

## Did you know?

Ireland has more than 12,000 lakes.

Lough Corrib is the largest lake in the Republic of Ireland and contains around 800 billion litres of water, enough to fill more than 300,000 Olympic-sized swimming pools.

Lakes and reservoirs are the main source of drinking water for two million people in Ireland.

The Environmental Protection Agency reports on the ecological health of over 800 lakes. This information helps us understand and manage this freshwater resource.

Lake water quality in Ireland is better than the European average, but there is no room for complacency as nearly one-third of our lakes are at moderate or worse status.

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## European Union Water Framework Directive

Lakes are assessed under the European Union Water Framework Directive (WFD). Having a single European framework to assess water quality allows us to compare our results across Europe. Lakes are classified into five quality classes (status) under the WFD. 'High' is when the water is not polluted at all, and 'bad' is when the water is most polluted.

1. High

2. Good

3. Moderate

4. Poor

5. Bad

Human activities and demands on our waters can cause problems in the land areas that drain into lakes (catchment areas). We must deal with these issues to ensure that more of our lakes are at 'high' and 'good' status.

## National lake water quality assessments

The water quality of 812 lakes is currently assessed by the EPA. This covers 90% of the surface area of all lakes in Ireland.

This includes:

- lakes greater than 50 hectares;
- lakes that are used for supplying drinking water; and
- lakes that are of regional, local or scientific interest.

In the map on the right, the location of WFD lakes reflects the distribution of lakes nationally. Most lakes are in the west and north-east.

**The water quality of 812 WFD lakes is currently assessed nationally by the EPA.**

Lake WFD Status  
2016-2021

High

Good

Moderate

Poor

Bad

## What is assessed in monitored lakes?

Each lake is monitored for a range of different plants and animals, including:

- phytoplankton (tiny, free-floating plants),
- diatoms (type of algae),
- aquatic plants,
- invertebrates, and
- fish (monitored by Inland Fisheries Ireland).

The lakes are also monitored for chemical and physical parameters. The chemical and physical parameters measured include:

- nutrients such as nitrogen and phosphorus,
- dissolved oxygen,
- temperature,
- water clarity,
- cloudiness, and
- colour.

The plants and animals are monitored once every three years while the physical and chemical parameters are measured several times a year. Changes are also recorded like:

- any change in the physical structure of the lake shore,
- changes in lake water level, or
- changes in how much water is flowing in to or out of the lake.

## Lake water quality assessment

Ecologically healthy lakes are an important natural resource. Healthy lakes are important:

- for plants and animals that live in or on the water,
- as a source of clean water for domestic, agricultural and industrial use, and
- for tourism and recreational activities.

In recent years, the water quality of lakes has largely been maintained due to:

- improvements in wastewater treatment systems, and
- better water quality management practices.

However, there are still significant challenges. Over two-thirds (69%) of lakes in Ireland are at 'good' and 'high' ecological status, while the remainder are at less than good (31%). We need to take action so that lakes at less than good status improve in a timely manner.

Almost one-third (31%) of lakes are at 'high' status. This means these lakes show no, or only very minor, signs of human disturbance. At the other end of the spectrum, 1% of lakes are at 'bad' status, which means human activity is affecting them badly.

You can get more information about lake water quality in Ireland, and the environmental pressures on these waters at [www.catchments.ie](http://www.catchments.ie)



## The ecological status of lakes in Ireland

Ecological status	High	Good	Moderate	Poor	Bad
Percentage of lakes at each ecological status	31%	38%	21%	10%	1%

Percentages do not add to 100% due to rounding

For the latest information go to [www.catchments.ie](http://www.catchments.ie) and <https://gis.epa.ie/EPAMaps/Water>