

Calculating Flow Field Data Sheet

Flow is a function of water volume and velocity. It is important because of its impact on water quality and on the living organisms and habitats in the stream. Stream flow, or discharge, is the volume of water that moves over a designated point over a fixed period of time. It is often expressed as cubic feet per second (ft³/sec).

SITE (include county)	SITE NUMBER
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INVESTIGATOR	DATE	TIME
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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 feet)
- C** = Coefficient or correction factor (0.8 for rocky bottom streams; 0.9 for muddy bottom streams)
- T** = Time, in seconds, for the float to travel the length of L

TRANSECT #1 (UPSTREAM)

Interval Width (feet): A to B _____ B to C _____ C to D _____ D to E _____ Total Width <input style="width: 50px;" type="text"/> ft	Depth (feet): (at B) _____ (at C) _____ (at D) _____ (shoreline) _____ Total _____ ÷ 4 = Avg. Depth <input style="width: 50px;" type="text"/> ft
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TRANSECT #2 (DOWNSTREAM)

Interval Width (feet): A to B _____ B to C _____ C to D _____ D to E _____ Total Width <input style="width: 50px;" type="text"/> ft	Depth (feet): (at B) _____ (at C) _____ (at D) _____ (shoreline) _____ Total _____ ÷ 4 = Avg. Depth <input style="width: 50px;" type="text"/> ft
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CROSS-SECTIONAL AREA OF TRANSECT #1:

Total Width X Avg. Depth = ft²

CROSS-SECTIONAL AREA OF TRANSECT #2:

Total Width X Avg. Depth = ft²

A AVERAGE CROSS-SECTIONAL AREA

(Cross-sectional Area of Transect #1 + Cross-sectional Area of Transect #2) ÷ 2

+ = ÷ 2 = ft²

L LENGTH OF STREAM REACH

ft

T TRAVEL TIME

Travel time of float in seconds:

Trial 1 _____

Trial 2 _____

Trial 3 _____

TOTAL _____ ÷ 3 = Avg. Time sec

C COEFFICIENT

0.8 for rocky bottom streams
0.9 for muddy bottom streams

$$\text{FLOW} = \frac{A L C}{T}$$

_A X _L X ÷ = ft³/sec