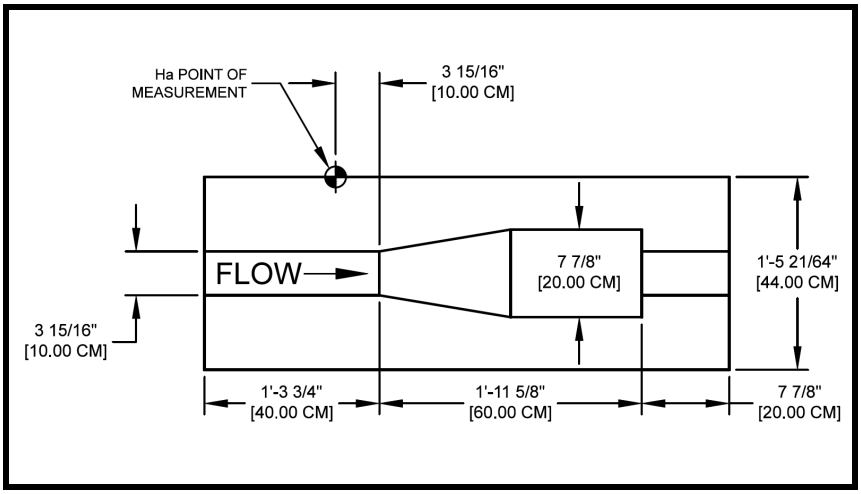
200 mm RBC Flume Discharge Table

80% Submergence Transition ±2% Accuracy

Formulas (H in feet): $GPM = 1615 (H_{ft.} + 0.0179)^{1.879}$

Formulas (H in millimeters): $L/S = 0.002189 (H_{mm} + 5.457)^{1.879}$

FEET	INCHES	METERS	CFS	GPM	MGD	L/S	M3/HR
0.01	0.12	0.0030	Excessive error due to fluid-flow properties and boundary conditions				
0.02	0.24	0.0061					
0.03	0.36	0.0091					
0.04	0.48	0.0122					
0.05	0.60	0.0152					
0.06	0.72	0.0183					
0.07	0.84	0.0213	0.0373	16.75	0.0241	1.057	3.802
0.08	0.96	0.0244	0.0457	20.50	0.0295	1.294	4.655
0.09	1.08	0.0274	0.0548	24.62	0.0354	1.553	5.589
0.10	1.20	0.0305	0.0648	29.08	0.0419	1.835	6.601
0.11	1.32	0.0335	0.0755	33.88	0.0488	2.138	7.693
0.12	1.44	0.0366	0.0870	39.03	0.0562	2.463	8.861
0.13	1.56	0.0396	0.0992	44.52	0.0641	2.809	10.11
0.14	1.68	0.0427	0.1122	50.34	0.0725	3.176	11.43
0.15	1.80	0.0457	0.1259	56.50	0.0814	3.565	12.83
0.16	1.92	0.0488	0.1403	62.99	0.0907	3.974	14.30
0.17	2.04	0.0518	0.1555	69.80	0.1005	4.404	15.85
0.18	2.16	0.0549	0.1714	76.95	0.1108	4.855	17.47
0.19	2.28	0.0579	0.1881	84.42	0.1216	5.326	19.17
0.20	2.40	0.0610	0.2054	92.21	0.1328	5.818	20.93
0.21	2.52	0.0640	0.2235	100.3	0.1445	6.330	22.78
0.22	2.64	0.0671	0.2423	108.7	0.1566	6.862	24.69
0.23	2.76	0.0701	0.2618	117.5	0.1692	7.414	26.68
0.24	2.88	0.0732	0.2820	126.6	0.1822	7.985	28.73
0.25	3.00	0.0762	0.3029	135.9	0.1957	8.577	30.86
0.26	3.12	0.0792	0.3245	145.6	0.2097	9.189	33.06
0.27	3.24	0.0823	0.3467	155.6	0.2241	9.820	35.33
0.28	3.36	0.0853	0.3697	165.9	0.2389	10.47	37.67
0.29	3.48	0.0884	0.3934	176.6	0.2542	11.14	40.09
0.30	3.60	0.0914	0.4177	187.5	0.2700	11.83	42.57



Source: Wahl, T., Clemmens, A., Replogle, J., Bos, M., Simplified Design of Flumes and Weirs, Irrigation and Drainage, Vol. 54, 2005

200 mm RBC Flume Discharge Table

80% Submergence Transition ±2% Accuracy

Formulas (H in feet): $GPM = 1615 (H_{ft.} + 0.0179)^{1.879}$

Formulas (H in millimeters): $L/S = 0.002189 (H_{mm} + 5.457)^{1.879}$

FEET	INCHES	METERS	CFS	GPM	MGD	L/S	M3/HR
0.31	3.72	0.0945	0.4428	198.7	0.2862	12.54	45.12
0.32	3.84	0.0975	0.4685	210.3	0.3028	13.27	47.74
0.33	3.96	0.1006	0.4949	222.1	0.3198	14.01	50.43
0.34	4.08	0.1036	0.5219	234.3	0.3373	14.78	53.18
0.35	4.20	0.1067	0.5497	246.7	0.3552	15.57	56.01
0.36	4.32	0.1097	0.5781	259.5	0.3736	16.37	58.91
0.37	4.44	0.1128	0.6071	272.5	0.3924	17.19	61.87
0.38	4.56	0.1158	0.6369	285.9	0.4116	18.04	64.90
0.39	4.68	0.1189	0.6673	299.5	0.4313	18.90	68.00
0.40	4.80	0.1219	0.6984	313.4	0.4514	19.78	71.16
0.41	4.92	0.1250	0.7301	327.7	0.4719	20.68	74.40
0.42	5.04	0.1280	0.7625	342.2	0.4928	21.59	77.70
0.43	5.16	0.1311	0.7955	357.1	0.5142	22.53	81.06
0.44	5.28	0.1341	0.8292	372.2	0.5359	23.48	84.50
0.45	5.40	0.1372	0.8636	387.6	0.5581	24.46	88.00
0.46	5.52	0.1402	0.8986	403.3	0.5808	25.45	91.57
0.47	5.64	0.1433	0.9342	419.3	0.6038	26.46	95.20
0.48	5.76	0.1463	0.9705	435.6	0.6273	27.49	98.90
0.49	5.88	0.1494	1.007	452.2	0.6511	28.53	102.7
0.50	6.00	0.1524	1.045	469.1	0.6754	29.60	106.5
0.51	6.12	0.1554	1.083	486.2	0.7002	30.68	110.4
0.52	6.24	0.1585	1.122	503.7	0.7253	31.78	114.4
0.53	6.36	0.1615	1.162	521.4	0.7508	32.90	118.4
0.54	6.48	0.1646	1.202	539.5	0.7768	34.04	122.5
0.55	6.60	0.1676	1.243	557.8	0.8032	35.19	126.6
0.56	6.72	0.1707	1.284	576.4	0.8299	36.37	130.9
0.57	6.84	0.1737	1.326	595.2	0.8571	37.56	135.1
0.58	6.96	0.1768	1.369	614.4	0.8847	38.77	139.5
0.59	7.08	0.1798	1.412	633.9	0.9127	39.99	143.9
0.60	7.20	0.1829	1.456	653.6	0.9411	41.24	148.4
0.61	7.32	0.1859	1.501	673.6	0.9700	42.50	152.9
0.62	7.44	0.1890	1.546	693.9	0.9992	43.78	157.5
0.63	7.56	0.1920	1.592	714.5	1.029	45.08	162.2
0.64	7.68	0.1951	1.638	735.4	1.059	46.40	166.9
0.65	7.80	0.1981	1.685	756.5	1.089	47.73	171.7
0.66	7.92	0.2012	1.733	777.9	1.120	49.08	176.6

Source: Wahl, T., Clemmens, A., Replogle, J., Bos, M., Simplified Design of Flumes and Weirs, Irrigation and Drainage, Vol. 54, 2005