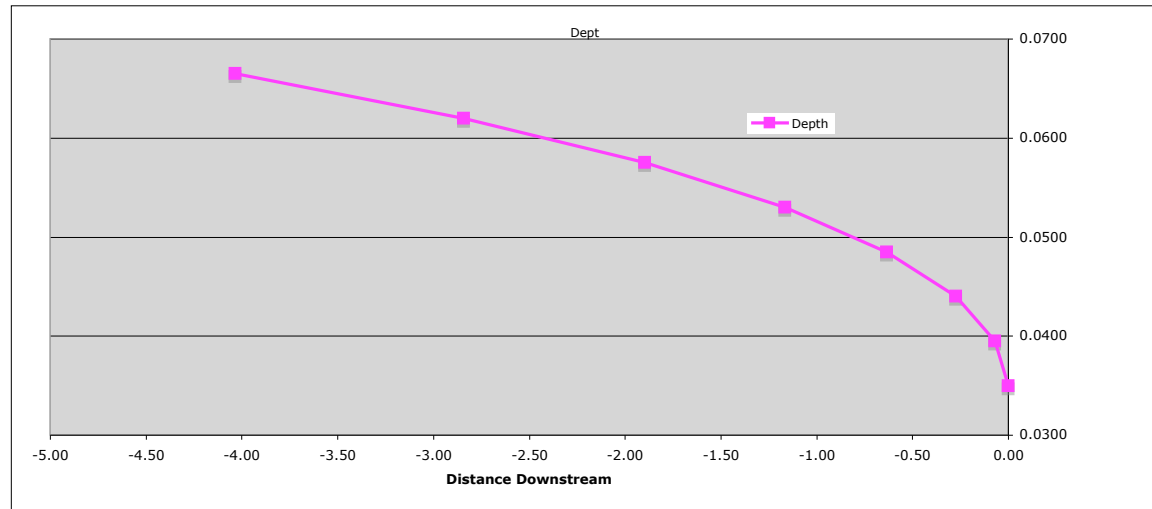


Gradually Varied Flow Profiles, Using direct step method, M2 profile

Parameter	Units	Value
M2, delta y	m	0.0045
Q	L/s	1.5000
Channel Width	m	0.0750
Bed Slope	-	0.0000
n	-	0.0150
Gravity	m/s ²	9.8100
Manning eqn fctr	-	1.0000
Control depth	m	0.0350

Adjust values in green



Reach	x up	x dn	y up	y dn	Fr dn	V up	V down	Equation 3.139 numerator		R_up	R_dn	Eq. 3.136		Sfavg	Eq. 3.139
								E up	E dn			Sf_up	Sf_dn		delta L
1	-0.07	0.00	0.0395	0.0350	0.9752	0.51	0.57	5.257E-02	5.164E-02	0.019	0.018	1.12E-02	1.55E-02	1.30E-02	0.071
2	-0.28	-0.07	0.0440	0.0395	0.8134	0.45	0.51	5.453E-02	5.257E-02	0.020	0.019	8.42E-03	1.12E-02	9.61E-03	0.204
3	-0.63	-0.28	0.0485	0.0440	0.6919	0.41	0.45	5.717E-02	5.453E-02	0.021	0.020	6.54E-03	8.42E-03	7.37E-03	0.358
4	-1.17	-0.63	0.0530	0.0485	0.5978	0.38	0.41	6.026E-02	5.717E-02	0.022	0.021	5.21E-03	6.54E-03	5.80E-03	0.533
5	-1.90	-1.17	0.0575	0.0530	0.5233	0.35	0.38	6.367E-02	6.026E-02	0.023	0.022	4.24E-03	5.21E-03	4.67E-03	0.729
6	-2.84	-1.90	0.0620	0.0575	0.4631	0.32	0.35	6.730E-02	6.367E-02	0.023	0.023	3.50E-03	4.24E-03	3.84E-03	0.948
7	-4.03	-2.84	0.0665	0.0620	0.4136	0.30	0.32	7.111E-02	6.730E-02	0.024	0.023	2.94E-03	3.50E-03	3.20E-03	1.190
8	-5.49	-4.03	0.0710	0.0665	0.3724	0.28	0.30	7.504E-02	7.111E-02	0.025	0.024	2.50E-03	2.94E-03	2.71E-03	1.454

Notes

up and dn refer to upstream and downstream locations

y = water depth

Fr = Froude number

V = velocity

E = specific energy

R = hydraulic radius

Sf = friction slope

delta l = distance to upstream location