Calculating the Citizen Science Stream Index

Recorder name:	Stream name:
Date:	GPS/location:

The Citizen Science Stream Index (CSSI) is based on the presence or absence of six key aquatic invertebrates. Three pollution-sensitive invertebrates ('good guys') are commonly found in clean streams and three pollution-tolerant invertebrates ('bad guys') are commonly found in polluted streams.

Citizens use a pond net to take three 30-second kick-samples (the three samples should be a few metres apart) from a shallow (<20cm), gravelly, fast-flowing part of the stream. The invertebrates captured in each sample are examined in a white tray on the bankside. The six key invertebrates are easily spotted amongst the many other species in the tray, by their characteristic shape, colour or movement.

The citizen will score each sample depending on which, if any, of the six key invertebrates occur in the tray. The three **'good guys' have a score of +1** each and the three **'bad guys' have a score of -1 each.**

The score for each kick-sample can range from +3 (all three good guys and no bad guys) to -3 (all three bad guys and no good guys). When the scores from all three samples are added together, the CSSI ranges from +9 to -9.

		Sample 1	Sample 2	Sample 3
Stonefly (+1)				
Flattened mayfly (+1)				
Green caddisfly (+1)				
Snail (-1)				
Leech (-1)				
Waterlouse (-1)				
		Sum of scores 1	Sum of scores 2	Sum of scores 3

Citizens should also take a good, clear photo of one of the 3 samples, including a label in the tray, with information on the date, stream name, location and recorder.

CSSI Scores can be a 'traffic light' for water quality

CSSI score -9 to -5
Poor

CSSI Score -4 to +4
Moderate

CSSI Score +5 to +9
Good

Total score for the 3 samples = CSSI Score

Any observations (eg. excessive algae or fine sediment, cattle access nearby, surface foam, presence of trout/salmon etc):

The 'good guys'

Stonefly
2 thin filamentous tails at end of abdomen

Flattened mayfly
3 thin filamentous tails, wide head with large eyes on top and <u>flattened</u> body

Green caddisfly
Green caterpillar-like larva. Gills along abdomen give it a 'spiky' appearance

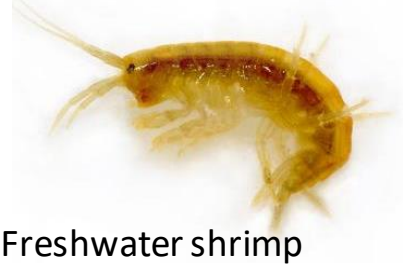
The 'bad guys'

Leech
Suckers at both ends & moves by stretching out body

Snail
Hard pointed or coiled shell covering body

Waterlouse
Looks like a woodlouse, crawls slowly along bottom

These invertebrates are found in most streams and are <u>NOT</u> scored for the CSSI



Freshwater shrimp

Swimming mayfly

Blackfly larva

Brown caddisfly

Pink caddisfly