

Oggetto:

COMUNE DI SERRAVALLE P.SE

Provincia di PISTOIA

STUDIO IDROLOGICO-IDRAULICO DEL TORRENTE STELLA NEL TRATTO CHE
ATTRAVERSA IL TERRITORIO DEL COMUNE DI SERRAVALLE P.SE
A SUPPORTO DELLA VARIANTE AL REGOLAMENTO URBANISTICO

Tavola: ALL	Disegno: ALLEGATI 1-6
Scala:	
Data: GENNAIO 2016	

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Collaboratore alla progettazione:	ING. SIMONE BONISTALLI
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Committenza:  COMUNE DI SERRAVALLE P.SE Sede: Via Garibaldi, 54 51030 SERRAVALLE P.SE (PT) - tel. 0573 9170
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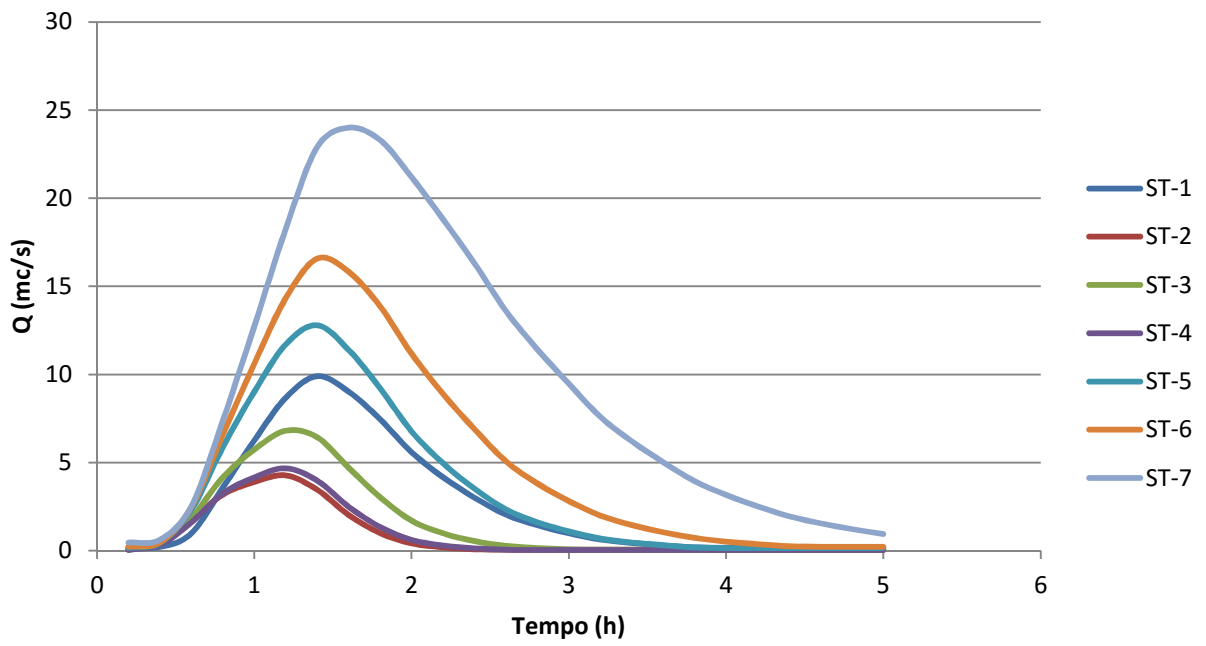
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Questo disegno e' protetto dalle vigenti leggi di autore e pertanto non puo' essere riprodotto, in tutto od in parte, ne' essere ceduto a terzi senza la nostra autorizzazione scritta.

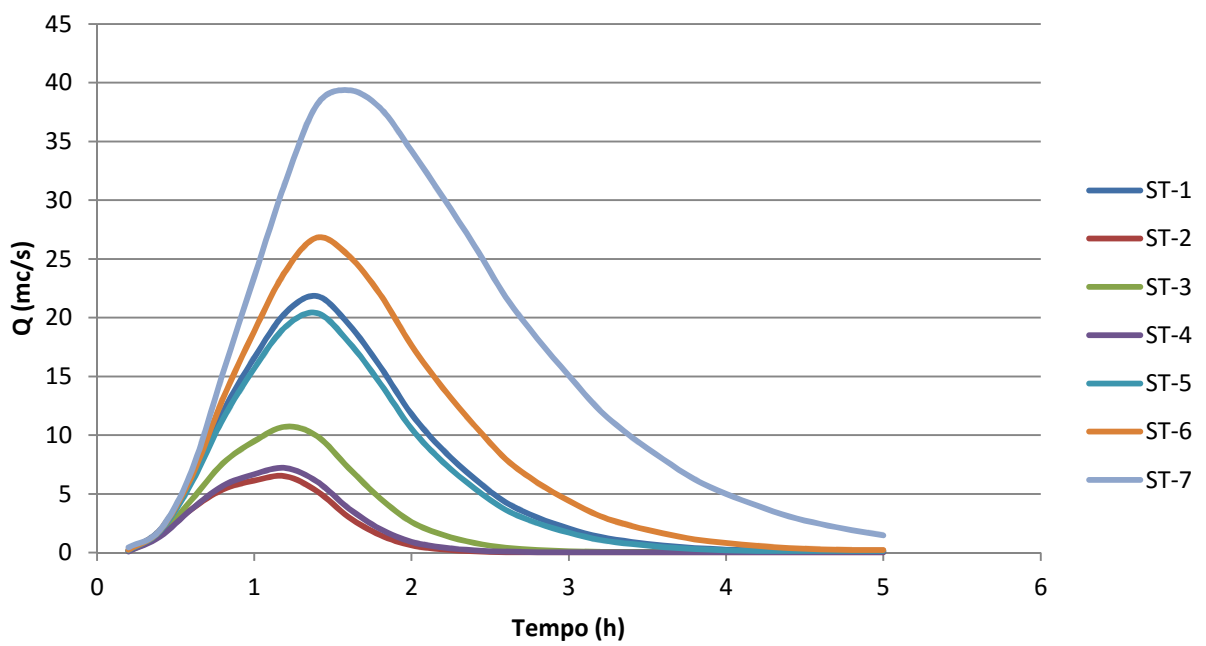
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IDROGRAMMI DI PIENA PER TR 30, 200 ANNI

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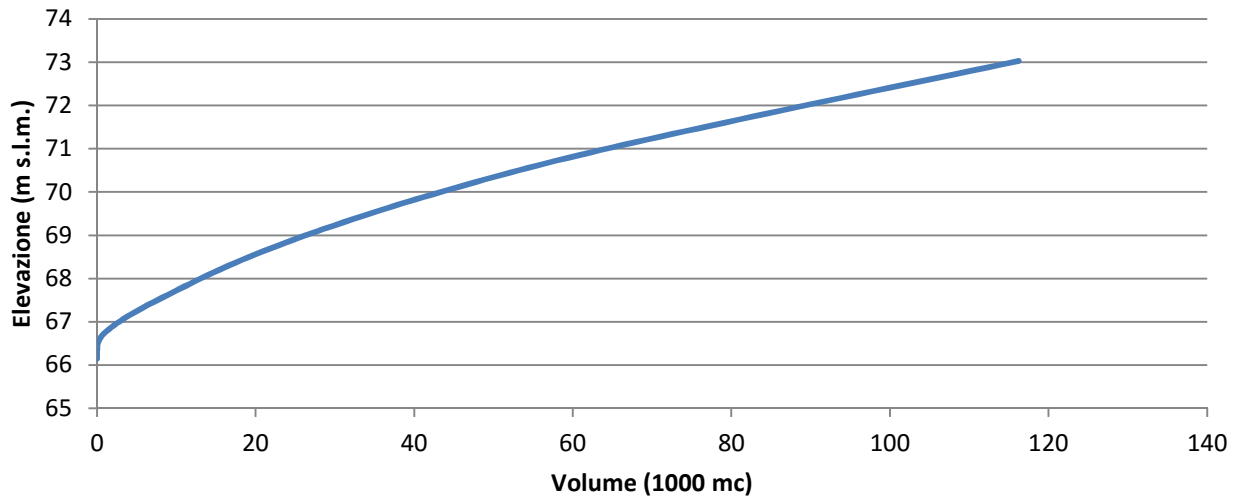
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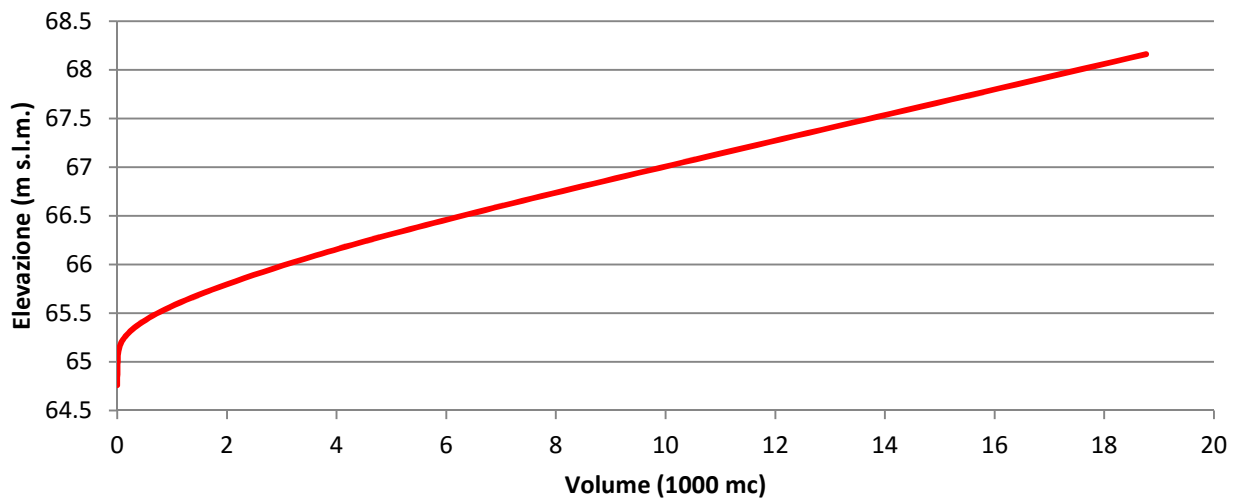
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CURVA DI INVASO AREA DI POTENZIALE ESONDAZIONE A01



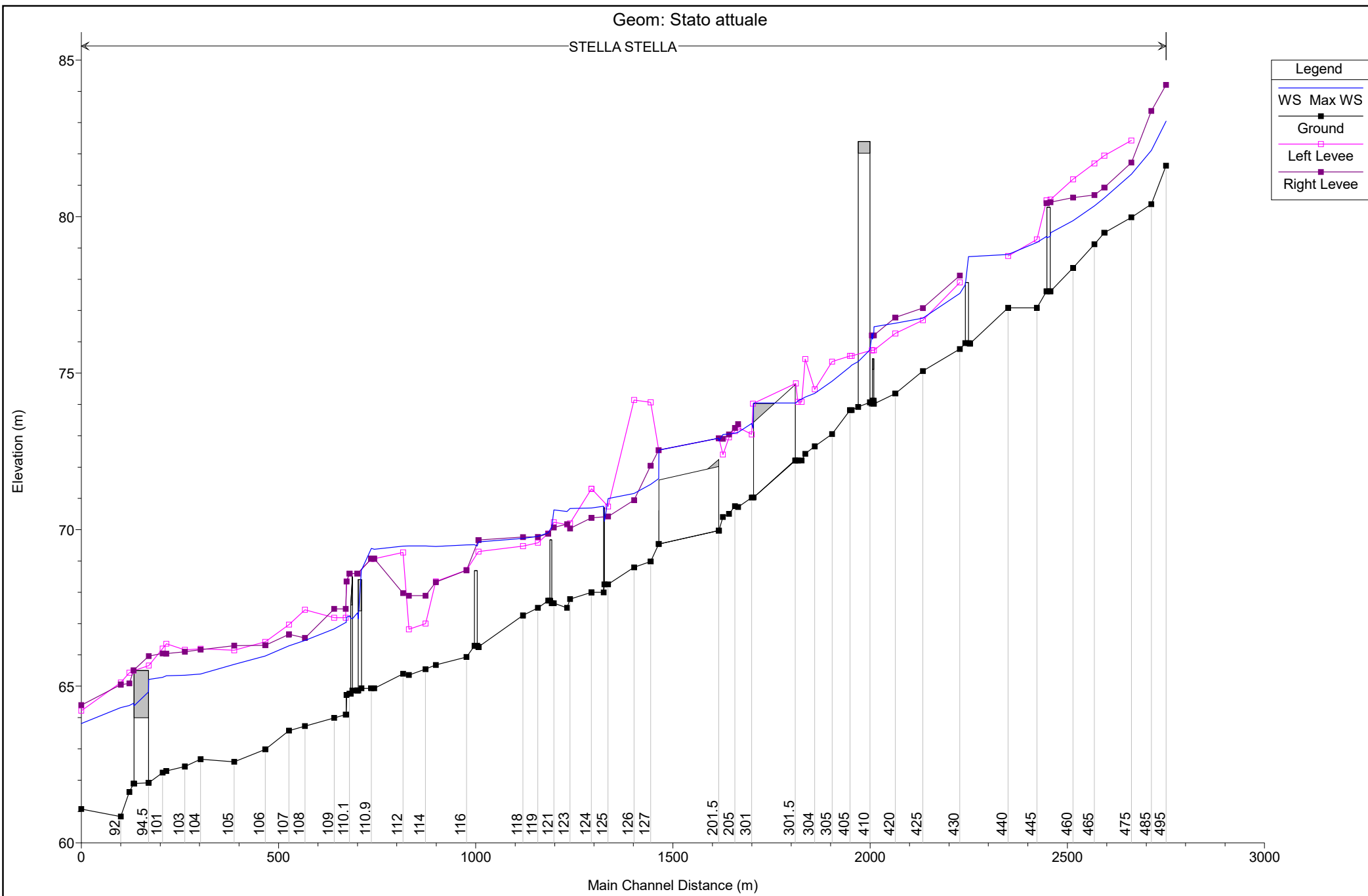
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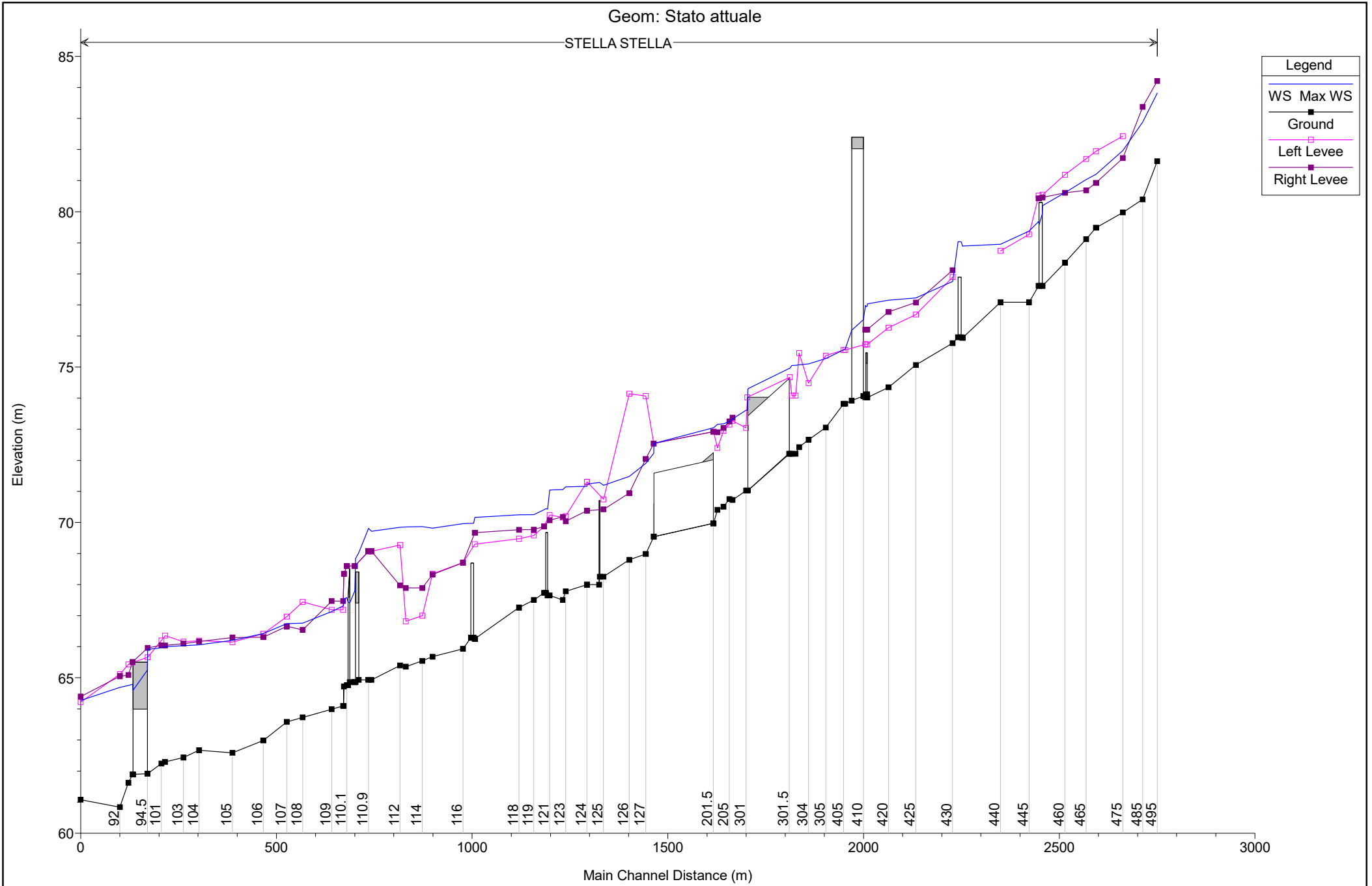
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PROFILI LONGITUDINALI CON LIVELLI IDRAULICI

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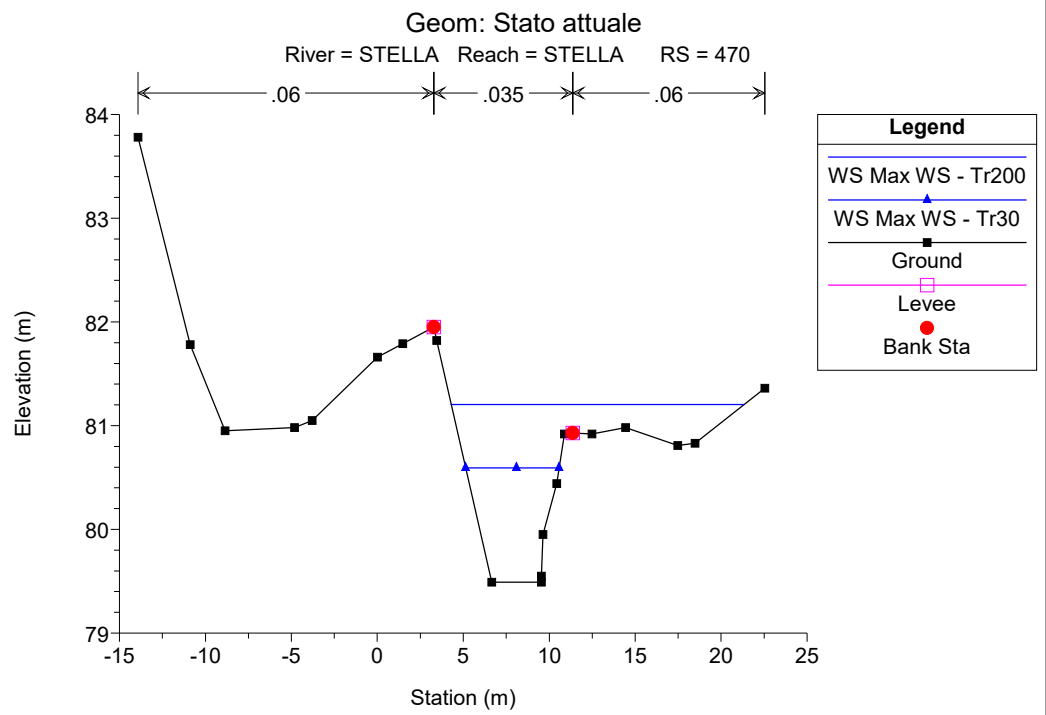
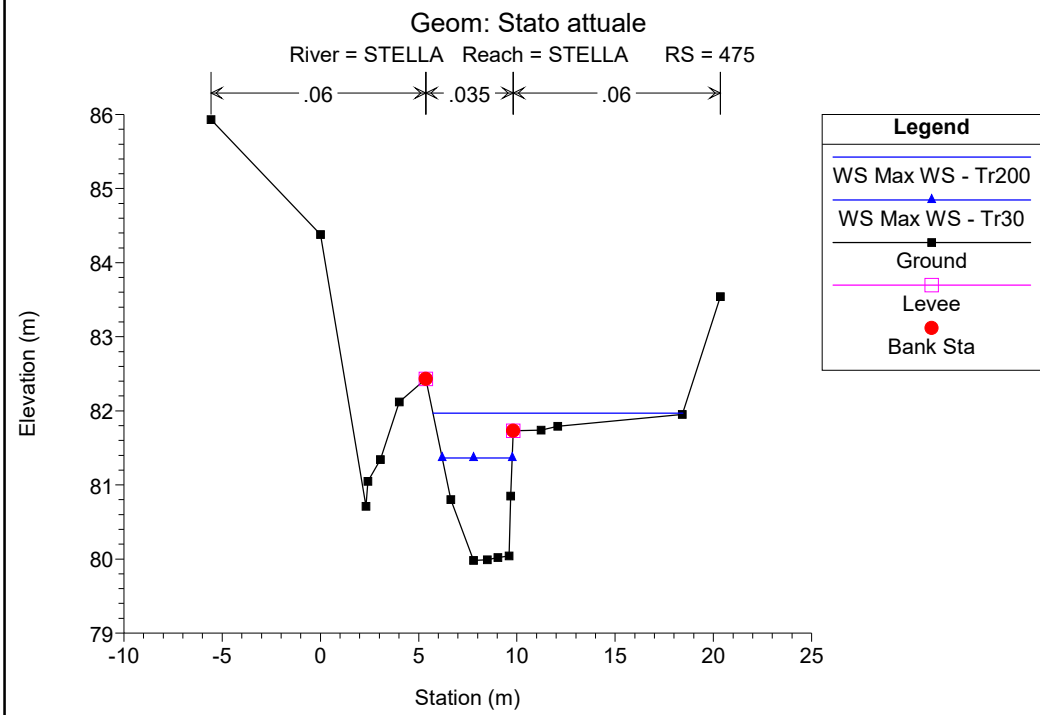
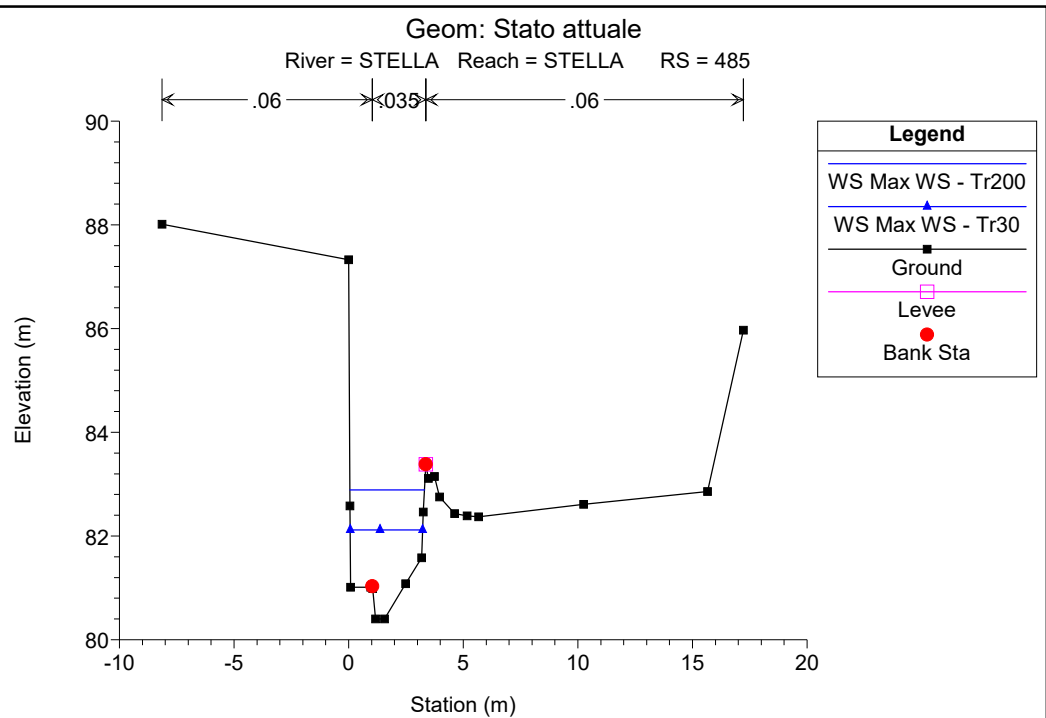
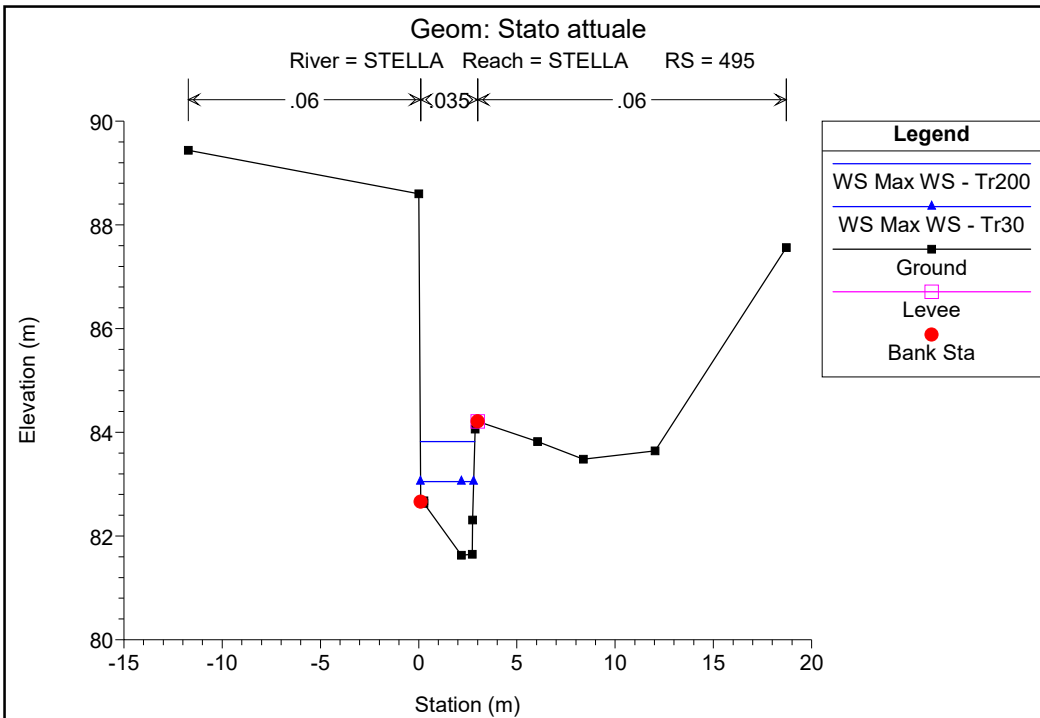


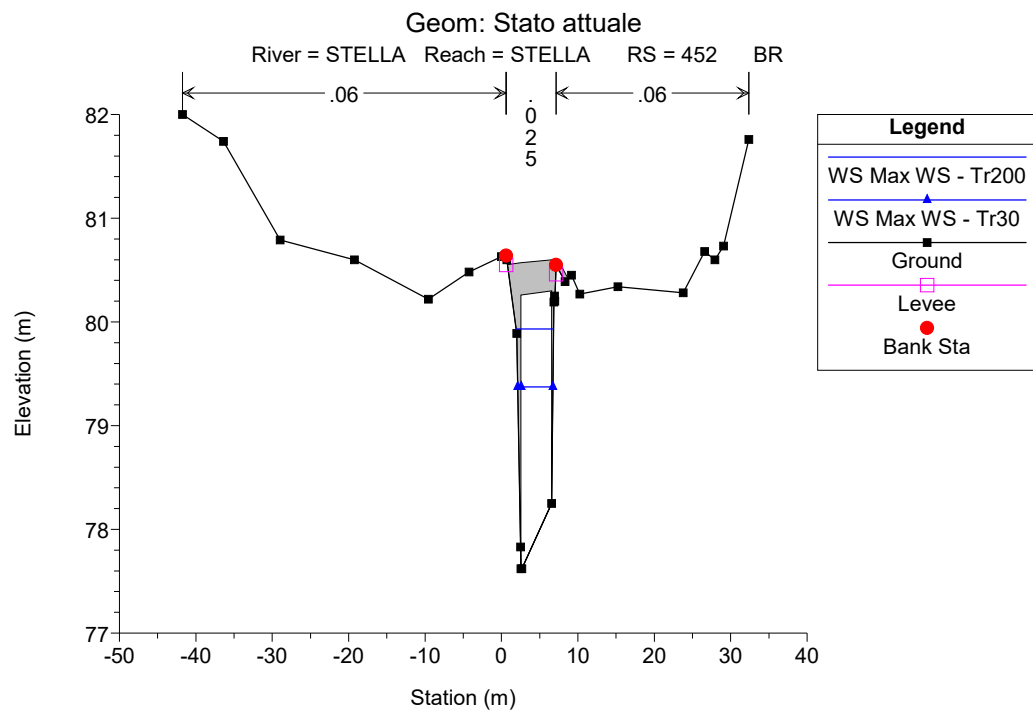
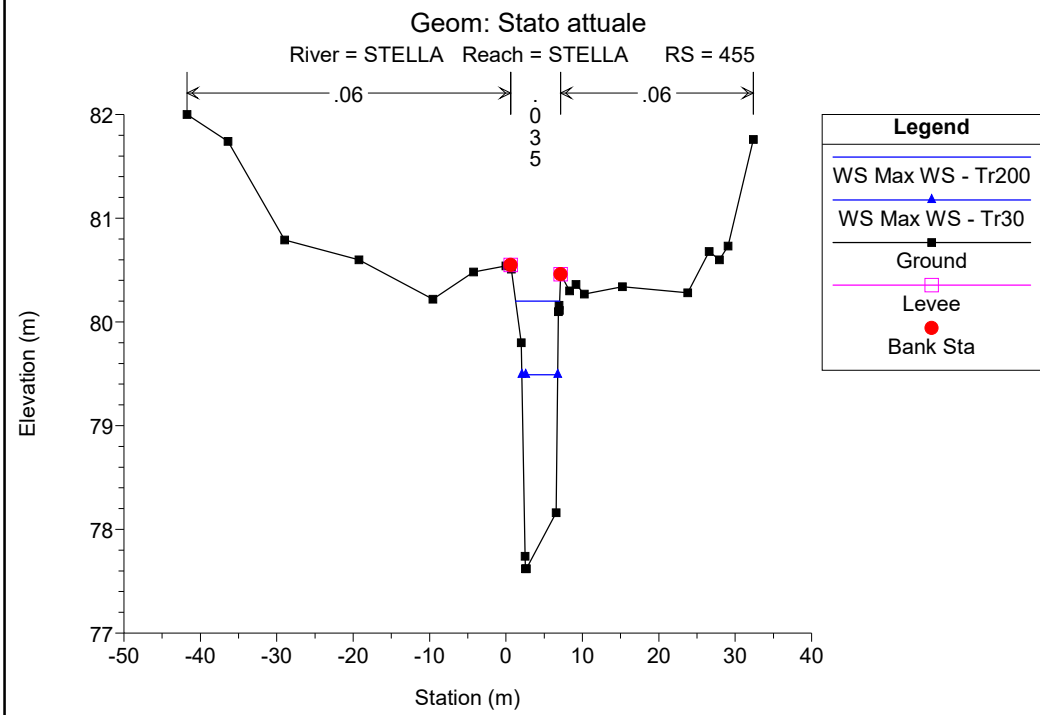
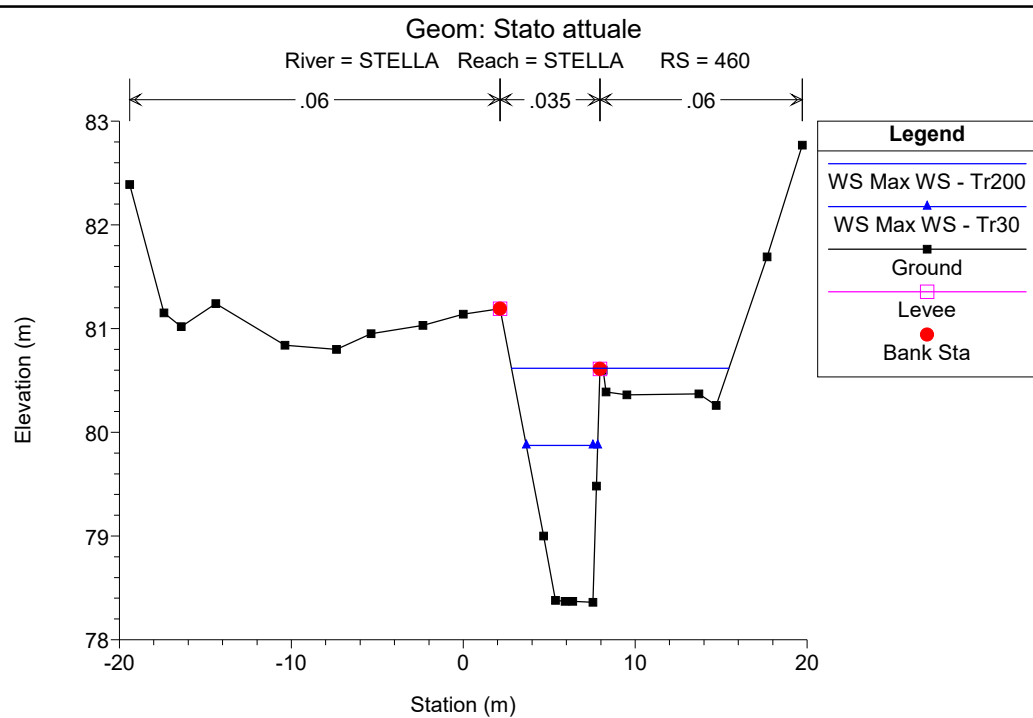
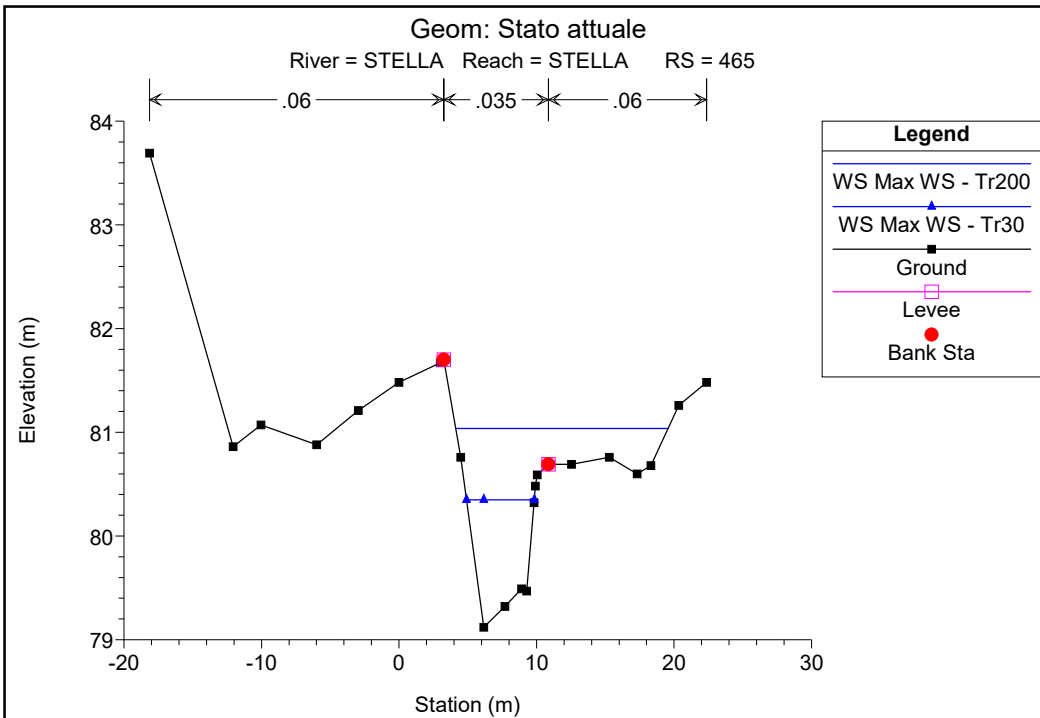
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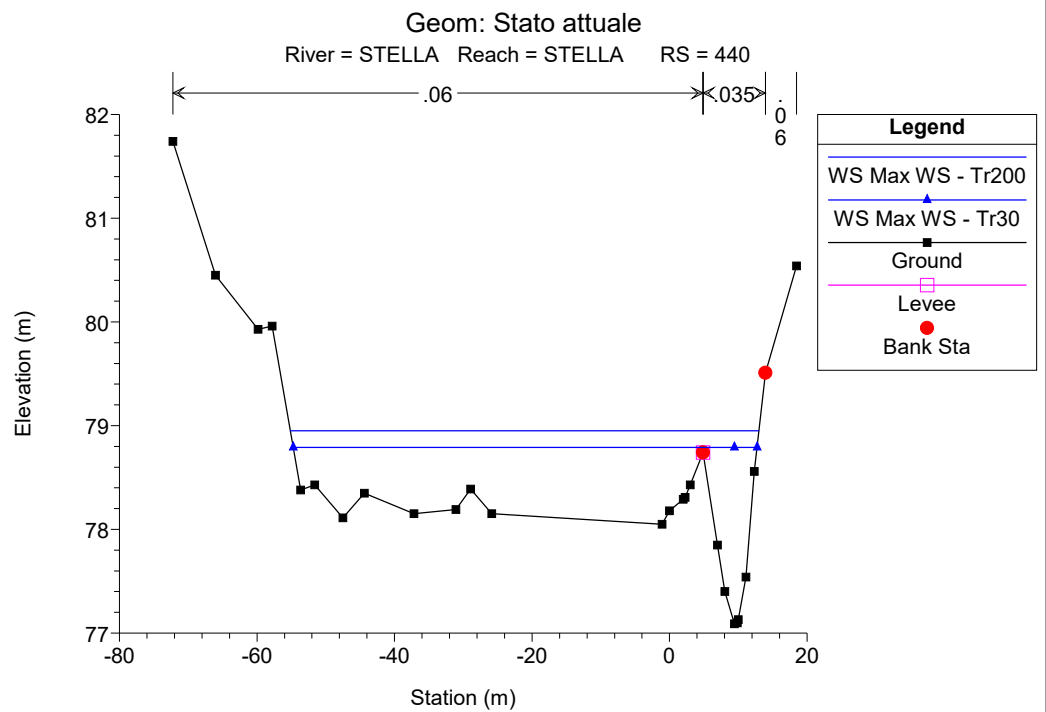
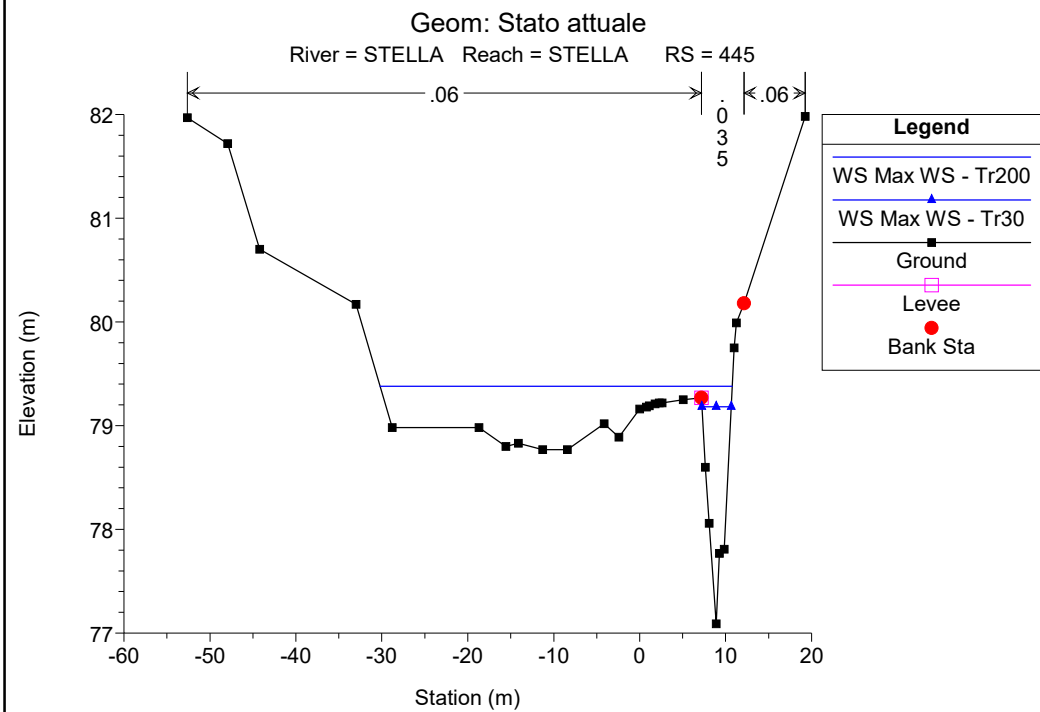
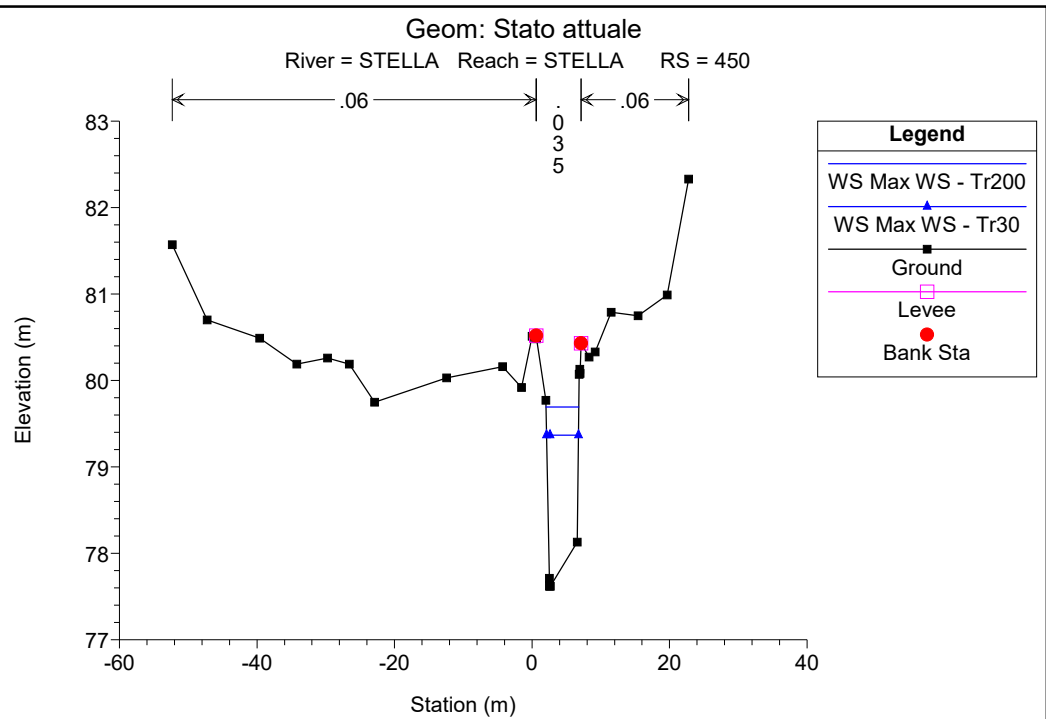
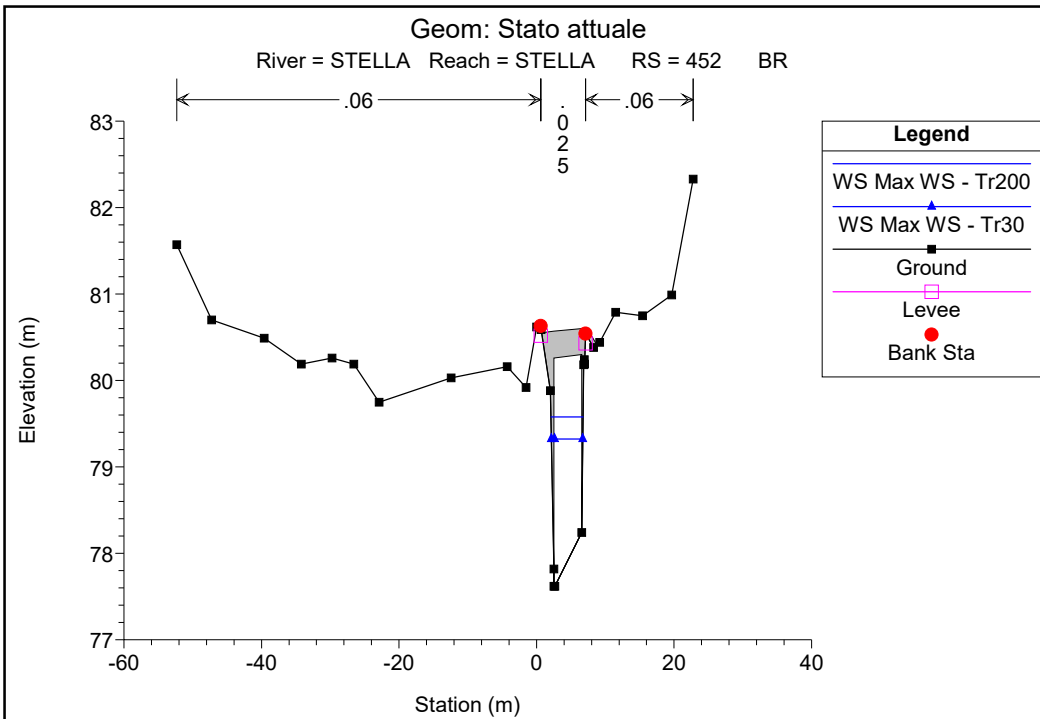


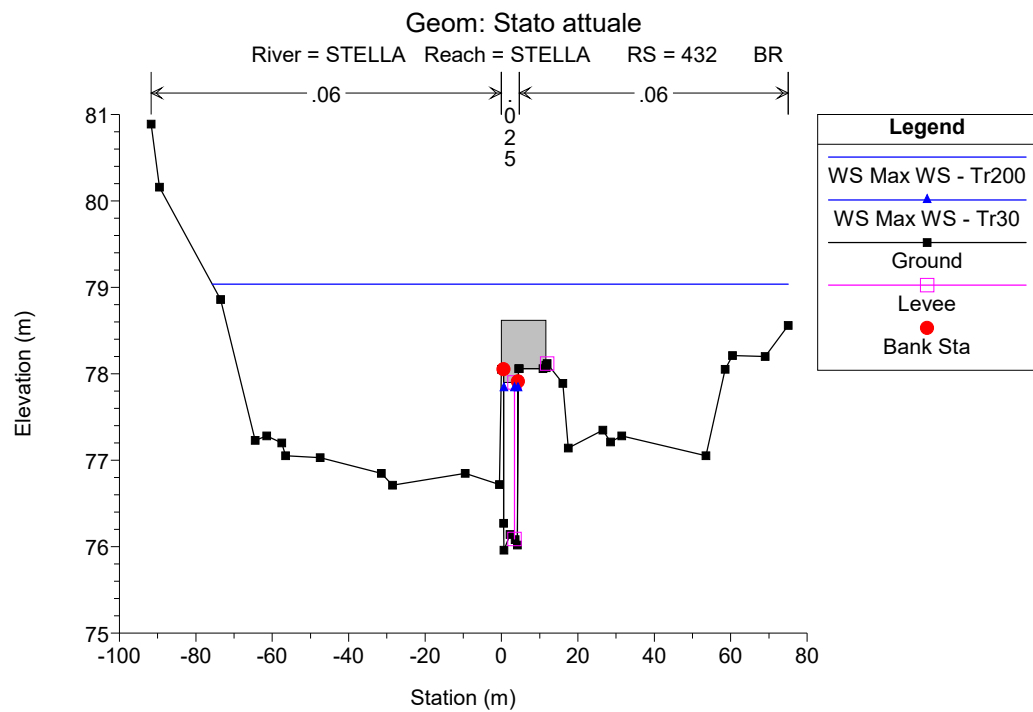
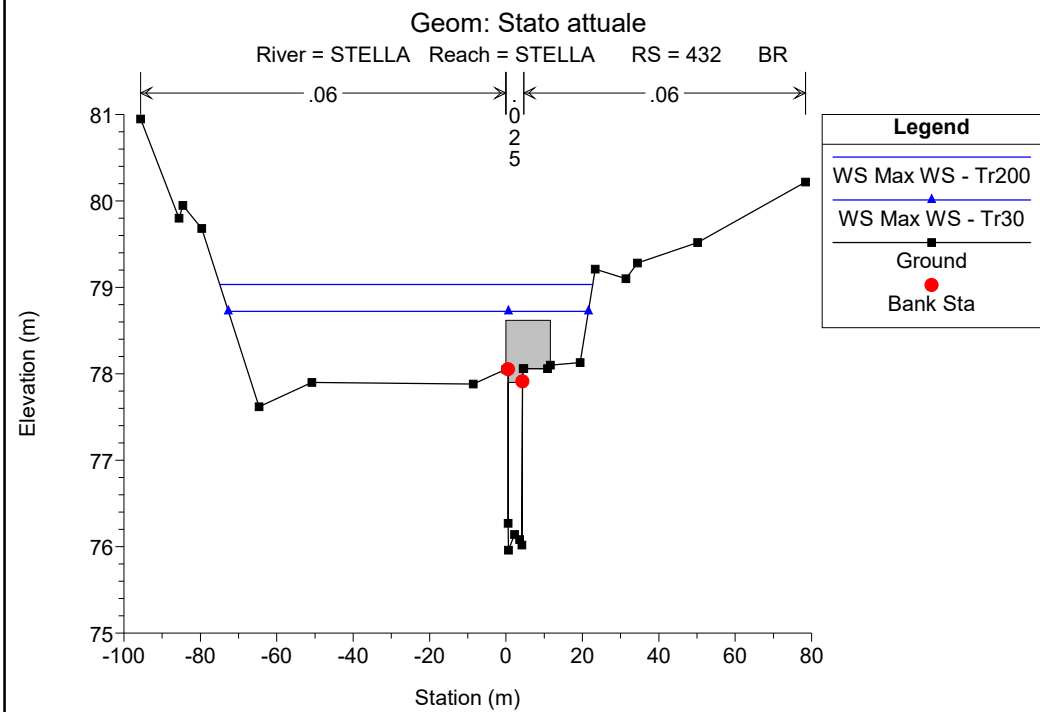
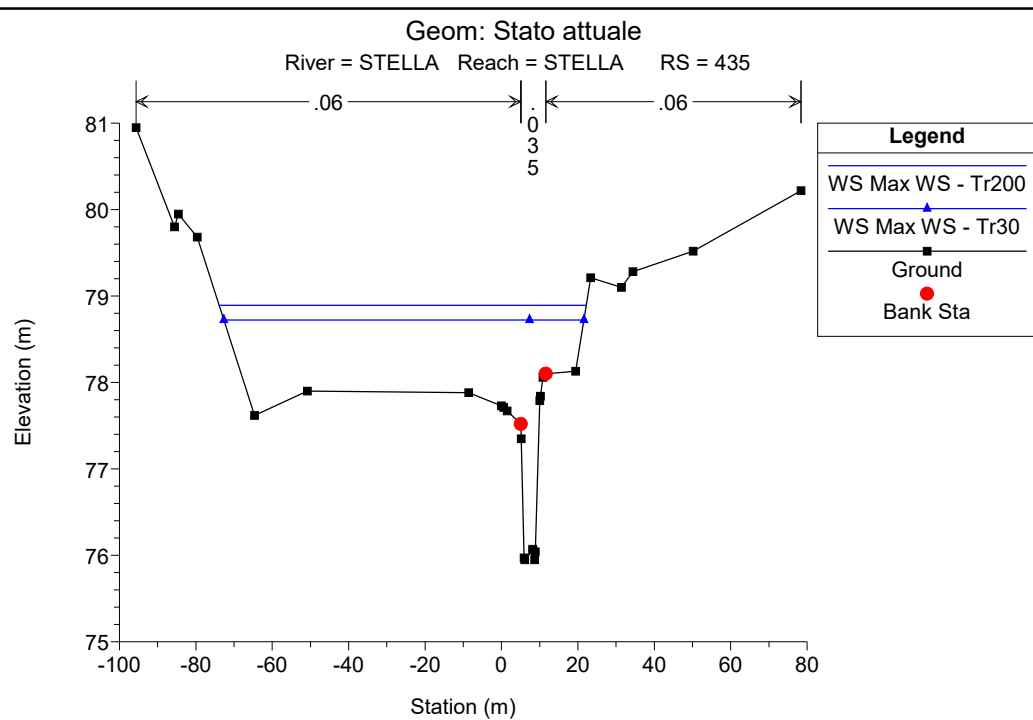
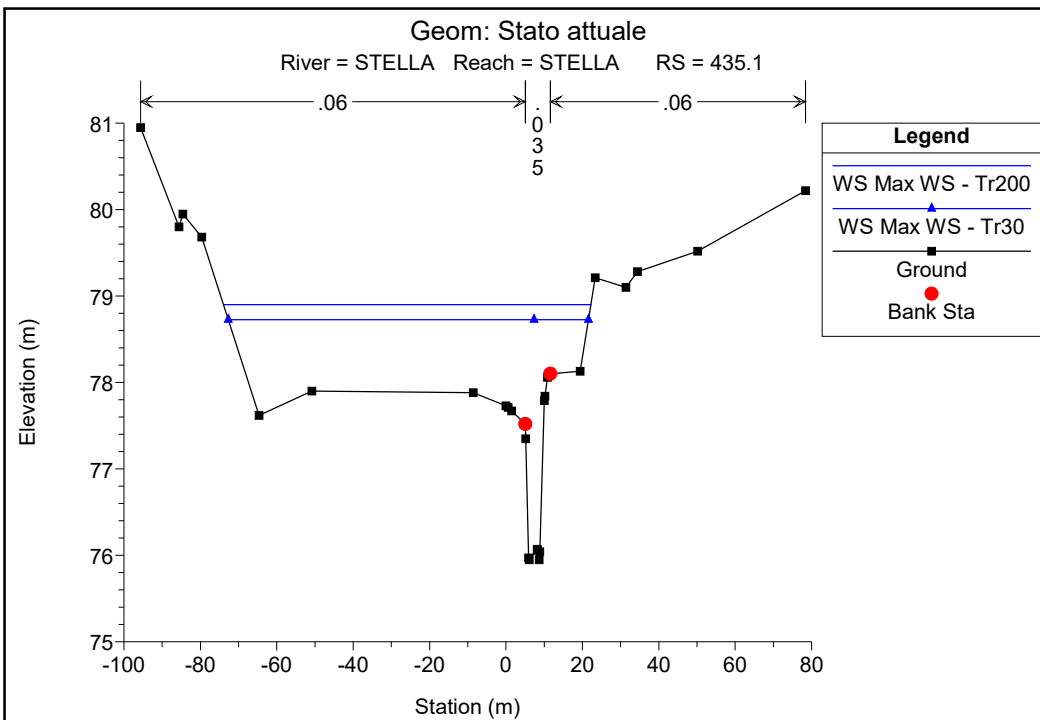
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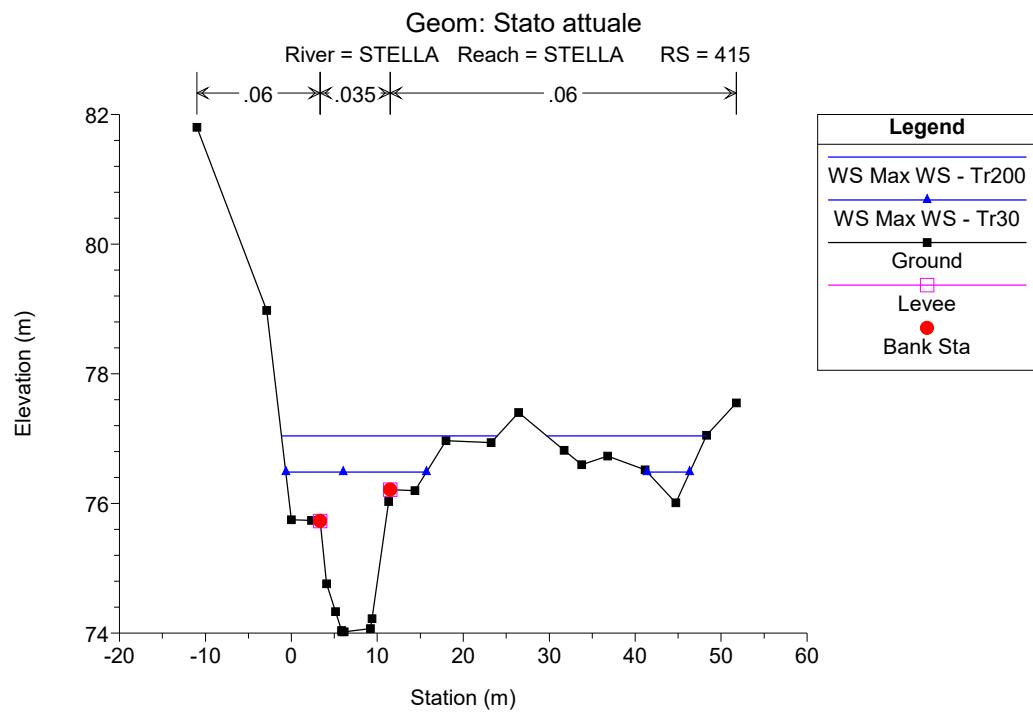
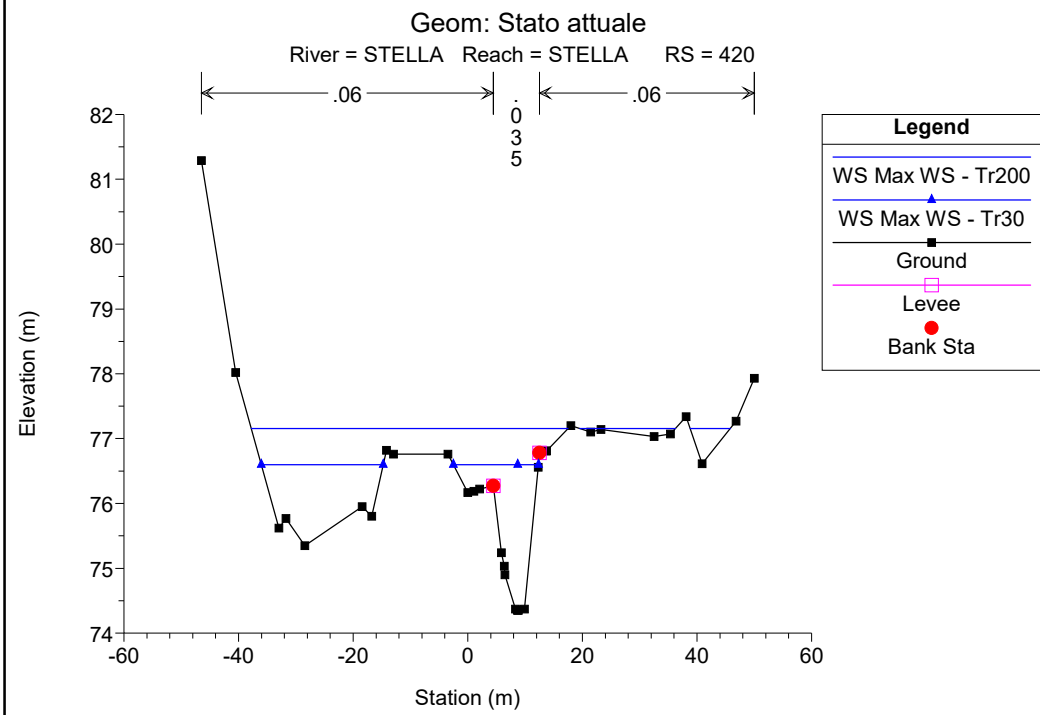
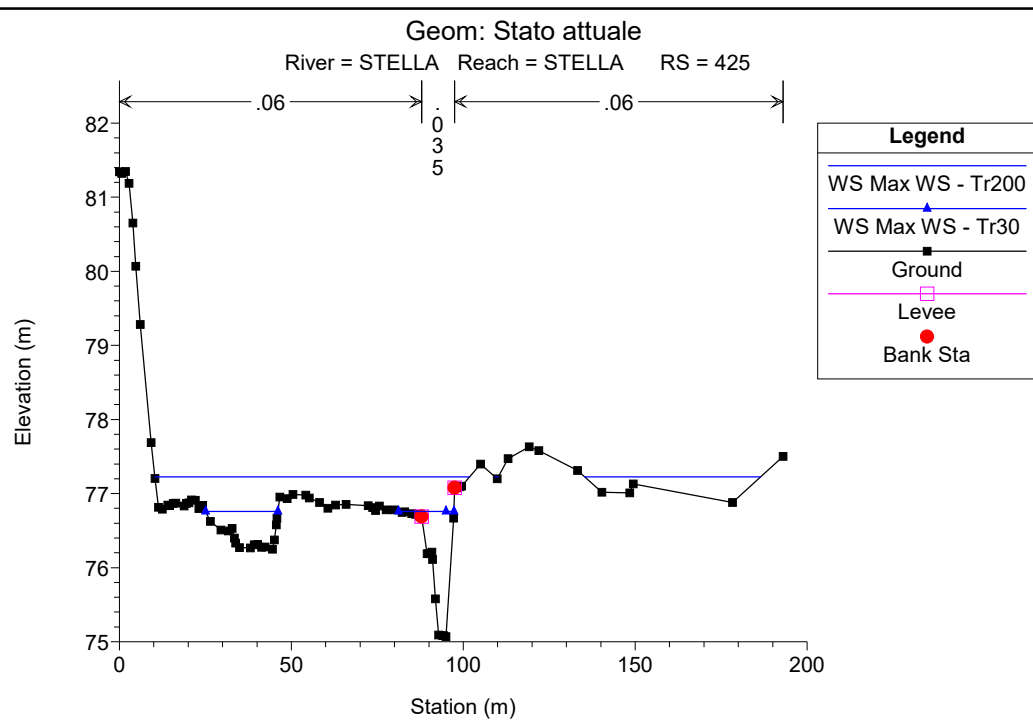
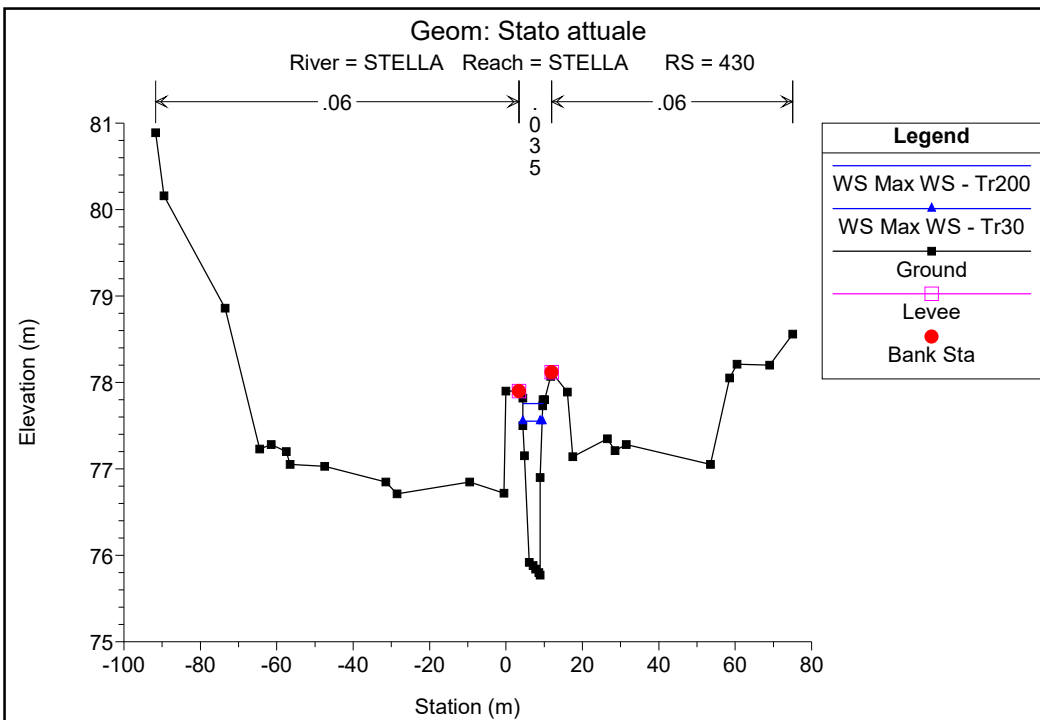
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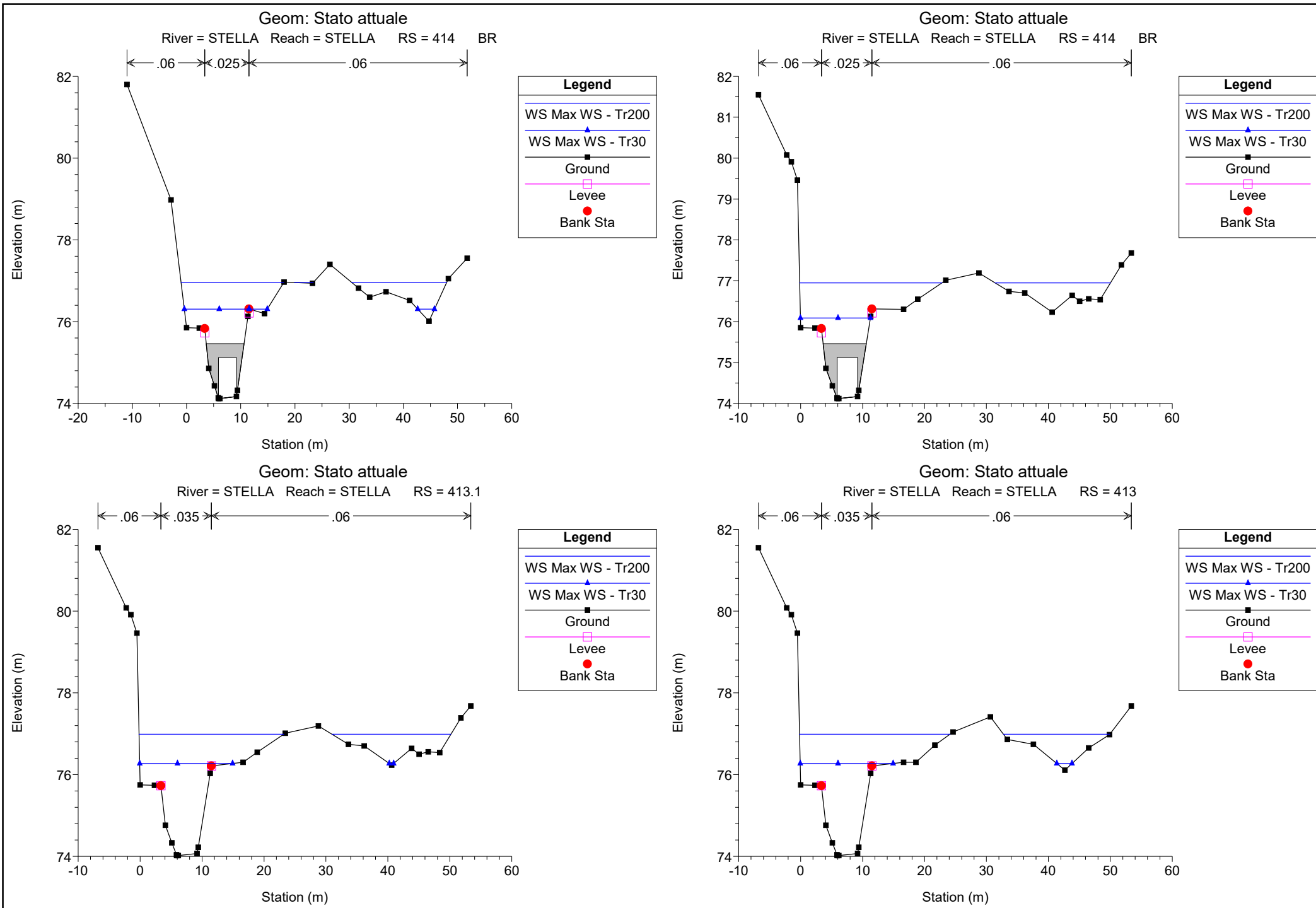


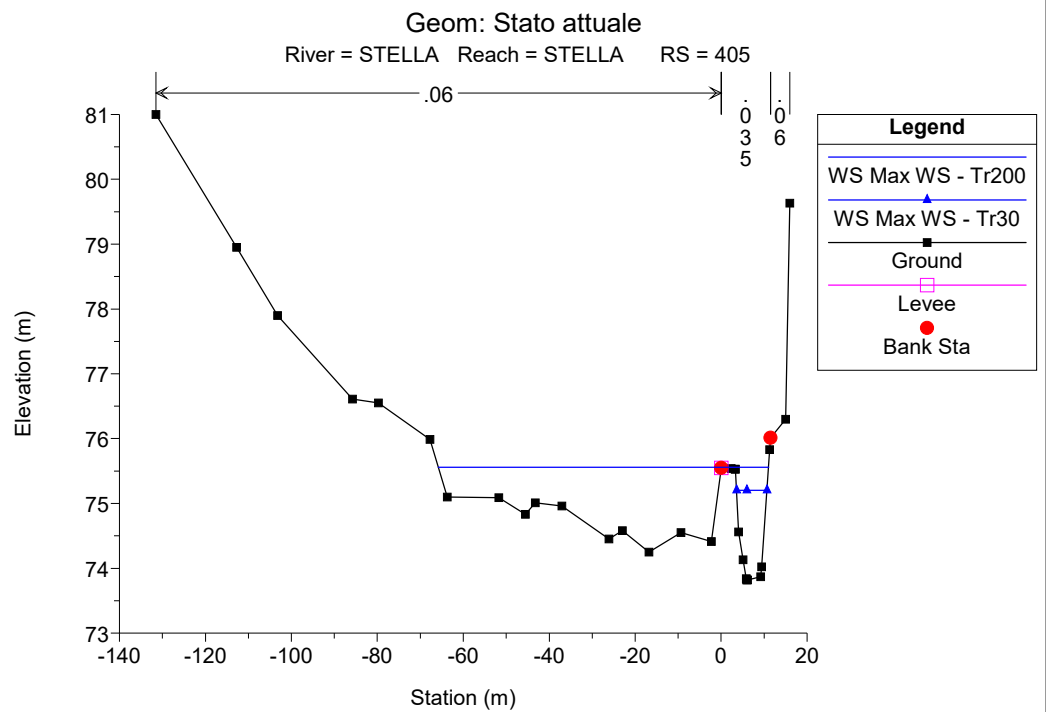
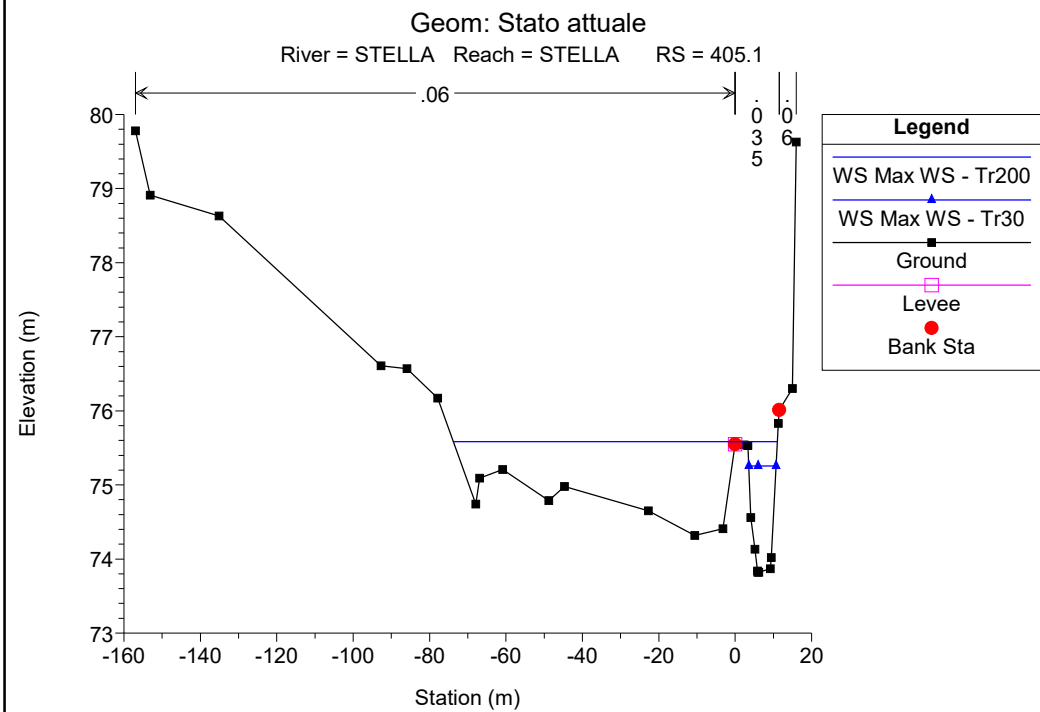
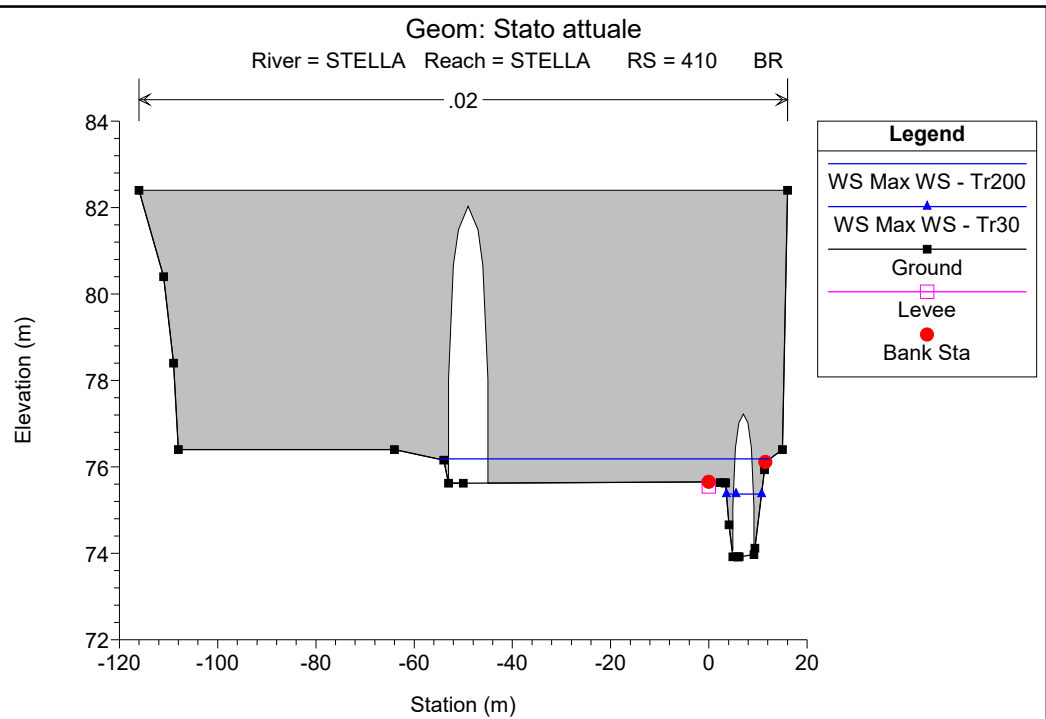
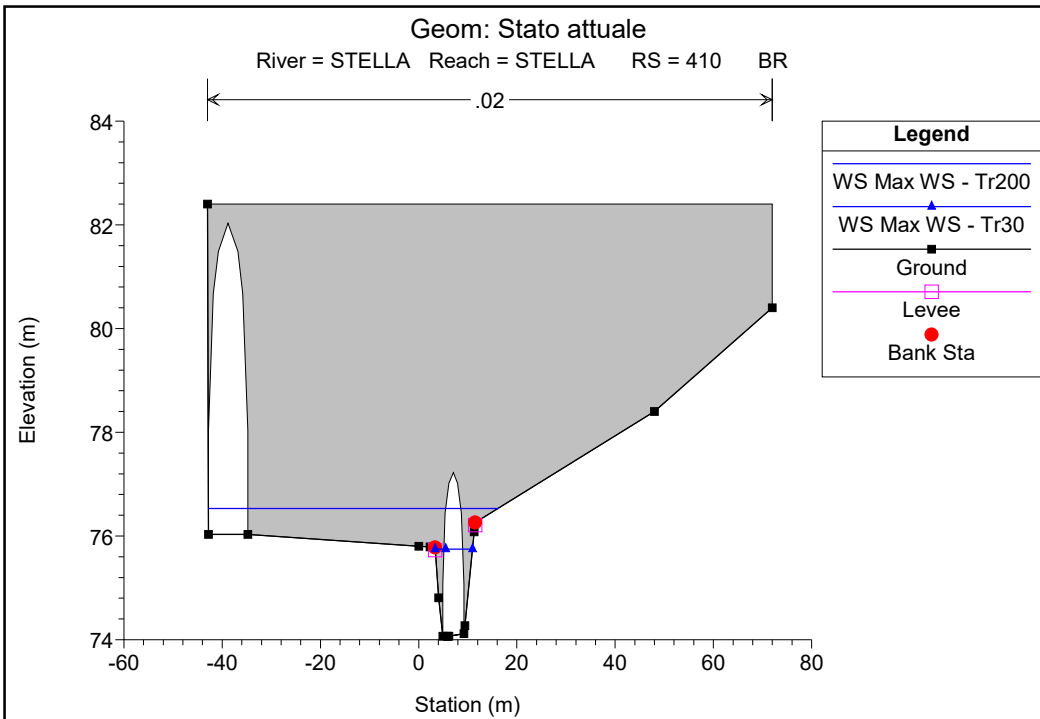


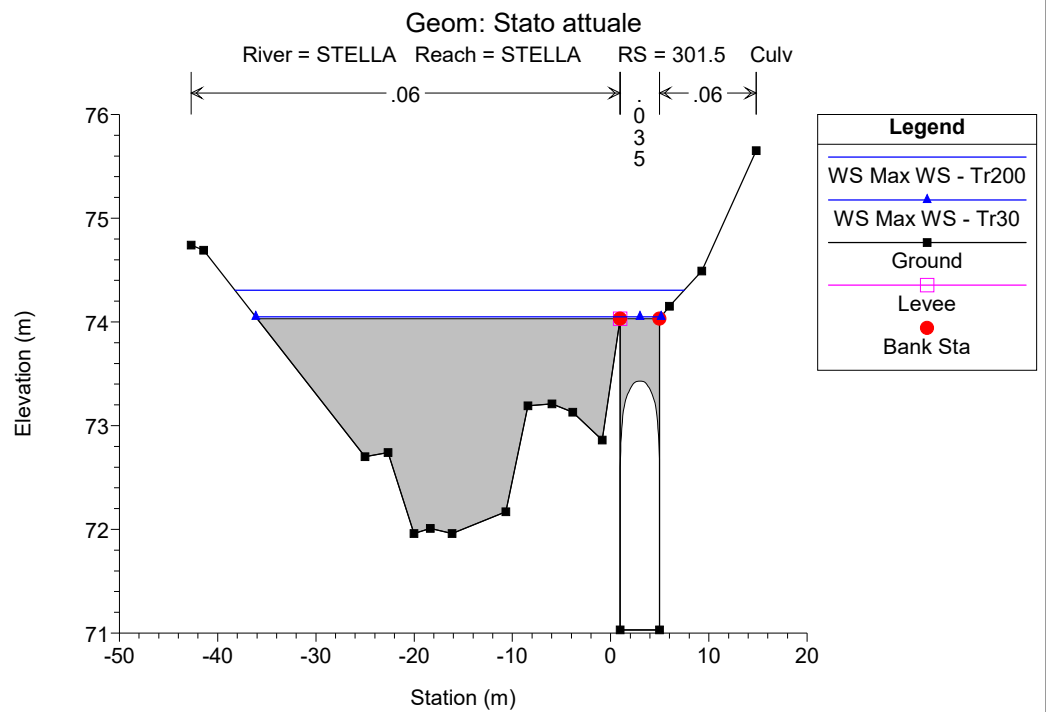
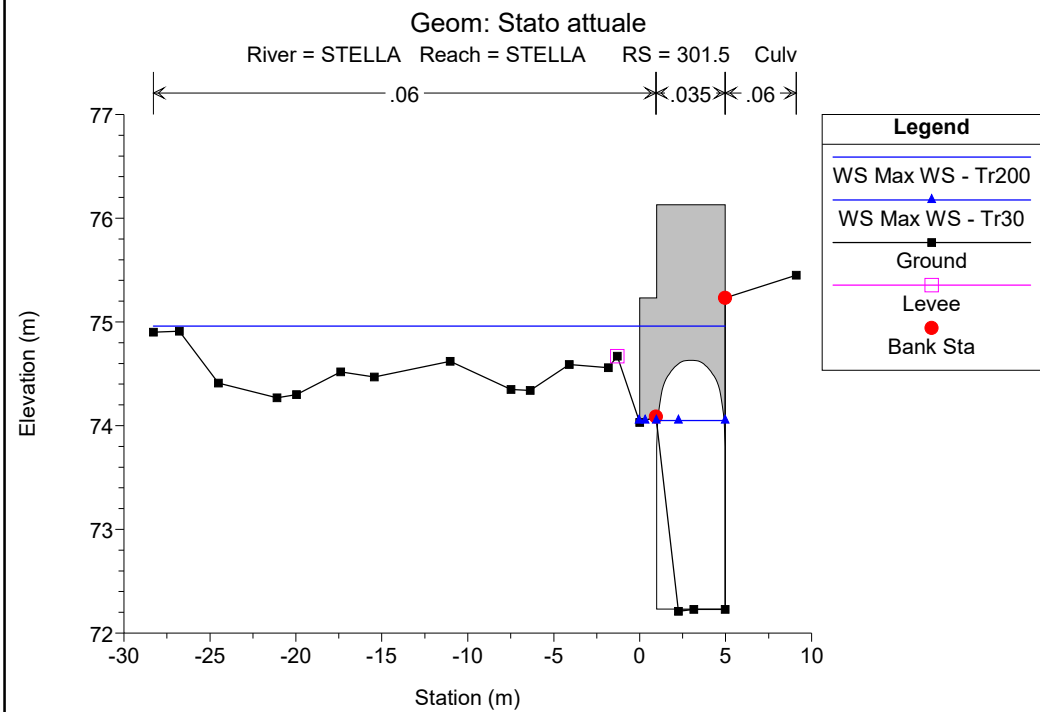
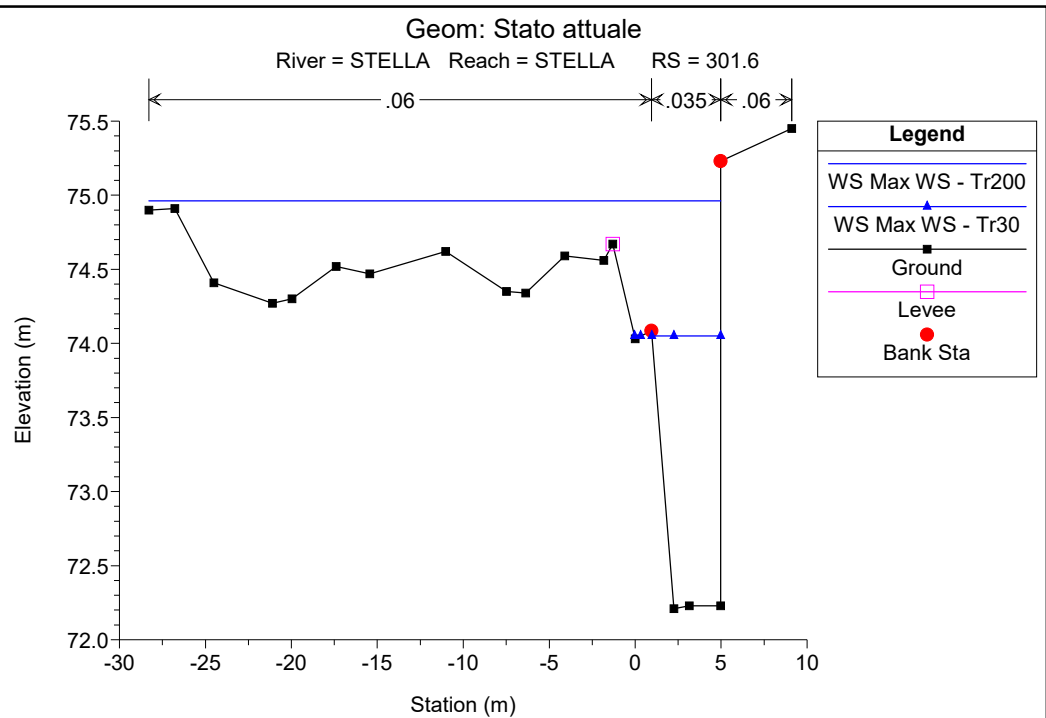
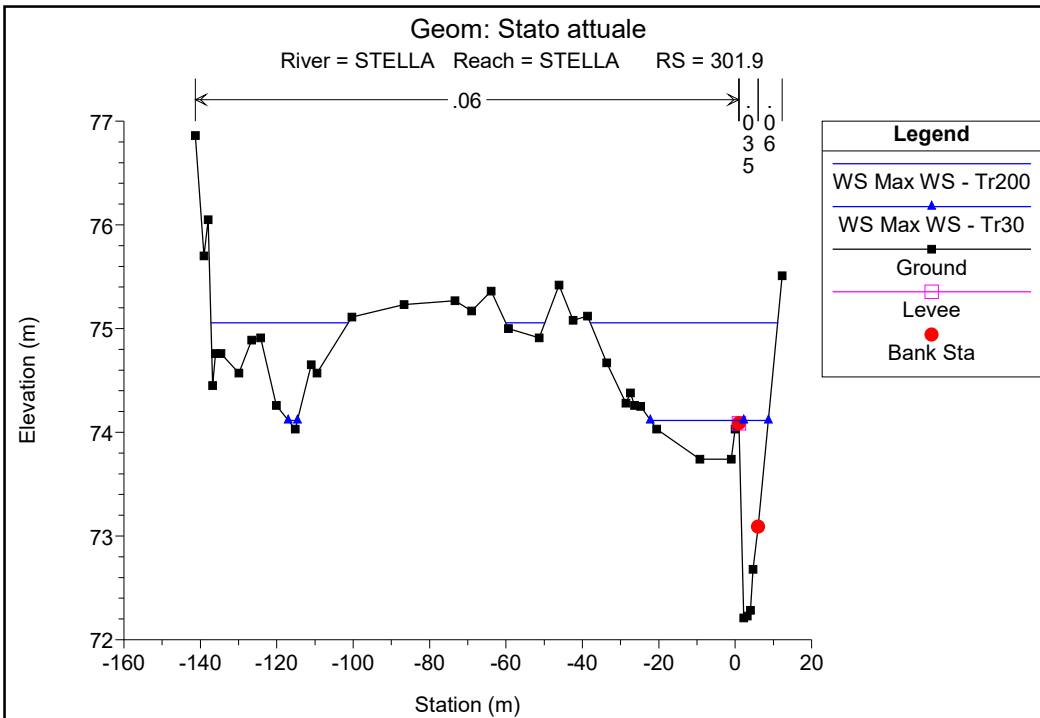


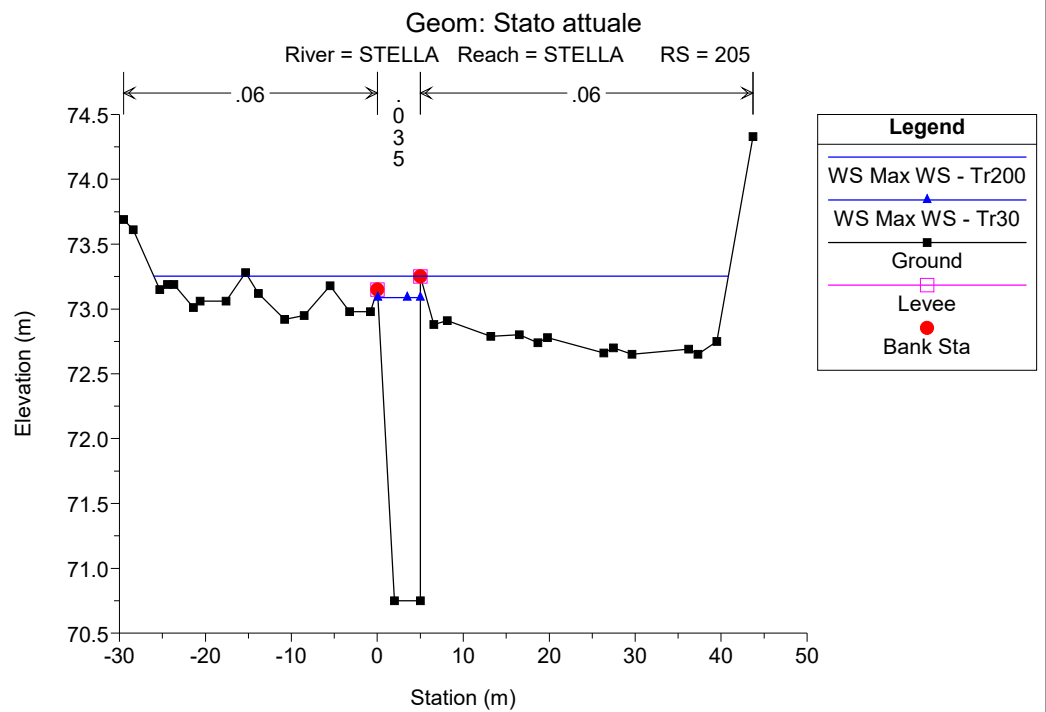
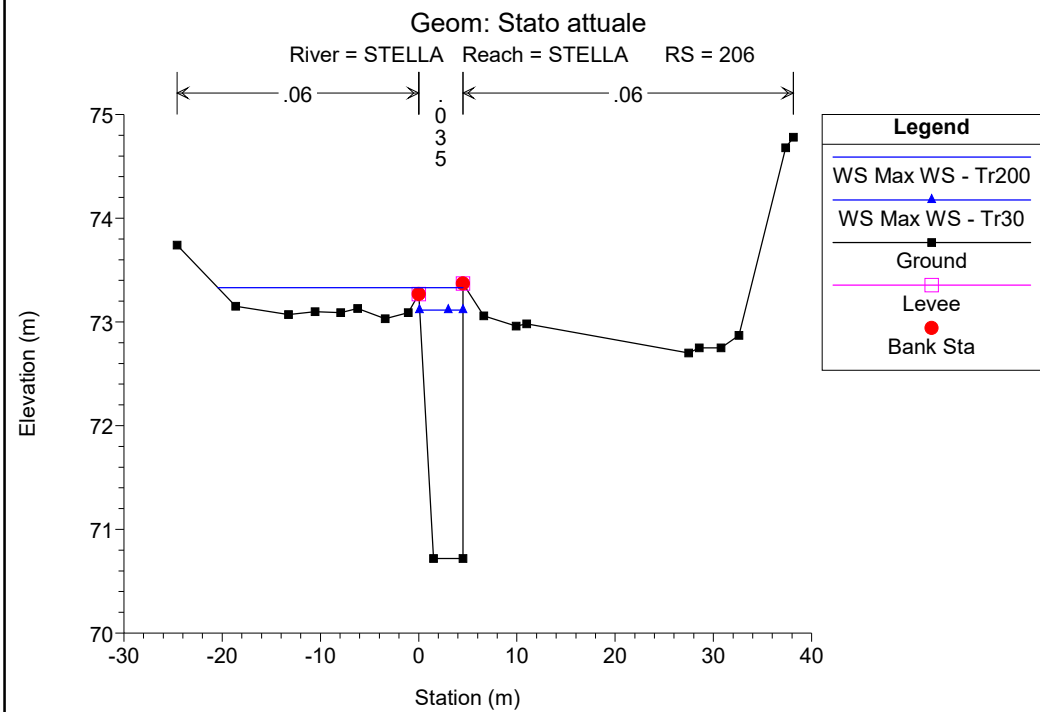
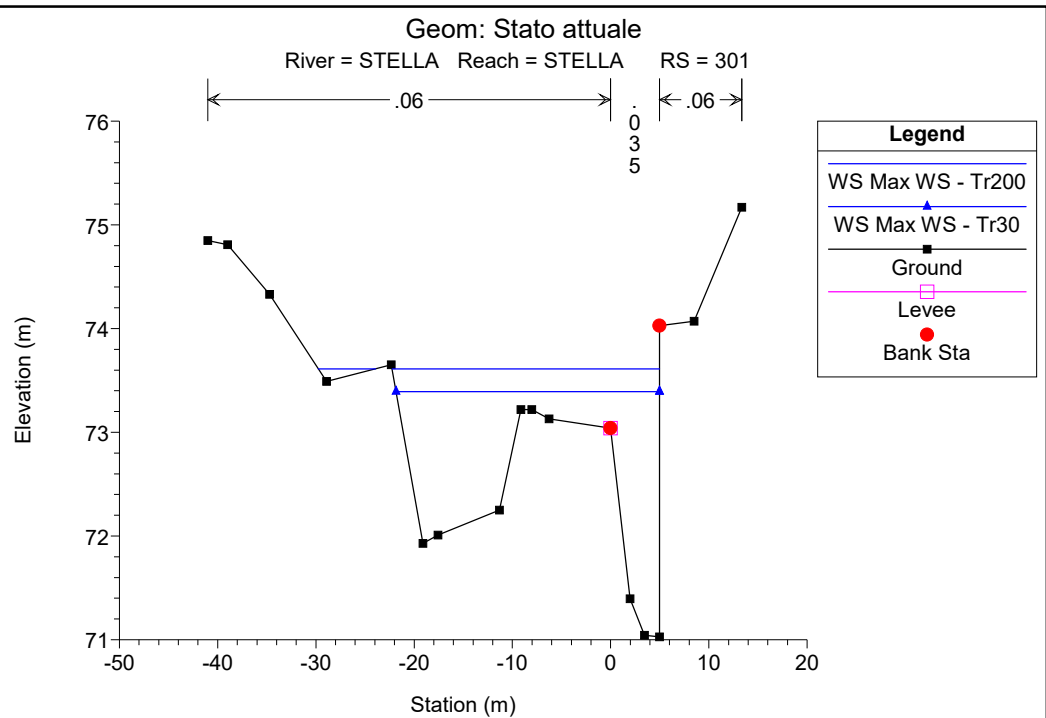
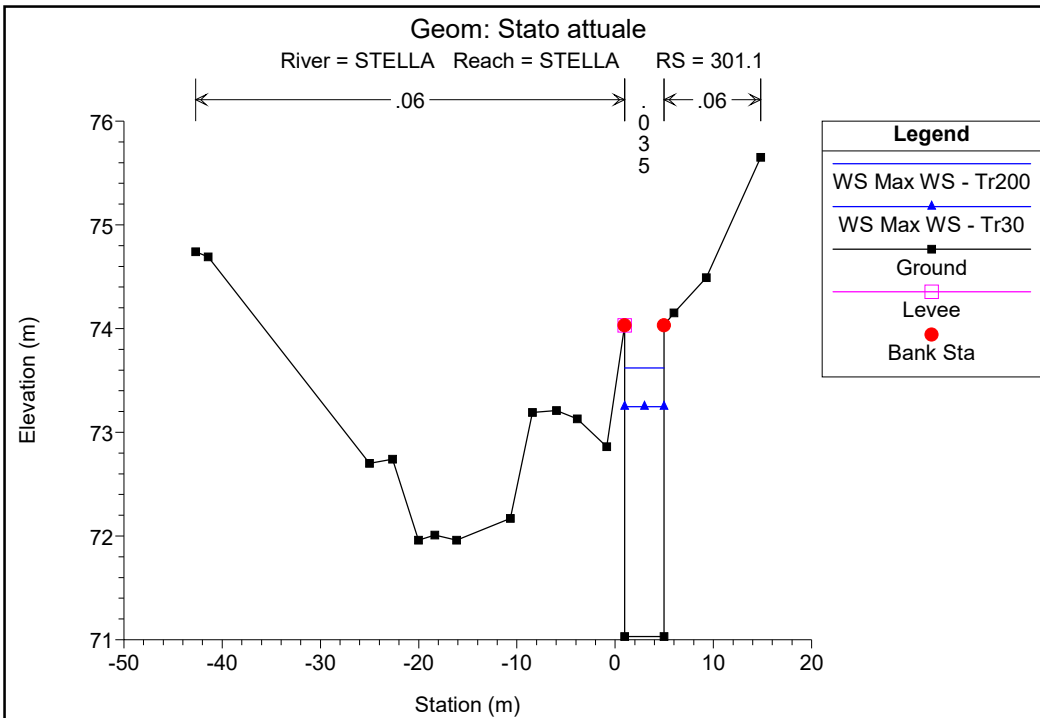


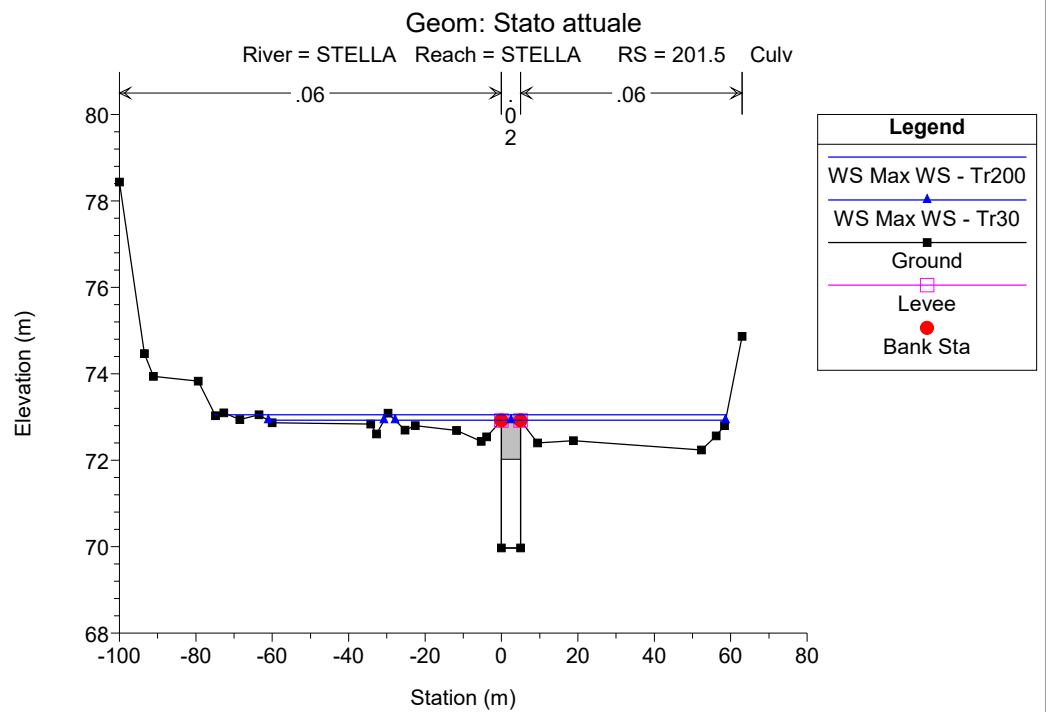
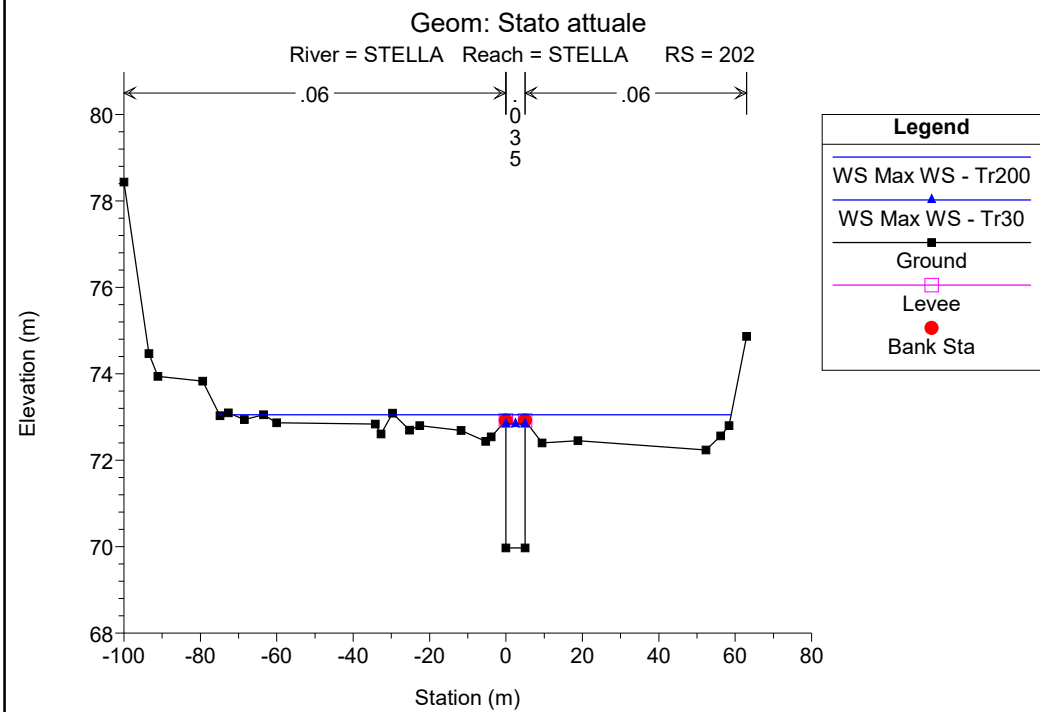
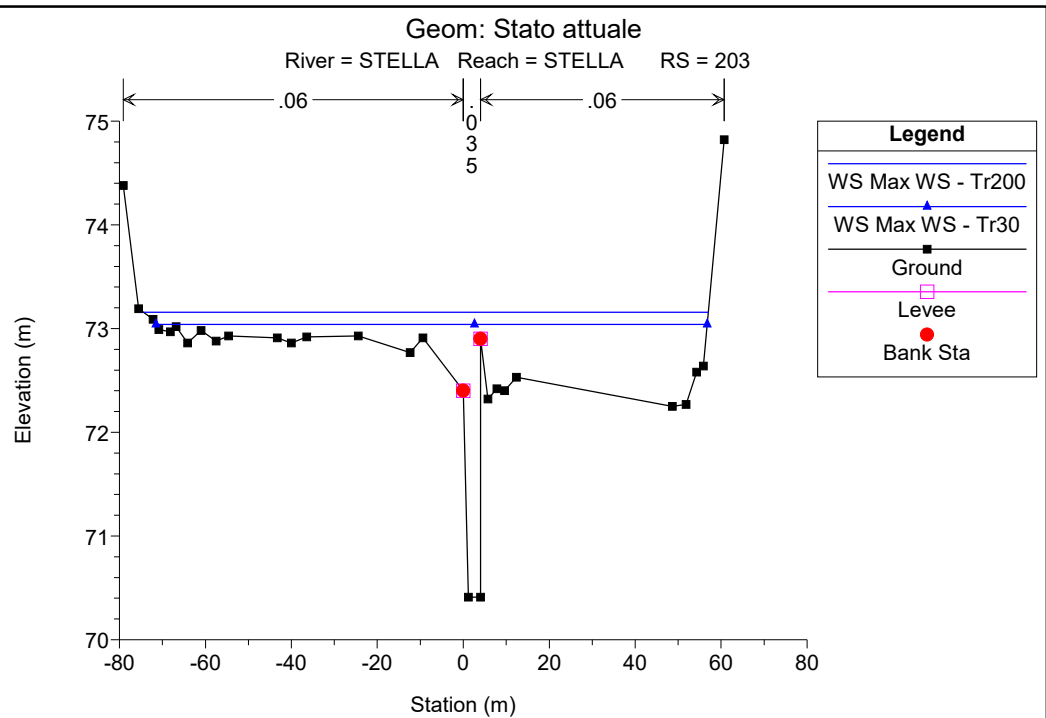
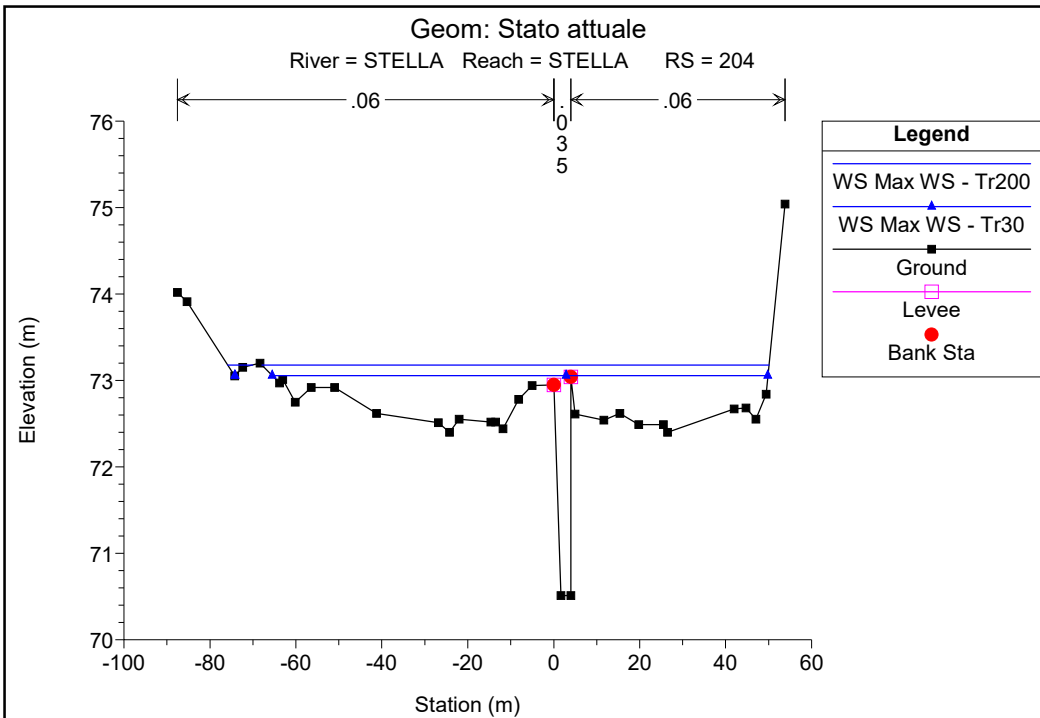


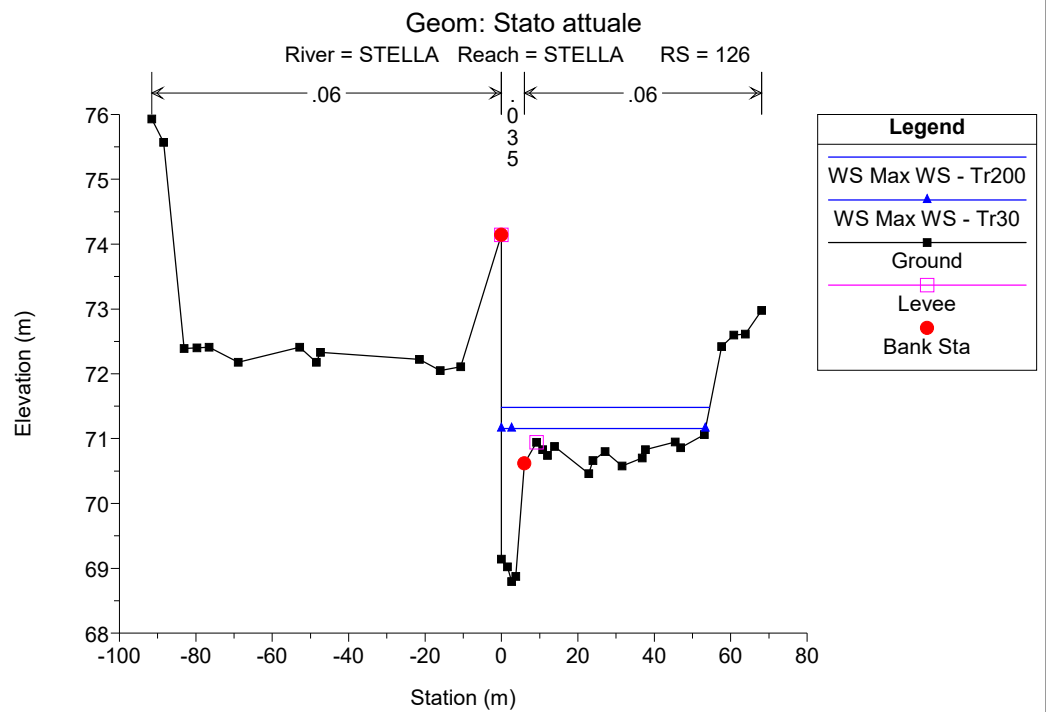
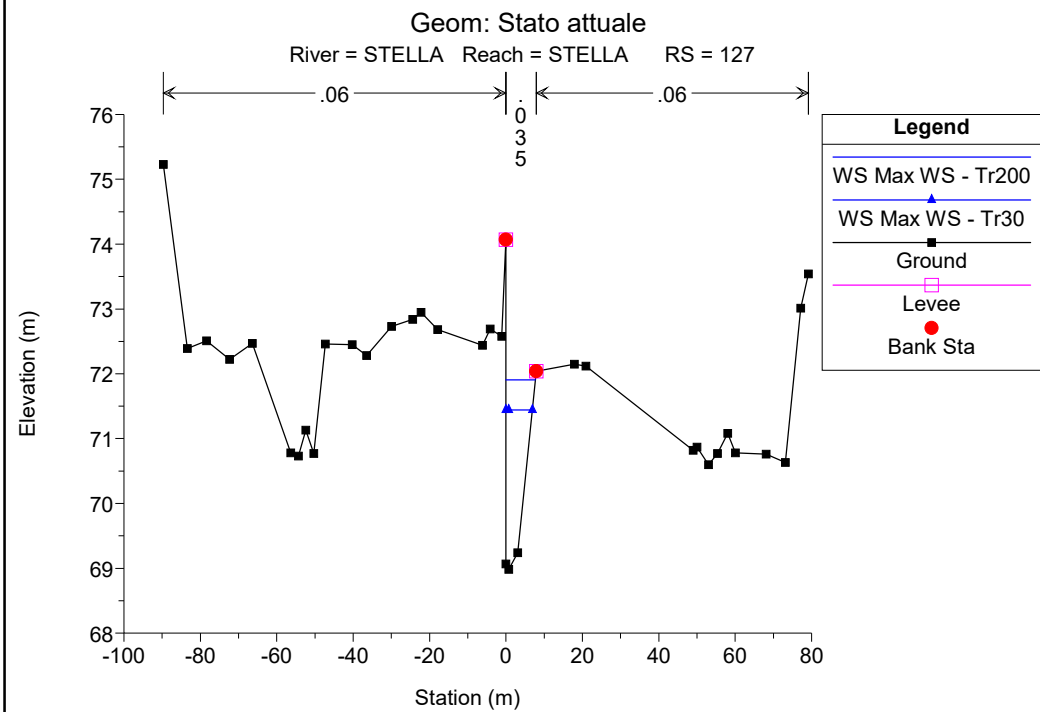
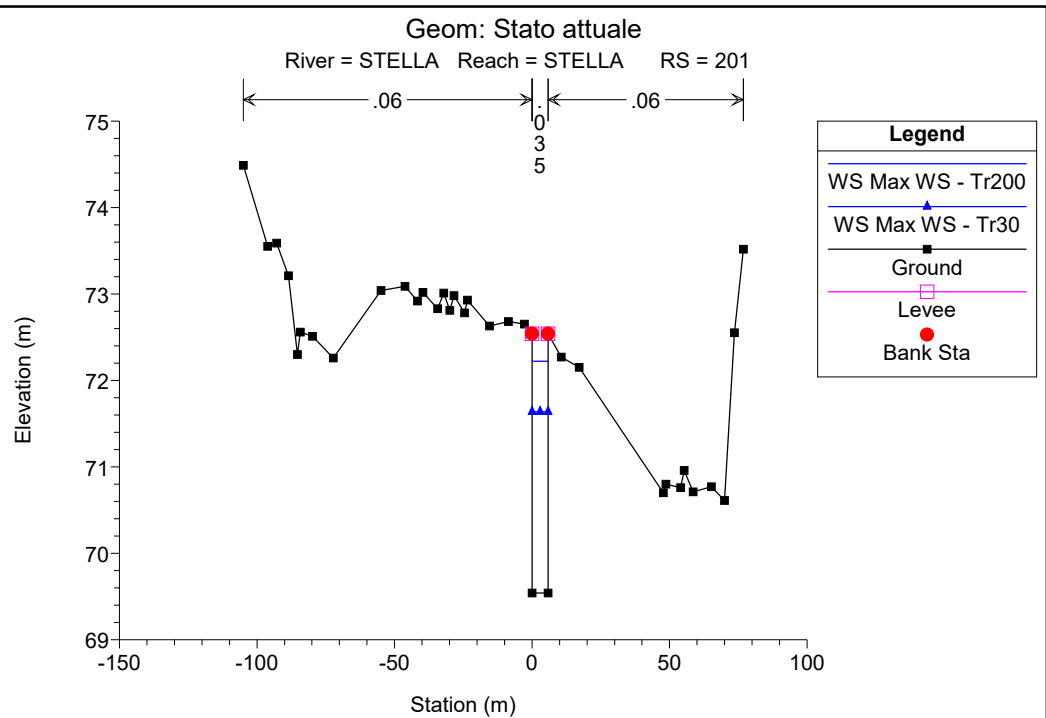
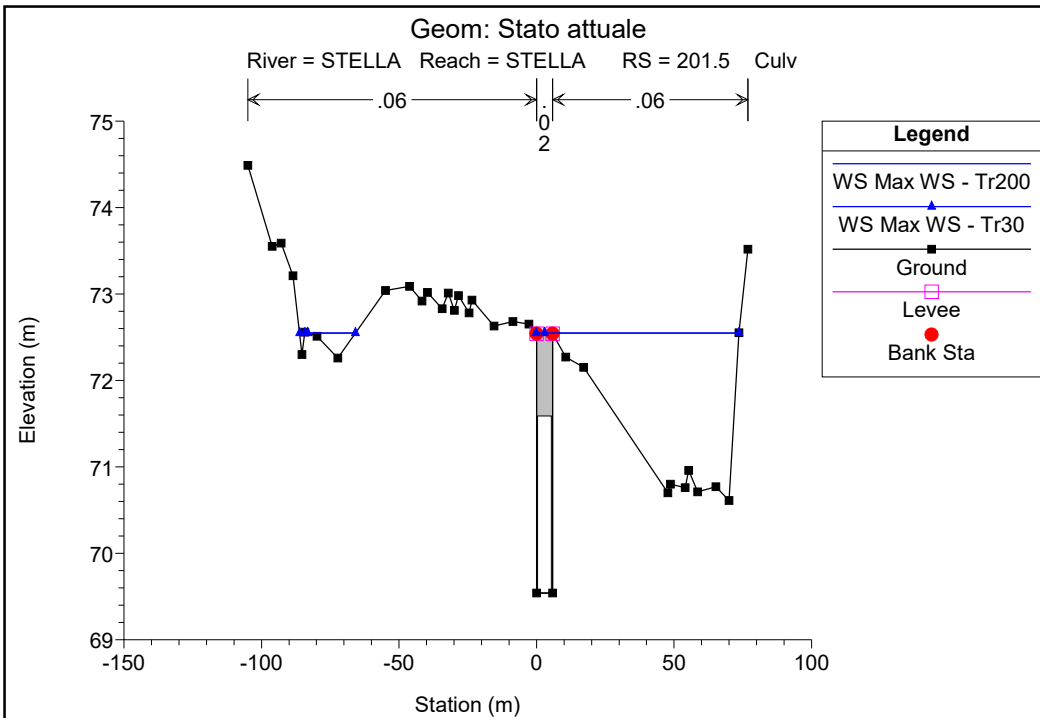


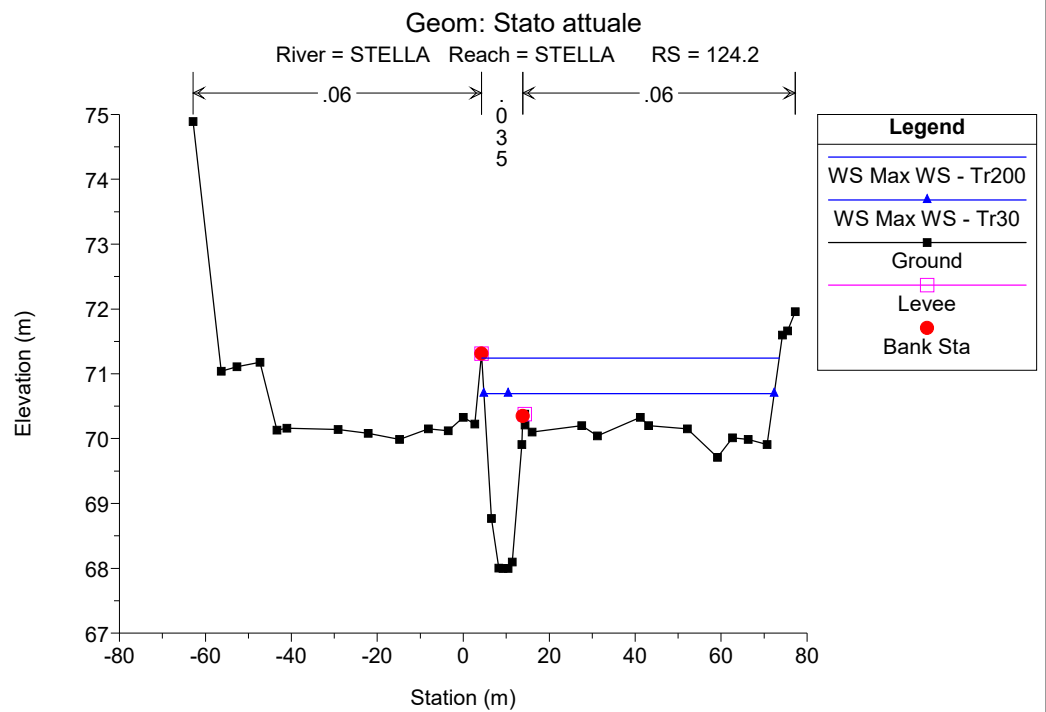
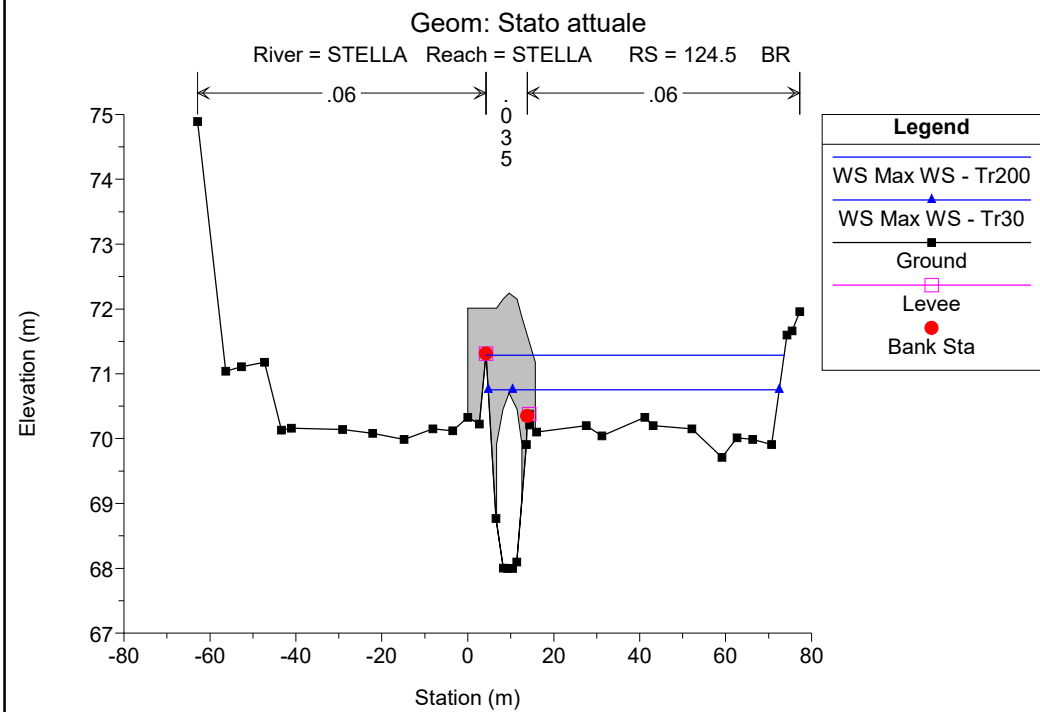
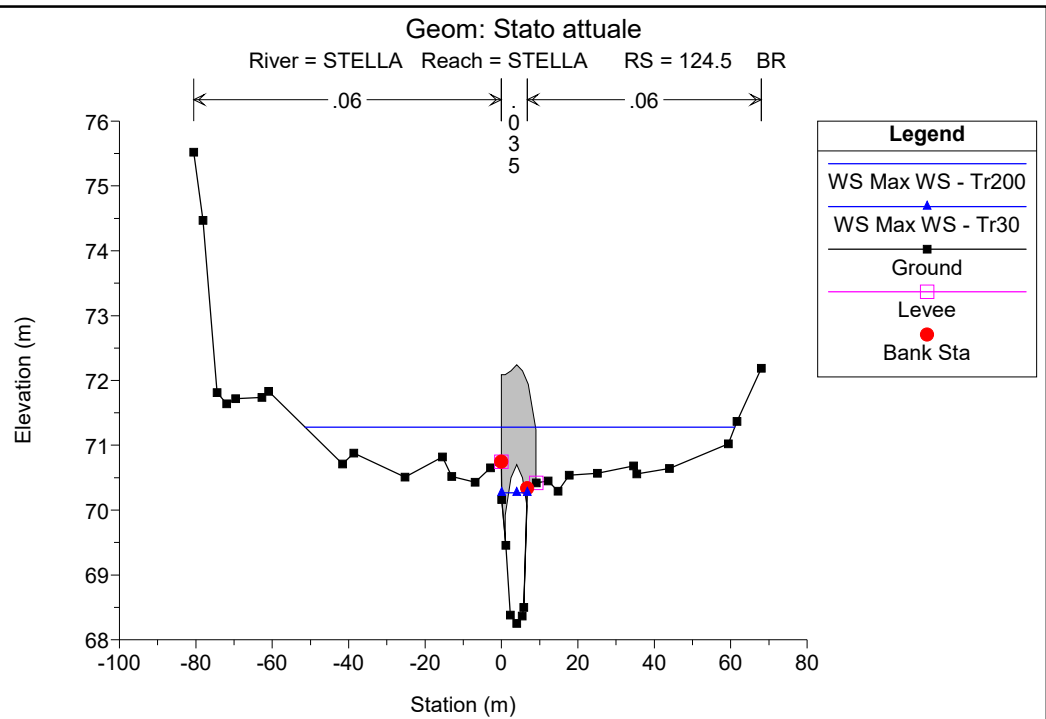
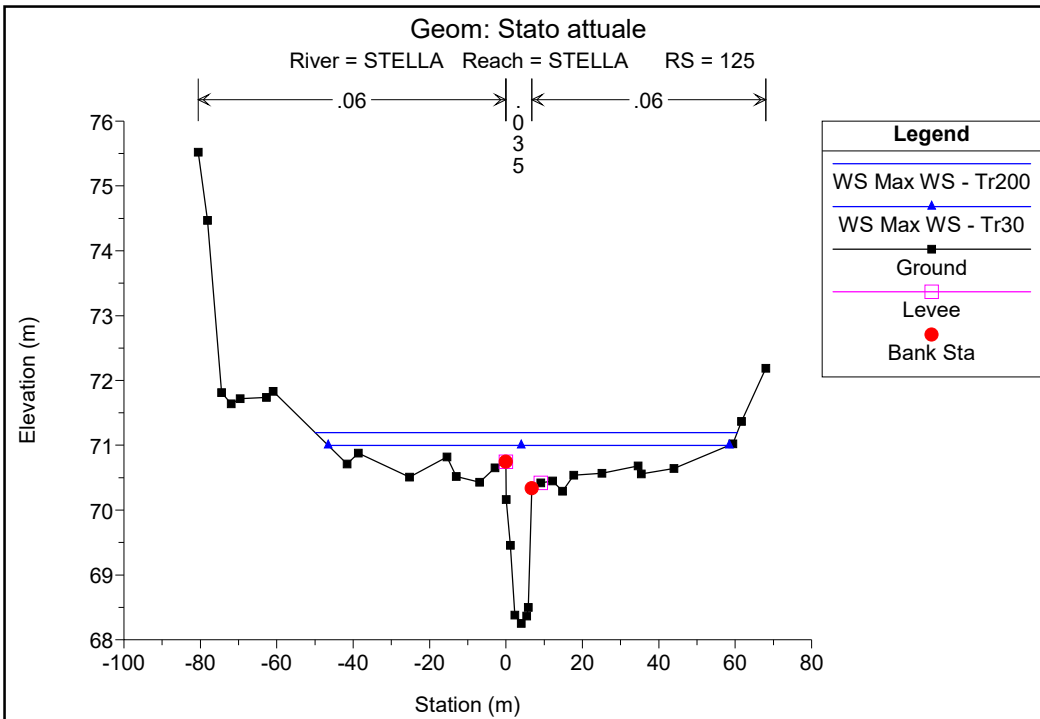


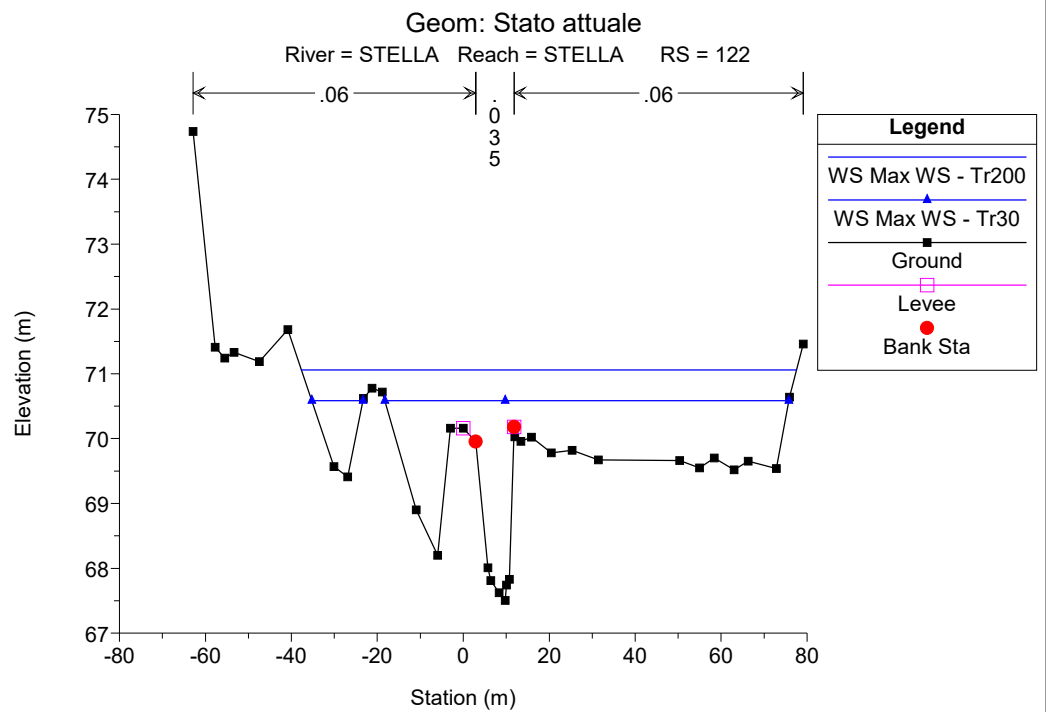
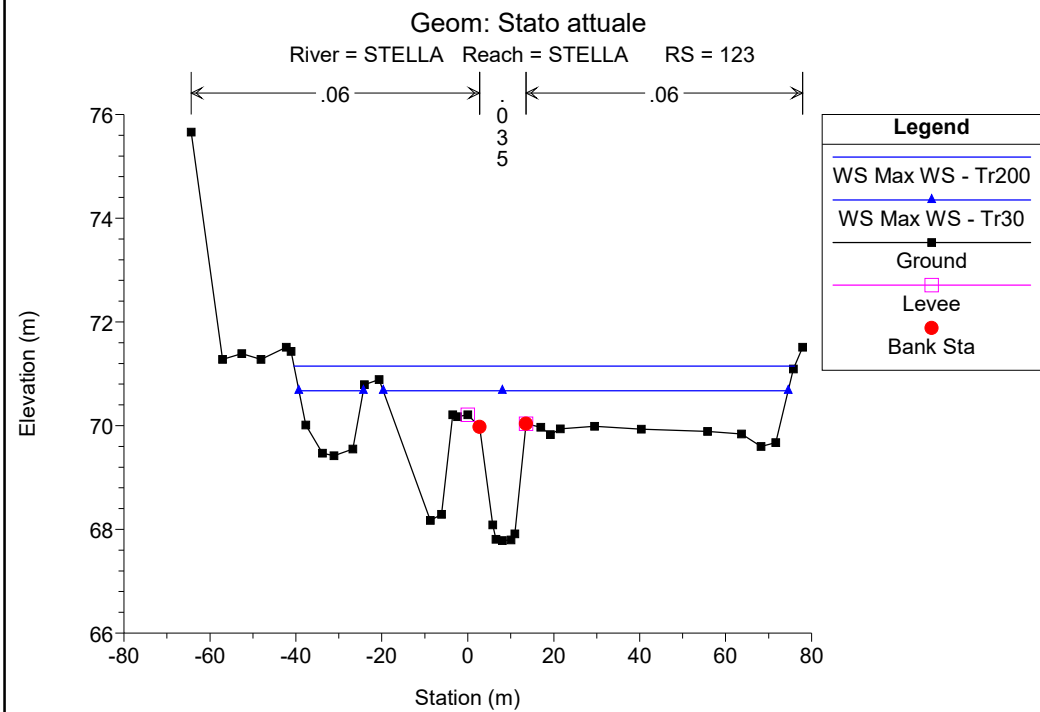
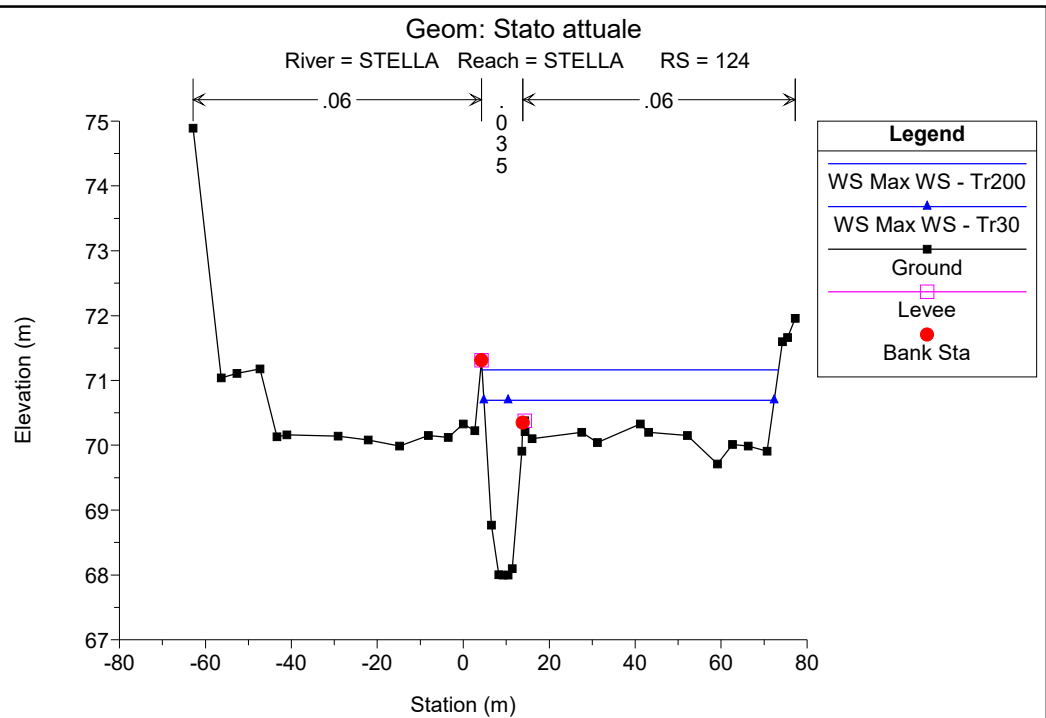
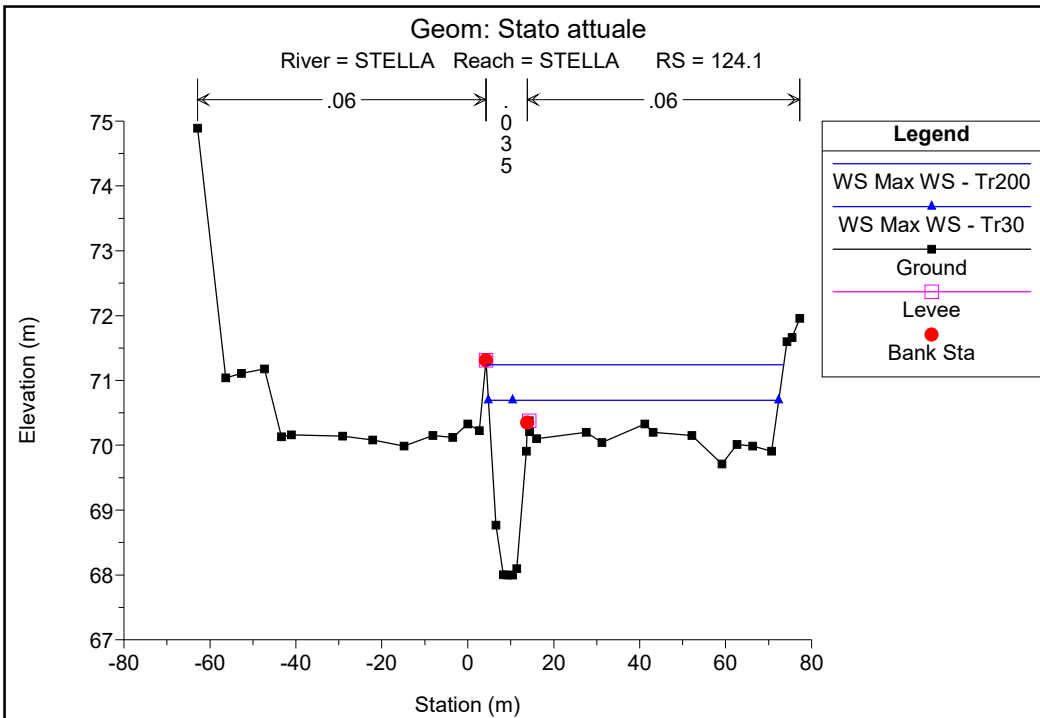


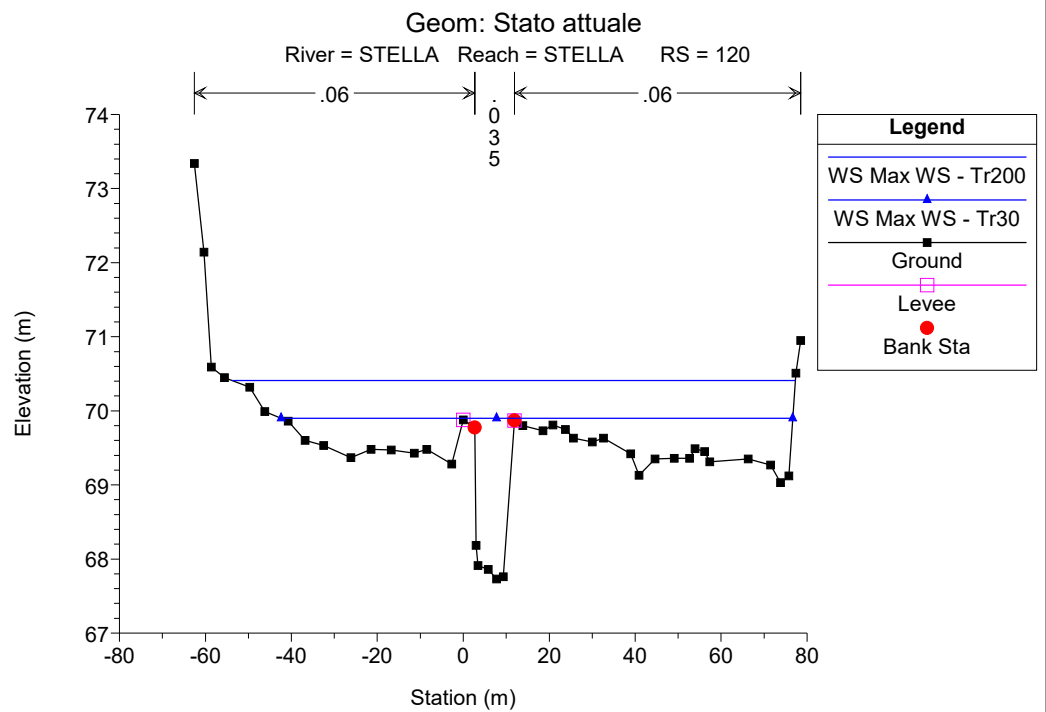
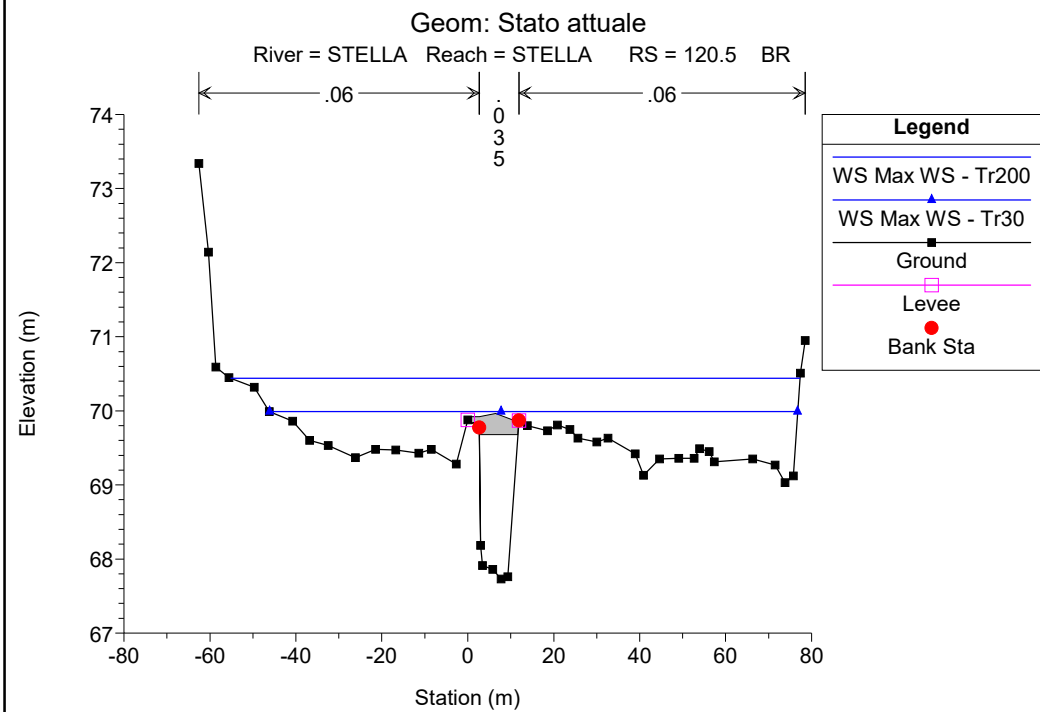
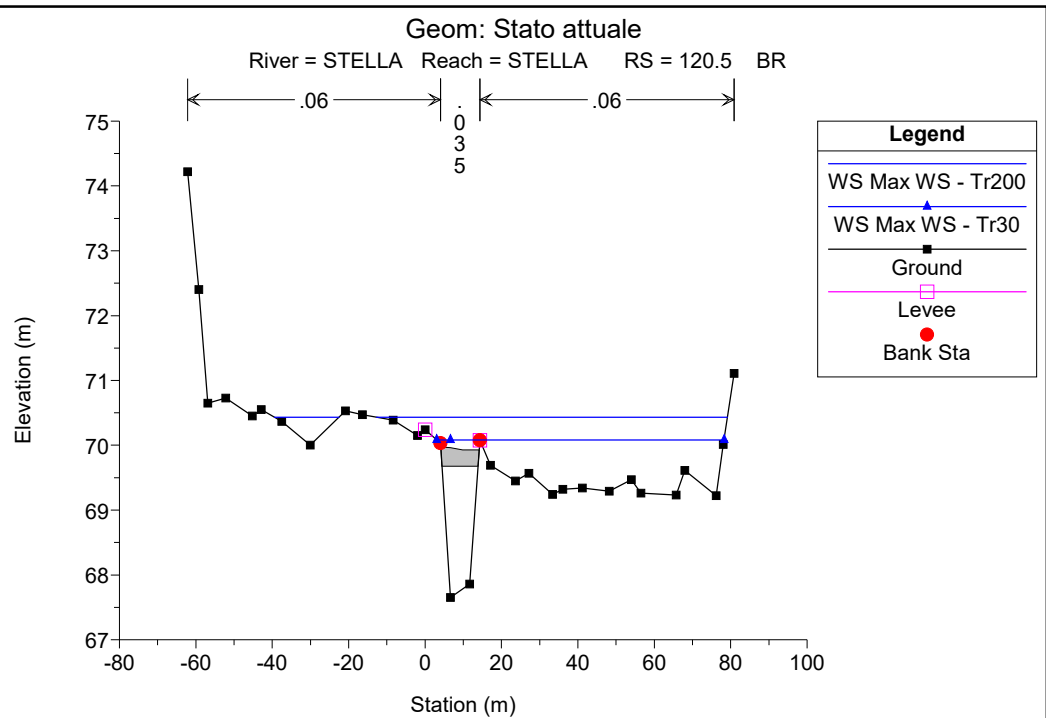
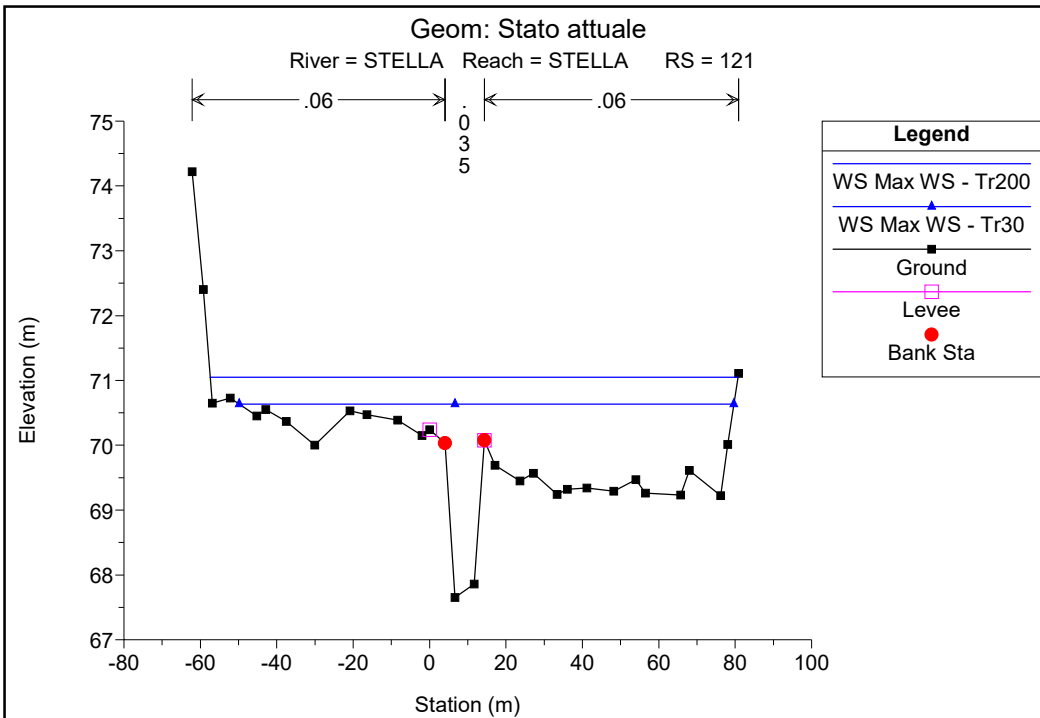


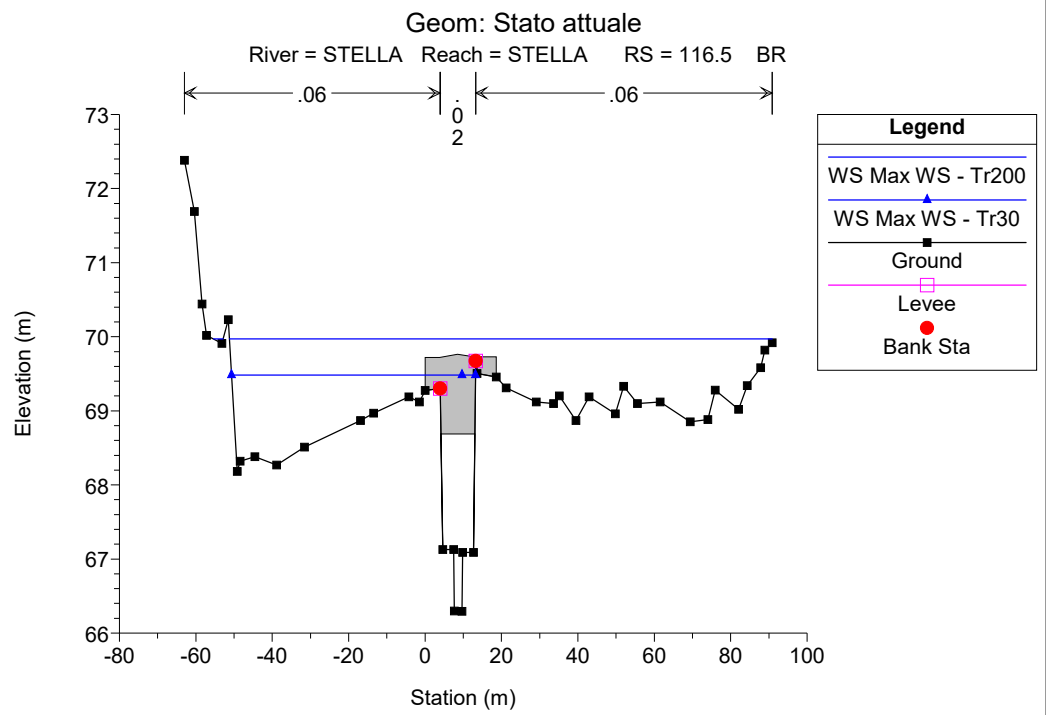
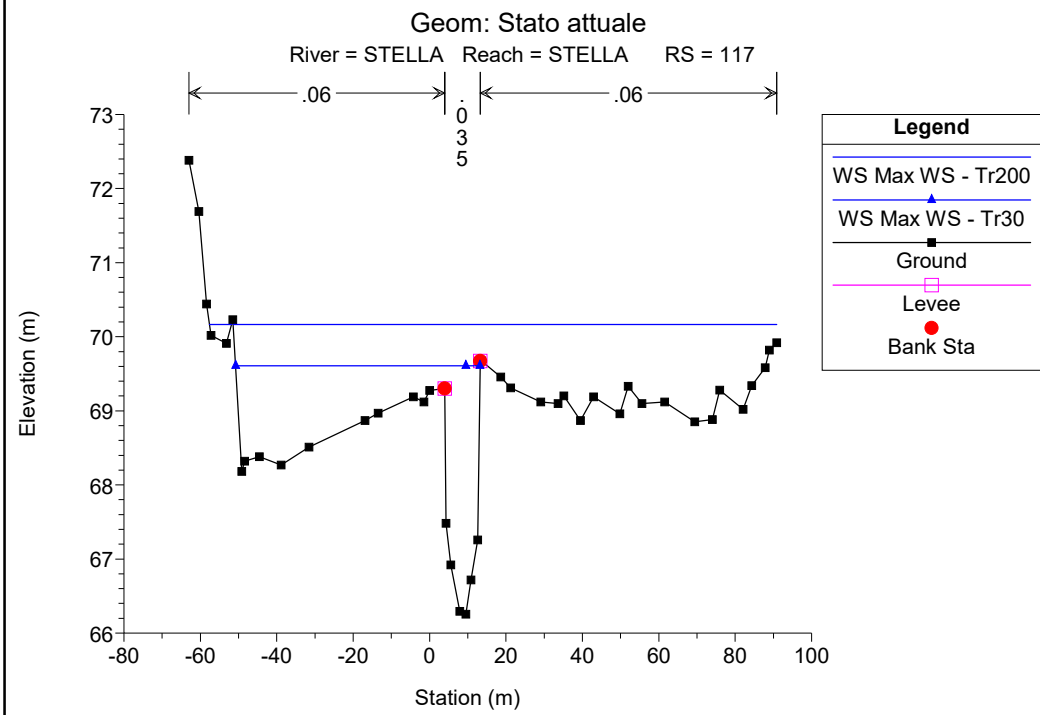
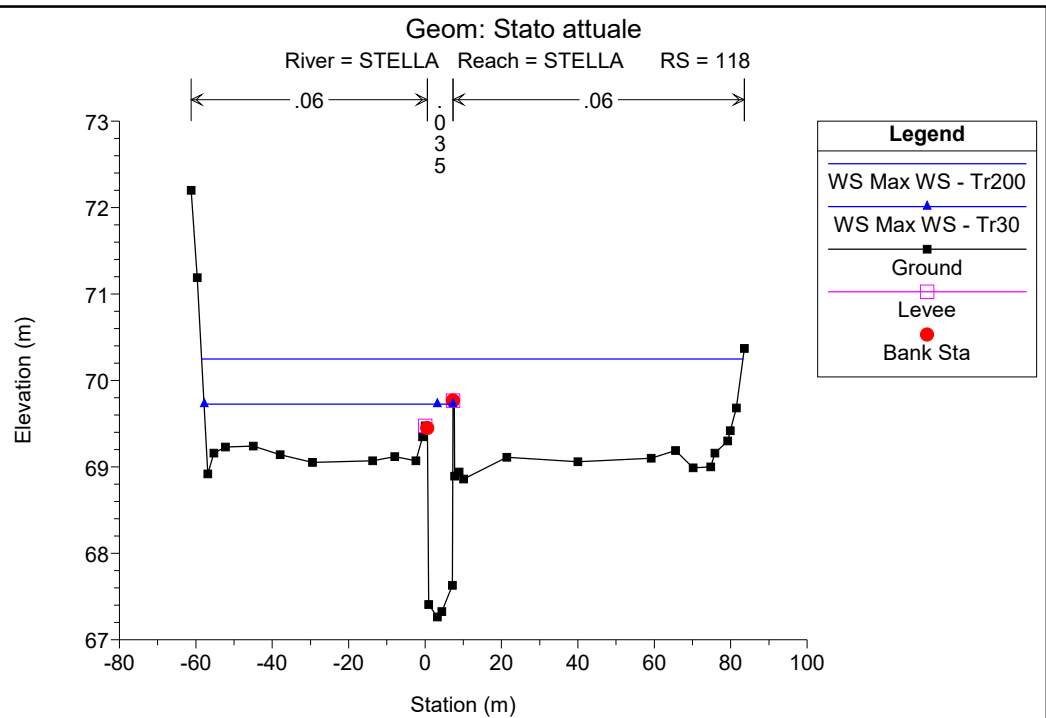
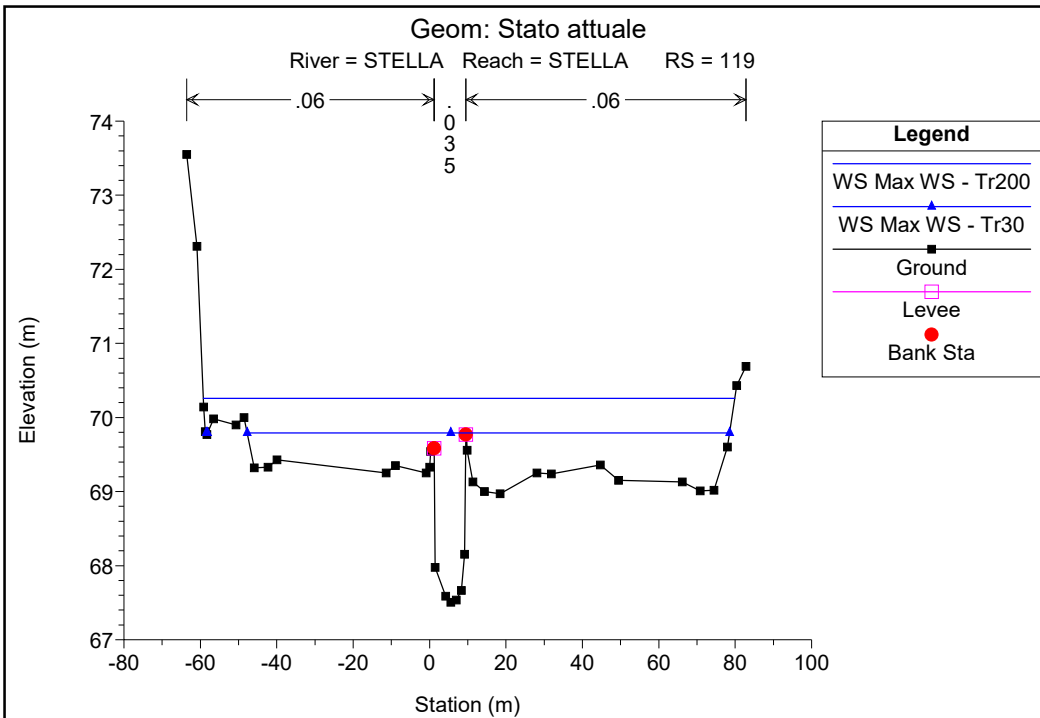


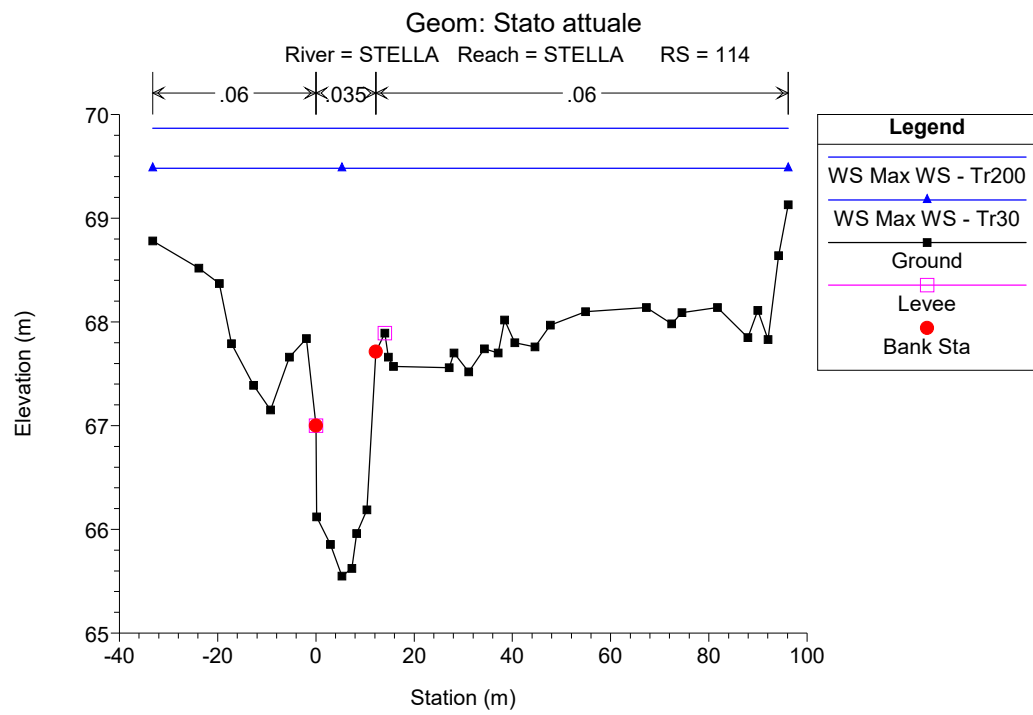
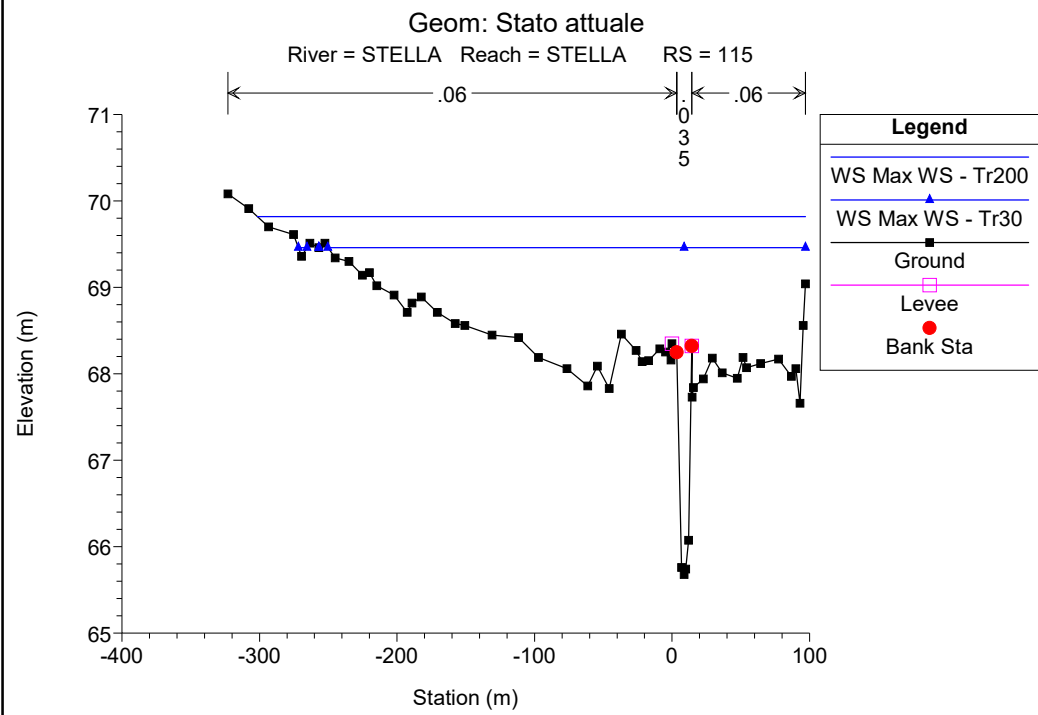
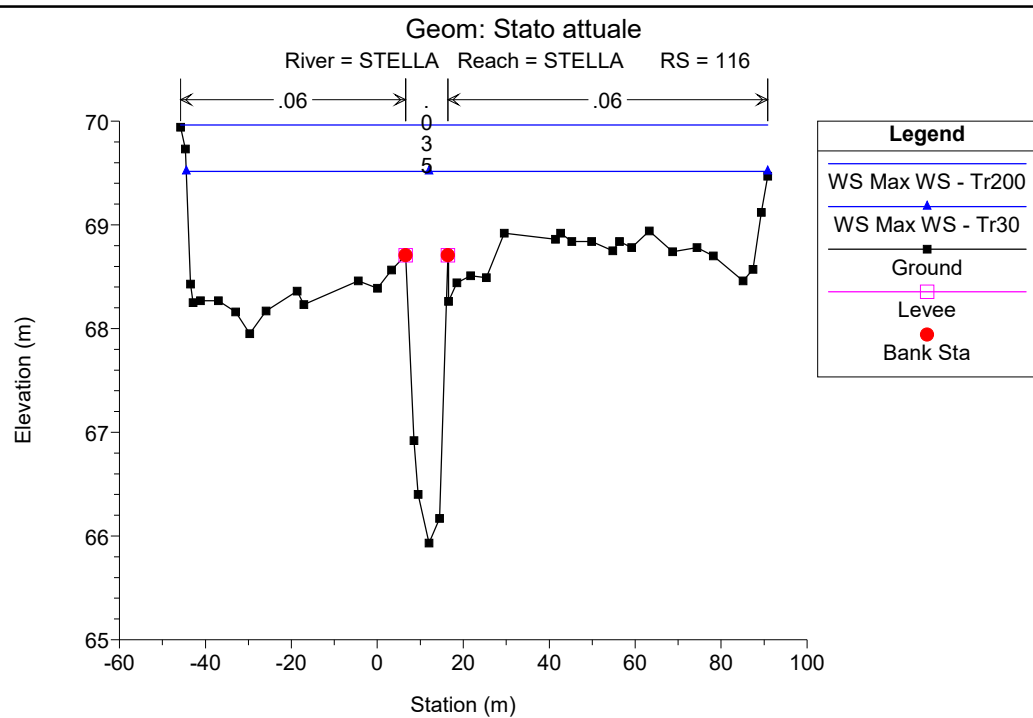
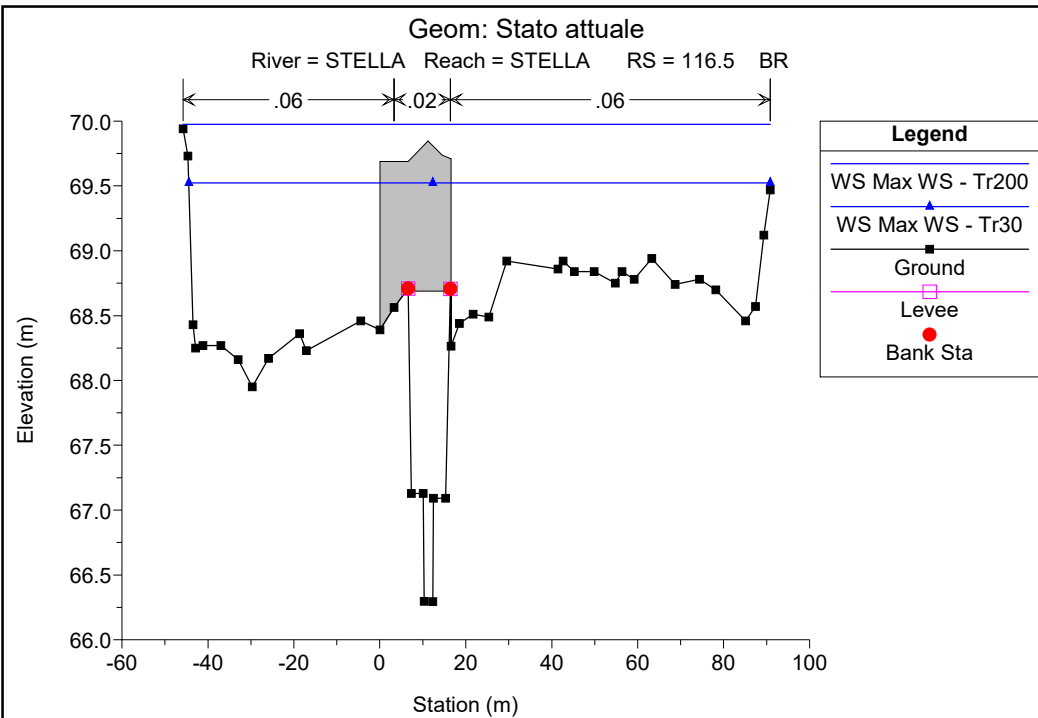


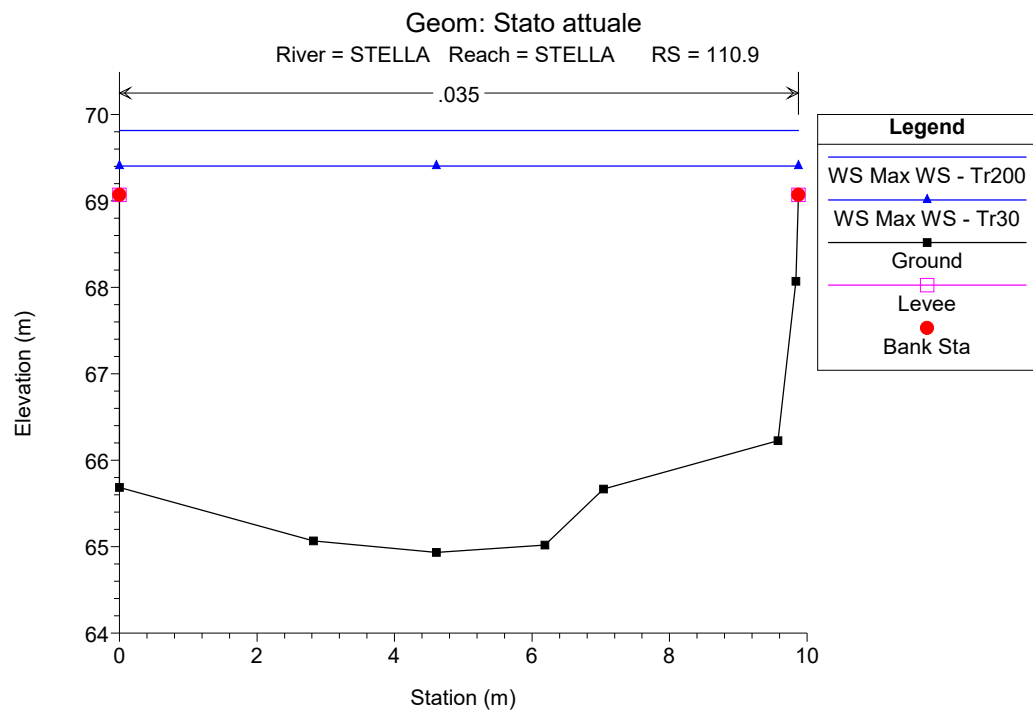
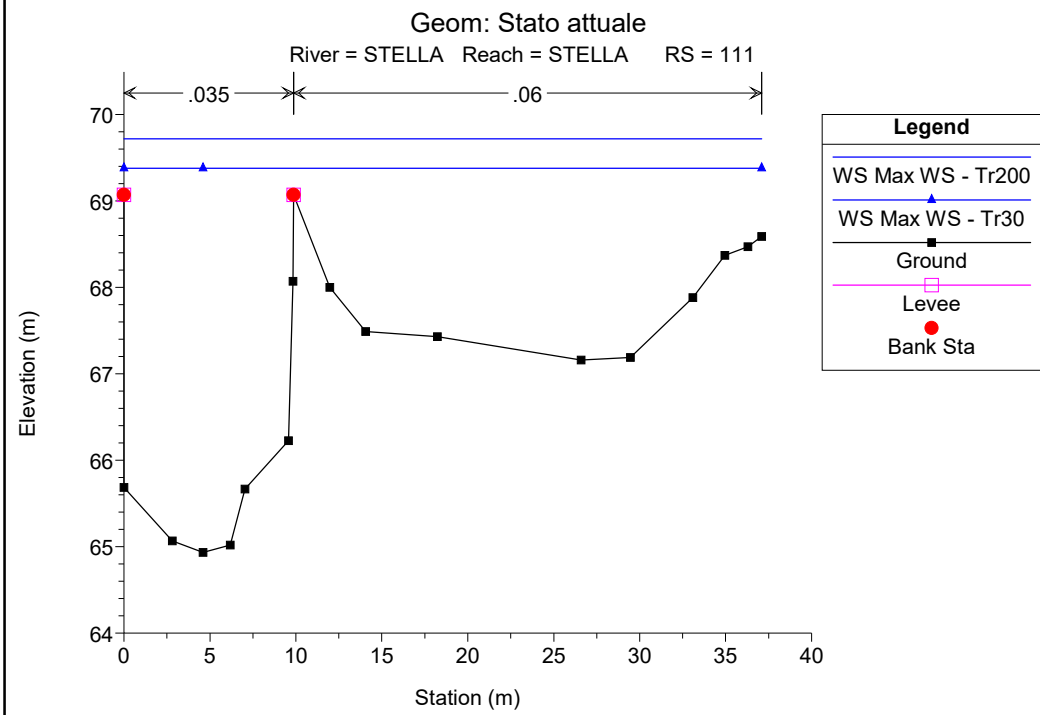
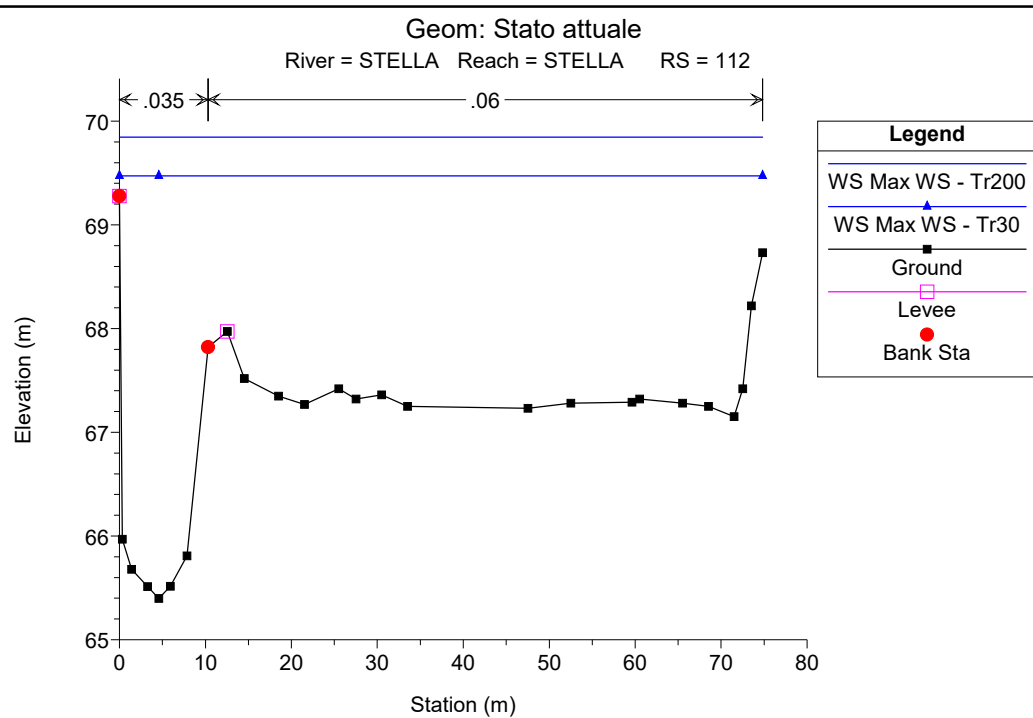
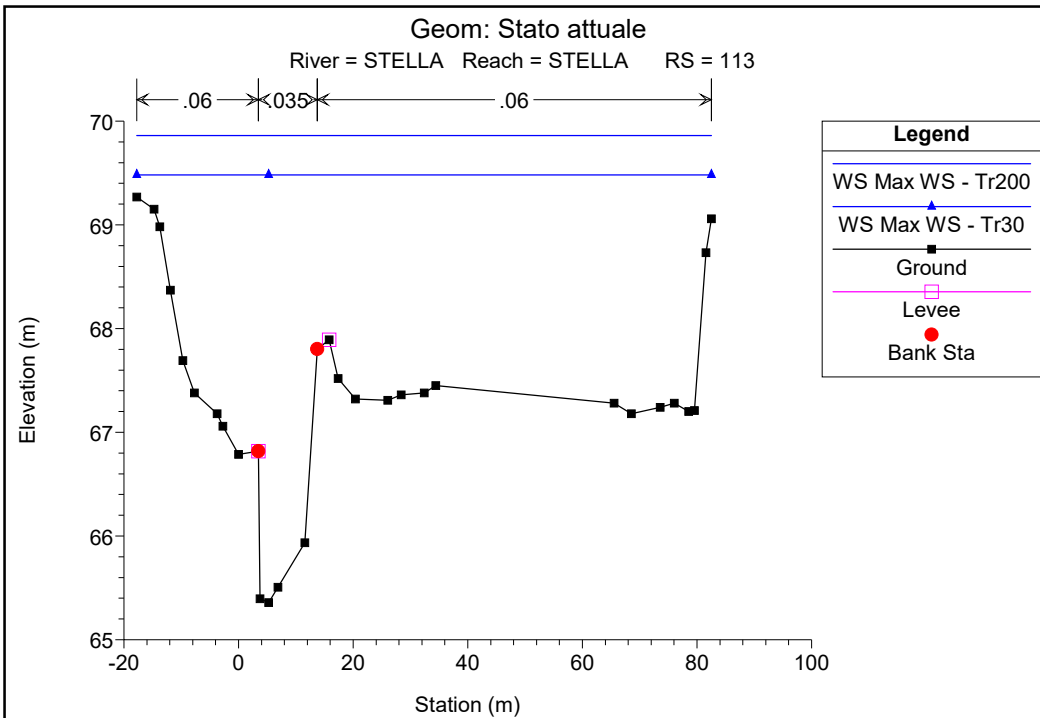


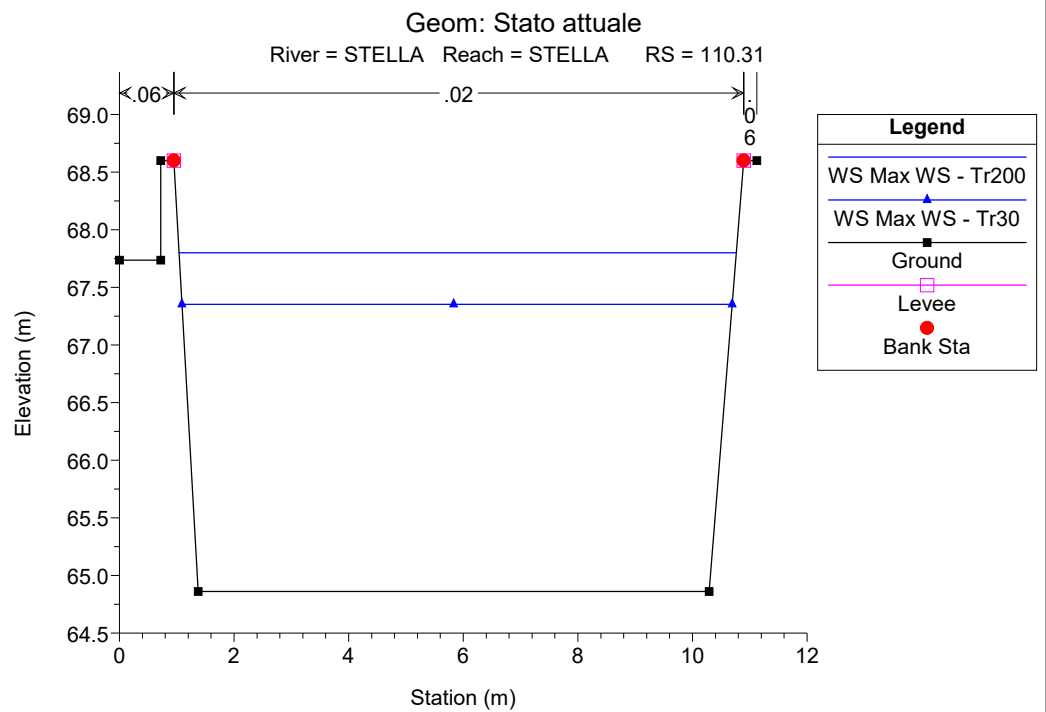
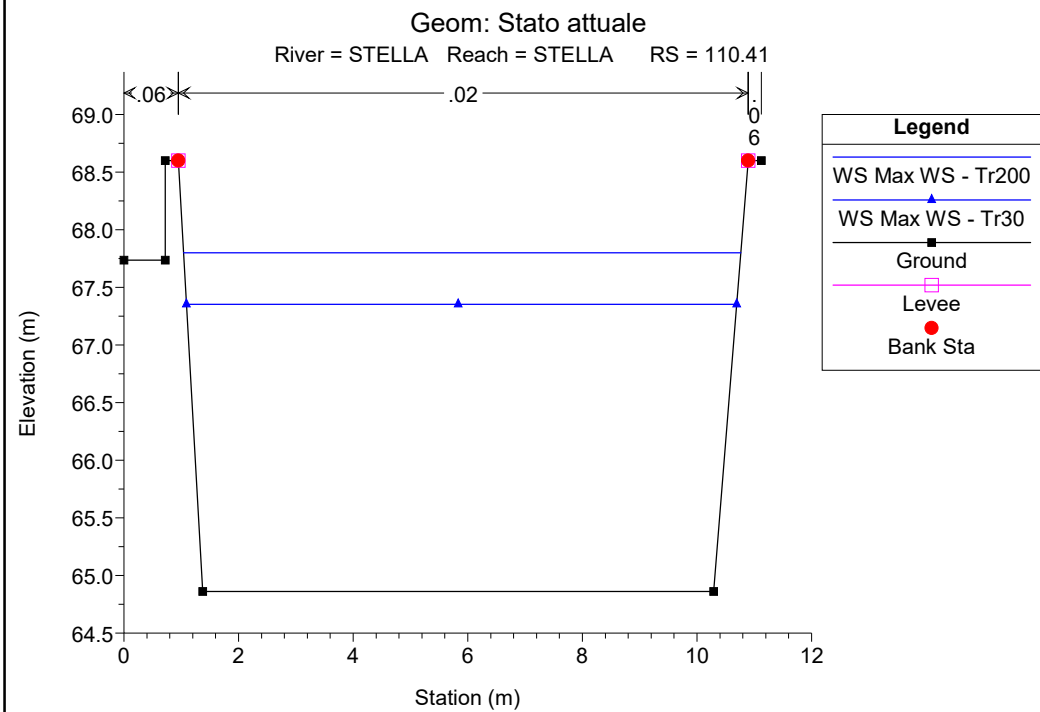
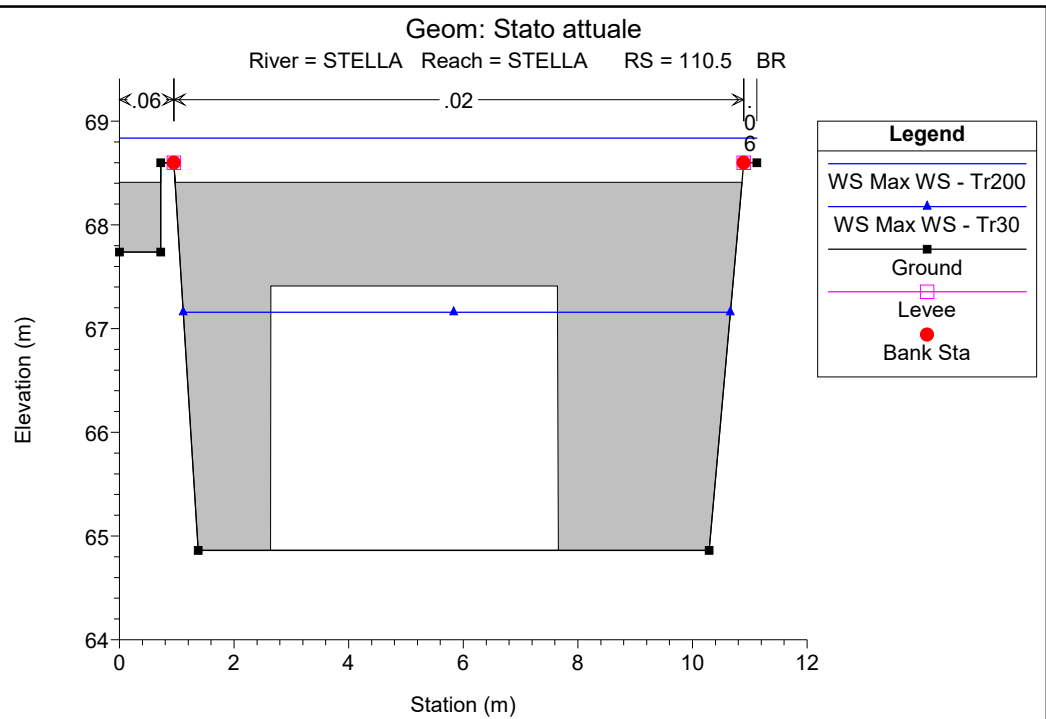
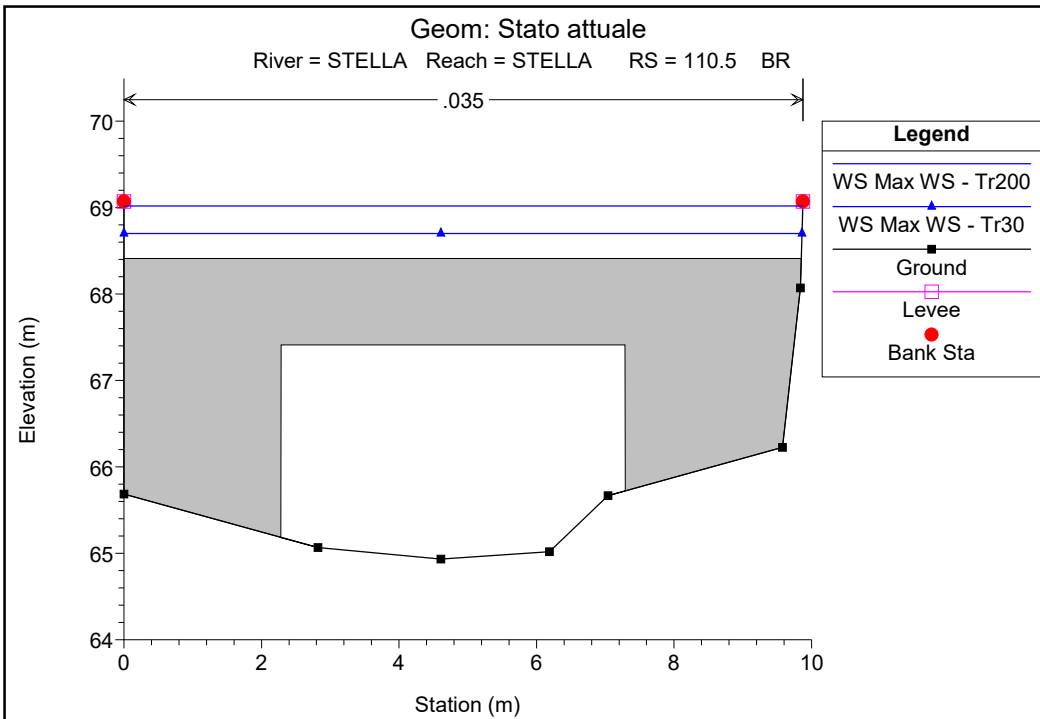


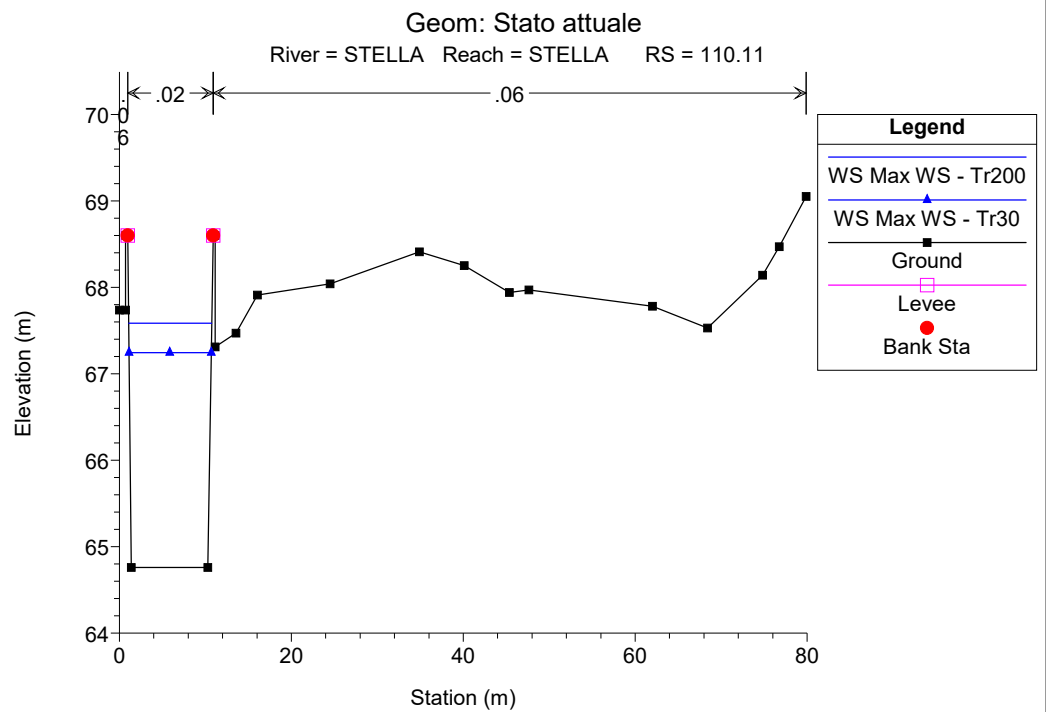
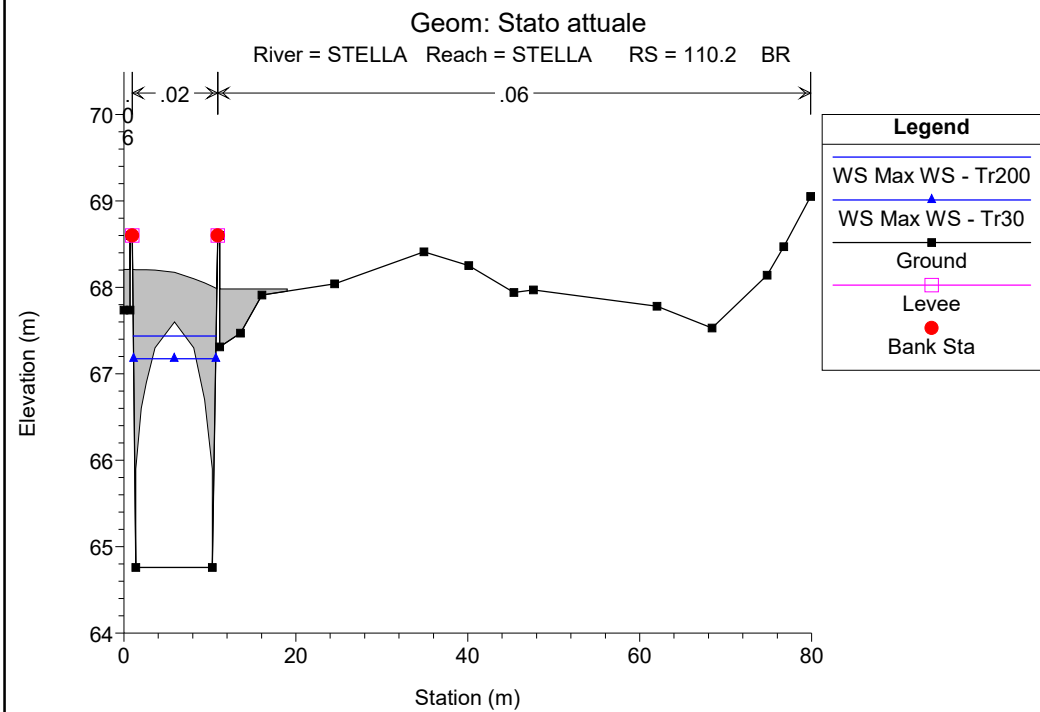
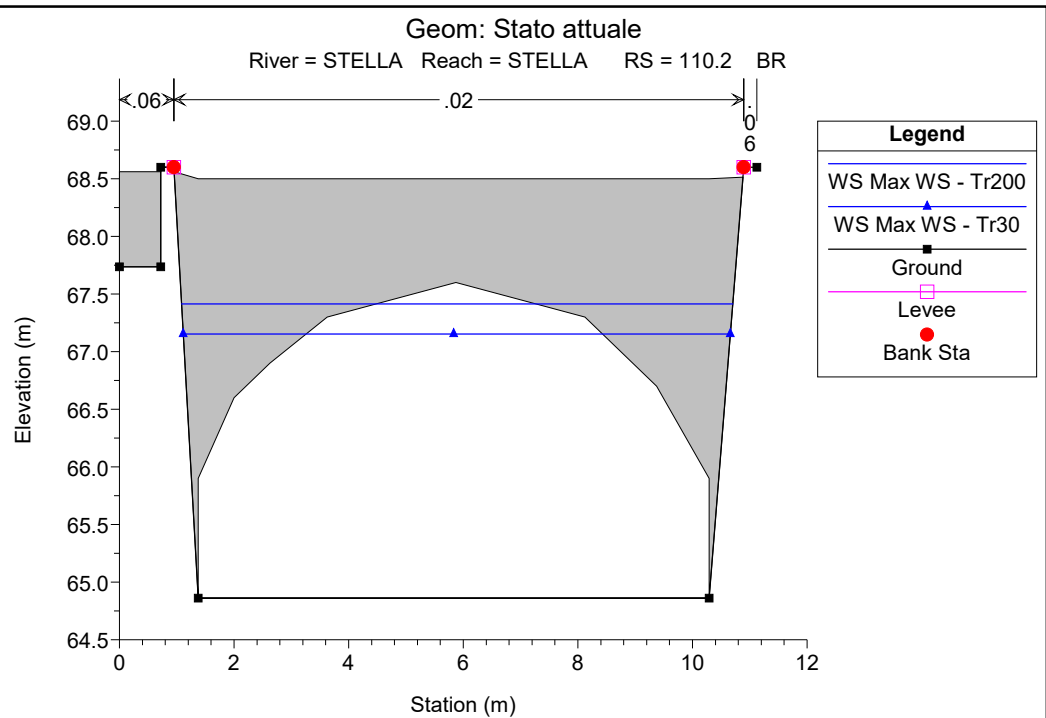
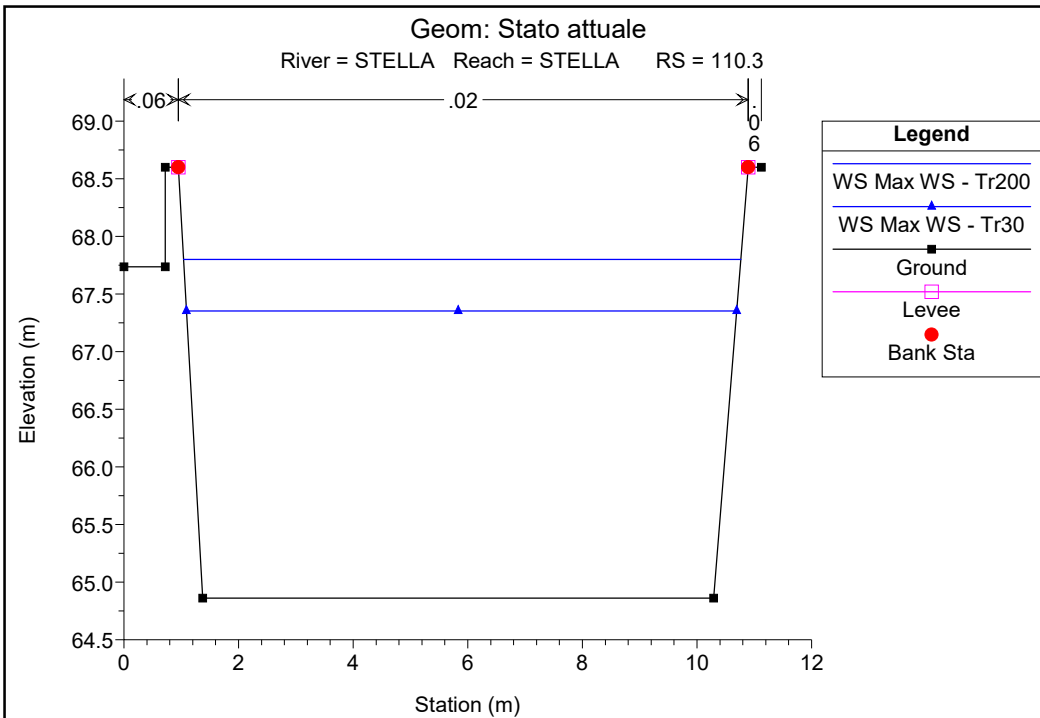


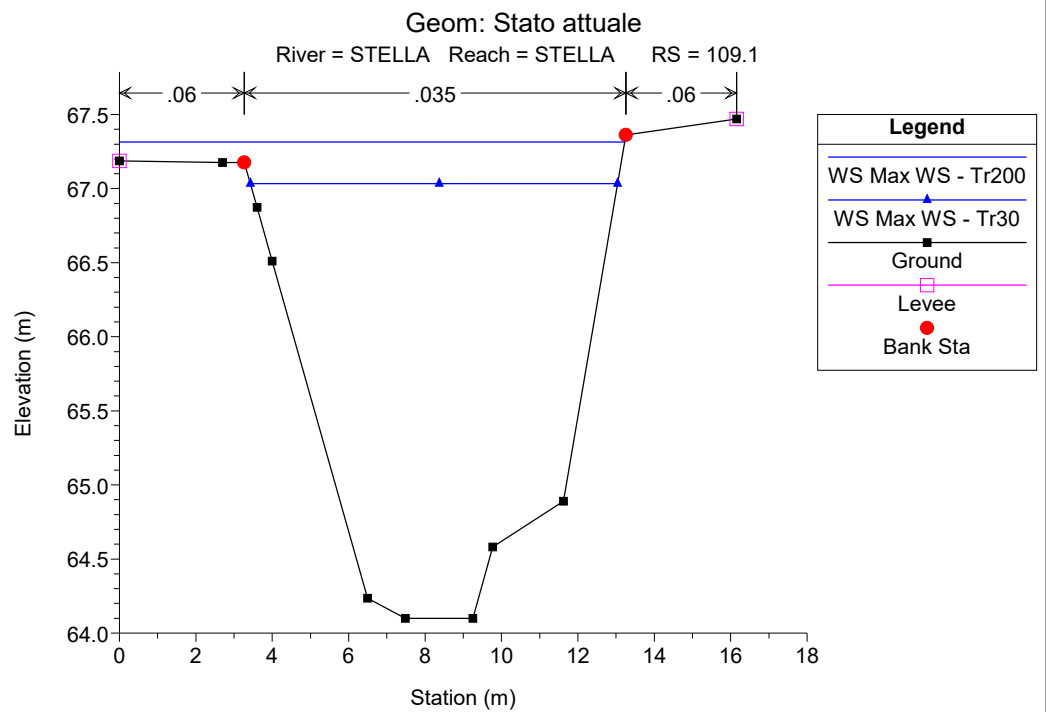
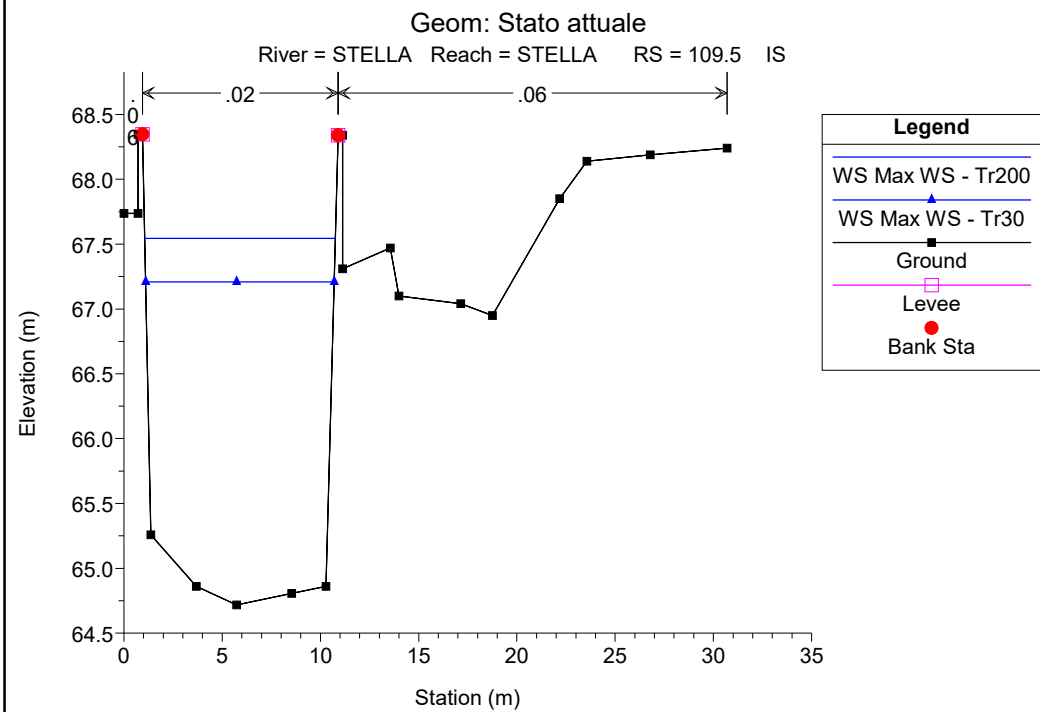
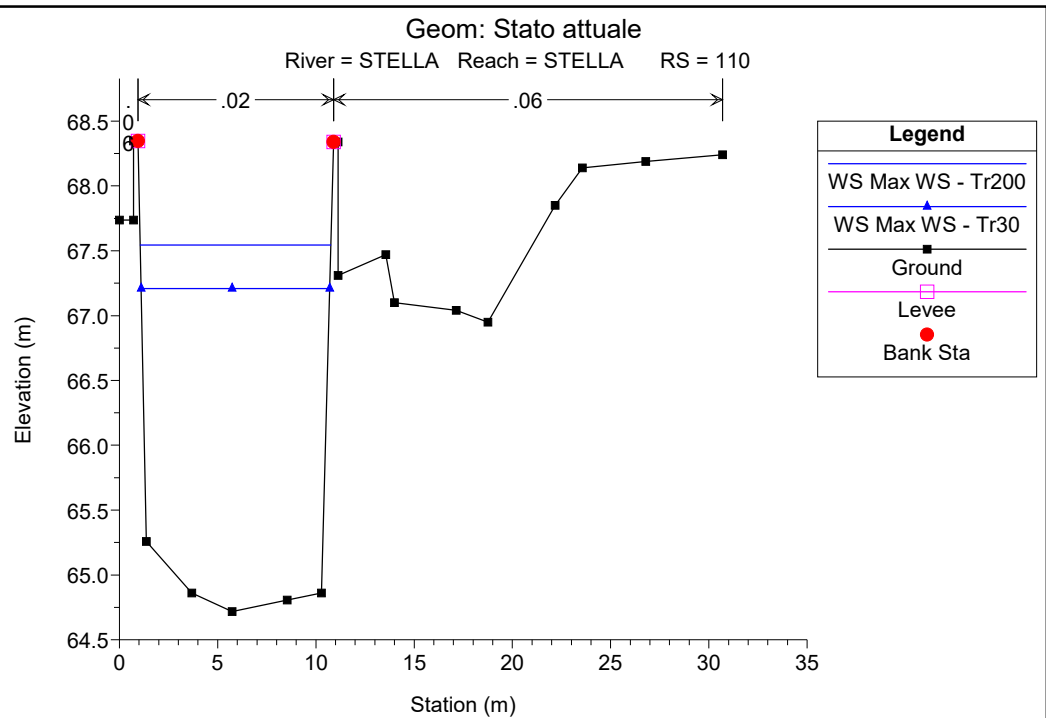
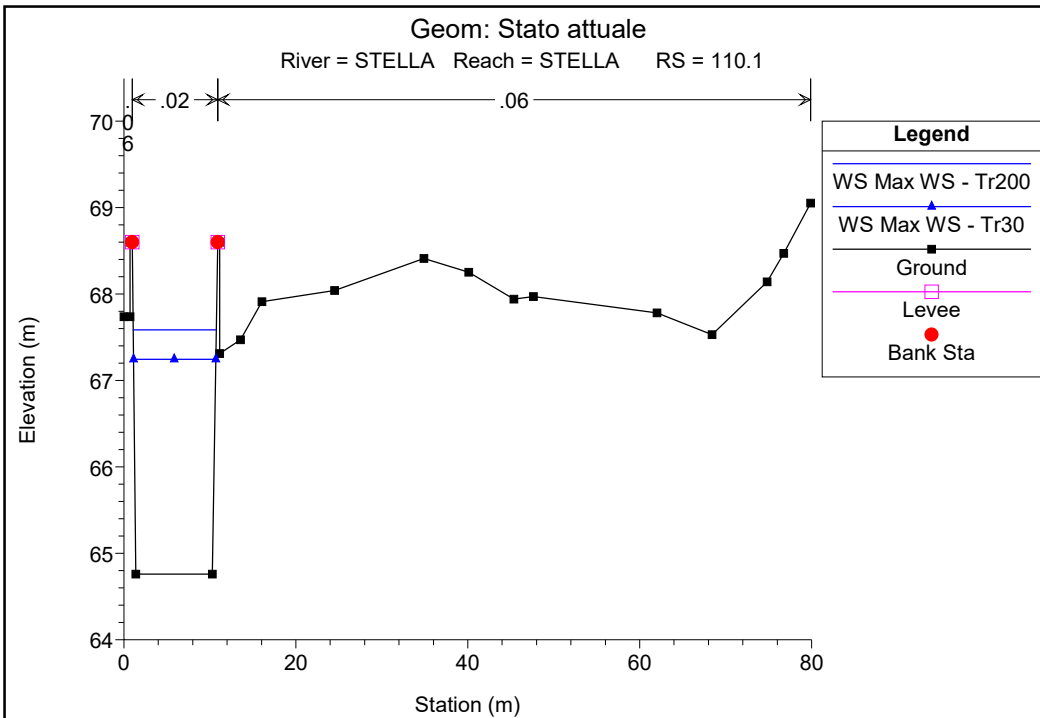


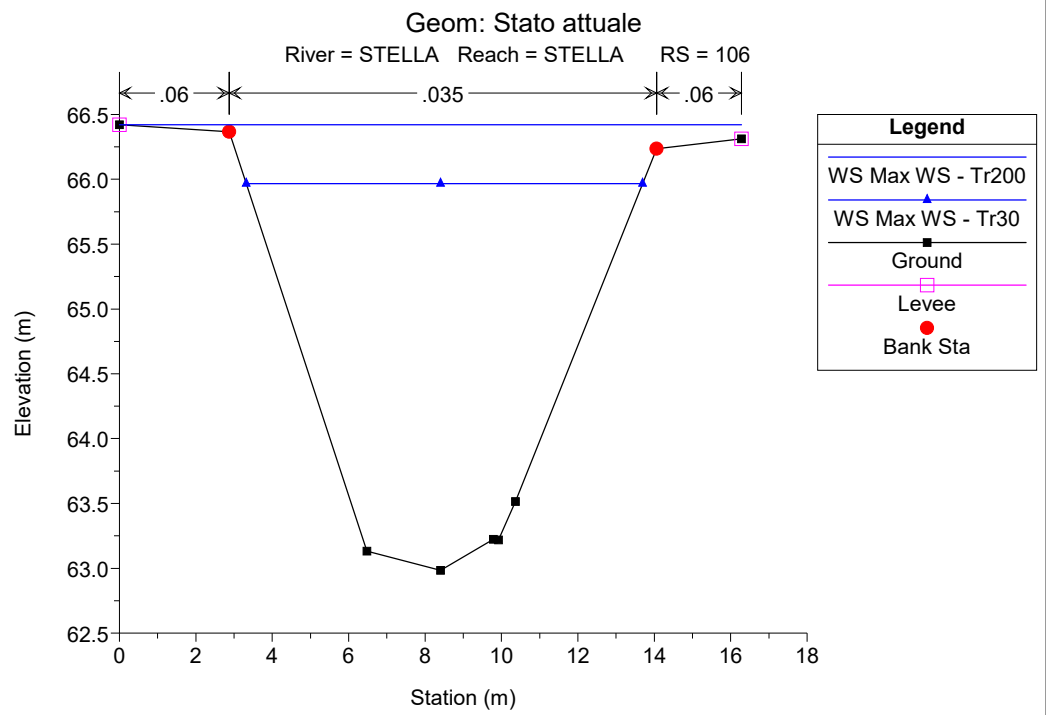
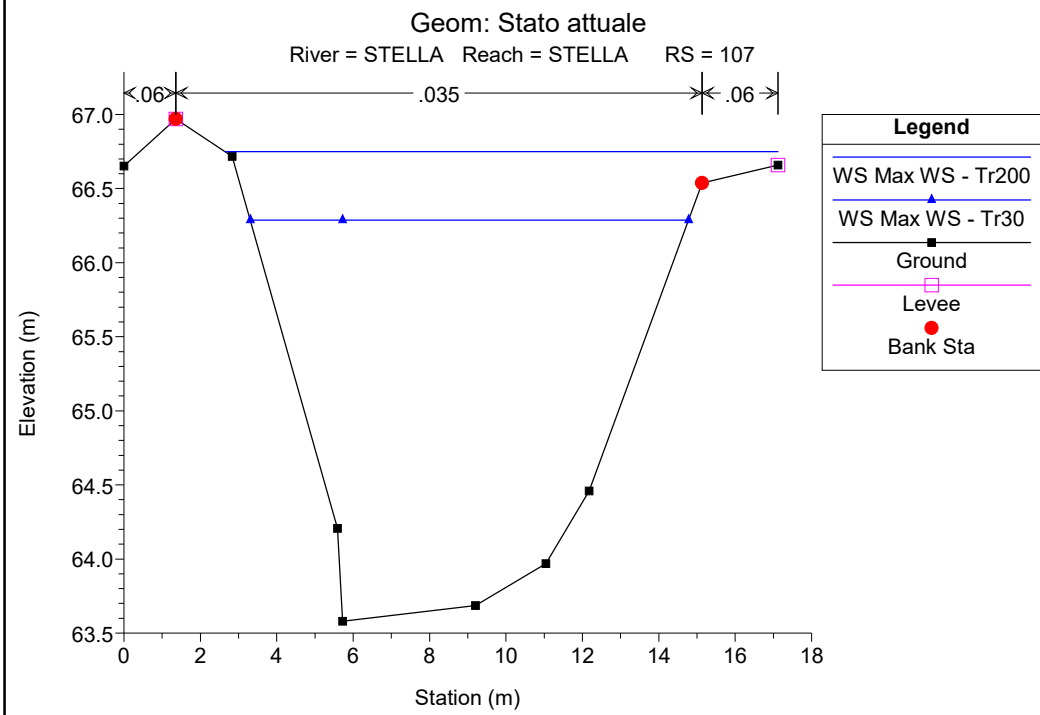
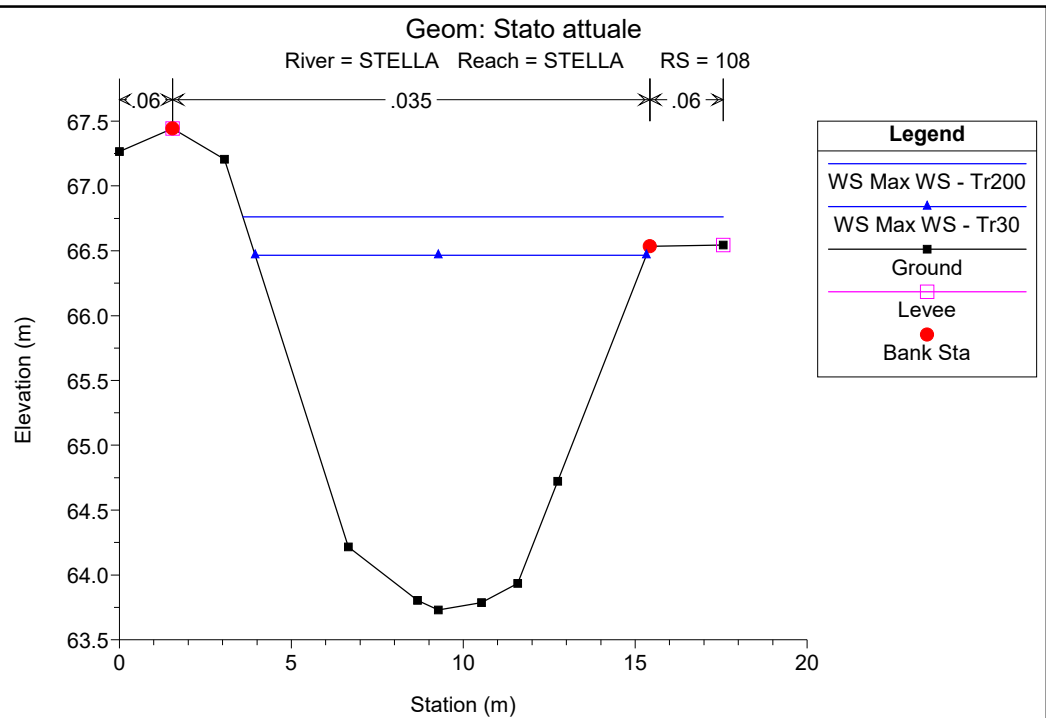
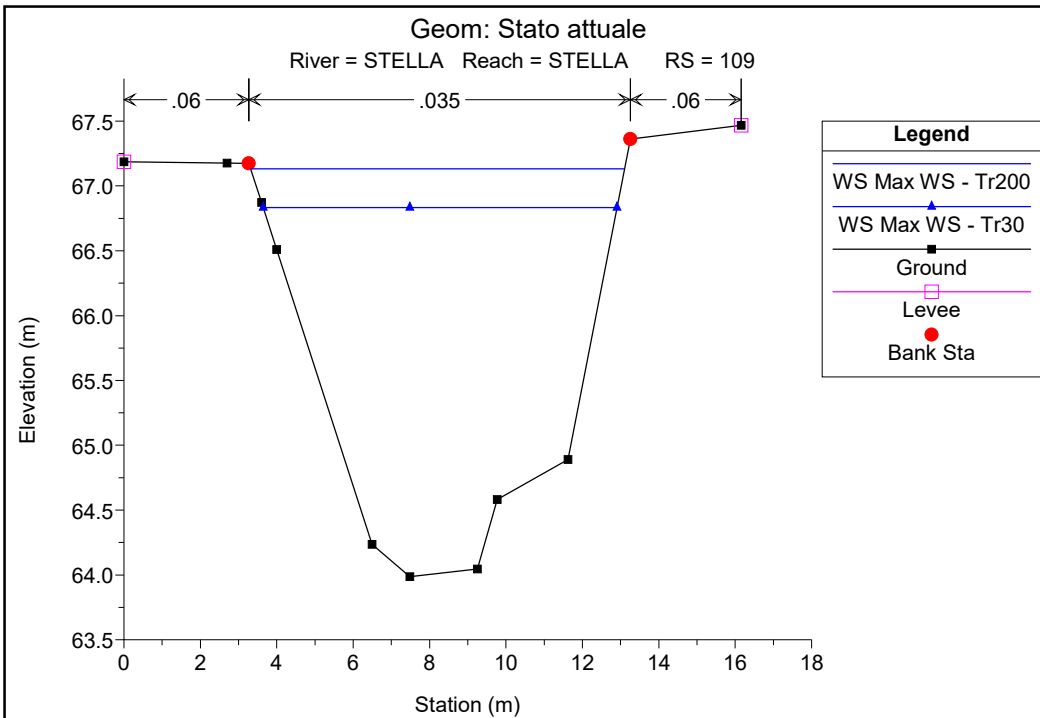


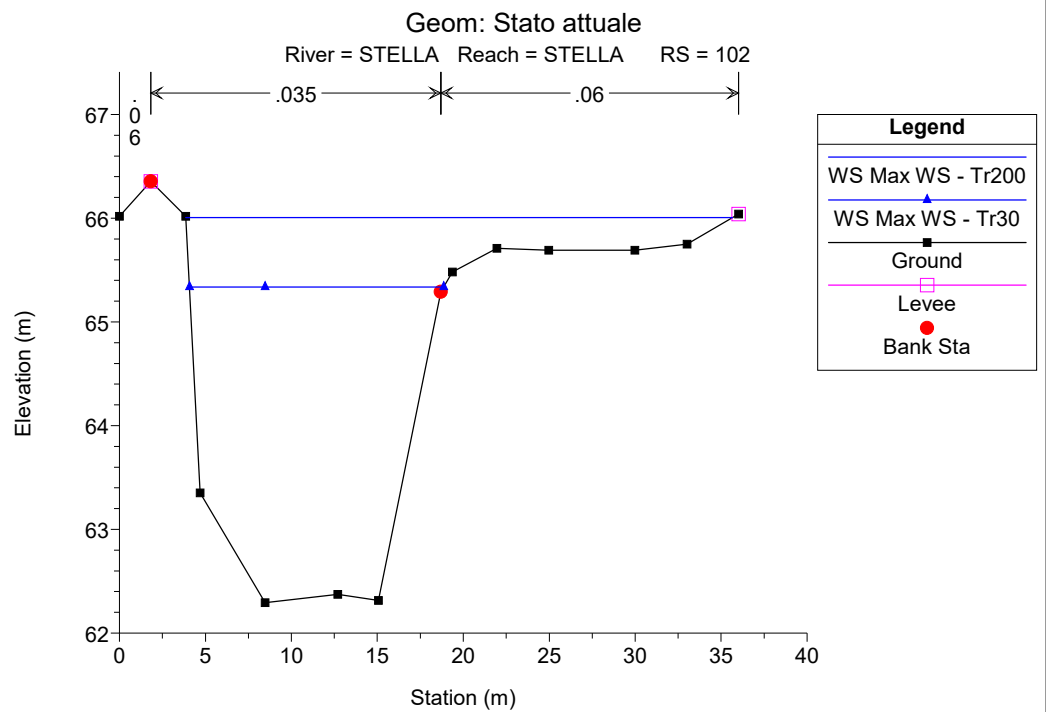
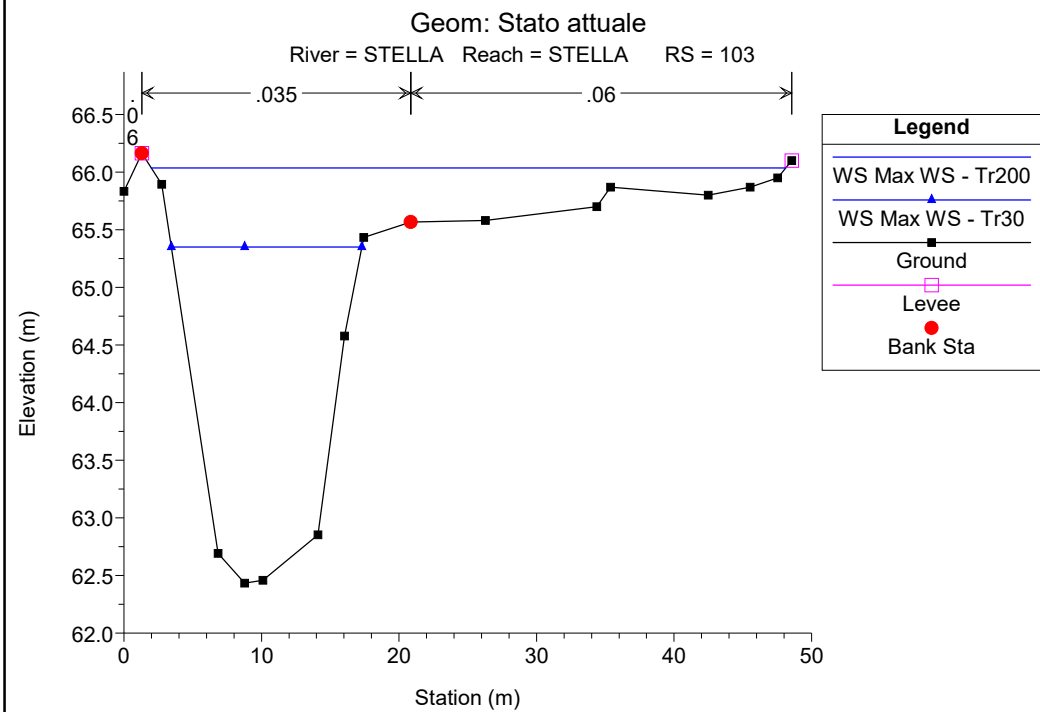
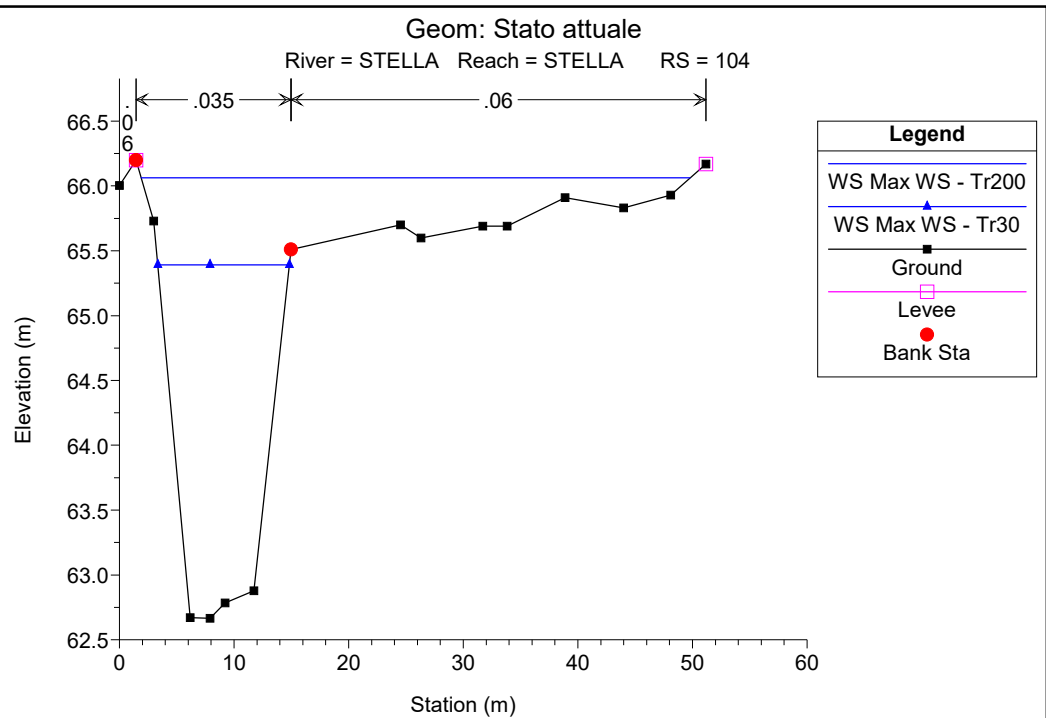
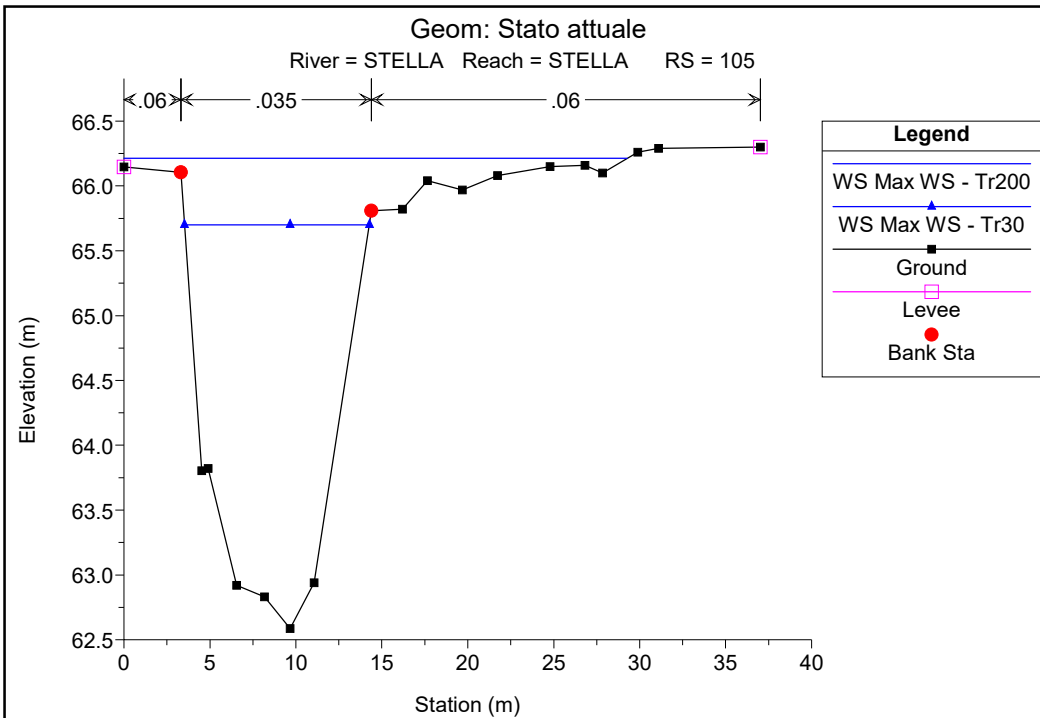


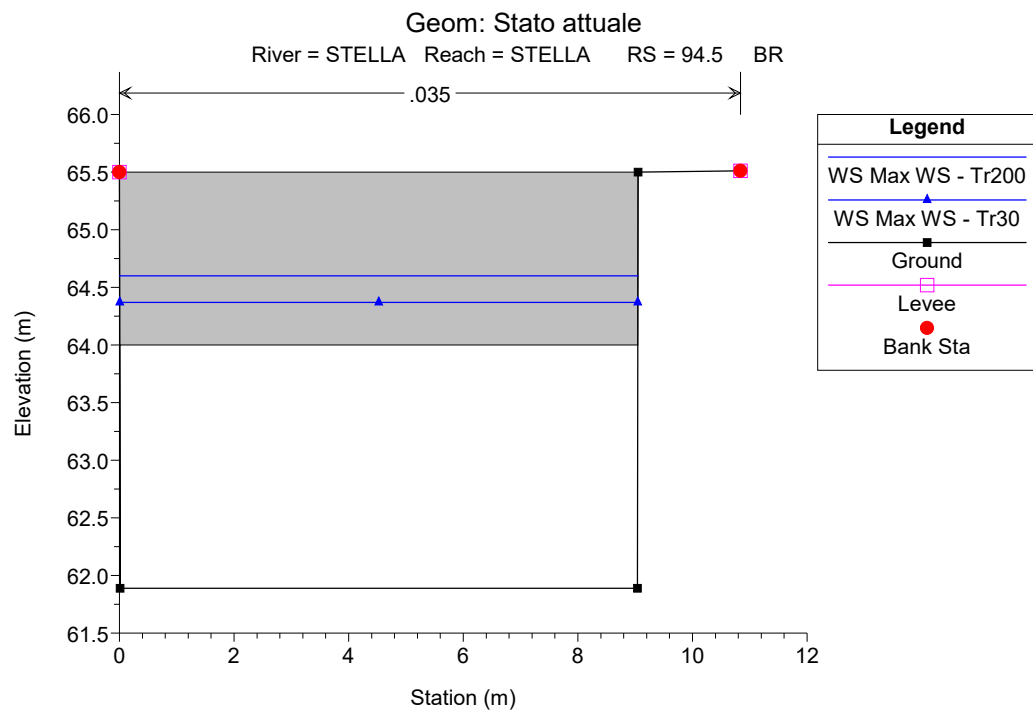
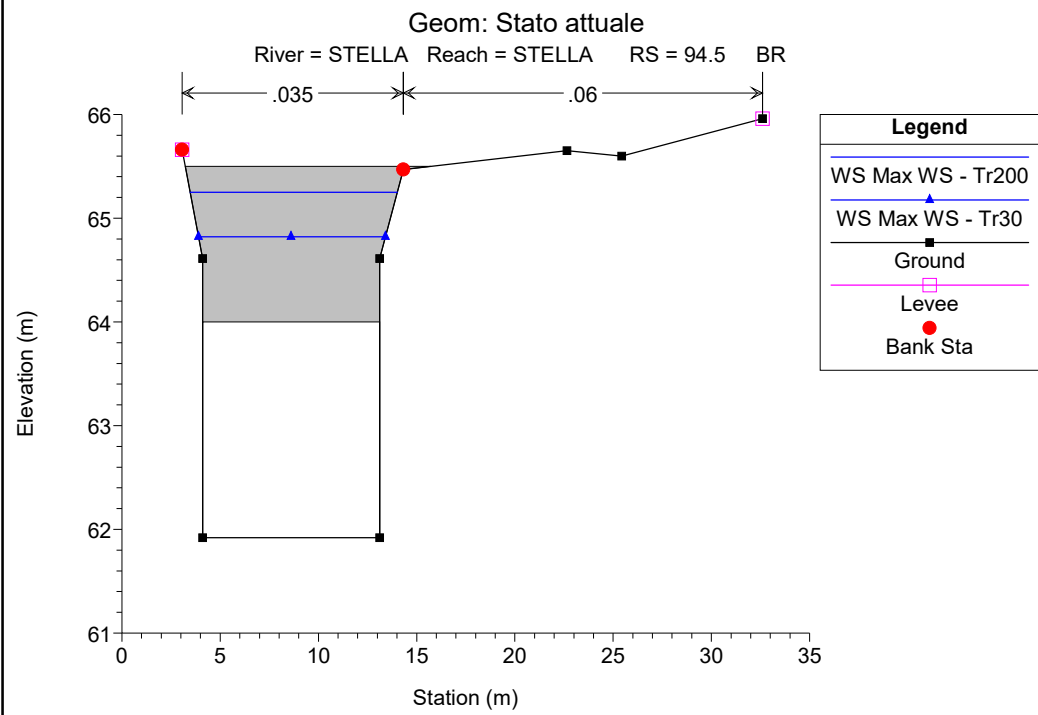
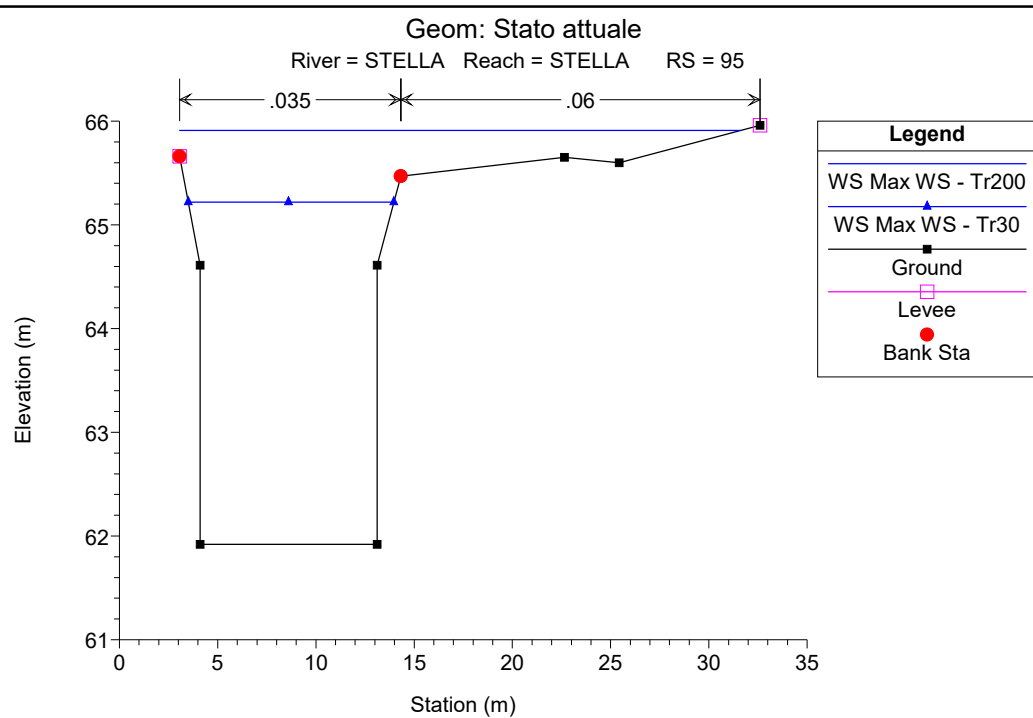
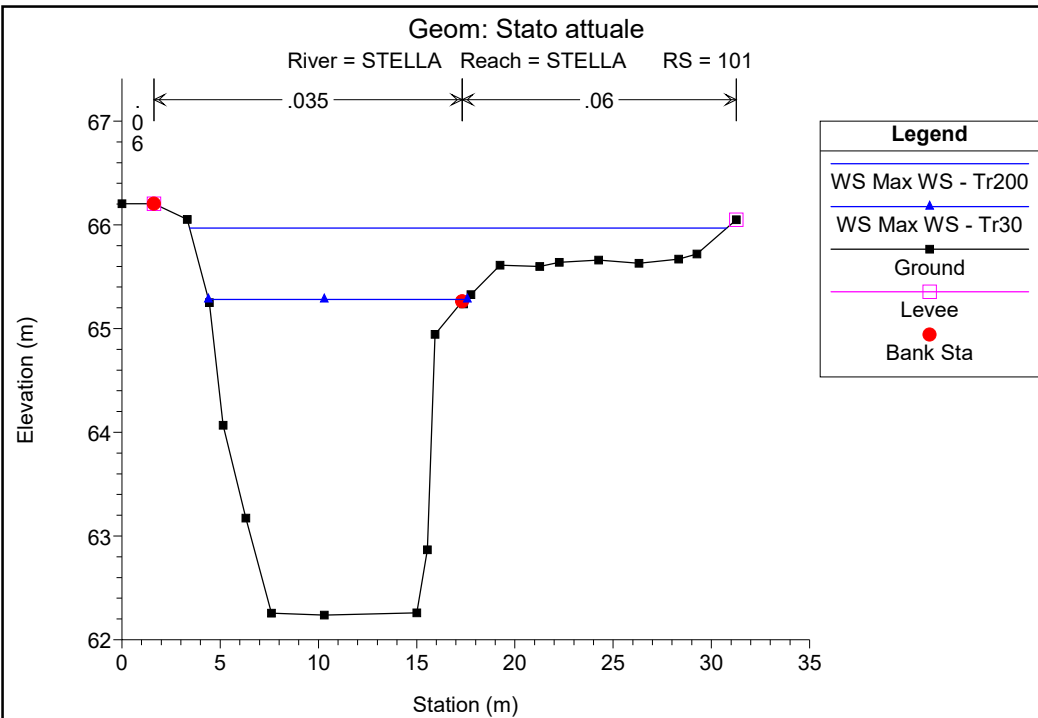


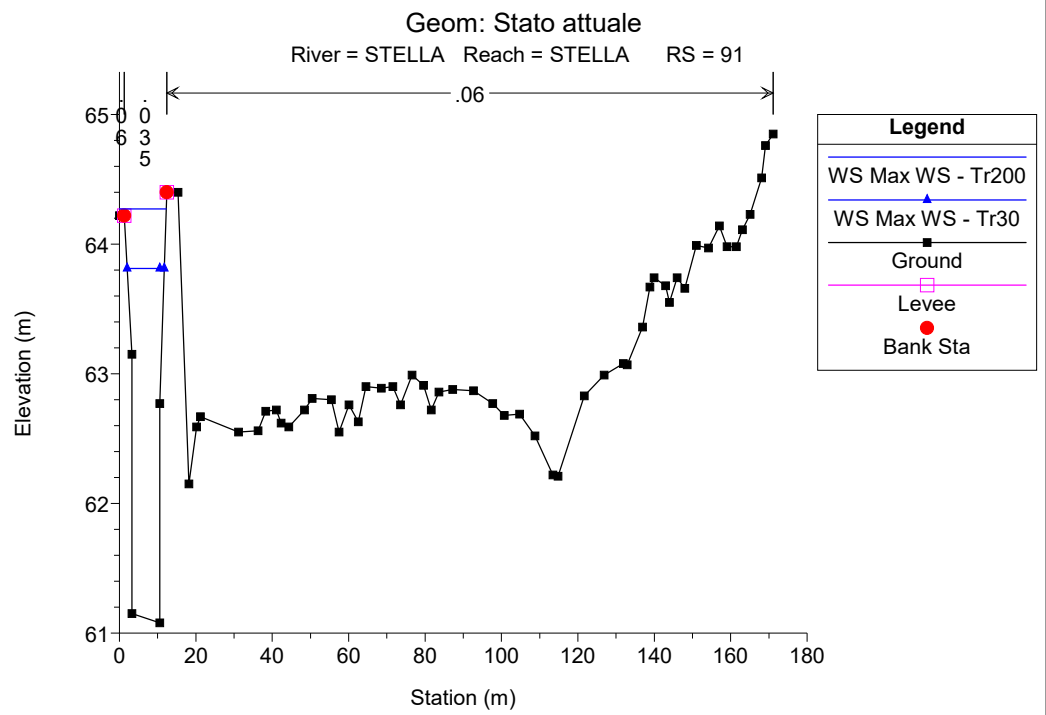
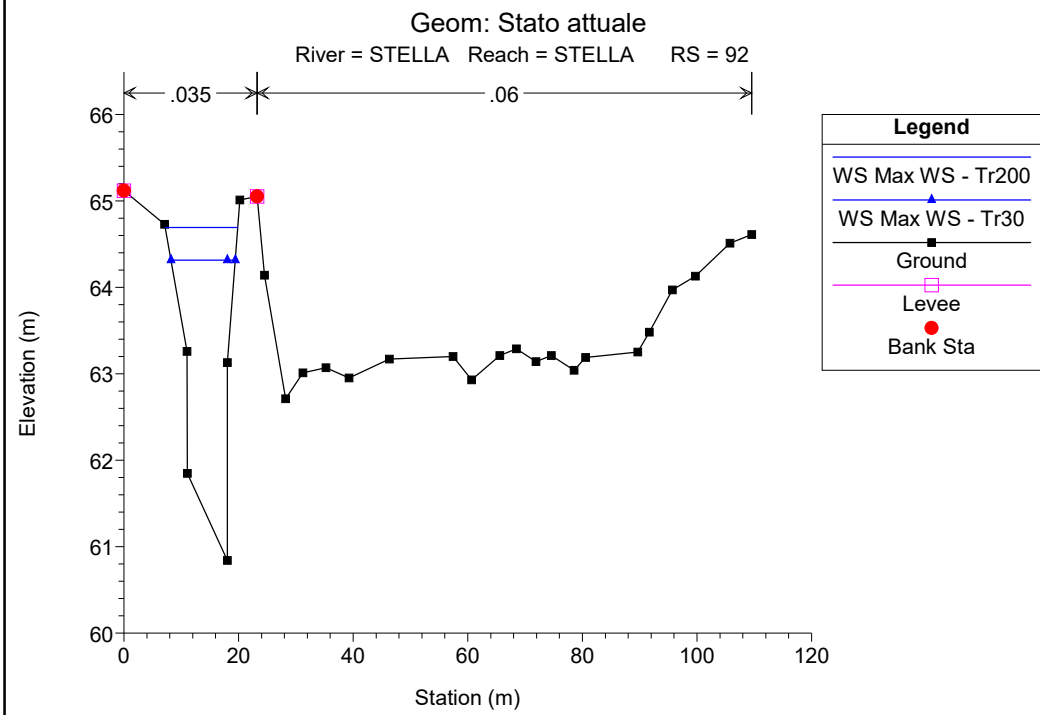
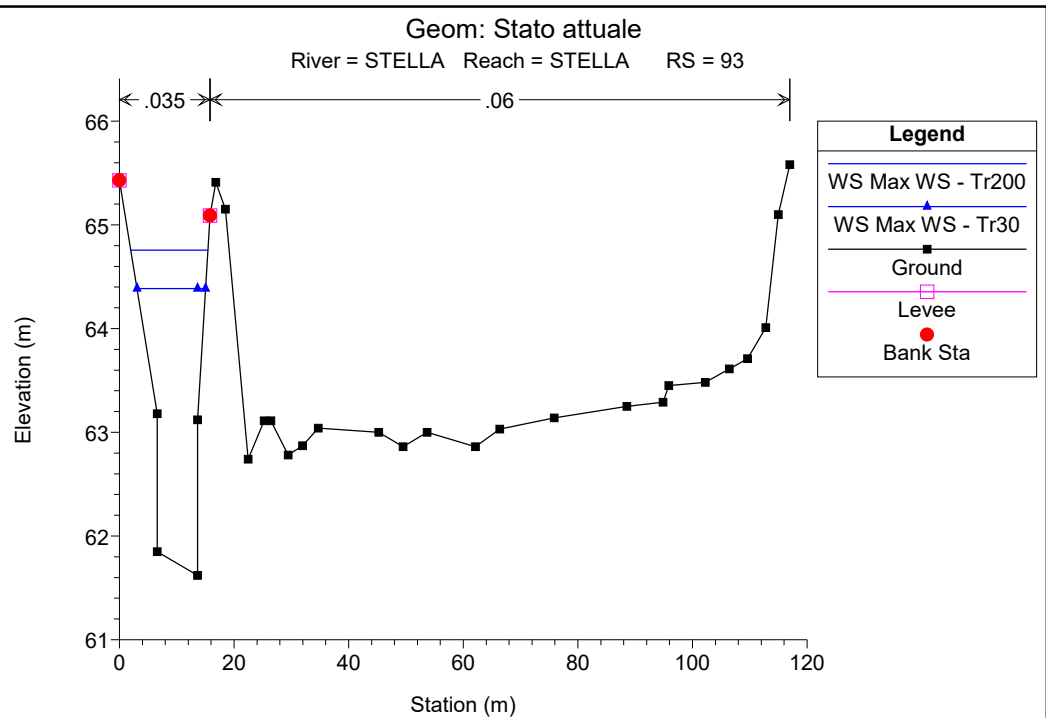
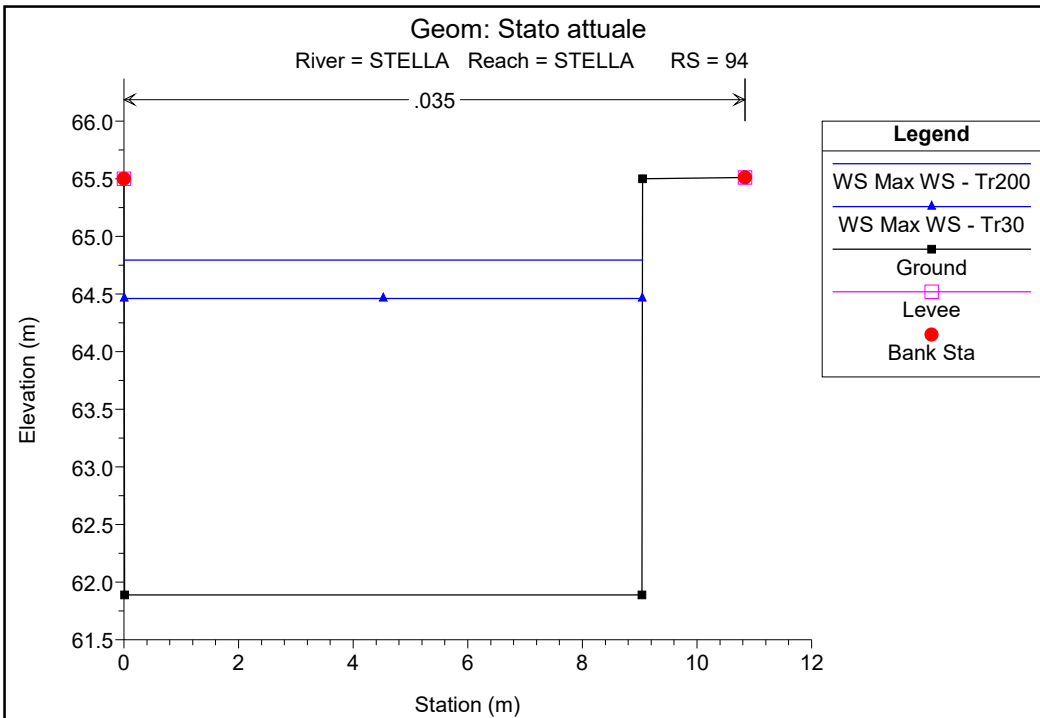












ALLEGATO 5

TABELLE OUTPUT MODELLO IDRAULICO - SEZIONI

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
STELLA	495	Max WS	Tr200	21.82	81.63	83.82	83.96	84.90	0.028656	4.61	4.75	2.77	1.12
STELLA	495	Max WS	Tr30	9.89	81.63	83.05	83.19	83.77	0.033097	3.74	2.64	2.71	1.21
STELLA	485	Max WS	Tr200	21.81	80.40	82.89	82.74	83.68	0.021041	4.19	6.24	3.26	0.96
STELLA	485	Max WS	Tr30	9.88	80.40	82.12		82.55	0.017121	3.10	3.77	3.16	0.89
STELLA	475	Max WS	Tr200	21.79	79.98	81.97	82.12	82.56	0.015571	3.46	7.27	12.72	0.90
STELLA	475	Max WS	Tr30	9.87	79.98	81.36		81.71	0.012872	2.60	3.79	3.56	0.80
STELLA	470	Max WS	Tr200	21.48	79.49	81.20		81.48	0.007131	2.40	10.96	17.05	0.71
STELLA	470	Max WS	Tr30	9.86	79.49	80.59		80.85	0.009805	2.22	4.44	5.44	0.79
STELLA	465	Max WS	Tr200	21.44	79.12	81.04		81.30	0.006683	2.37	11.10	15.45	0.68
STELLA	465	Max WS	Tr30	9.85	79.12	80.35		80.63	0.010584	2.34	4.22	4.94	0.81
STELLA	460	Max WS	Tr200	21.66	78.36	80.62		80.93	0.007378	2.52	10.00	12.64	0.64
STELLA	460	Max WS	Tr30	9.80	78.36	79.87		80.09	0.007148	2.07	4.73	4.15	0.62
STELLA	455	Max WS	Tr200	26.96	77.62	80.20	79.49	80.53	0.006703	2.54	10.62	5.75	0.60
STELLA	455	Max WS	Tr30	13.25	77.62	79.49	78.89	79.67	0.004542	1.88	7.06	4.69	0.49
STELLA	452			Bridge									
STELLA	450	Max WS	Tr200	26.96	77.62	79.69		80.26	0.012912	3.33	8.09	4.78	0.82
STELLA	450	Max WS	Tr30	13.24	77.62	79.37		79.57	0.005583	2.02	6.56	4.65	0.54
STELLA	445	Max WS	Tr200	26.91	77.09	79.38		79.57	0.012653	2.66	19.30	40.95	0.76
STELLA	445	Max WS	Tr30	13.24	77.09	79.18	79.27	79.80	0.025200	3.49	3.79	3.40	1.06
STELLA	440	Max WS	Tr200	26.64	77.09	78.95		78.97	0.000924	0.89	53.78	68.15	0.27
STELLA	440	Max WS	Tr30	13.24	77.09	78.79		78.80	0.000453	0.57	42.91	67.46	0.18
STELLA	435.1	Max WS	Tr200	26.65	75.95	78.90		78.90	0.000178	0.53	101.34	96.17	0.12
STELLA	435.1	Max WS	Tr30	12.81	75.95	78.73		78.73	0.000068	0.31	84.94	94.28	0.07
STELLA	435	Max WS	Tr200	35.96	75.95	78.89	78.17	78.90	0.000330	0.72	100.70	96.09	0.16
STELLA	435	Max WS	Tr30	6.35	75.95	78.72	76.74	78.72	0.000017	0.16	84.66	94.24	0.04
STELLA	432			Bridge									
STELLA	430	Max WS	Tr200	35.96	75.77	77.76	77.90	78.92	0.028638	4.78	7.53	5.23	1.27
STELLA	430	Max WS	Tr30	19.61	75.77	77.55		78.02	0.012940	3.03	6.47	5.06	0.86
STELLA	425	Max WS	Tr200	35.96	75.07	77.22		77.27	0.001555	1.32	62.61	143.68	0.35
STELLA	425	Max WS	Tr30	19.59	75.07	76.76		76.88	0.004242	1.71	16.74	37.17	0.55
STELLA	420	Max WS	Tr200	35.81	74.35	77.15		77.19	0.000693	1.08	61.43	78.94	0.24
STELLA	420	Max WS	Tr30	19.57	74.35	76.60		76.63	0.000832	0.98	31.77	36.13	0.25
STELLA	415	Max WS	Tr200	41.46	74.02	77.04	75.95	77.16	0.001252	1.67	38.51	43.63	0.34
STELLA	415	Max WS	Tr30	23.70	74.02	76.48	75.39	76.58	0.001206	1.39	20.80	21.32	0.32
STELLA	414			Bridge									
STELLA	413.1	Max WS	Tr200	41.46	74.02	76.99		77.11	0.001350	1.71	37.72	42.55	0.35
STELLA	413.1	Max WS	Tr30	23.70	74.02	76.27		76.40	0.001913	1.62	16.08	15.69	0.39
STELLA	413	Max WS	Tr200	41.46	74.02	76.99	75.94	77.11	0.001334	1.70	37.82	41.48	0.35
STELLA	413	Max WS	Tr30	23.70	74.02	76.27	75.39	76.40	0.001908	1.61	16.26	17.45	0.39
STELLA	410			Bridge									
STELLA	405.1	Max WS	Tr200	41.37	73.82	75.58		75.61	0.001525	1.00	67.25	84.85	0.33
STELLA	405.1	Max WS	Tr30	23.70	73.82	75.26		75.72	0.011797	3.02	7.85	7.15	0.92
STELLA	405	Max WS	Tr200	41.39	73.82	75.56		75.58	0.001750	1.05	62.01	76.84	0.35
STELLA	405	Max WS	Tr30	23.70	73.82	75.20	75.19	75.71	0.013508	3.17	7.49	7.06	0.98
STELLA	305	Max WS	Tr200	41.39	73.06	75.28		75.76	0.007599	3.13	14.35	10.59	0.80
STELLA	305	Max WS	Tr30	21.46	73.06	74.75		75.04	0.006320	2.43	9.29	8.63	0.70
STELLA	304	Max WS	Tr200	41.34	72.66	75.10		75.12	0.000462	0.82	106.48	119.14	0.21
STELLA	304	Max WS	Tr30	23.60	72.66	74.36	74.39	74.86	0.014511	3.29	8.18	8.61	1.06
STELLA	303	Max WS	Tr200	41.34	72.43	75.08		75.11	0.000773	1.19	70.22	64.38	0.25
STELLA	303	Max WS	Tr30	23.59	72.43	74.24		74.33	0.002823	1.72	25.83	42.68	0.45
STELLA	302	Max WS	Tr200	41.34	72.21	75.06		75.11	0.000910	1.34	63.23	59.86	0.28
STELLA	302	Max WS	Tr30	23.59	72.21	74.18		74.33	0.004060	2.08	21.27	40.25	0.54
STELLA	301.9	Max WS	Tr200	41.34	72.21	75.06		75.10	0.000916	1.34	71.03	95.26	0.28
STELLA	301.9	Max WS	Tr30	23.59	72.21	74.12	73.98	74.40	0.006716	2.60	14.85	33.30	0.69
STELLA	301.6	Max WS	Tr200	41.34	72.21	74.96		75.28	0.007686	2.94	23.86	33.27	0.60
STELLA	301.6	Max WS	Tr30	23.59	72.21	74.05		74.80	0.020488	3.83	6.16	4.37	0.99
STELLA	301.5			Culvert									
STELLA	301.1	Max WS	Tr200	41.33	71.03	73.62		74.43	0.016583	3.99	10.36	4.00	0.79
STELLA	301.1	Max WS	Tr30	20.87	71.03	73.25		73.53	0.006347	2.35	8.87	4.00	0.50

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
STELLA	110.9	Max WS	Tr200	69.28	64.93	69.81	67.14	69.95	0.000962	1.61	43.12	9.87	0.25
STELLA	110.9	Max WS	Tr30	54.90	64.93	69.40	66.89	69.51	0.000787	1.40	39.08	9.87	0.23
STELLA	110.5			Bridge									
STELLA	110.41	Max WS	Tr200	69.28	64.86	67.80		68.13	0.001132	2.53	27.39	9.72	0.48
STELLA	110.41	Max WS	Tr30	54.90	64.86	67.35		67.64	0.001158	2.38	23.07	9.60	0.49
STELLA	110.31	Max WS	Tr200	69.28	64.86	67.80		68.13	0.001132	2.53	27.39	9.72	0.48
STELLA	110.31	Max WS	Tr30	54.90	64.86	67.35		67.64	0.001158	2.38	23.07	9.60	0.49
STELLA	110.3	Max WS	Tr200	69.27	64.86	67.80	66.67	68.13	0.001132	2.53	27.38	9.72	0.48
STELLA	110.3	Max WS	Tr30	54.90	64.86	67.35	66.42	67.64	0.001159	2.38	23.06	9.60	0.49
STELLA	110.2			Bridge									
STELLA	110.11	Max WS	Tr200	69.27	64.76	67.58		67.94	0.001276	2.64	26.25	9.67	0.51
STELLA	110.11	Max WS	Tr30	54.90	64.76	67.25		67.54	0.001170	2.39	22.99	9.58	0.49
STELLA	110.1	Max WS	Tr200	69.27	64.76	67.58		67.94	0.001276	2.64	26.25	9.67	0.51
STELLA	110.1	Max WS	Tr30	54.90	64.76	67.25		67.54	0.001170	2.39	22.99	9.58	0.49
STELLA	110	Max WS	Tr200	69.27	64.72	67.54	66.68	67.94	0.001430	2.78	24.92	9.70	0.55
STELLA	110	Max WS	Tr30	54.88	64.72	67.21	66.42	67.53	0.001337	2.53	21.68	9.59	0.54
STELLA	109.5			Inl Struct									
STELLA	109.1	Max WS	Tr200	69.08	64.10	67.32		67.80	0.005520	3.10	22.69	13.22	0.66
STELLA	109.1	Max WS	Tr30	54.88	64.10	67.03		67.44	0.005126	2.82	19.49	9.61	0.63
STELLA	109.04			Lat Struct									
STELLA	109	Max WS	Tr200	68.61	63.99	67.13		67.69	0.006839	3.32	20.66	9.78	0.73
STELLA	109	Max WS	Tr30	54.95	63.99	66.83		67.32	0.006566	3.08	17.82	9.26	0.71
STELLA	108	Max WS	Tr200	57.13	63.73	66.76		67.05	0.003270	2.38	24.41	13.96	0.53
STELLA	108	Max WS	Tr30	54.69	63.73	66.46		66.83	0.004769	2.67	20.49	11.38	0.64
STELLA	107	Max WS	Tr200	52.48	63.58	66.75		66.94	0.002138	1.96	27.00	14.46	0.43
STELLA	107	Max WS	Tr30	54.68	63.58	66.29		66.63	0.004474	2.58	21.18	11.47	0.61
STELLA	106	Max WS	Tr200	67.49	62.98	66.42		66.80	0.004113	2.74	24.98	16.28	0.59
STELLA	106	Max WS	Tr30	54.67	62.98	65.97		66.36	0.005127	2.78	19.64	10.37	0.65
STELLA	105.1			Lat Struct									
STELLA	105	Max WS	Tr200	66.63	62.59	66.21		66.48	0.002443	2.30	31.51	29.28	0.46
STELLA	105	Max WS	Tr30	54.67	62.59	65.70		65.99	0.003272	2.37	23.07	10.75	0.52
STELLA	104	Max WS	Tr200	66.59	62.67	66.06		66.26	0.002046	2.05	41.84	47.89	0.43
STELLA	104	Max WS	Tr30	54.66	62.67	65.39		65.69	0.003714	2.44	22.38	11.48	0.56
STELLA	103	Max WS	Tr200	66.60	62.43	66.04		66.16	0.001338	1.61	48.28	46.14	0.35
STELLA	103	Max WS	Tr30	54.66	62.43	65.35		65.54	0.002107	1.94	28.19	13.85	0.43
STELLA	102	Max WS	Tr200	66.59	62.29	66.01		66.11	0.000746	1.44	50.54	31.81	0.26
STELLA	102	Max WS	Tr30	54.66	62.29	65.34		65.46	0.001117	1.54	35.47	14.79	0.32
STELLA	101	Max WS	Tr200	66.59	62.24	65.97		66.11	0.001114	1.65	44.16	27.34	0.31
STELLA	101	Max WS	Tr30	54.66	62.24	65.28		65.45	0.001715	1.80	30.40	13.18	0.37
STELLA	95	Max WS	Tr200	65.61	61.92	65.91	63.68	66.06	0.001280	1.70	42.51	28.56	0.30
STELLA	95	Max WS	Tr30	54.66	61.92	65.22	63.47	65.39	0.001766	1.81	30.17	10.47	0.34
STELLA	94.5			Bridge									
STELLA	94	Max WS	Tr200	64.54	61.89	64.79		65.10	0.003464	2.46	26.24	9.05	0.46
STELLA	94	Max WS	Tr30	54.66	61.89	64.46		64.74	0.003509	2.35	23.23	9.04	0.47
STELLA	93	Max WS	Tr200	64.52	61.62	64.76		65.06	0.004121	2.44	26.41	13.47	0.56
STELLA	93	Max WS	Tr30	54.66	61.62	64.39		64.71	0.004949	2.52	21.71	11.98	0.60
STELLA	92	Max WS	Tr200	64.49	60.84	64.69		64.97	0.003574	2.34	27.58	12.64	0.51
STELLA	92	Max WS	Tr30	54.66	60.84	64.32		64.60	0.004054	2.37	23.11	11.20	0.53
STELLA	91	Max WS	Tr200	66.34	61.08	64.27	63.18	64.62	0.004249	2.60	25.60	12.24	0.54
STELLA	91	Max WS	Tr30	54.66	61.08	63.81	62.91	64.17	0.005003	2.63	20.76	9.72	0.58

ALLEGATO 6

TABELLE OUTPUT MODELLO IDRAULICO - AREE DI POTENZIALE ESONDAZIONE

HEC-RAS Profile: Max WS

Storage Area	Profile	Plan	W.S. Elev (m)	SA Min El (m)	Inflow (m3/s)	Outflow (m3/s)	Net Flux (m3/s)	SA Area (1000 m2)	SA Volume (1000 m3)
A01	Max WS	Tr200	68.55	66.15	5.37	0.00	5.37	12.81	19.87
A01	Max WS	Tr30	67.02	66.15	1.84	0.00	1.84	8.02	2.94
A02	Max WS	Tr200	66.74	64.76	0.49	0.00	0.49	7.40	8.01
A02	Max WS	Tr30	65.45	64.76	0.23	0.00	0.23	3.04	0.60