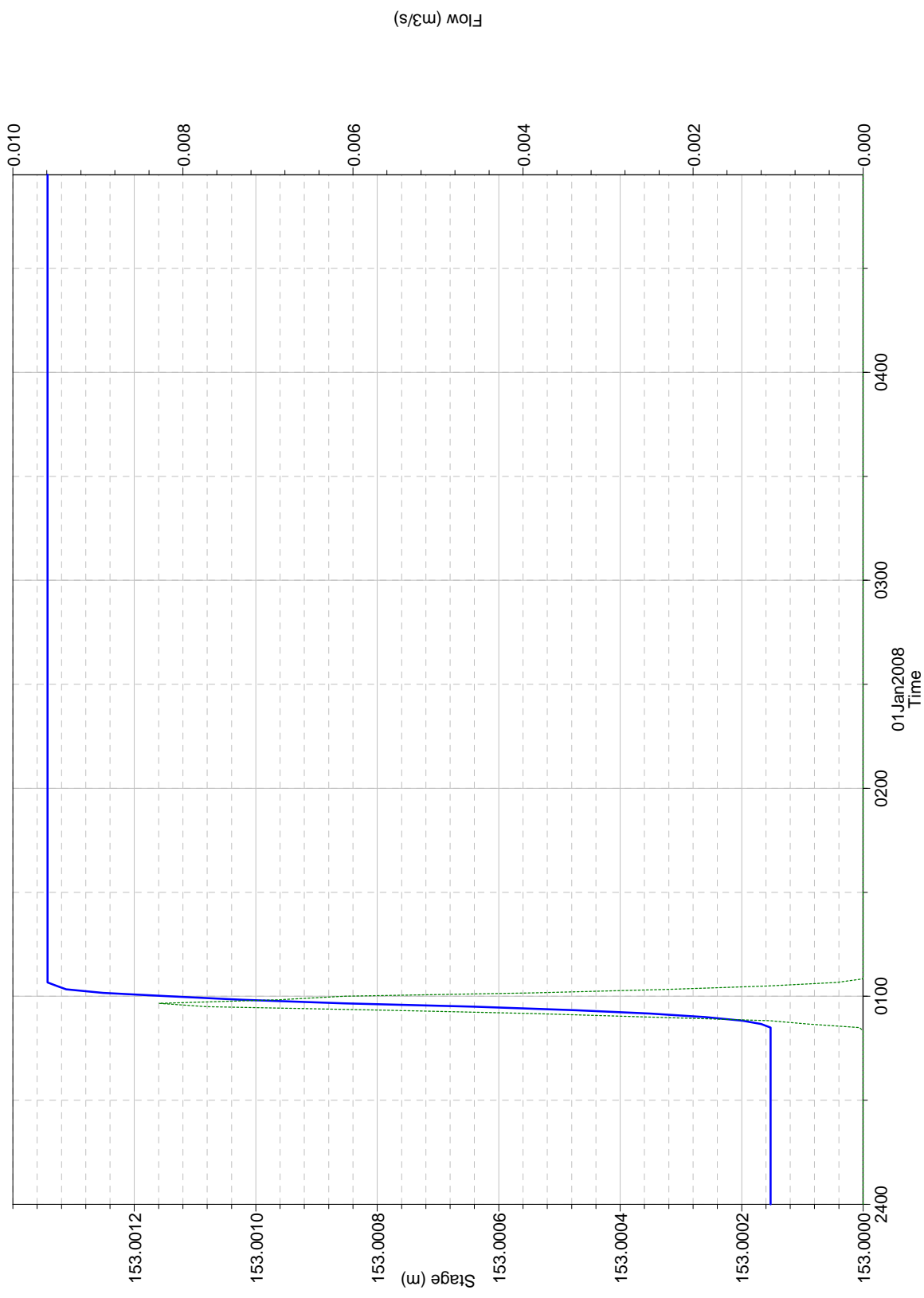
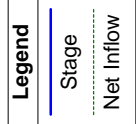
148.18
148.16
148.14
148.12
148.10
148.08

Stage (m)

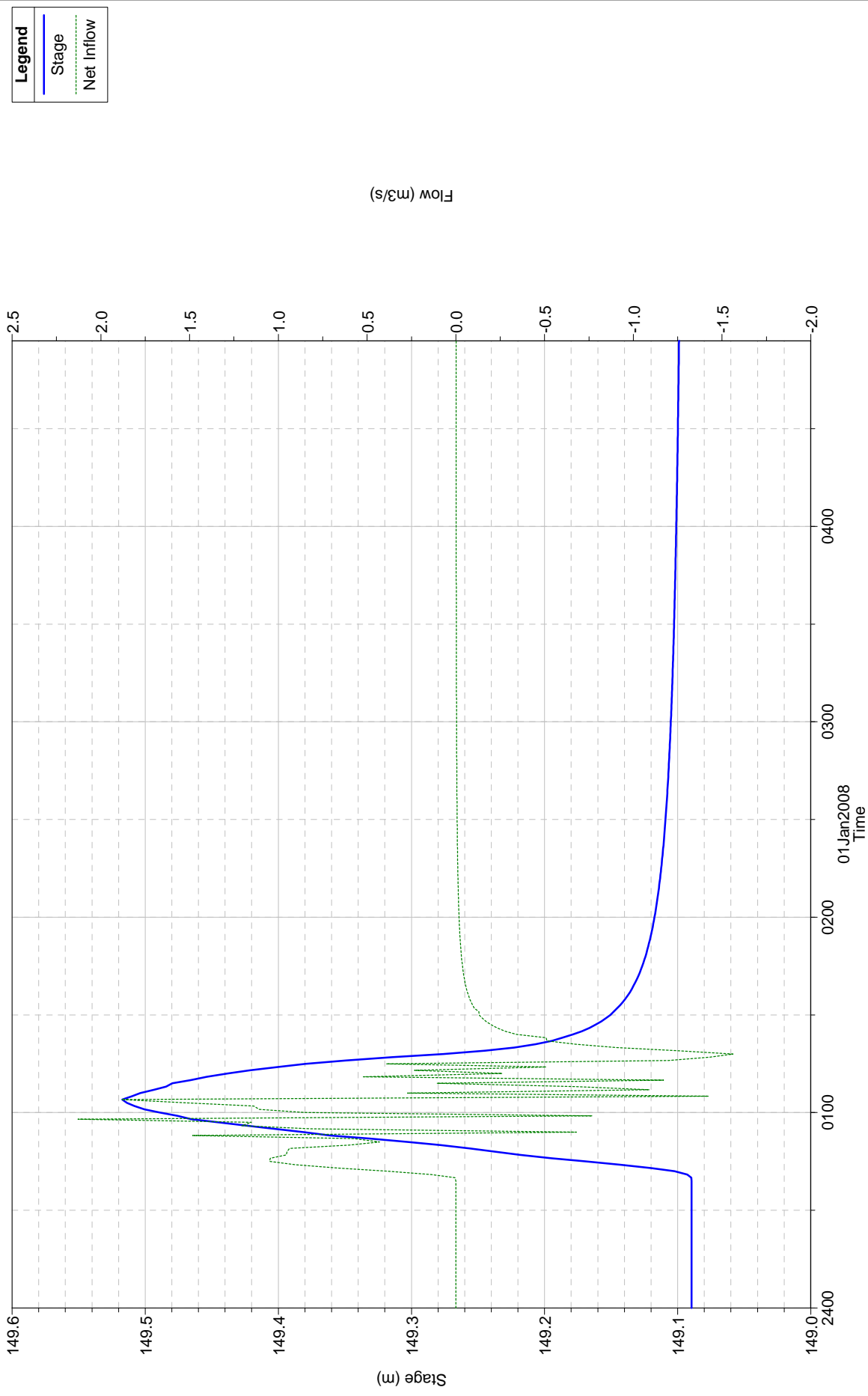
Plan: SA_100_cr Storage Area: dx_2



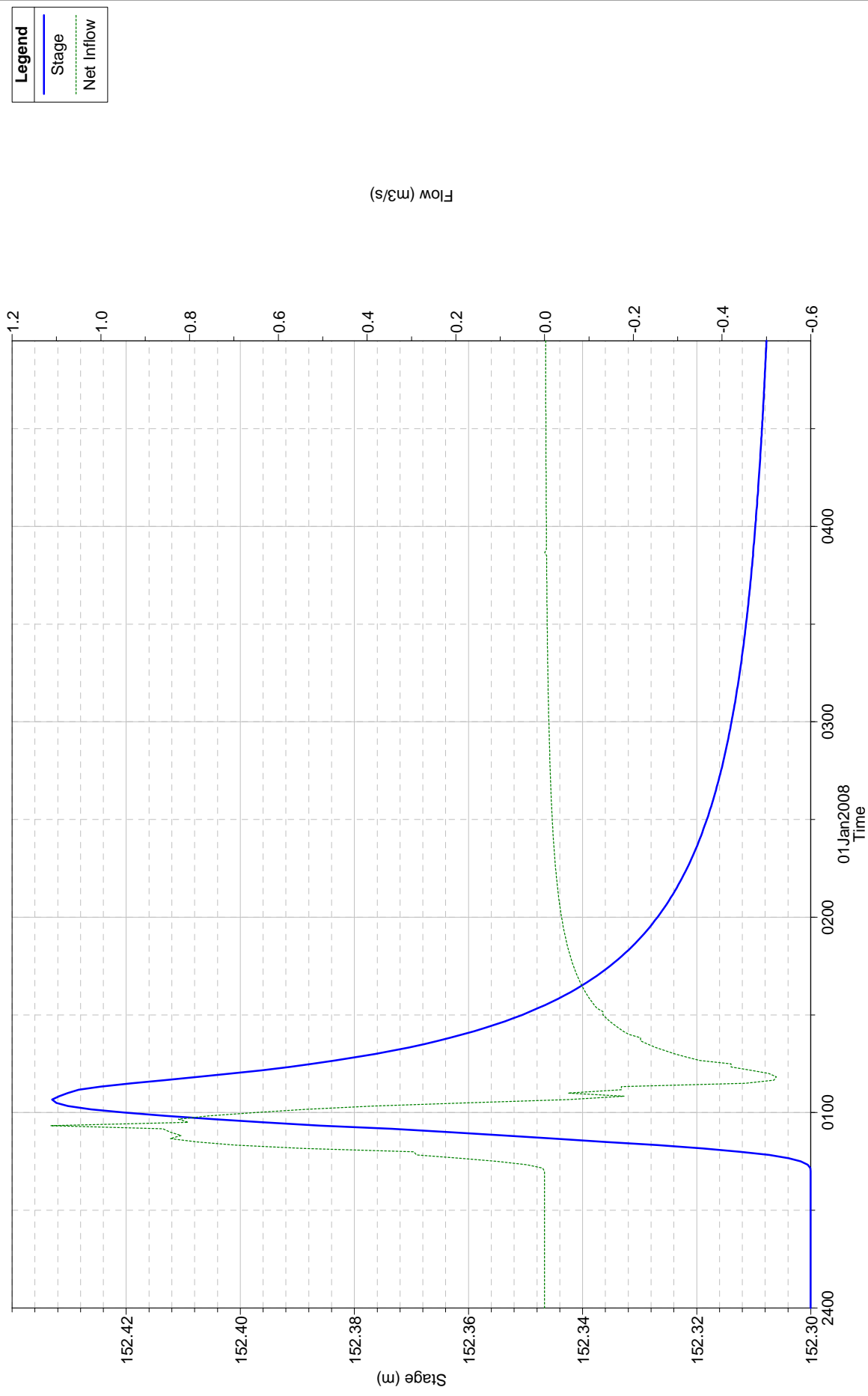
Plan: SA_100_cr Storage Area: dx_1



Plan: SA_200_cr Storage Area: sx_2



Plan: SA_200_cr Storage Area: sx_1



Legend
— Stage
- - - Net Inflow

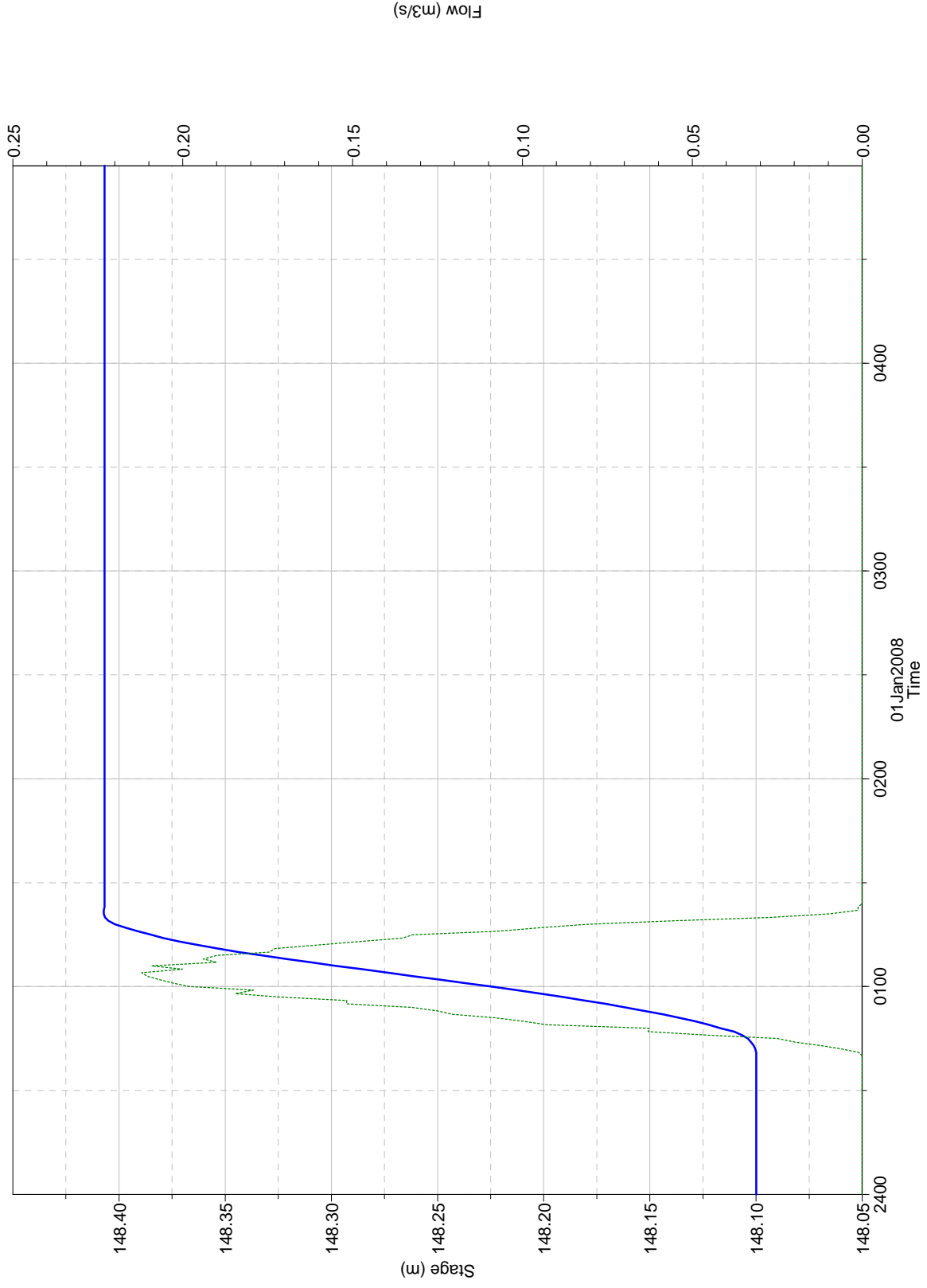
Flow (m³/s)

Stage (m)

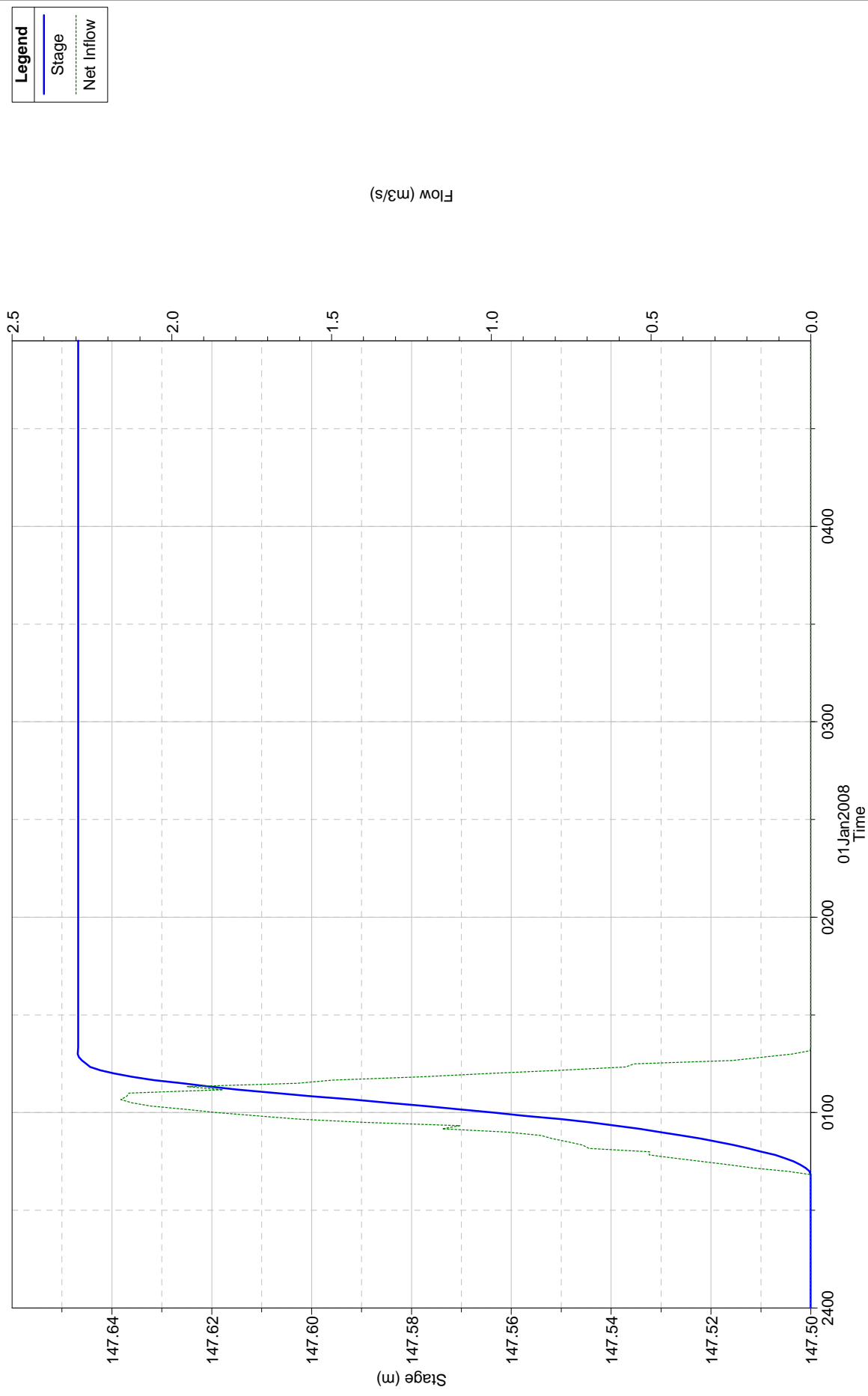
01Jan2008
Time

Plan: SA_200_cr Storage Area: dx_3

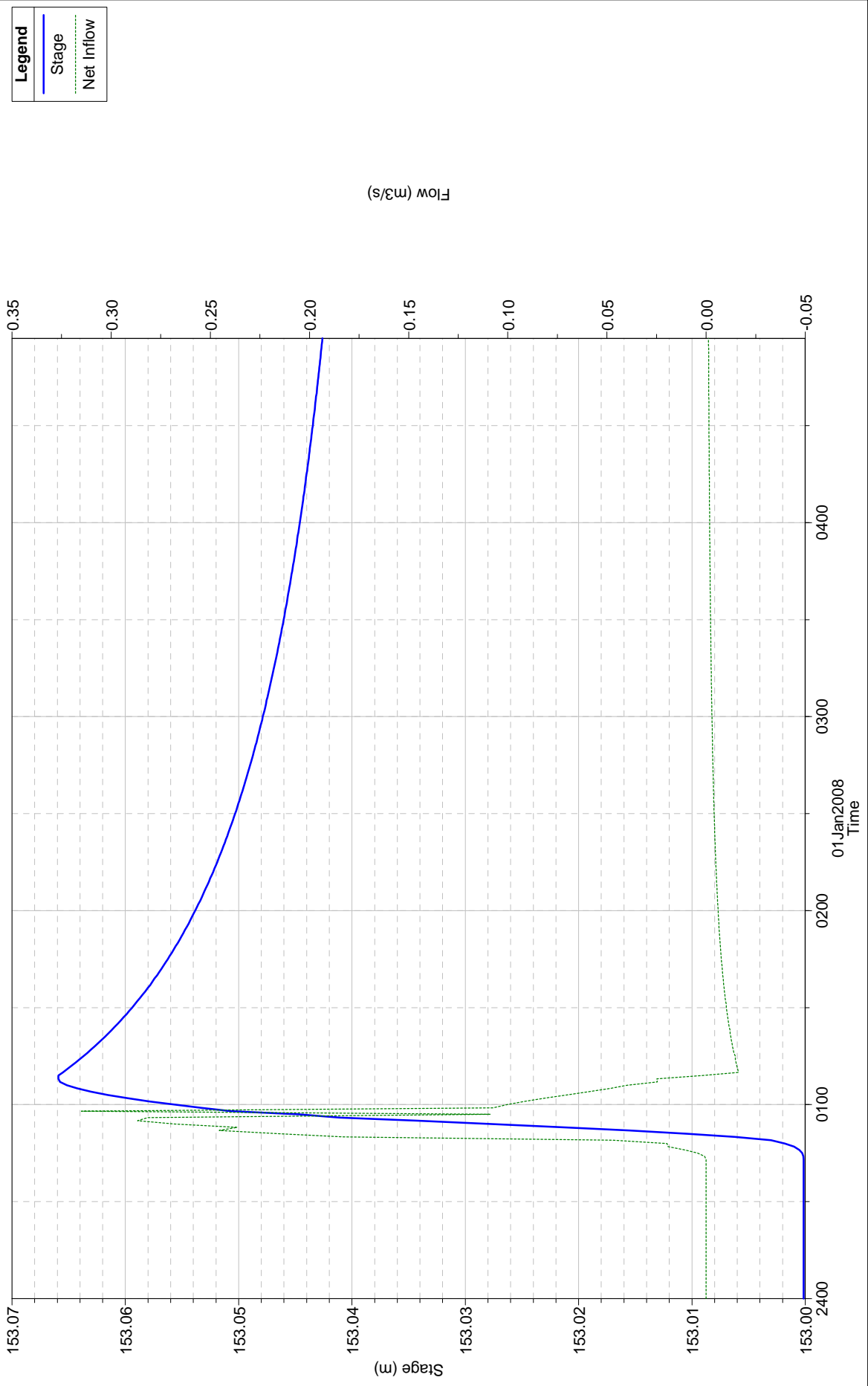
Legend	
—	Stage
---	Net Inflow



Plan: SA_200_cr Storage Area: dx_2



Plan: SA_200_cr Storage Area: dx_1



Legend
— Stage
- - - Net Inflow

Flow (m³/s)

0.35
-0.30
-0.25
-0.20
-0.15
-0.10
-0.05
0.00
-0.05

153.07
153.06
153.05
153.04
153.03
153.02
153.01
153.00

0400
0300
0200
0100
2400

01Jan2008
Time

