

Irish bathing water quality in 2015



Ireland 

May 2016

BWD Report For the Bathing Season 2015

Ireland

The report gives a general overview of information acquired from the reported data, based on provisions of the Bathing Water Directive¹. The reporting process is described below, as well as state and trends of bathing water quality in Ireland.

1. BWD reporting in the season 2015

In 2015 bathing season, 137 bathing waters have been reported in Ireland. For each bathing water, five groups of parameters have been delivered²:

- *identification data* – including name, location, geographic type of bathing water and availability to bathers;
- *seasonal data* – including season start and end, national quality classification in present season, potential management measures and changes in quality;
- *monitoring results* – disaggregated numerical values of two microbiological parameters – intestinal enterococci and Escherichia coli (also known as E. coli), recorded at each water sample taken;
- *abnormal situation periods* – periods of unexpected situations that have, or could reasonably be expected to have, an adverse impact on bathing water quality and on bathers' health; reporting is optional;
- *short-term pollution periods* – identifiable events that adversely affect water quality by faecal contamination; reporting is optional.

Total reported	137
Coastal	128
Inland	9
Max season period	107 days
	1 Jun to 15 Sep
Samples taken	1451
Share of bathing waters with good or excellent water quality	83 %
Reporting under Directive 2006/7/EC since	2011

The authorities of Ireland report data according to the new BWD (2006/7/EC) since the season 2011. The data for the season 2015 were delivered to the European Commission by **18 December 2015**, with additional deliveries on 20 January 2016.

Altogether, **137 bathing waters** have been reported – 0.6% of all bathing waters in Europe. Out of all bathing waters in Ireland, 0.73% have been newly identified in 2015 season. 93% of bathing waters in Ireland are of coastal type; the other 7% are inland. **1451 samples** were taken at bathing waters throughout the season – 11 per bathing water on average.

¹ Directive BWD 2006/7/EC, available at <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2006:064:0037:0051:EN:PDF>

² See the BWD Data Dictionary for detailed explanations: <http://dd.eionet.europa.eu/datasets/3294#tables>

The bathing season period was from 1 June to 15 September, i.e. 107 days altogether.

Detailed information on bathing waters is available from national portal at <http://splash.epa.ie>.

2. Assessment methodology³

During the bathing season, water samples are taken and analysed for two bacteria, *Escherichia coli* and intestinal enterococci which may indicate the presence of pollution, usually originating in sewage, livestock waste, bird faeces etc. The results of the analysis are used to assess the quality of the bathing waters concerned and to provide information to the public on the quality of water in the bathing sites concerned.

The monitoring requirements under the Directive are:

- taking a pre-season sample (taken shortly before the start of the bathing season) ⁴;
- a minimum of four samples per season⁵;
- a minimum of one sample per month⁶.

If these rules are satisfied, the bathing water is categorised as 'sampling frequency satisfied'. If not all monitoring requirements are fulfilled the bathing water is categorised as 'not enough samples'. All bathing waters of Ireland met the described monitoring requirements set by the Directive, with 2.2% not being quality-classified due to non-complete dataset for different reasons: being new; having changed environmental conditions that might affect water quality classification; closed; not monitored due to legal issues, physical inaccessibility to the site etc. Table 1 shows the statistics of bathing waters according to monitoring requirements.

³ The methodology used by the EC and the EEA is described here, while results of assessment by national authorities may differ in individual cases.

⁴ A pre-season sample is taken into a sum of samples per season.

⁵ Three samples are sufficient if the season does not exceed eight weeks or the region is subject to special geographical constraints.

⁶ If, for any reason, it is not possible to take the sample at the scheduled date, a delay of four extra days is allowed. Thus, the interval between two samples should not exceed 31 + 4 days.

Table 1: Bathing waters in 2015 according to compliance with BWD monitoring provisions

	Count	Share of total [%]
BWs with sampling frequency satisfied (and are not new, are not subject to changes or were not closed in 2015) These bathing waters have been monitored according to provisions and have complete dataset from the last assessment period. They have been quality-classified (excellent, good, sufficient, poor).	134	97.8%
BWs with sampling frequency not satisfied (and are not new, are not subject to changes or were not closed in 2015) These bathing waters exist throughout the last assessment period but have not been monitored throughout the period according to provisions for various individual reasons. They may be quality-classified if there is an adequate volume of samples available for credible classification.	0	0.0%
BWs that are new, subject to changes or closed in 2015 These bathing waters do not have complete dataset for the last assessment period because they are new, have been subject to changes (that are likely to affect the classification of the bathing water) or have been closed. They cannot be quality-classified.	3	2.2%
Total number of bathing waters in 2015	137	100%

Bathing waters where sampling frequency was not satisfied can still be quality assessed if at least four samples per season (three samples if the season does not exceed eight weeks or the region is subject to special geographical constraints) are available and equally distributed throughout the season. Assessment of bathing water quality is possible when the bathing water sample dataset is available for four consecutive seasons. Bathing waters are accordingly classified to one of the bathing water quality classes (excellent, good, sufficient, or poor).

The classification is based on pre-defined percentile values for microbiological enumerations, limiting the classes given in Annex I of the Directive. The Directive defines different limit values for coastal and inland waters.

Quality assessment is not possible for all bathing waters. In these cases, they are instead classified as either:

- not enough samples⁷;
- new⁸;
- changes⁹;
- closed¹⁰.

⁷ Not enough samples have been provided throughout the last assessment period (the last four bathing seasons or, when applicable, the period specified in Article 4.2 or 4.4).

⁸ Classification not yet possible because bathing water is newly identified and a complete set of samples is not yet available.

⁹ Classification is not yet possible after changes that are likely to affect the classification of the bathing water.

¹⁰ Bathing water is closed temporarily or throughout the bathing season.

3. Bathing water quality

The results of the bathing water quality in Ireland throughout the past period are presented in Figure 1 (for coastal bathing waters) and Figure 2 (for inland bathing waters). The previous reports are available on the European Commission's bathing water quality website¹¹ and the European Environment Agency's bathing water website¹².

3.1 Coastal bathing waters

In Ireland, 93.8% of all existing coastal bathing waters met at least sufficient water quality standards in 2015. See Appendix 1 for numeric data.

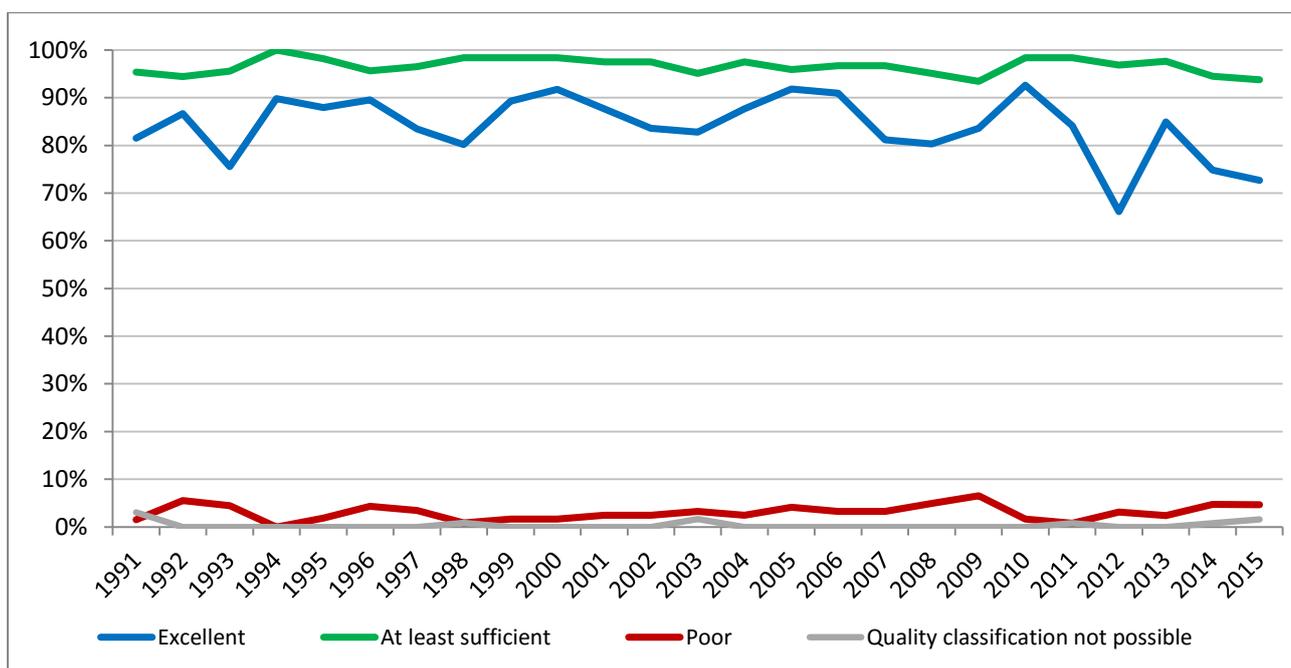


Figure 1: Coastal bathing water quality trend in Ireland. Note: the “At least sufficient” class also includes bathing waters of “Excellent” quality class, the sum of shares is therefore not 100%.

¹¹ http://ec.europa.eu/environment/water/water-bathing/index_en.html

¹² <http://www.eea.europa.eu/themes/water/status-and-monitoring/state-of-bathing-water>

3.2 Inland bathing waters

88.9% of all existing inland bathing waters were of at least sufficient water quality in 2015. See Appendix 1 for numeric data.

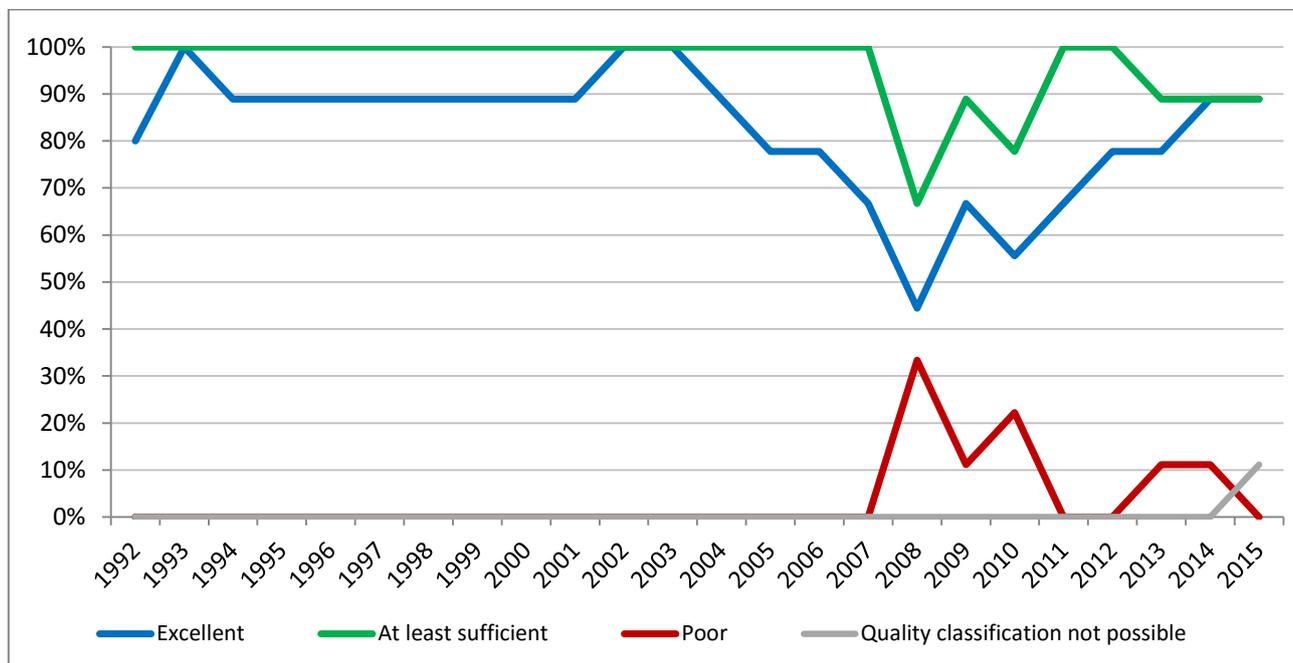


Figure 2: Inland bathing water quality trend in Ireland. Note: the “At least sufficient” class also includes bathing waters of “Excellent” quality class, the sum of shares is therefore not 100%.

4. Information regarding management and other issues

2015 is the second assessment of identified bathing waters by Ireland using data for a four year period (2012-2015) as required by the Bathing Water Directive 2006/7/EC, which was transposed into Irish law as Statutory Instrument No. 79 of 2008.

The quality of many of Ireland’s bathing waters is known to be markedly affected by weather events and, in particular, heavy rainfall. This is most evident in those waters close to urban areas such as greater Dublin and other major cities where the influence of wastewater discharges can be a crucial factor in the assessment of overall quality. Rural bathing waters tend to be affected more by diffuse pollution from agricultural sources, and from river systems. During the 2015 bathing season, most areas experienced above average rainfall and wind speeds according to the Irish National Meteorological Service. A total of 147 bathing water incidents were reported by local authorities to the EPA during the 2015 bathing season - 37 incidents under Article 7 Management measures in exceptional circumstances and 110 incidents were reported as prior warnings under Article 2(8) Short Term Pollution (STP). The majority of the prior warning STP incidents reported, following analysis of scheduled and investigation samples, showed no evidence of pollution and were deemed invalid incidents. The replacement of samples under STP requirements was granted for five bathing waters, where exceedances occurred and STP criteria were met. Thus, only five short-term pollutions were reported to EC and EEA.

Management measures undertaken in relation to bathing water incidents included; notifying the incidents to the Health Executive Service (HSE) and the EPA; notifying the incidents to Irish Water where appropriate; protecting the public by posting of temporary advice against bathing or bathing prohibition notices at the beach (as appropriate); informing the public of the incidents via “Splash” and other media; resampling etc.

All the bathing waters with poor quality had bathing restrictions in place for the entire 2015 bathing season. ‘Advice Not to Swim’ notices were placed at six of these bathing waters and there was a ‘Bathing Prohibition’ notice at one. All these bathing waters were monitored during 2015 bathing season. Untreated wastewater, sewer overflows, combined storm overflows, birds (particularly gulls), discharges through the surface water outfalls and agricultural runoff are deemed to be the primary causes for poor water quality. Prior to the 2015 bathing season, management plans for improving the water quality at these bathing waters were submitted and approved by the EPA. In order to improve water quality management measures such as new sewers, drainage upgrades, re-routing the foul and surface water sewers were taken among other actions.

The Environmental Protection Agency (EPA) has developed a suite of bathing water information systems to support the implementation of the Bathing Water Directive (2006/7/EC) in Ireland. The Bathing Water Information System (BWIS) allows local authorities to electronically report the identification of bathing waters, bathing water profiles (new & update existing) and monitoring calendars to the Agency.

In addition, the Compliance & Risk Information System (CRIS) facilitates local authorities to electronically notify bathing water incidents, in a timely manner, to the Agency and to the public via Splash (<http://splash.epa.ie>) and @EPABathingWater Twitter account. The national bathing water information website, “Splash” informs the public of any current bathing water incidents, bathing water monitoring results for all of the season, likely water quality assessment of individual samples, annual water quality classification, bathing water profiles, public participation information, and other information as required under the Directive. A mobile version of Splash is planned to be developed in 2016.

5. Bathing water quality assessment presentation in online viewers

The European bathing water legislation focuses on sound management of bathing waters, greater public participation and improved information dissemination. More on the bathing and other water legislation can be found on the European Commission's website: http://ec.europa.eu/environment/water/index_en.htm.

The bathing water section of the Water Information System for Europe (WISE) which is accessible at the EEA bathing water website (<http://www.eea.europa.eu/themes/water/interactive/bathing/state-of-bathing-waters>) allows users to view the bathing water quality at more than 21 000 coastal beaches and inland sites across Europe. The WISE bathing water quality data viewer combines text and graphical visualisation, providing a quick overview of the bathing water's locations and achieved

quality. Having access to bathing water information, citizens are encouraged to make full use of it and participate with their comments.

Appendix 1: Results of bathing water quality in Ireland from 2012 to 2015

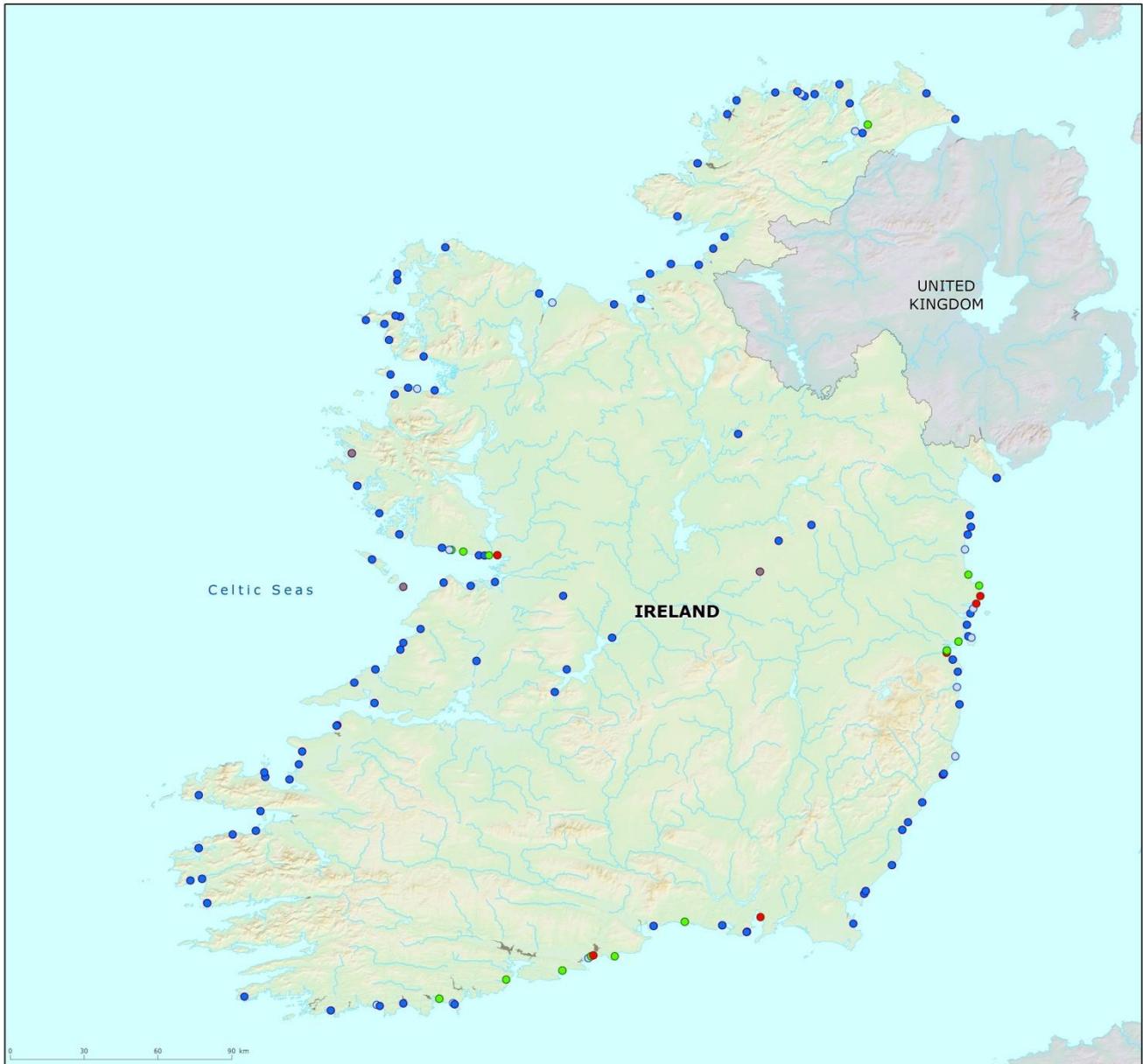
Table 2: Bathing waters in the season 2015 according to quality

		Total number of bathing waters	Excellent quality		At least sufficient quality		Poor quality		Quality classification not possible: not enough samples /new bathing waters/bathing waters subject to changes/closed	
			No	%	No	%	No	%	No	%
Coastal	2012	127	84	66.1	123	96.9	4	3.1	0	0.0
	2013	126	107	84.9	123	97.6	3	2.4	0	0.0
	2014	127	95	74.8	120	94.5	6	4.7	1	0.8
	2015	128	93	72.7	120	93.8	6	4.7	2	1.6
Inland	2012	9	7	77.8	9	100.0	0	0.0	0	0.0
	2013	9	7	77.8	8	88.9	1	11.1	0	0.0
	2014	9	8	88.9	8	88.9	1	11.1	0	0.0
	2015	9	8	88.9	8	88.9	0	0.0	1	11.1
Total	2012	136	91	66.9	132	97.1	4	2.9	0	0.0
	2013	135	114	84.4	131	97.0	4	3.0	0	0.0
	2014	136	103	75.7	128	94.1	7	5.1	1	0.7
	2015	137	101	73.7	128	93.4	6	4.4	3	2.2

Note: the class "At least sufficient" also includes bathing waters which are of excellent quality, the sum of shares is therefore not 100%.

Appendix 2: Bathing water quality map

Map 1: Bathing waters reported during the 2015 bathing season in Ireland



Bathing water quality

- Excellent water quality
- Good water quality
- Sufficient water quality
- Poor water quality
- Quality classification not possible: not enough samples / new bathing waters / bathing waters with changes / closed
- No data
- Outside data coverage (data available, not presented on the map)

Source: National boundaries: EEA; Large rivers and lakes: EEA, WFD Article 3; Bathing waters data and coordinates: Irish authorities; Digital Elevation Model over Europe (EU-DEM): EEA.