Water Bug Survey Result Sheet: SIGNAL 2 & calculating SPI

Survey site name: _____

Survey date: _____ **No. of participants in group:** _____

Water bug recording table – record the number of water bugs per type you found in column B. Refer to next page for instructions to calculate the Stream Pollution Index (SPI).

Macroinvertebrate types		**A**	**B**	**C**	**D**
Sensitivity rating	**Bug types**	**Sensitivity rating**	**Number of bugs found**	**Weight factor**	**Column A X Column C**
Very sensitive	Stonefly nymph	10			
	Mayfly	9			
Sensitive bugs	Alderfly larva	8			
	Caddisfly larva	8			
	Riffle Beetle & larva	7			
	Water mite	6			
Tolerant bugs	Beetle larva	5			
	Dragonfly nymph	4			
	Water strider	4			
	Whirligig beetle & larva	4			
	Freshwater yabby/crayfish	4			
	Damselfly nymph	3			
	Fly larva & pupa	3			
	Midge larva & pupa	3			
	Freshwater mussel	3			
	Nematode	3			
	Freshwater sandhopper	3			
	Freshwater shrimp	3			
	Water scorpion/needle bug	3			
Very tolerant bugs	Diving beetle & larva	2			
	Flatworm	2			
	Hydra	2			
	Water treader	2			
	Freshwater worm	2			
	Freshwater slater	2			
	Water boatman	2			
	Backswimmer	1			
	Bloodworm	1			
	Leech	1			

	Mosquito larva & pupa	1			
	Freshwater snail	1			
	TOTALS				

Did you catch Gambusia at your site? ☐Yes ☐ No ☐ Did not look (tick the box)

How to calculate the health of your site

Method of calculation:

Step 1. Tally and count the number found of each bug type in Column B.

Step 2: Refer to the Weight Table for the correct weight factor for the number found.

Step 3: Write the correct Weight Factor for each bug type in Column C.

Step 5: Next, multiply the Bug Sensitivity Rating (Column A) by the Weight Factor (Column C) for each bug type and enter the answer in Column D cell.

Step 6: Add up all Column C (Weight Factors).

Step 7: Add up all Column D (Sensitivity Rating x Weight Factor).

WEIGHT TABLE	
No. of each bug found (Column B)	Weight factor (Column C)
1–2 →	1
3–5 →	2
6–10 →	3
11–20 →	4
>20 →	5

Step 8: Calculate the SPI value number, and record the Stream Quality Rating (Good/Fair/Poor).

Step 9: Count the number of bug types found and record.

Calculate the **SPI** = Total of column D / Total column C = _____ = SPI = _____

Stream Quality Rating = _____

No. o f types of bugs (biodiversity) found = _____

What your Stream Pollution Index (SPI) score means	
Stream Pollution Index	**Stream Quality Rating**
Less than 3.0	Poor
3.0 to 4.0	Fair
>4.0 to 6.0	Good
>6.0	Excellent