

Flood discharge - Working out of  
Minor Irrigation Work  
Adoption of Metric units

GOVERNMENT OF MAHARASHTRA,  
IRRIGATION AND POWER DEPARTMENT  
NO. MNS 1963-MI(1), CHIEF ENGINEER (M.I. AND P.H.)'S  
TECHNICAL CIRCULAR NO. 1, SACHIVALAYA, Bombay  
NO. 32 BR, 1<sup>st</sup> JUNE 1964.

With the adoption of metric units for preparation of Plans and estimates of new schemes the flood discharges will hereafter be worked out according to the accompanying statement. The catchment area will be in square kilometres (one square mile = 2.59 sq.kms.) and the discharge in cubic metres (One cubic metre = 35.32 cubic feet).

For intermediate catchment areas not mentioned in the statement, the value of C will be derived by arithmetic proportion.

Flood absorption capacity will not, as usual, be taken into account for catchment area upto 50 sq. kms.

The circular supersedes the circular of even number, dated the 20<sup>th</sup> August 1963.

DA : Statement

(R.D. GUPTE)  
For Chief Engineer (M.I. & P.H.)

## Statement : I :

Accompaniment to Chief Engineers (M. I. and P. H. ) and Joint Secretary's Technical Circular No. 1, dated the 1<sup>st</sup> June 1964.

Statement showing flood discharges for different catchment area to be used for Minor Irrigation Works.

Sr. no.	Catchment area		Flood Discharge as per Inglis formula $Q = \frac{CA}{\sqrt{A+4}}$		Flood discharge in Metric formula $Q = C\sqrt{A}$		Remarks
	Sq. Kms.	Sq. miles	C	'Q' in cumecs	C	'Q' in cumecs	
1	2	3	4	5	6	7	8
1	1	0.386	4000	20.89	21	21.00	The formula to be used in working out flood discharge in metric units is $Q = C \cdot \sqrt{A}$ where, Q= discharge in cubic meters per second, A= catchment area in sq. kms., C= constant as in column 6 of the table
2	2	0.772	4000	40.05	28	39.6	
3	3	1.158	4100	59.26	36	62.36	
4	4	1.544	4350	80.78	40	80.00	
5	5	1.930	4500	101.10	44	89.39	
6	6	2.317	4670	121.90	48	117.58	
7	7	2.703	4750	140.50	52	142.41	
8	8	3.089	4820	154.50	56	158.39	
9	9	3.475	4900	176.40	60	180.00	
10	10	3.861	4970	193.90	64	202.39	
11	20	7.722	5810	389.00	86	384.60	
12	30	11.583	6260	520.40	97	531.29	
13	40	15.444	6550	664.60	106	670.41	
14	50	19.305	7000	804.20	113	799.03	
15	60	23.166	7000	866.57	118	914.03	
16	70	27.027	7000	955.68	121	1012.36	
17	80	30.888	7000	1036.40	123	1100.15	
18	90	34.749	7000	1106.40	124	1176.36	
19	100	38.610	7000	1190.00	125	1250.00	
20	125	48.263	7000	1343.00	125	1397.50	
21	150	57.915	7000	1481.00	125	1530.87	
22	175	67.568	7000	1606.00	125	1653.62	
23	200	77.220	7000	1744.00	125	1767.75	
24	300	115.83	7000	2096.70	125	2165.13	