



## DRINKING WATER INSPECTORATE

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**To: Rebecca Pow  
Parliamentary Under Secretary of State for the Environment**

The Drinking Water Inspectorate for England will be publishing its annual drinking water report on 9 July, which summarises the overall drinking water quality of both private supplies within England and public supplies managed by water companies operating in England.

Safe, clean drinking water is vital to public health and the wellbeing of our society, now and into the future. This is the central tenet of the vision and strategy of the Drinking Water Inspectorate, published in April 2020. It is ever more important in the face of significant challenges to drinking water supplies, from the impacts of climate change, and on the quality and availability of water resources, as well as more recently infectious disease such as CoViD-19.

The Inspectorate's work is wide-ranging, covering all aspects of the quality and sufficiency of public water supplies. Drinking Water 2019 provides a record of the work of the Inspectorate in checking that water companies and local authorities have taken the appropriate action to maintain confidence in drinking water quality and to safeguard public health.

The status of water quality in England is at a very high standard but work remains to improve planning for future generations:

It is difficult to escape the question of lead pipes. Fifty years after the use of lead pipes was made illegal, the industry has not made significant progress, largely because of the ownership of supply pipes from the property curtilage remains with the householder. The most significant risk of lead dissolving into the water is from where it sits in the last few meters of piping waiting to be drawn from the tap. Consequently, this will continue to be a potential risk to the mental and physical health of current and future generations, until removal of lead from domestic plumbing.

Global challenges such as CoViD-19, coupled with current water resource demand and availability, pose challenges for the maintenance of supply

during these difficult times. Companies in England have identified “no supply” as being a key risk. Demand and resource all threaten water quality and sufficiency. Long term planning will be vital to maintain both our industry and our private supplies. We have clear evidence that water resource challenges result in water quality failings, and the choice between sufficiency and quality is not a decision that can be or should have to be made.

In England, compliance failures and unplanned events are dominated by microbiological parameters such as coliforms, *E. coli*, and low-level Cryptosporidium detections. This is compounded by repeated turbidity failures at treatment works. The changing patterns of the weather can play a role, with increased numbers of failures during heavy rain. Asset condition is a significant risk, since poor condition or structural defects permit ingress. Any manifestation of this risk could have serious consequences.

There were three detections of metaldehyde (from slug pellets). Metaldehyde still remains available to use, and is very difficult to remove from raw waters, presenting an ongoing risk.

The increasing use of nickel in the manufacture of taps, and their availability on the market as a cheap alternative, is of concern with 28 nickel failures in 2019. Individuals sensitised to nickel, (estimated to be 15% of the population, EFSA 2018) can develop an itchy eczematous rash of the skin. Without some control, these increasingly popular fittings are likely to create a future legacy for an increasingly sensitive population. The Inspectorate has been in discussions with WRAS for fittings made of nickel to be identifiable.

Companies are required to provide risk assessments. In 2019, of approximately 1.5 million hazards, analysis indicated 94% of the risks are being effectively mitigated. This illustrates the high standards companies hold themselves to in securing good clean drinking water. ‘No supply’ and microbiological risks are the top two identified risks. The remaining risks, identified within company risk assessments, can be grouped as domestic plumbing related. These fall into two groups, metals, and taste/odour: Metals include lead and nickel, already mentioned, as well as antimony which is used as a replacement for lead solder, and chromium on fittings, and are not considered toxic in this setting. Taste and odour often result from inappropriate fixtures and fittings in the domestic premises and can represent a risk to health in certain circumstances. e.g. no backflow valve between a dishwasher and the drinking tap. Competency and training of plumbers, and the control of products and the fittings they use, would reduce future risks, particularly if required through an obligatory accreditation scheme such as WaterSafe.

The report provides a summary of 3,502,637 results from compliance samples taken by the industry, and the associated investigations taken for 1,433 failures of regulatory standards. The continuing performance by the industry is measured by the Compliance Risk Index (CRI), designed to allocate a numerical value to risk. For 2019, the CRI for England was 2.80 compared to the wider industry value of 2.87. A lower value indicates a lower risk. From

2020, companies have a target to achieve an individual CRI of 2 as a common performance commitment. The median value for 2019 is 1.73, and so over half of companies are now meeting this expectation. However, Southern Water are notable with a score of 7.66 which is over four times the current median value and of which 69% was due to coliforms at treatment works. All failures were investigated, and actions carried out to protect consumers.

In 2019, there were 547 events in England where an unexpected failure in the water supply or water quality may not have met the minimum standards expected. Any event which may pose a risk to consumers' water quality and supply is an unacceptable situation and is investigated based upon risk. The performance of the industry is measured by the Event Risk Index (ERI). In 2019 the ERI for England was 723. Four companies in England: Northumbrian Water, United Utilities Water, Southern Water and Thames Water, were above the national ERI. Notably, Northumbrian Water were over 2.5 times the value of the next highest company, due largely to an unplanned event at Whittle Dean works where *Cryptosporidium* was detected. All four companies will be subject to further scrutiny. A performance target of 30 would be considered acceptable going forwards, and over half of companies achieved this standard.

During the year, 39 site audits were carried out by Inspectors, assessing operation, risk and competency. These, together with risk assessments, compliance assessments, and events, generated 544 recommendations, as a first stage regulatory intervention. All recommendations and their responses are assessed and scored. Severn Trent Water, United Utilities Water, Southern Water and Thames Water were identified as performing below expectations and have transformation programs in place for improvement. I am pleased to report the positive response by the companies to these programmes.

In 2019, 75 legal Notices were issued, but it was not necessary to issue any Final or Provisional Enforcement Orders. Two prosecutions were completed in 2019. One at South Moor, operated by Northumbrian Water, recorded the largest fine ever for a Water Quality prosecution at just under £500,000. The second was at Coppermills, a key works supplying north east London, where four charges were brought against Thames Water.

The picture in relation to private water supplies continues to require keen focus with 3.4% of tests failing to meet the drinking water standards. This represents a small improvement compared with 2018, when 4.8% test failed, and 2017, when 5.5% of tests failed. These failures present a high risk to consumers and a potential danger to human health.

Across England, 6,805 private supplies (56%) have a valid risk assessment. Risk assessments remain valid for five years. Since 2015, there has been a decline in the number of valid risk assessments from a four-year average of 66%. This represents a high risk to consumers who may drink these supplies and a potential danger to human health.

In 2019 there were 495 supplies in England that were a potential danger to human health, where local authorities had to require the owners to make improvements and take steps to protect public health. Over three-quarters (78%) of these failing private supplies are large supplies or supply commercial premises where the water is used as part of a commercial or public activity, e.g. B&Bs, cafés and tourist attractions. This is an increase from 2018, and at a five-year high figure, representing a high risk to unsuspecting consumers who use these services.

For context of the challenges faced by local authorities, an example which concerned a local authority who were unclear as to how or if the regulations applied to an historic water supply is summarised: The source of water of this supply was being used for a diverse range of uses in different buildings, which constituted a range of separate supplies. These are unusual in that the springs, which provide the source water are owned by the local authority under an ancient Royal Charter. It was identified that the water was being used as part of a public amenity, in a commercial capacity and as part of a tourist attraction in a local museum. On inspection of the various premises concerned, it was found that the regulations only applied at one hotel where the water was being used for domestic purposes in 3 rooms, which until this time had not been suitably risk assessed.



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