

DATA FORM FOR CALCULATING FLOW

Solving the equation: $\text{Flow} = \frac{A L C}{T}$

Where:

A = Average cross-sectional area of the stream. L = Length of the stream reach measured (usually 20 ft.).

C = A coefficient or correction factor (0.8 for rocky-bottom streams or 0.9 for muddy-bottom streams). T = Time, in seconds, for the float to travel the length of L.

A: Average Cross-Sectional Area

Transect #1 (upstream)

Interval width (feet)	Depth (feet)
A to B = <input type="text"/>	<input type="text"/> (at B)
B to C = <input type="text"/>	<input type="text"/> (at C)
C to D = <input type="text"/>	<input type="text"/> (at D)
D to E = <input type="text"/>	<input type="text"/> (shoreline)
Totals <input type="text"/>	<input type="text"/> ÷ 4
	= Avg. depth <input type="text"/> ft

Cross-sectional area of Transect #1

= Total width (ft) X Avg. depth (ft)

X = ft²

Transect #2 (downstream)

Interval width (feet)	Depth (feet)
A to B = <input type="text"/>	<input type="text"/> (at B)
B to C = <input type="text"/>	<input type="text"/> (at C)
C to D = <input type="text"/>	<input type="text"/> (at D)
D to E = <input type="text"/>	<input type="text"/> (shoreline)
Totals <input type="text"/>	<input type="text"/> ÷ 4
	= Avg. depth <input type="text"/> ft

Cross-sectional area of Transect #2

= Total width (ft) X Avg. depth (ft)

X = ft²

(Cross-sectional area of Transect #1 + Cross-sectional area of Transect #2) ÷ 2 = Average Cross-sectional area

X = ft²

L: Length of Stream Reach

ft

C: Coefficient

T: Travel Time

Travel Time
of Float (sec.)

Trial #1

Trial #2

Trial #3

Total ÷ 3
= Avg. time sec.

$\text{Flow} = \frac{A L C}{T} = \frac{\text{ } \times \text{ } \times \text{ }}{\text{ }} = \text{ } \text{ ft}^3/\text{sec.}$