



Rivers being used as 'open sewers' says charity

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Data is for England only

Last update: 14/08/2019 - New comments from Defra and Environment Agency added

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Overview

Targets for three quarters of rivers to be healthy by 2027 are "very unlikely" to be met, a charity has warned.

The World Wide Fund for Nature (WWF) said new laws were needed to stop rivers being "used as open sewers" by water companies and industry.

The Environment Agency aims for 75% of rivers to be "good" for wildlife by 2027 compared with 14% at present.

However it said it will review the target and look at "what can realistically be achieved".

It is planning an autumn consultation on the "challenges and choices" faced in cleaning up water.

Sewage discharging into rivers is one of the most common reasons for failing ecological health tests - about a third of all rivers that failed had "continuous sewage discharge" confirmed or suspected in 2016 - while water companies in England have been told their efforts to protect the environment are "unacceptable".

What is "good" ecological status?

The EU asked nations to grade rivers into poor, moderate, good and high. Governments should aim for rivers to be "good" - that is relatively unaffected by human activity. "High" refers to upland streams in sparsely-populated areas.

Under its Water Framework Directive the EU set a target for all rivers to be "good" by 2027 but exceptions are allowed if the cost of doing so is too high.

The elements that [make up ecological status](#) include:

- biological elements (including fish, macro-invertebrates, macrophytes and diatoms); and
- supporting elements (made up of water flow, surface features, ammonia, pH, phosphates, dissolved oxygen and 18 pollutants including some heavy metals and pesticides).



The UK government is aiming for 75% of rivers to be in good health "as soon as is practicable", according to its 25-year environment plan, which Parliament's Environmental Audit Committee said [was a "weakening of this target"](#) after Brexit.

And now the Environment Agency is planning a consultation in which it may revise the predictions based on "what can realistically be achieved".

What's the current state of rivers?

As of 2016, the latest data available, just 14% of rivers in England were in good health.

Environment Agency data shows that by 2021 the government predicts about 19% of 3,767 river bodies to be "good", rising to the 75% target by 2027.

The WWF said this was **unlikely to be achieved** unless there was tougher regulation of water companies and work to restore rivers to a more natural state.

Dave Tickner, chief adviser for freshwater at WWF, said: "Our rivers are the lifeblood of the countryside - vital for wildlife and people, as well as our economy.

"As we prepare to leave the EU, the UK Government must fast-track flagship legislation to better protect and restore our waterways and invest in effective monitoring and enforcement to ensure water companies and agricultural industry can no longer use our rivers as open sewers."

The charity wants water companies to be required to have long-term plans to tackle sewage pollution and for the government to put more money into advice and enforcement.

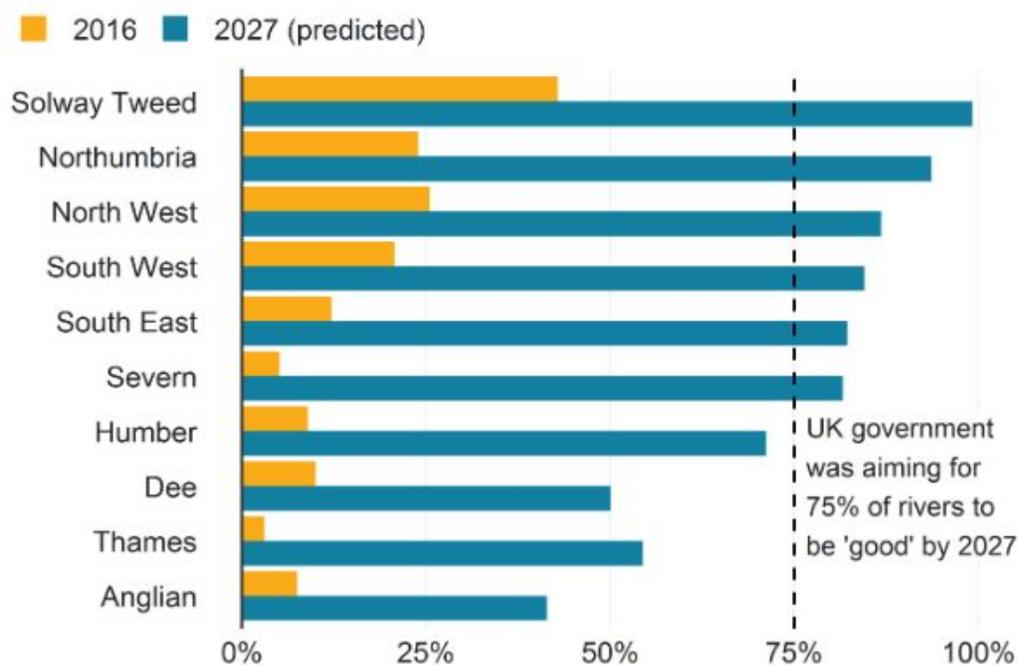
It said investing in river health by tackling pollution would improve people's health, help wildlife and cut the cost of water treatment, leading to reduced water bills.

Who has the most polluted rivers?

The Thames river basin is the most polluted in England.

How the government expects rivers to improve

Percentage of rivers (%) by basin district in 'good' health in 2016 vs. government predictions for 2027 which may now be revised



Source: Environment Agency

BBC

Just 3% of rivers in the Thames basin, which stretches from the Cotswolds and Northampton through London to Kent and Hampshire, were in good health at the last reported check.

Solway Tweed, which covers parts of Cumbria, Northumberland and the Scottish borders has the largest proportion of good rivers, 43%, and is currently predicted to be 99% good by 2027.

Just 10% of river water in the Dee basin, which runs from Snowdonia in Wales to Chester, was good in 2016 but this is currently predicted to be 50% by 2027 unless the government revises the target.

Here's the breakdown in percentages of the chart above:

River basin district	2016 % of rivers that were good	2027 predicted % of rivers that will be good
Anglian	8%	41%
Dee	10%	50%
Humber	9%	71%
North West	25%	87%
Northumbria	24%	94%
Severn	5%	82%
Solway Tweed	43%	99%
South East	12%	82%
South West	21%	85%
Thames	3%	54%

Where is our river basin district and which rivers in our patch are of interest?

Colleagues can find the river basin district for their region using this interactive map:

<https://environment.data.gov.uk/catchment-planning/>

Our data on individual rivers is [available here](#).

This will help you to find examples of rivers that were in poor condition in 2016 but are expected to be good by 2027, plus examples of those where sewage pollution has been found in previous years.

The WWF tell us the Hogsmill in south west London is well known for its pollution incidents and might make a good case study:



<https://www.southeastriverstrust.org/the-hogsmill-river-a-globally-rare-chalk-river-is-regularly-contaminated-with-sewage/>

WWF also partners with Coca-Cola to work with farmers in the east of England to improve agricultural pollution. More info here:

<https://www.wwf.org.uk/updates/coca-cola-great-britain-and-wwf-renew-partnership-protect-precious-uk-river-habitats>.

How are the water companies doing?

Water companies have been told their efforts to protect the environment are "simply unacceptable".

The Environment Agency recorded 1,623 sewerage pollution incidents in England in 2018, just four fewer than the year before and equivalent to more than four per day.

These are where water companies responsible for sewers discharge raw sewage into the environment, something they are only meant to do during extreme rainfall.

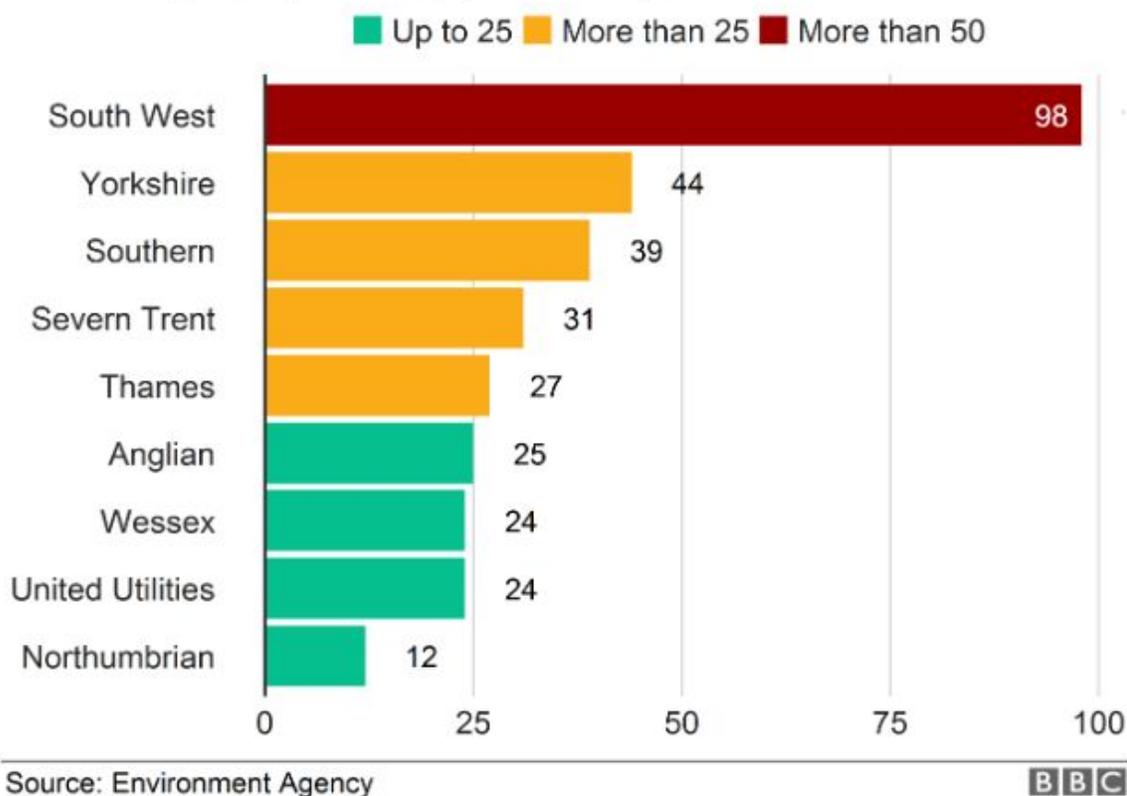
There have been prosecutions for spills of wastewater.

Southern Water was hit with a record £126m punishment for spills from its sewage plants and for deliberately misreporting its performance.

In July Thames Water was fined £607,000 for two incidents that saw millions of litres of raw sewage released in Maidenhead in 2014.

South West Water had the highest rate of pollution incidents in England

Incidents per 10,000km (6,214 miles) of sewer in 2018



The above chart gives the proportion of incidents per 10,000 km of sewer in 2018.

These are the raw figures in terms of total sewage pollution incidents (source is the [Environment Agency](#)):

	2017	2018
Anglian	228	191
Northumbrian	50	37



Severn Trent	280	287
Southern	123	151
South West	169	168
Thames	303	297
United Utilities	169	181
Wessex	80	82
Yorkshire	225	229
Sector total	1627	1623

Despite the criticism, the figures show that South West had its lowest rate of sewage pollution incidents for five years.

In 2013 it reported 267 incidents for every 10,000km of sewer.

What is polluting the rivers?

The Environment Agency stresses that England has the cleanest bathing waters since records began and serious pollution incidents are in decline.

However, it says climate change is causing more extreme weather, with longer droughts punctuated by more intense rainfall.

And it says [there are unacceptable levels of phosphorous in over half of English rivers](#), usually due to sewage effluent and pollution from farm land.

This chokes the fish and other wildlife as algae uses up their oxygen.

What do experts want?

The Environment Agency has the power to take court action if water companies' actions hurt the natural environment.



Dr Andrew Singer, senior scientist at the Centre for Ecology and Hydrology, said there needed to be "zero tolerance" of sewage pollution and a programme of "habitat restoration" to make rivers fit for different types of wildlife again.

"By conceding that 25% of rivers will not meet good ecological status the government is recognising some rivers have deteriorated so far that they need this kind of work to have a chance of getting there.

"This investment needs to come alongside a zero tolerance approach to sewage being dumped in rivers as otherwise any good work will just be washed away.

"I'm not aware of any implementation plan to achieve that 75% good status. If they could do it in such a short space of time, why not do it now?"

What does the government say?

Latest comments 14/08/2019:

A Defra spokesperson said:

"As we have already made very clear, we will not weaken any of our high environmental standards when we have left the EU and, where possible, will even look to enhance these even further.

"The 25-year Environment Plan sets out how we will improve our environment for future generations and we remain fully committed to delivering on these ambitious targets."

An Environment Agency spokesperson said:

"Water quality is now better than at any time since the Industrial Revolution, largely due to the work of the Environment Agency and the £25 billion of investment we have required water companies to make.



"We remain committed to sustaining this improvement, including by taking robust enforcement action against those who pollute our waters. In the last four years we have prosecuted water companies 40 times with fines totalling £33 million.

"We are also increasingly using legally binding enforcement undertakings – raising around £5m in the last three years alone for local environment projects and requiring offenders to restore damage."

Further comments:

A spokesman for the **Environment Agency** said: "We respond to all pollution incident reports attending the most serious and significant to investigate any offence and initiate clean ups and remedial works. We deal with the majority of minor incidents by ensuring operators or polluters take remedial action to clean up any impact.

"With regards to pollution, agricultural land use, wastewater management by the water industry and diffuse inputs from urban areas remain of concern. Addressing these will need ongoing attention and may require new approaches to achieving sustainable environmental quality.

"The Water Framework Directive generally requires [EU] member states to aim to achieve good ecological status by 2027, though there are provisions to allow extension of this deadline if natural conditions do not allow timely improvement of particular waters. It is also possible to set lower objectives for bodies of water if the conditions in the directive are met.

"The Environment Agency will be reviewing the objectives and looking at what can realistically be achieved by 2027 as part of the work to update the river basin managements to be published in 2021."

He said between 1990 and 2020 the water industry will have invested about £25 billion in environmental improvement work, much of it to improve water quality.

What do the water companies say?

A Water UK Spokesperson said:

“Water companies have spent around £25 billion on environmental work since 1995 – action which has improved around 10,000 miles of rivers. It means wildlife is flourishing again, whereas 30 years ago Britain was known as ‘The Dirty Man of Europe’ due to badly polluted rivers, some of which had been biologically dead since the Industrial Revolution.

“The industry has made a major commitment for the future, with an additional £5 billion to be spent between 2020 and 2025 on environmental improvements, and a reduction in serious pollution incidents of 90% by the end of 2025. This will be delivered under the existing regulatory framework.”

Appendices

More information and contacts

Water UK:

<https://www.water.org.uk/contact/>

They're the trade body for the water companies.

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From the WWF:



<https://www.wwf.org.uk/updates/more-third-40-rivers-england-and-wales-are-polluted-sewage-adding-one-most-urgent>

https://www.wwf.org.uk/sites/default/files/2017-12/Flushed%20Away_Nov2017.pdf

https://www.wwf.org.uk/sites/default/files/publications/Dec17/2182%20Final%20Report_20170803_Update.pdf

Information for background from WWF:

Pollution is killing the wildlife in our rivers and making people ill. The biggest causes of concern are farming practices that cause water pollution, pollution from sewage, physical modification of watercourses and over-abstraction of water sources (which diminishes the ability of rivers to cope with pollution).

WWF is concerned that the EU legal target won't be met unless the government takes much stronger action. If the target is to be met, UK become far more efficient in our use of water.

Improving river health by tackling pollution and other issues at source can benefit people through cutting down on illness, improve conditions to enable wildlife to thrive, and cut water treatments costs, which could ultimately lead to reduced water bills. More generally, analysis by the Environment Agency said that investing to bring the vast majority of water bodies to good health, as required by legislation, could benefit the wider economy in England by £8 billion.

While some action is being taken by governments, regulators, water companies and farmers, far more could be done.

In England, WWF is calling for the Government to implement to incentivise sustainable farming, for OFWAT to do more to ensure water companies to embed sustainability into their investments, for water companies to be required to put in place long-term plans to tackle



sewage pollution, and for the UK Government to invest in additional resources to provide effective regulatory advice and enforcement.

UK governments must ensure that any new legislation implemented after we leave the EU, including the Environment Bill, maintains or improves standards for river health.

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My full Q&A email with the Environment Agency:

Questions about overall classification

Q1: Your data shows in 2013 about 29% of rivers (overall waterbody) were classed as “good” with a handful “high”. By 2016 this was just 14%. I understand that “good” means only a slight deviation from undisturbed conditions, following assessments of animals, plant life and any pollutants found. Is this correct?

- The way we define good ecological status changed between 2013 and 2016, meaning a direct comparison between the two datasets is not possible. Changes were made to the water body network and the monitoring programme; new standards were introduced and some existing standards made tighter during this period.
- In 2013 we reported that 21% of rivers were at good ecological status based on the Water Framework Directive cycle 1 assessment methodologies. In that year, we began to introduce and refine methodologies for cycle 2. Because this was work in progress, and methodologies were still being refined, we do not think the figure of 29% is a fair reflection of the state of the rivers at that time and we do not use it in our assessments.
- In 2014 when the cycle 2 methodologies were more refined, 17% of rivers were at good ecological status. In 2016 we reported that 14% of rivers were at good ecological status..
- Please see page 40 of Defra's recent report "Measuring environmental change: outcome indicator framework for the 25 Year Environment Plan" for more information:
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/802094/25-yep-indicators-2019.pdf

Q2: Given that drinking water is treated anyway, why does it matter that rivers meet "good" for ecological quality?

- There is no requirement for water used in the supply of drinking water to meet good ecological status. River water is managed to achieve good ecological quality primarily for the benefit of wildlife, although water that achieves good ecological quality will be suitable for water supply after treatment.
- Drinking water quality is regulated by the Drinking Water Inspectorate which applies quality standards set out in the Drinking Water Directive, at the point of consumption, i.e. at the tap.



Q3: What has caused the decline in the proportion of “good” rivers?

- Please see Q1 for explanation of why the 2013 and 2016 data sets are not comparable.
- The last time we published these summaries (in 2016) 39% of water bodies were not achieving good status as a result of physical modifications, 35% as a result of pollution from waste water (mainly sewage discharges) and 35% from pollution from rural areas (mainly farming).
- In 2016, 76% of the tests used to measure the health of rivers were rated good.
- However, only 14% of rivers reached good ecological status overall – this is because the failure of one test means the whole waterbody fails to obtain good or better status. Pollution markers associated with water company discharges such as ammonia, dissolved oxygen and phosphorus have seen dramatic improvements over recent years. These improvements are in line with quality improvements in other European member states.

Q4: What is being done to address this?

- The Environment Agency’s monitoring of the water environment varies over time and was subject to significant changes when the Water Framework Directive was introduced in 2009. Monitoring activity peaked in 2013 due to extensive water quality investigations required for the first cycle of the Water Framework Directive which informed River Basin Management Plans published in 2015.
- The reasons for not achieving good status are regularly reviewed. However, if the reason has not changed or if a new reason has not been found then a new record is not added to CDE. Prior to 2016 we had a major programme of work to investigate and record the reasons for not achieving good status – hence the large number of record for those years in CDE. We are now improving and refining our records, hence the lower number of new or changed records in 2016.
- Between 1990 and 2020 the water industry will have invested about £25 billion in environmental improvement work, much of it to improve water quality.



Q5: What part have the water companies played in this decline? You have said their efforts to protect the environment are “simply unacceptable”. What measures are you taking to ensure they improve their performance?

- In 2009 we introduced a system of Operator Self-Monitoring where water companies monitor their effluents and report the results to us. This is backed up by a system of audits and quality checks carried out by the Environment Agency to ensure the quality of the data. In addition we carry out audits and inspections of water company environmental permits to ensure compliance.
- Since the system came into force in 2009, final effluent quality has remained high over this period with wastewater treatment works across the country consistently achieving greater than 98% compliance with effluent quality standards.
- This is when the effluent standards and environmental quality targets have been significantly tightened so in actuality environmental quality related to discharges from wastewater treatment works has improved over this time.
- Water companies have invested over £25 billion in environmental improvements over the last 25 years driven by environmental directives such as the Urban Wastewater Treatment Directive, Bathing Waters Directive and the Water Framework Directive. This is a greater level of investment in reducing water pollution than from any other sector and has led to major reductions in polluting matter entering rivers and seas over this time.

Q6: Why was ecological quality tested yearly until 2016 but hasn't been tested since?

- We monitor ecological quality each year. We are currently assessing monitoring information up to and including 2018 and this will form the basis of the next classification of water bodies which will be published early in 2020.

- This will help us understand progress that has been made during the current cycle of River Basin Management Plans and inform what is needed for the next cycle of plans which will be published in 2021.

Questions on reasons for not achieving good status

Q7: Not every river is included in the datasets “reasons for not achieving good”. But for the stretches of river included in the 2016 database, 33% failed for reasons including “continuous sewage discharge”, 8% for intermittent sewage discharge and 3% for septic tanks. Why is so much raw sewage getting into the rivers? What is being done to stop this discharge being so frequent?

- Untreated sewage is not permitted to be discharged to rivers routinely but can occasion discharge to rivers due to an equipment failure/blockage or an intervention (for example an operative incorrectly closing a valve) on the sewer or sewage treatment.
- We respond to all pollution incident reports attending the most serious and significant to investigate any offence and initiate clean ups and remedial works. We deal with the majority of minor incidents by ensuring operators or polluters take remedial action to clean up any impact.
- The “continuous sewage discharge” relates to water company sewage treatment work discharges and the “intermittent sewage discharge” to storm water overflows operating during wet weather on the sewer network. They are permitted discharges with specific limits and requirements and discharge treated final effluent and storm sewage respectively.
- In 2018, we completed our environmental planning for the next water company investment round from 2020 to 2025. Where such discharges contribute to not achieving the Water Framework Regulations environmental standards then new limits and requirements will have

been determined by the Environment Agency and subject to the appropriate costs benefit assessment they will be included in the environment programmes for waters companies to deliver those improvements in the period 2020 to 2025. The permits will be amended to reflect these new requirements.

- We are commencing our environmental planning for the third cycle of River Basin Management Plans to meet Water Framework Regulations requirements which will include an assessment of the impact of small sewage discharges, including septic tanks, and any required actions.

Q8: As far as the EA is concerned, what is the biggest cause of concern when it comes to river pollution and what is being done to tackle it?

- We are currently preparing to consult in the autumn on the Challenges and Choices we all face in managing the quality of the water environment. This will help inform the next set of River Basin Management Plans which will be published in 2021.
- With regards to pollution, agricultural land use, wastewater management by the water industry and diffuse inputs from urban areas remain of concern. Addressing these will need ongoing attention and may require new approaches to achieving sustainable environmental quality.

Questions on future objectives

Q9: According to your “objectives” dataset, about 19% of the 3,767 river bodies graded in 2016 are expected to be “good” by 2021. This includes those where the status is an “objective” and those where it is “predicted”. By 2027, Almost 75% of them are predicted or have the objective of being so. How can this target be met in such a short time? Is the EA confident it will be met? What happens if it is not?

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- The Water Framework Directive generally requires Member States to aim to achieve good ecological status by 2027, though there are provisions to allow extension of this deadline if natural conditions do not allow timely improvement of particular waters. It is also possible to set lower objectives for bodies of water if the conditions in the Directive are met.
 - The current river basin management plans for England make extensive use of the exemptions in the Directive. A quarter of water bodies have an objective lower than good ecological status. The other 75% were set objectives as good by 2027 as required by the Directive.
 - Former Environment Secretary Michael Gove stated in a letter to Mary Creagh MP (17 May 2018) "... we know that most EU Member States, including the UK, will realistically find it a challenge to meet the ambition of the Directive. It is likely that Member States and the EU Commission will need to consider extending the WFD deadline in some way or revising water quality objectives looking beyond 2027."
 - The Environment Agency will be reviewing the objectives and looking at what can realistically be achieved by 2027 as part of the work to update the river basin managements to be published in 2021.