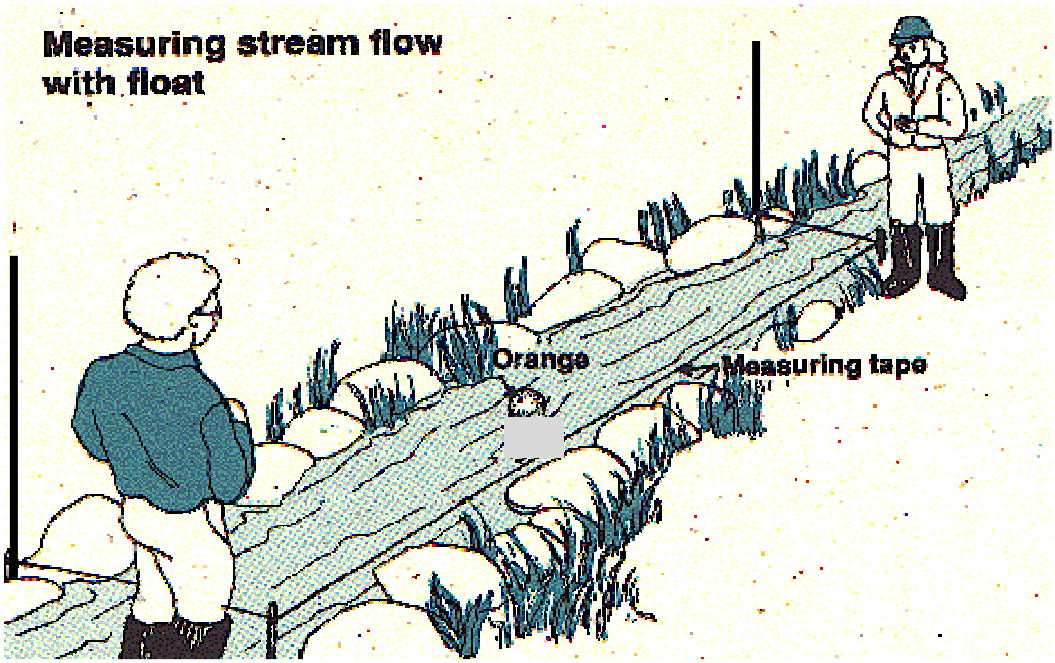
DOWNSTREAM CHANGES IN A RIVER

VELOICITY

SITE .....

The simplest way to measure the velocity of a river is the float method.
The float must be heavy enough to float just below the surface, but not sink, it must be stable enough not to be affected by the wind, and brightly coloured enough to be seen. Wood and paper are not suitable, an orange is probably best.
A straight 5 metre section of the river is chosen. A longer section over 10 metres would be better, but it is hard to find long straight sections and meanders cause the flow rate to change and should be avoided.
The 5 metre section is marked out with ranging poles and the orange introduced to the stream a metre upstream from the first pole to allow it to get up to speed. The orange is timed to 0.1 of a second between the two poles. A total of 3 timed runs is taken to account for irregularities due to weeds and other obstructions and give a meaningful average.



First run	Second run	Third run	Average
secs	secs	secs	secs

Velocity = $\frac{5\text{m}}{\text{Average time}}$ = ... metres / sec

The surface velocity is faster than average velocity, so we must x the answer by 0.8 to calculate the true average velocity

.....m/s x 0.8 = ...m/s