

# Problem with discharge computation in RIVeR v2.4.2?

I am having some issues when computing discharge in the latest version of RIVeR (v2.4.2) and I'm wondering whether anyone else has experienced the same.

These issues can be summarized as follows:

- I am unable to export the ...StationDischarge.txt (when I do there is no data under "Station,Discharge", see Figure 1 below). I am able to export the ...StationVelocity.txt (see Figure 2 below)
- The discharge and velocity plots don't look correct: the % of total discharges looks too high, and the number of points/bars does not match the number of stations for the cross section, which I think is the main source of the discharge computation problem. (See Figure 3 below).
- In this example, RIVeR gives a total Q of 5.8 m<sup>3</sup>/s, but the comparison FlowTracker measurement was 22.9 m<sup>3</sup>/s)
- If I manually calculate the total discharge, using the StationVelocity.txt data from RIVeR and the same depths and station distances imported into RIVeR, then I compute a total Q of 24.8 m<sup>3</sup>/s, which is much closer to the expected value. (See Table 1 below).

Figure 1: no data in ...StationDischarge.txt



Figure 2: ...StationVelocity.txt data

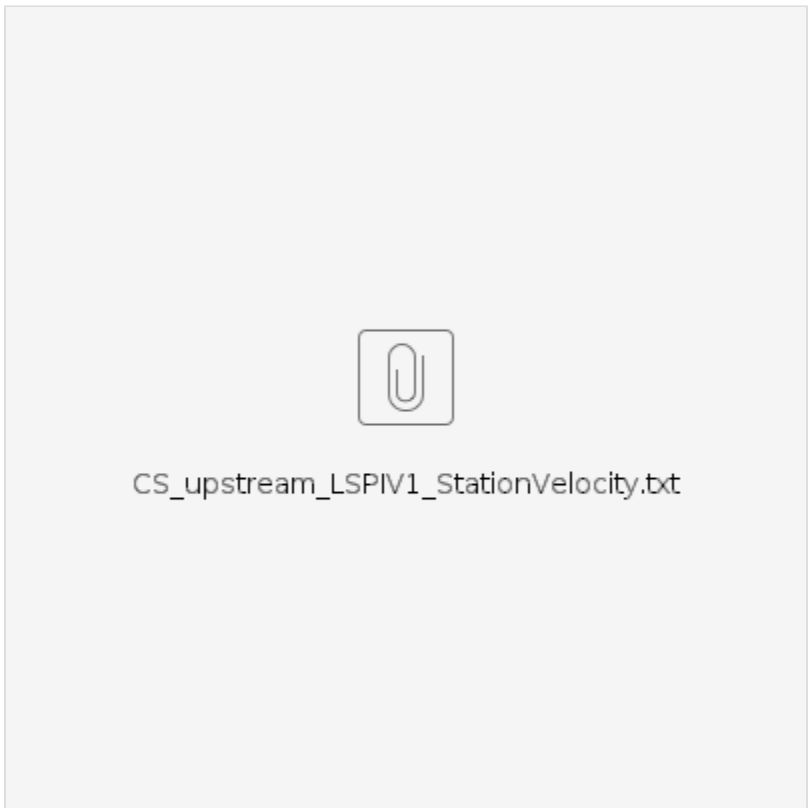


Figure 3. Note the number of data points for discharge and velocity in the plot on the right hand side does not match the number of stations in the cross section (should be 25). the correct number of stations and velocity points do appear in the table and the exported ...StationVelocity.txt file).

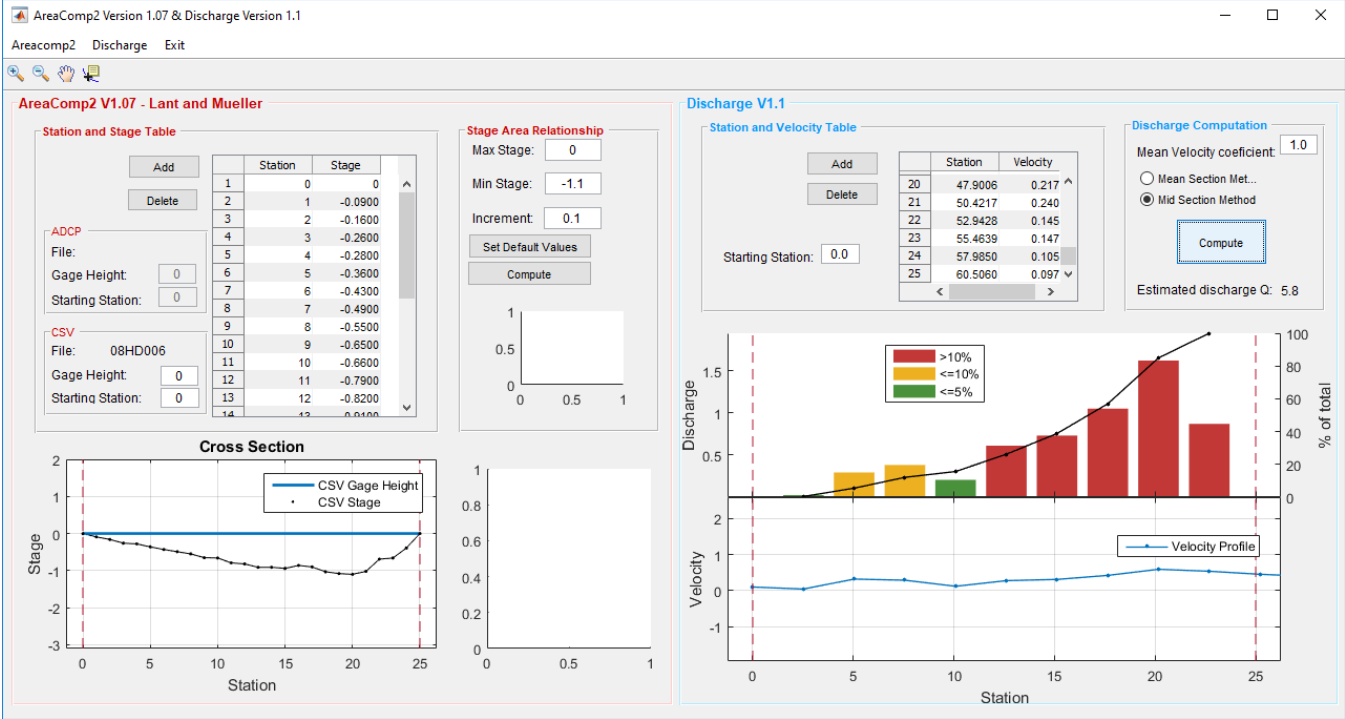


Table 1: Manual check of total discharge, using StationVelocity.txt data from RIVeR (Area and Q manually computed using station dis and velocity respectively).

St	Depth	Station	Velocity		
()	(m)	dis (m)	(m/s)	Area	Q
0	0			(m <sup>2</sup> )	(m <sup>3</sup> /s)
1	0.09	0	0.10146	0.226898	0.023021
2	0.16	2.52109	0.0456	0.806747	0.036788
3	0.26	5.04217	0.32173	1.310964	0.421777
4	0.28	7.56326	0.29035	1.411808	0.409918
5	0.36	10.08434	0.12186	1.815181	0.221198
6	0.43	12.60543	0.27802	2.168133	0.602784
7	0.49	15.12651	0.31261	2.470663	0.772354
8	0.55	17.6476	0.42397	2.773194	1.175751
9	0.65	20.16868	0.59303	3.277411	1.943603
10	0.66	22.68977	0.53915	3.327832	1.794201
11	0.79	25.21085	0.45416	3.983314	1.809062
12	0.82	27.73194	0.39608	4.134579	1.637624
13	0.91	30.25302	0.37496	4.588375	1.720457
14	0.91	32.77411	0.35366	4.588375	1.622725
15	0.94	35.29519	0.38185	4.73964	1.809831
16	0.86	37.81628	0.30974	4.336266	1.343115
17	0.9	40.33736	0.29996	4.537953	1.361204
18	1.03	42.85845	0.24306	5.193435	1.262316
19	1.08	45.37953	0.22464	5.445544	1.223287
20	1.1	47.90062	0.21747	5.546387	1.206173
21	1.02	50.4217	0.24086	5.143013	1.238746
22	0.69	52.94279	0.14573	3.479104	0.50701
23	0.66	55.46388	0.14778	3.327832	0.491787
24	0.39	57.98496	0.10553	1.966446	0.207519
25	0	60.50605	0.0973	0	0
				Total Q =	24.84225