



Environmental Protection Agency

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## **Greater risk of illness if you drink contaminated water from private wells. Up to one third of private wells are contaminated by E.coli says EPA**

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### **Greater risk of illness if you drink contaminated water from private wells Up to one third of private wells are contaminated by E.coli says EPA**

- It is estimated that 30% of private wells in Ireland are contaminated by *E. coli* arising from animal or human waste.
- HSE reports a growing number of cases of VTEC – a particularly nasty form of *E.coli*. – Ireland has highest incidence of VTEC in Europe.
- Analysis of cases finds that patients are up to four times more likely to have consumed untreated water from private wells.
- A '*Protect your Well*' assessment app is now available from the EPA.

The Environmental Protection Agency (EPA) and the Health Service Executive (HSE) are advising people that water supplies from private wells can be contaminated with *E-coli*. The HSE meanwhile reports a growing number of cases of VTEC, a particularly serious and nasty form of *E-coli*. Analysis of cases shows that people treated for VTEC are four times more likely to have consumed untreated water from a private well. The EPA has developed a new assessment tool '*Protect your Well*' and well owners are urged to use it to assess their private well and ensure they are not putting their health or the health of family and visitors at risk.

"Lots of people assume that because their water comes from a well or a spring that it's completely pure and safe to drink, but that is not necessarily the case," said David Flynn, Programme Manager, EPA. "We estimate that up to 50,000 private wells in Ireland are contaminated with human or animal waste and this can cause significant threat to people's health. Sometimes, we find that people can develop immunity themselves, but visitors to the house, particularly children and the elderly are at risk of getting very sick."

Dr Una Fallon, Public Health Specialist in the HSE and Chair of the HSE National

Drinking Water Group said,

“There has been a dramatic increase in the number of cases of VTEC (*Verotoxigenic E. coli*) in recent years. VTEC is a nasty water borne illness and cases have been linked to contaminated wells. VTEC infection is most common in children and in up to 8 per cent of cases patients go on to develop serious kidney complications. These can, on rare occasions, prove fatal. This is all preventable.”

Ireland has the highest incidence of VTEC in Europe. Since 2011, the HSE has reported a doubling of the number of VTEC cases in Ireland (284 in 2011, 554 in 2012 and 704 in 2013). Animals, particularly cattle are the main source of VTEC and infection is spread either from direct animal contact or through contaminated food and water. Person to person spread is also common. In other countries the most common source of infection is through food outbreaks.

In Ireland, rural families are commonly affected and much of this is because of contaminated private wells. Consumers of water from private wells at much greater risk of VTEC than those who drink water from mains supplies. It can take a long time for the bug to clear even after the child has become well.

Disinfection kills all *E. coli* including VTEC and, while public water supplies are disinfected, not all private wells are.

“Well owners should check their wells to ensure their health is not at risk,” said David Flynn, Programme Manager, EPA. This includes checking that there aren’t any sources of pollution entering their well and testing their water, at least once a year, ideally following heavy rain when the well is most at risk of contamination.”

The EPA is providing easy to use information on its website explaining what well owners should do to protect their health. The information includes a short animation to explain the risks to well water quality and the simple things that can be done to reduce the risks.

A ‘*Protect your Well*’ assessment app is also available from the EPA website. Well owners can assess whether their wells are at risk in less than 10 minutes using this simple app. It provides well owners with tailored advice on how they can reduce the risk of contamination in their well.

The animation, web app, an Infographic and general information for the Householder about Private Wells are available on the EPA website.

## **Resources**

[Householder Information](#) on Private Wells.

Private Well Assessment [Web App](#) – link to web app

“Here is what you can do to make sure you well water is safe and secure” [animation](#) (available in both English and Irish).

[Infographic](#) (available in both English and Irish).

## Notes to Editor:

**VTEC (Veritoxigenic E. coli)** are a particular group of the bacterium *Escherichia coli*. VTEC infection often causes severe bloody diarrhoea and abdominal cramps although sometimes the infection causes non-bloody diarrhoea or no symptoms. Usually there is little or no fever, and patients recover within 5 to 10 days. VTEC infection is most common in children (60%). In some persons, particularly children under 5 years of age and the elderly, the infection can also cause a complication called haemolytic uraemic syndrome (HUS), in which the red blood cells are destroyed and the kidneys fail. This happens in up to 8% of cases. Some people are left with lifelong kidney problems, which can, on rare occasions, prove fatal.

There was a 100% increase in the number of cases of VTEC between 2011 and 2012 and a further 30% increase in 2013. While some of this recent increase may be explained by improved laboratory methods, the 2012 figures were dominated by water-borne outbreaks.

Ireland has the highest incidence of VTEC in Europe [📍](#)

<http://www.efsa.europa.eu/en/efsajournal/doc/3547.pdf%20> (page 156 section 3.4.1)

## Private Well Water Quality

It is estimated that up to 30 per cent of private wells in Ireland are contaminated with human or animal waste (EPA, Water Quality in Ireland 2007-2009 report, 2010). The most common sources of pollution are from agricultural activities or from human wastewater (e.g. septic tanks) where the groundwater is vulnerable to contamination (e.g. shallow soils) or where the borehole has been poorly constructed (e.g. not sealed or lined).