

# DEALING WITH POOR DRINKING WATER QUALITY IN PRIVATE WELLS: The Effectiveness of a Communications Strategy in Influencing Behavioural Change



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# Overview

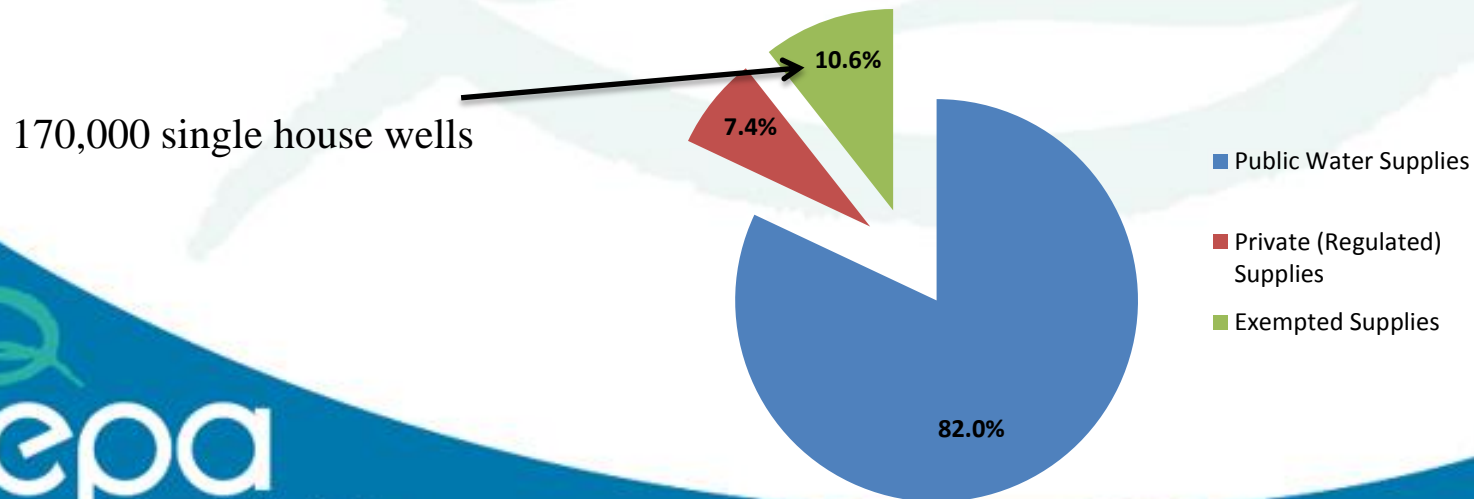
- Regulation of Drinking Water in Ireland
- Risk to Human Health
- EPA Action
- Implementation of the Strategy
- Assessment of Effectiveness
- Lessons Learnt
- Proposed Work

# Regulation of Drinking Water in Ireland

**Public Water Supplies** (Irish Water) – regulated by EPA

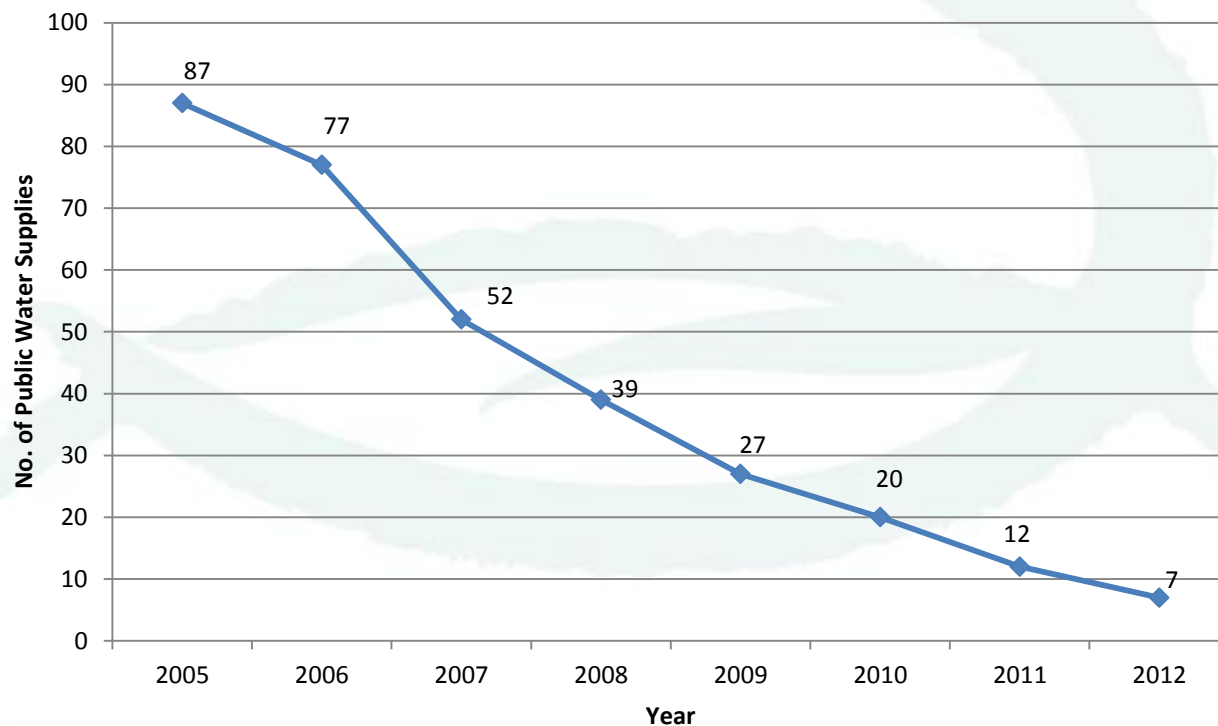
**Private Regulated Supplies** (community run, housing estates and commercial supplies) – regulated by City and County Councils

**Private Wells (Exempted Supplies)** – City and County Councils only required to ensure well owners are aware of risk and provide advice



# Drinking Water Quality – Regulated supplies

- E. coli incidents down >90% in public supplies
- EPA became the supervisory authority in 2007



# Drinking Water Quality – Unregulated (Private wells)

- 170,000 private wells serving single households in Ireland
  - Private wells are unregulated in Ireland (exempted supplies)
  - Estimated that up to 30% have *E. coli*
  - Ireland has the highest rate of VTEC in Europe
  - VTEC cases are 4 times more likely where private well water consumed
  - 100% increase in VTEC in 2012 (over 700 cases in 2013)
  - Only 32% of private wells have some form of treatment
  - 40% of cases the well water was not regularly tested

# Communication Strategy

The aim is to improve awareness of the risks and to reduce the incidence of contaminated water reaching consumers taps

## Purpose:

- Target rural communities with private wells  
Raise awareness and inform them of issues that directly affects them but they may not know about
- Deliver in partnership with others  
Communicate with the stakeholders whose members are directly affected private well issues  
Improve channels with stakeholders to get message out to the public
- Creating awareness and enabling behaviour change

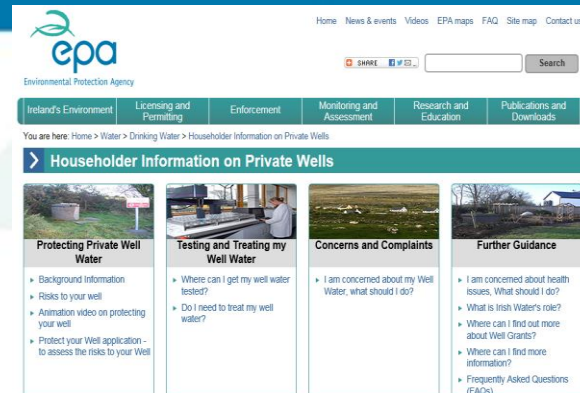
# Strategy Framework

- What do we want to achieve?
- Who can make it happen?
- What do they need to hear?
- Who do they need to hear it from?
- How can we make sure they hear it?
- What do we have/ need?
- How do we begin?
- How can we tell if it is working?

Goal	<ul style="list-style-type: none"> <li>• The goal of the strategy is to ensure that well owners:</li> <li>• Become aware of the risks to their private well water.</li> <li>• Check whether their water is safe to drink.</li> <li>• Take any necessary action to ensure their supply is safe and secure.</li> </ul>
Scientific Evidence	<ul style="list-style-type: none"> <li>• Health Protection Surveillance Center provided evidence of the increasing rate of VTEC illness in Ireland.</li> <li>• VTEC patients were four times more likely to have consumed untreated well water.</li> <li>• EPA reported that 30% of groundwater monitoring locations were contaminated by <i>E. coli</i>.</li> <li>• A study by Hynds 2012 found that <i>E. coli</i> was found in 29% of private wells, that only 40% of well owners had the well water tested and that 68% of the supplies had no form of treatment.</li> </ul>
Stakeholders/ Audiences	<ul style="list-style-type: none"> <li>• Local authorities</li> <li>• National/International Bodies</li> <li>• Other key Departments and Agencies</li> <li>• Service Providers</li> <li>• Environmental NGOs</li> <li>• Public</li> <li>• Media</li> </ul>
Key Messages	<ul style="list-style-type: none"> <li>• Private wells in Ireland are at risk of contamination.</li> <li>• Just because your water looks safe does not mean it is safe to drink.</li> <li>• Drinking contaminated water can cause serious illness.</li> <li>• It is important that your well is constructed and sealed properly.</li> <li>• Many private wells do not have any form of treatment, if contaminated then treatment may be necessary.</li> <li>• Visually check your well to make sure there are no sources of contamination nearby.</li> <li>• Test your well water once a year for microbial contamination, ideally after heavy rain.</li> </ul>
Channels	<ul style="list-style-type: none"> <li>• Meetings with stakeholder groups</li> <li>• Presentations at national and EU meetings</li> <li>• Dissemination of information to all stakeholders</li> <li>• National, Regional and Newsletter articles</li> <li>• Website re-development</li> <li>• Web application</li> <li>• Animations</li> <li>• Press releases and regional articles</li> <li>• National and Local radio interviews and national TV programmes</li> </ul>
Metrics	<ul style="list-style-type: none"> <li>• Web Application usage</li> <li>• Animation views</li> <li>• Website hits</li> <li>• Grant uptake</li> <li>• Media interest</li> <li>• Water Testing Rates</li> <li>• Illness associated with water supplies</li> </ul>

# EPA resources

- Website
- Infographics
- Posters
- [Animation](#)
- Social media (Twitter, Facebook, YouTube)
- Web Application <http://erc.epa.ie/water/wells>





# Campaign Launch



RTÉ RADIO 1

Irish Examiner  
For a different view



RTÉ  
RAIDÍO  
NA GAELTACHTA

thejournal.ie  
READ, SHARE AND SHAPE THE NEWS



THE  
IRISH  
TIMES

shannonside  
Longford, Roscommon & South Leitrim

midwest  
radio 96.1fm

Irish Independent

east coast fm  
95/96/100 & 103fm  
The Heart of Wicklow

## Six One News



Broadcast on: June 05th, 2014



RTÉ News

# EPA Actions

- Dissemination of information through all stakeholders (>80,000 leaflets)
- Articles for EPA newsletter, Rural Water News, Groundwater Newsletter, EI newsletter, Sherkin Comment
- Presentations at Water Event, Environmental Awareness Officers Meeting, ENDWARE, UK Private Well meeting, IWRA (Edinburgh)
- Information stands at the Ploughing Championship, Young Scientist Exhibition, Environment Ireland
- Letter to all Drillers in telephone directory outlining the issues with poor construction plus a copy of the EPA Advice Note and leaflets
- Advertisement in Farmer's Journal national newspaper

# Working with others (1)



## ■ In partnership with **health professionals**

- Joint Press release with HSE on private wells
- HSE Spokesperson
- Dissemination of information through
  - Environmental health officers
  - General practitioners
  - Public Health doctors
  - Posters and leaflets in GP offices, health centres etc.

## Working with others (2)



### ■ In partnership with **local authorities**

- Environmental awareness officers deliver messages to schools and local communities
- Leaflet distribution to all offices, libraries etc.
- Placing the posters in public places such as libraries, art centres etc.
- Changing screensaver and background messages on public PCs in libraries etc. Example -“Clean Water is Vital for your Health. Is your Septic Tank a risk?”

# Working with others (3)

## ■ State Agencies and Voluntary Organisations

- GSI
- An Taisce
- NFGWS
- Farming organisations
- Environmental NGOs

## ■ Professional Organisations

## ■ Industry Bodies

## ■ Well drillers



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So, did it work?



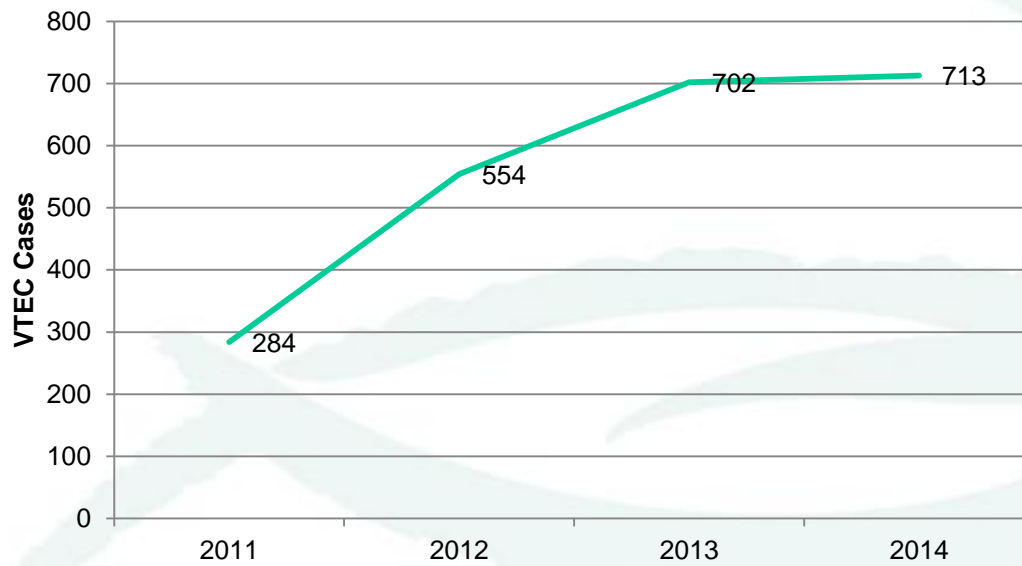
[freshspectrum.com](http://freshspectrum.com)

# Assessment of Metrics

	Metric	
Awareness of campaign/risks to private wells	Media interest	47 newspaper articles 3 TV interviews 21 radio interviews Ear to the Ground and EcoEye (400,000 viewers)
	Animation views	850 views in YouTube
	Newsletters/e-Zines	e.g. Sherkin Comment – 24,000
	EPA website hits	10,000 unique page hits
	Web application usage	435 responses and 6692 hits
Behavioural changes	Grant uptake	13% increase in money re-cooped to LA
	Well testing rates	23% increase in test numbers

# Metric Assessment (2)

## ■ Illness rates





# New Desk Study Research

- Communicating Risk Based Enforcement (Relay\_Risk) (2013-W-DS-12)
  - Currently examining ways to deliver risk based messages effectively in order to improve knowledge and promote behavioural change
  - Investigating the appropriate metrics in order to determine the effectiveness of the engagement strategies
  - The findings of this project will be published in mid 2015
    - Will inform further assessment and the development of future strategies

# Proposed Work

- Joint Information Seminars for
  - Drillers
  - NGO's
- Further meetings with AnTaisce
  - Green Homes
  - Green Schools
- Assessment of Metrics
  - Application of Research Project Findings
- Integration with the septic tank campaign
  - Information seminar for inspectors

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