

# RIVERS AND CANALS NORMAL FLOW OF RIVERS REGULATIONS 1941

**GN 255/1941**

**(Lane III/640) - section 92 - 25 October 1941**

1. In these regulations-

"Permanent Secretary" means the Permanent Secretary of the Ministry of Works.

"River" includes streams and other natural watercourses.

2. Parties wishing to have the normal flow of a river fixed shall make their application to the Permanent Secretary stating-

- (a) the reasons for which the normal flow should be fixed;
- (b) the site or sites at which the normal flow is to be ascertained;
- (c) the manner in which they wish to proceed to ascertain the normal flow according to these regulations;
- (d) the temporary works if any which are deemed necessary for the purpose and the reasons therefor.

3. The application shall be accompanied by a plan or plans showing the site or sites at which the normal flow is to be ascertained, the catchment area above each site, the position of all existing dams, canals, pipe lines or conduits taking off from the river or its tributaries above such site or sites, a statement giving the mean annual rainfall in the catchment area above each site and particulars of the records of rainfall in the locality from which the mean annual rainfall has been deduced, and a statement giving the particulars of all grants of water from the river and its tributaries whether permanent or temporary, public or private, made under the laws of Mauritius.

Amended by [GN No. 54 of 1968]

4. The application with the accompanying plans and statements shall be submitted to the President by the Permanent Secretary.

Amended by [GN No. 61 of 1968]; [Act No. 48 of 1991]

5. All works which may have been approved by the President as being ,necessary for ascertaining the normal flow and all gaugings and measurements shall be executed under the direction and supervision of the Permanent Secretary.

Amended by [GN No. 61 of 1968]; [Act No. 48 of 1991]

6. The normal flow at any site may be ascertained with reference to the catchment area above the site and the mean annual rainfall over the catchment area. The limits of the catchment area shall be ascertained by inspection or survey and shall be shown on the one inch contour map of the island or other accurate map on a larger scale and its area shall be calculated and expressed in square miles. The normal flow per square mile of catchment area corresponding to any mean annual rainfall shall be taken from the table appended to these regulations. If the mean annual rainfall is the same over the whole catchment area the normal flow at the site shall be the product of the area in square miles by the normal flow per square mile corresponding to the mean annual rainfall over the area. If the mean annual rainfall is different over different parts of the catchment area the normal flow at the site shall be the sum total of the products of the area in square miles of each part of the catchment area by normal flow per square mile corresponding to the mean annual rainfall over that part of the catchment area.
7. When such a course is necessary measurements of the discharge of the river shall be made to ascertain the normal flow. The rainfall in the catchment area shall also be measured.
8. Measurements of rainfall shall be begun not later than 1 August. The amount of rainfall shall be measured daily at a fixed time and recorded in a register. The measurements shall not be discontinued until after 30 November following.
9. If the rainfall is the same over the whole region of the catchment area the rainfall shall be measured at one rain gauge suitably located in the region, otherwise if

- there be more than one region of rainfall within the catchment area one rain gauge shall be suitably located in each region and the rainfall measured at each.
10. Measurements of the discharge of the river shall be begun not later than 1 September and shall be made by means of a gauging weir, which may be a temporary work approved for the purpose, or an existing weir.
  11. The head at the gauging weir, or if there is more than one, at each of them, shall be measured daily at a fixed time and the measurements shall not be discontinued until after 30 November. The measured head shall be recorded at once in a register specially used for that purpose. If there are any canals, conduits or pipe lines taking off from the river above the gauging weir their discharges shall be measured or ascertained daily and simultaneously with the measurement of head at the gauging weir and recorded in the register.
  12. The discharge corresponding to the measured head at any weir shall be calculated according to the dimensions and type of the weir and according to the approved formula adapted to such weir and recorded in the register.
  13. The recorded discharge of the river at the gauging weir or the sum of the recorded discharges of the river and of the canals, conduits or pipe lines if any taking off from the river above the gauging weir shall be plotted for each day on a diagram of discharge. If there is more than one gauging weir a diagram of discharge shall be drawn for the discharge of the river at each site.
  14. A line passing through points of normal discharge on the discharge diagram and showing generally a gradual fall in the discharge of the river towards the end of the gauging season shall be the line of normal discharge.
  15. The discharge given by the line of normal discharge on 30 September shall be the normal flow and a horizontal line drawn through that point on the discharge diagram shall be the line of normal flow.

16. If the rainfall as shown by the measurements of rainfall before and during the gauging season has been abnormal the President may increase or decrease the normal flow as ascertained in any year by such amount as may be necessary and as he may deem proper, or he may order a new determination to be made the next year.

Amended by [GN No. 61 of 1968]; [Act No. 48 of 1991]

TABLE

NORMAL FLOW IN CUBIC FEET PER SECOND PER SQUARE MILE OF  
CATCHMENT AREA .. CORRESPONDING TO MEAN

ANNUAL RAINFALL

Mean annual Rainfall in inches	Normal Flow per square mile of catchment area in cubic feet per second
30	0.12
40	0.22
50	0.34
60	0.46
70	0.59
80	0.72
90	0.86
100	1.00
110	1.15
120	1.30
130	1.45
140	1.57
150	1.70
160	1.83
170	1.95

180

2.08

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