

## EXPLAINER: BATHING WATER CLASSIFICATIONS



Regulators calculate bathing water classifications based on results from 10 to 20 samples from the bathing site, which are taken during the official bathing season each year. Samples are taken on a weekly basis, and the classification is determined at the end of each bathing season.

Bathing water classifications use both *E. coli* and intestinal Enterococci results, and having specific threshold values which place bathing water sites into categories.

### Inland and Coastal Waters – what are the differences?

The Bathing Water Regulations 2013 allow for higher values of *E. coli* and enterococci at inland waterways when calculating the classification.

The thresholds for **inland** bathing waters are as follows:

Classification	<i>Escherichia coli</i> (CFU/100mL)	Intestinal Enterococci (CFU/100mL)
Excellent (95 <sup>th</sup> percentile)	<500	<200
Good (95 <sup>th</sup> percentile)	<1000	<400
Sufficient (90 <sup>th</sup> percentile)	<900	<330
Poor	Values are worse than sufficient	

Table 1

The thresholds for **coastal and transitional** bathing waters are as follows:

Classification	<i>Escherichia coli</i> (CFU/100mL)	Intestinal Enterococci (CFU/100mL)
Excellent (95 <sup>th</sup> percentile)	<250	<100
Good (95 <sup>th</sup> percentile)	<500	<200
Sufficient (90 <sup>th</sup> percentile)	<500	<185

Poor	Values are worse than sufficient
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Table 2

‘Excellent’ and ‘Good’ classifications are both determined using data from the 95<sup>th</sup> percentile, and ‘Sufficient’ classifications are determined using data from the 90<sup>th</sup> percentile. Percentile measurements are a statistical technique whereby only the top 5-10% of results are used. This allows us to determine the relative likelihood of high contamination occurring, using a risk-based approach.

### Bathing water calculator

At SAS, we’ve developed a bathing water classification calculator. This allows us to take all of the data that has been generated from citizen science data to determine bathing classifications, in a way that is comparable to the Bathing Water Regulations method that the Regulator uses.

You can access:

- [Calculator for 10 weeks of samples](#)
- [Calculator for 20 weeks of samples](#)
- [The classification for 2025 sampling sites](#) (ongoing)
- [A video on how to edit the calculator](#)

How it works:

The calculator generates results for both the 90<sup>th</sup> and 95<sup>th</sup> percentiles, and then classifies each site according to where the results sit within tables 1 and 2 above. This is done for both *E. coli* and intestinal enterococci separately. An overall classification for the site is then generated based on both of these results; the lowest classification will be taken into account, as a site has to be below the threshold for a classification for both *E. coli* and enterococci to meet that classification. For example, if a site received Good status for *E. coli* but Sufficient status for enterococci, the overall classification will be Sufficient.