

Water Services Training Group

18th Annual Conference

Shaping the Future of Water Services

Radisson Blu Hotel, Sligo 4th September 2014



Comhshaol, Pobal agus Rialtas Áitiúil
Environment, Community and Local Government

Shaping the Future of Water Services



Water Quality The Key Challenges



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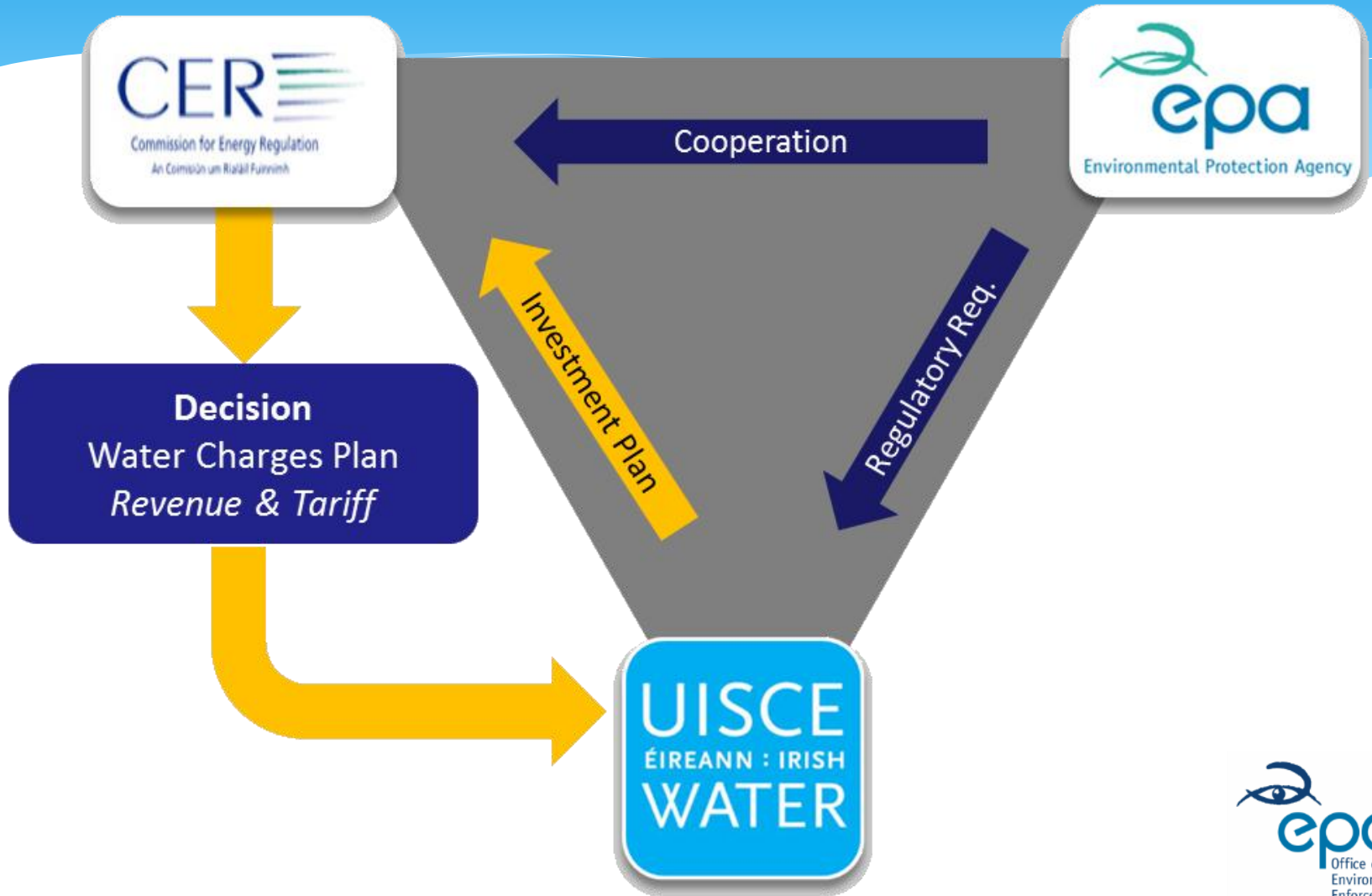
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Environment, Community and Local Government

Introduction

- * Outline some key challenges for environmental regulation of water services
 - * Role of EPA in new water service landscape
 - * Drinking Water quality
 - * Urban Waste Water quality
 - * Challenges in Private Systems

Role of the EPA in Water Service Regulation

Role of the EPA



EPA Regulated Water Services

- * **978+** public water supplies registered on EDEN
- * **1,074** public waste water discharges
 - * *357 licensed public waste water agglomerations*
 - * *512 certified public waste water agglomerations*
 - * *205 at application stage*
- * Risk based: focus regulatory resources on the issues that present the greatest risk

System Improvements

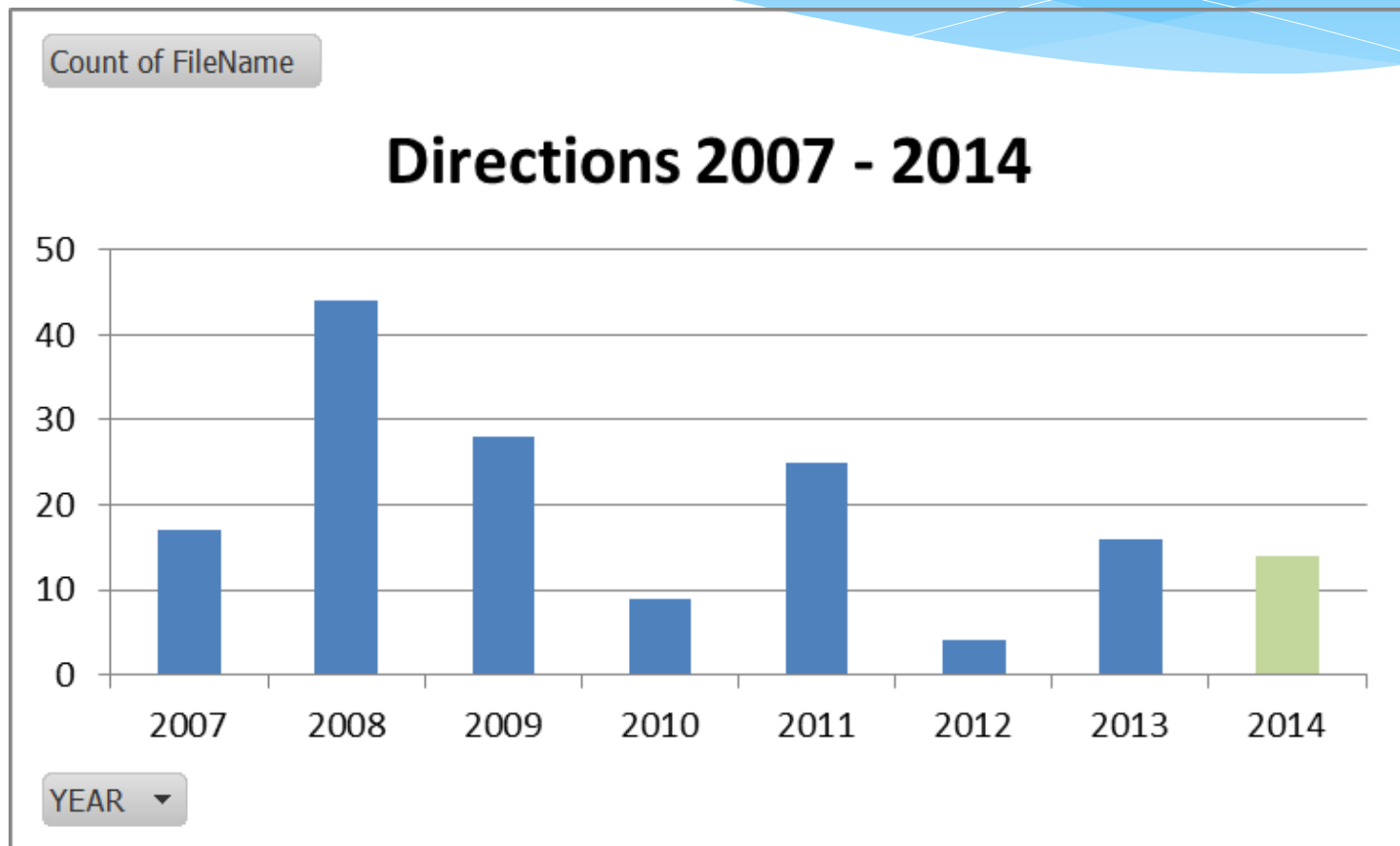
- * **70%** of the original 237 remedial action list supplies are now complete
- * **92%** reduction in E. coli detection in public water supplies since 2005
- * **94%** of Ireland's Urban Waste Water receives secondary treatment: three times more than a decade ago.

EPA DW Activity 2014

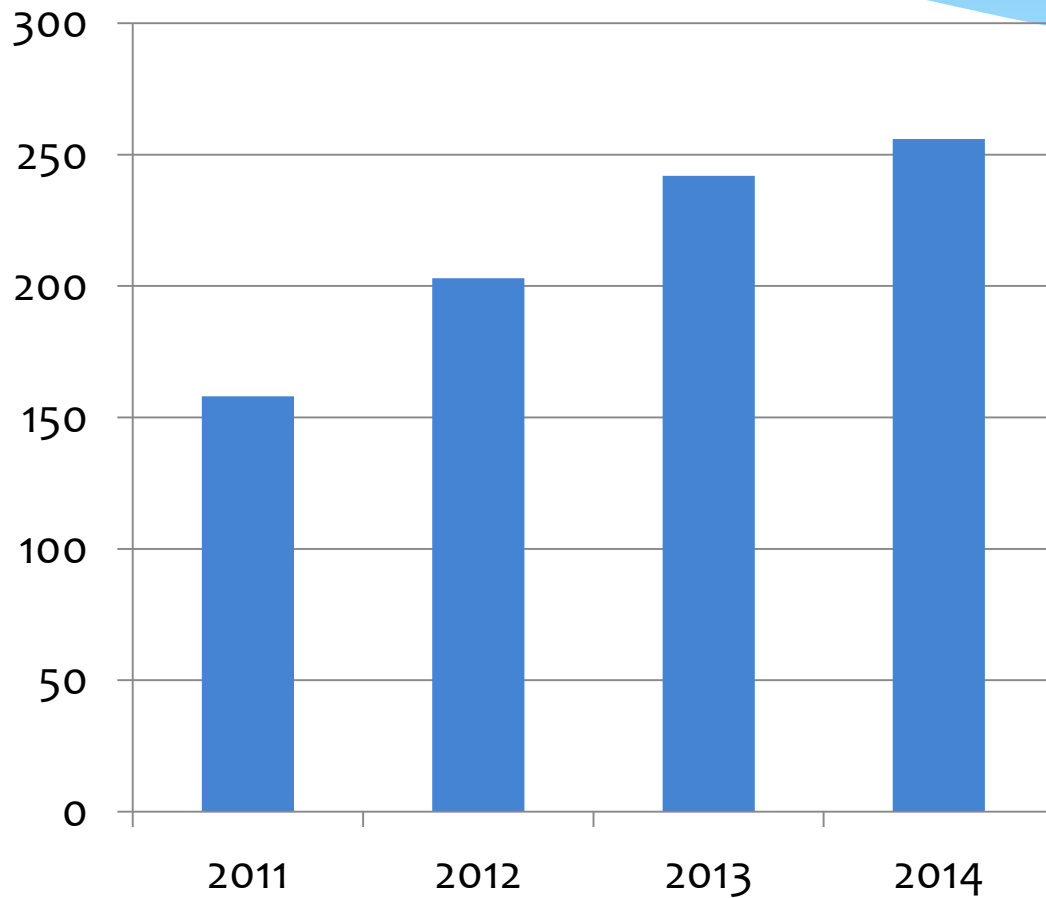
* **Drinking Water**

- * 415 files open today
 - * 2014 → 209 files closed with 97 open
- * 47 audits YTD 2014
- * 14 directions issued YTD 2014

EPA Drinking Water Directions



EPA Waste Water Activity



- * 256 Audits
- * 179 Compliance investigations in 2014
 - * (102 closed, 77 open)
- * 780 Incidents YTD
- * 4 Legal Actions
 - * 3 infrastructure
 - * 1 fish kill

Key (Quality) Challenges

Drinking Water Supply

Enforcement Priorities in Drinking Water

- * **Boil water notice** or use restrictions
- * **Large Supplies** on the Remedial Action List
- * Supplies with no **Cryptosporidium barrier**
- * Supplies with **Trihalomethane** failures
- * Supplies with an **unverified Cryptosporidium barrier**
- * Other **RAL supplies**

Boil Notices/ Water Restrictions

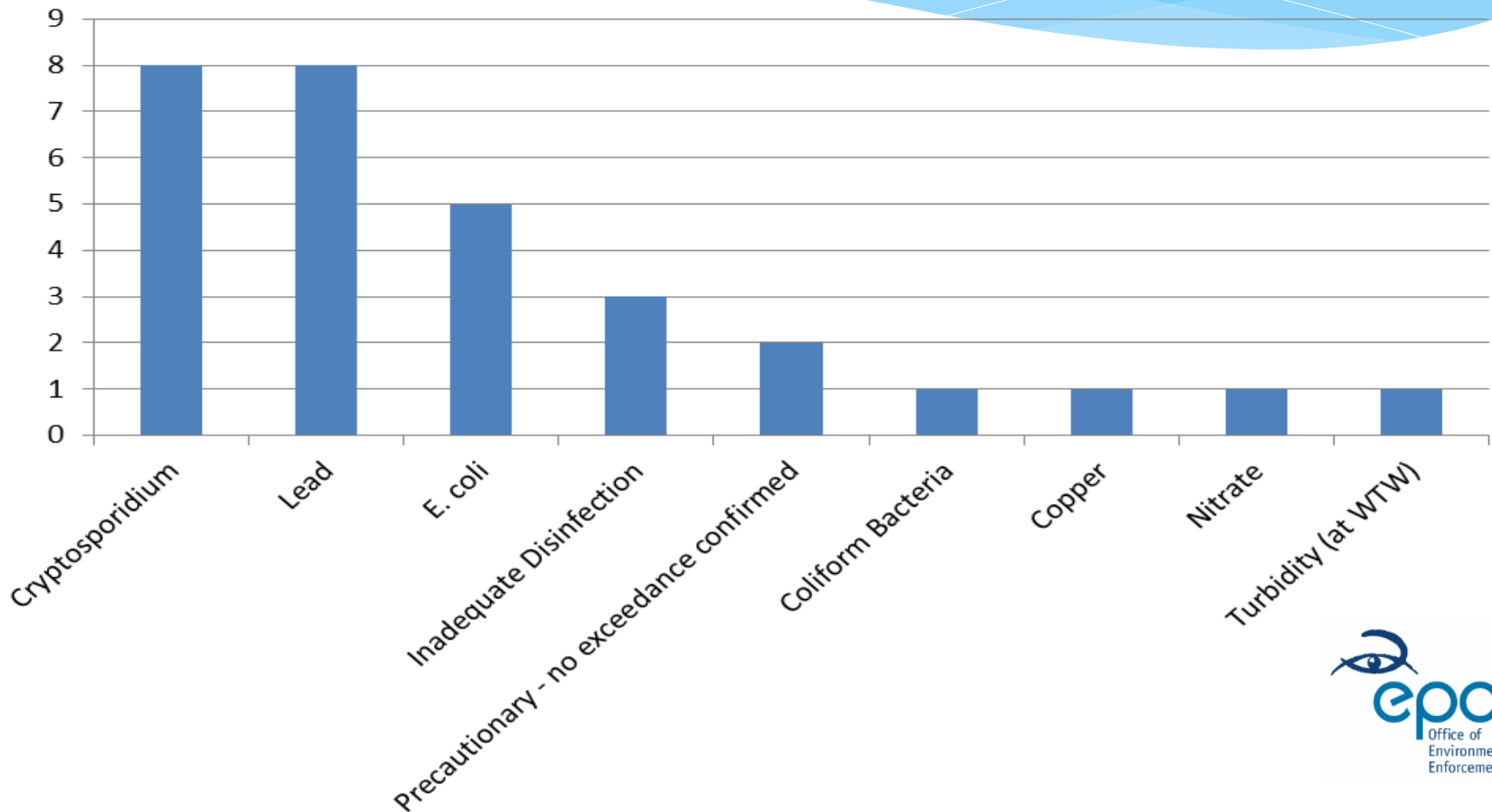
- * **30 Notices** affecting a population of **25,888**
 - * 19 boil notices
 - * 11 water restrictions
 - * 9 supplies account for 90% of this population

- * IW report that 30% due to have solution complete in 2014

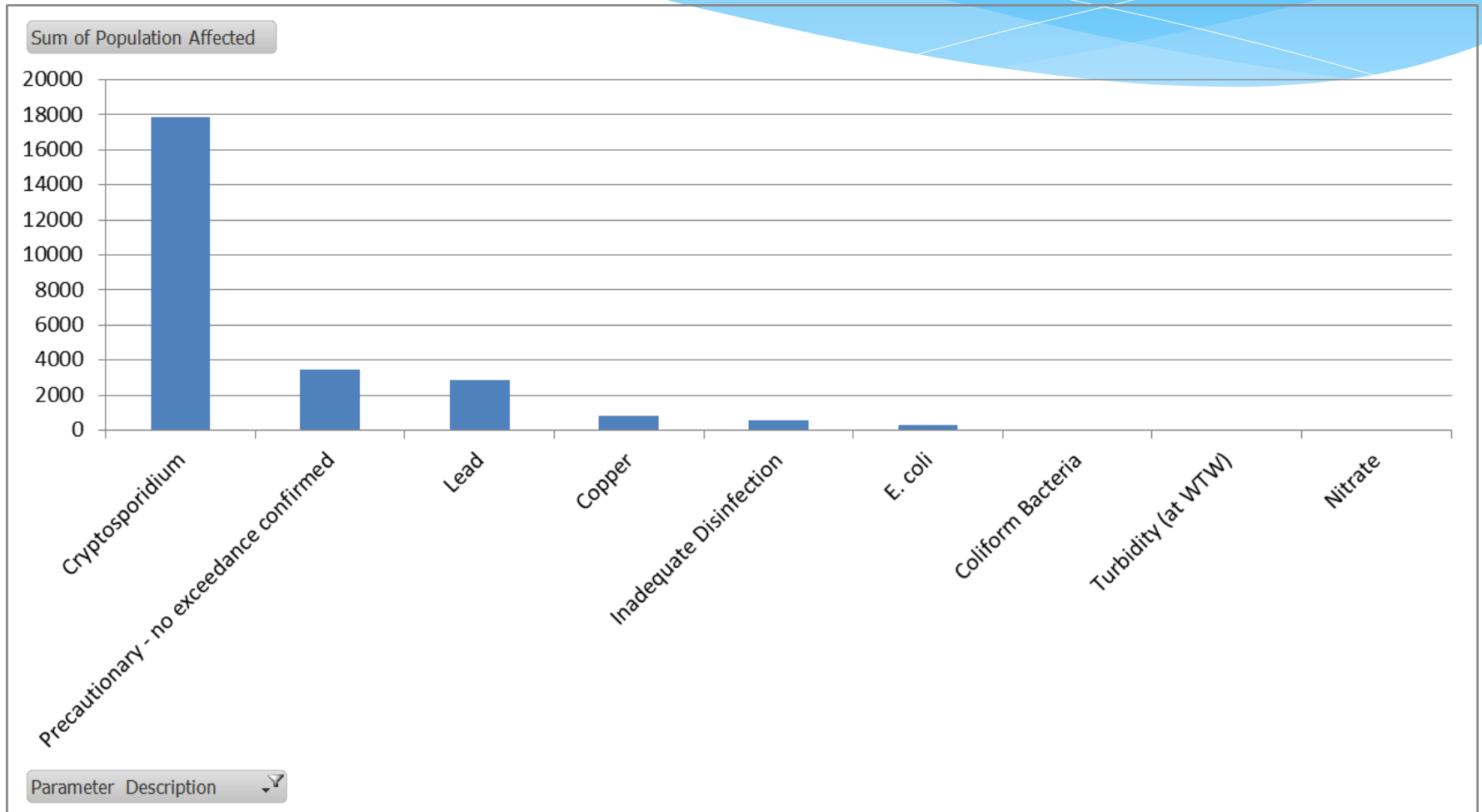
Large Supplies with Boil notice or Restriction

Scheme Name	Local Authority	Population Affected	Parameter Description
SRRWSS - Killeglan	Roscommon County Council	6000	Cryptosporidium
Boyle	Roscommon County Council	4300	Cryptosporidium
Castlerea Regional	Roscommon County Council	3443	Precautionary - no exceedance confirmed
NERWSS - Strokestown/Elphin	Roscommon County Council	3000	Cryptosporidium
Limerick City Water Supply	Limerick City and County Council	1920	Lead
Castlerea Urban	Roscommon County Council	1800	Cryptosporidium
Boyle/Ardcarne	Roscommon County Council	1700	Cryptosporidium
F_ZONE1	Fingal County Council	840	Copper
NERWSS - Rooskey	Roscommon County Council	508	Cryptosporidium

Restrictions: by cause



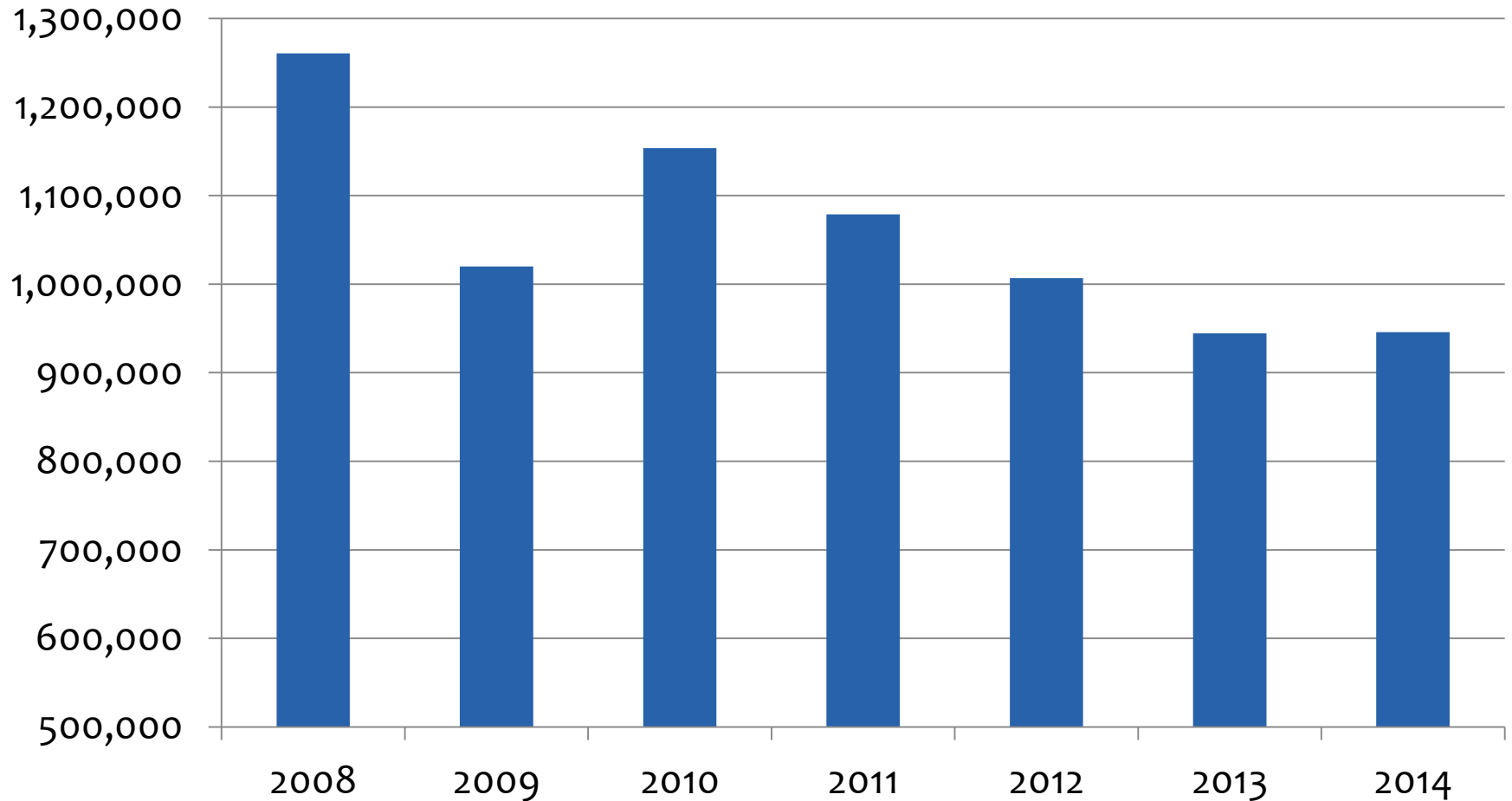
Restrictions: by cause, by population



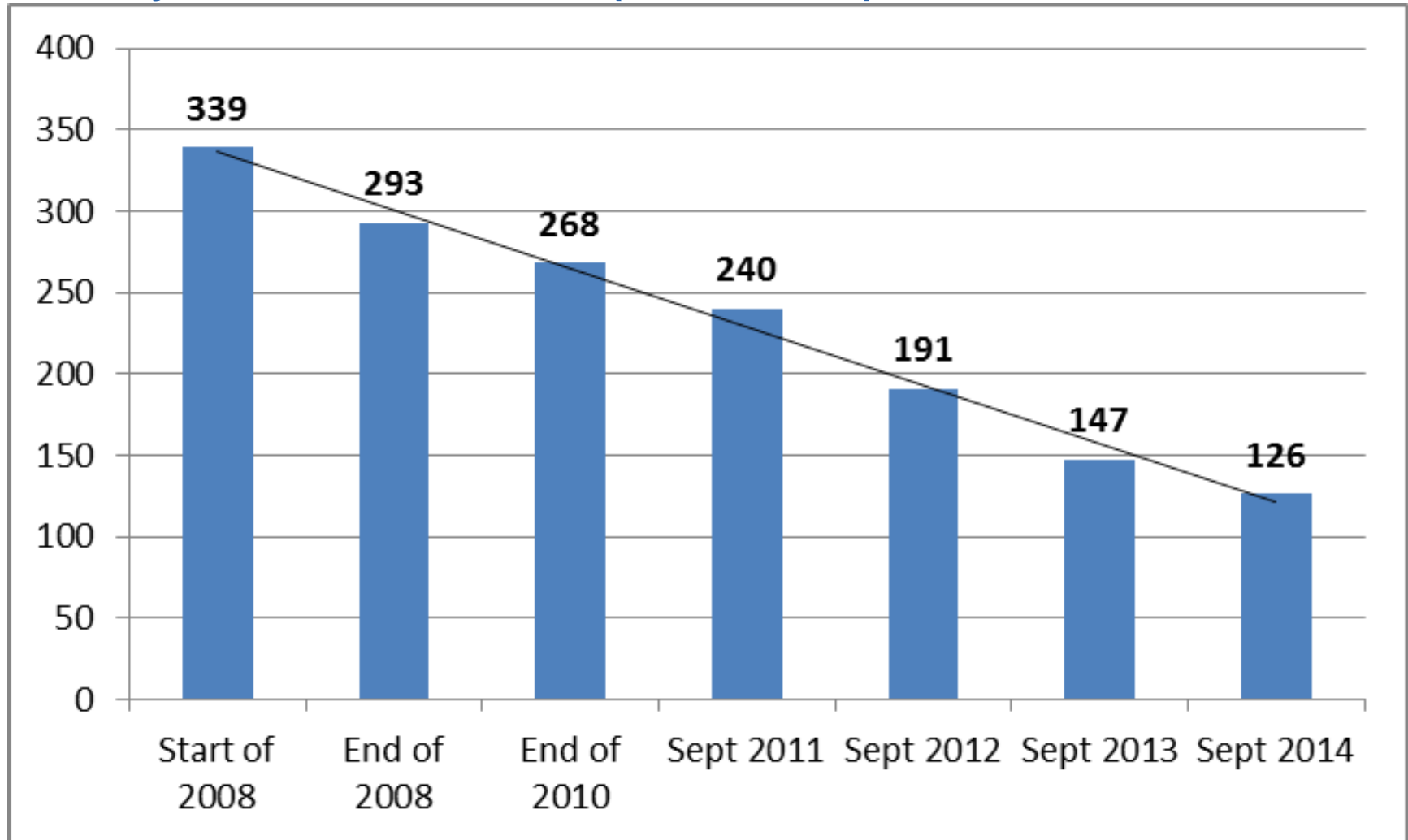
Remedial Action List

- * Update has been released this week at www.epa.ie
 - * Population of 945,771
 - * 126 Schemes
 - * 2 schemes added to the RAL
 - * 16 schemes complete and have come off the RAL
- * IW has solutions mapped for many but not all schemes
- * RAL is reactive; EPA seeks move to WSP driven investment

RAL by population served (2008 – 2014)



RAL by number of schemes (2008 – 2014)



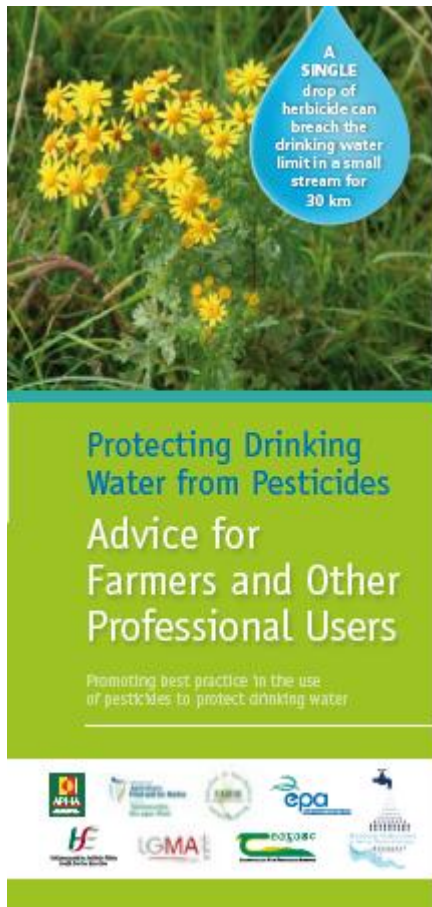
Lead

- * PV for lead in drinking water is now $10\mu\text{g/l}$
 - * (but people should try to drink water with as little lead as possible)
- * More lead water restrictions
- * Good new information within IW from their metering project
- * Need for a national approach rather than case-by-case
- * **EPA-HSE Joint Position Paper**
 - * Guidance and information for consumers

Trihalomethanes

- * Chemical standard compliance slipped from 99.5% in 2011 to 99.3% in 2012.
- * Trihalomethanes (THMs) compliance declined from 89.1% in 2011 to 85.1% in 2012
- * Accounted for 68% of all chemical standard breaches in 2012.

Pesticides



- * 24 notifications in 2012
 - * up by 9 on 2011
 - * 16 supplies
 - * Herbicides (MCPA , Mecoprop)
- * Pesticides Working Group Leaflets
- * *Advice Note No. 13: Pesticides in Drinking Water*

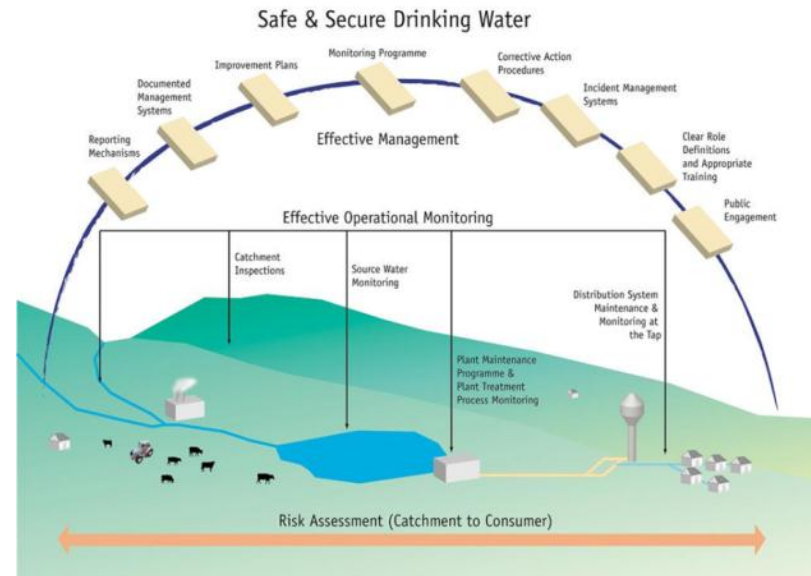
Small Public Supplies



- * Large number (+107) of small public supplies
- * LA/IW/EPA have poor information about conditions
- * Difficult access?
- * High risk of infection?
- * Remedial works necessary many cases?
- * Specific project necessary

Water Safety Plan

- * IW commitment to use Water Safety Plans
- * Water Safety Planning as the central driver of system improvements
- * Move from the reactive RAL-led investment to the WSP driven investment

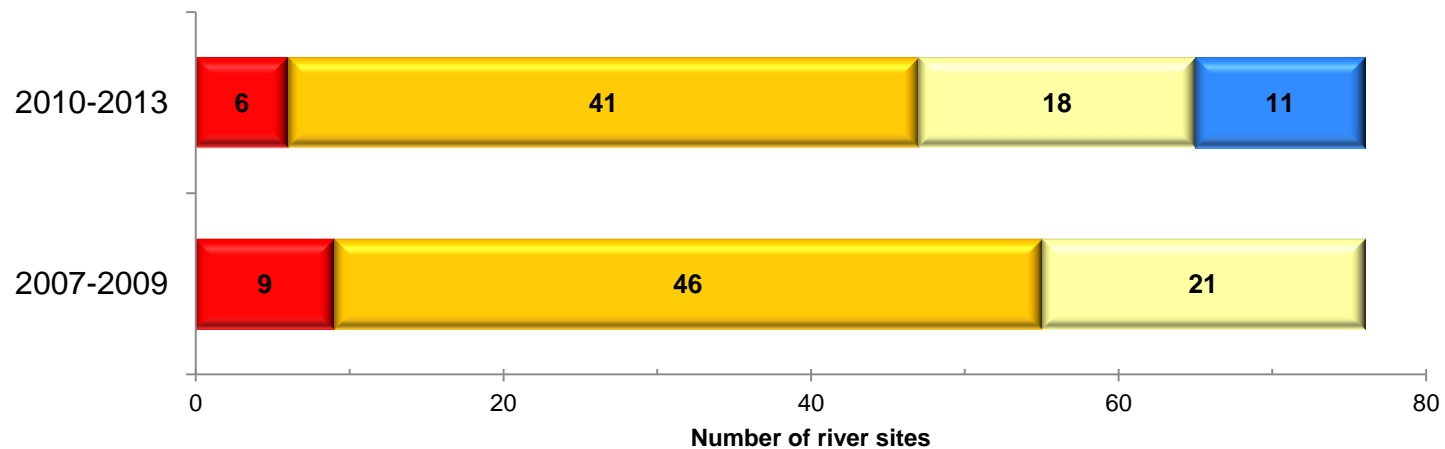


Urban Waste Water Treatment

Enforcement Priorities in Waste Water

1. Discharges causing **serious** pollution
2. Discharges contributing to **bathing water** failures
3. Discharges causing **moderate or slight** pollution
4. **Pearl mussel** catchment pressures
5. Discharges causing pressure on **shellfish** water
6. Overdue **secondary or tertiary** treatment
7. **No treatment** or preliminary treatment only
8. Risk to **drinking water** abstractions
9. Risk to **estuarine or coastal** waters
10. Other environmental pollution risk

Status of 76 river sites where pollution in 2007-2009 was attributed to urban waste water discharges.

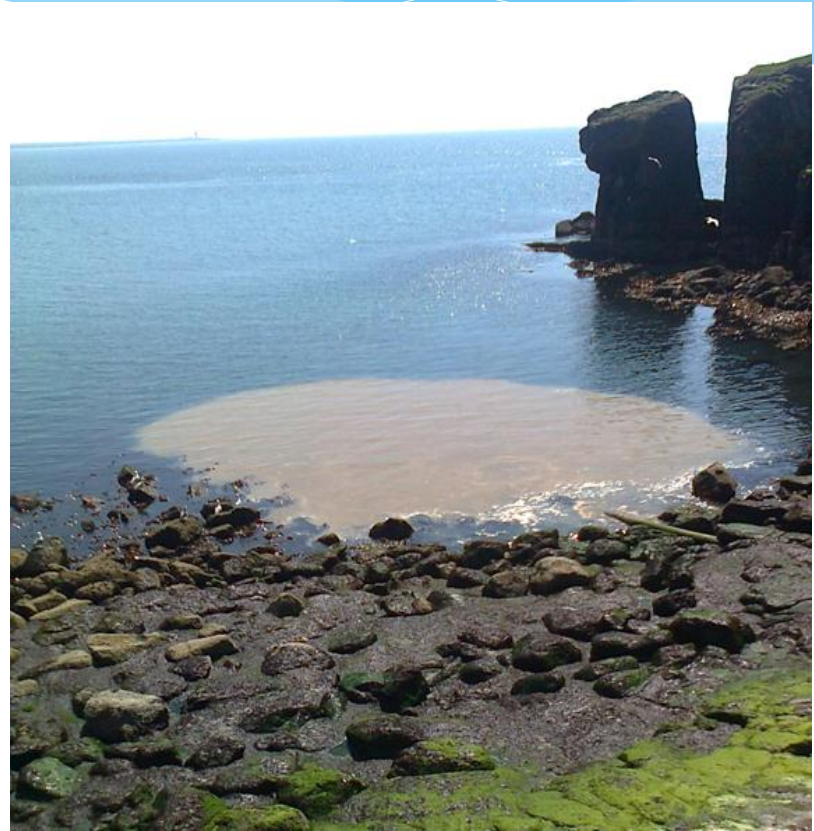


■ Serious Pollution (bad status)
■ Slight Pollution (moderate status)

■ Moderate Pollution (poor status)
■ Unpolluted (good status)

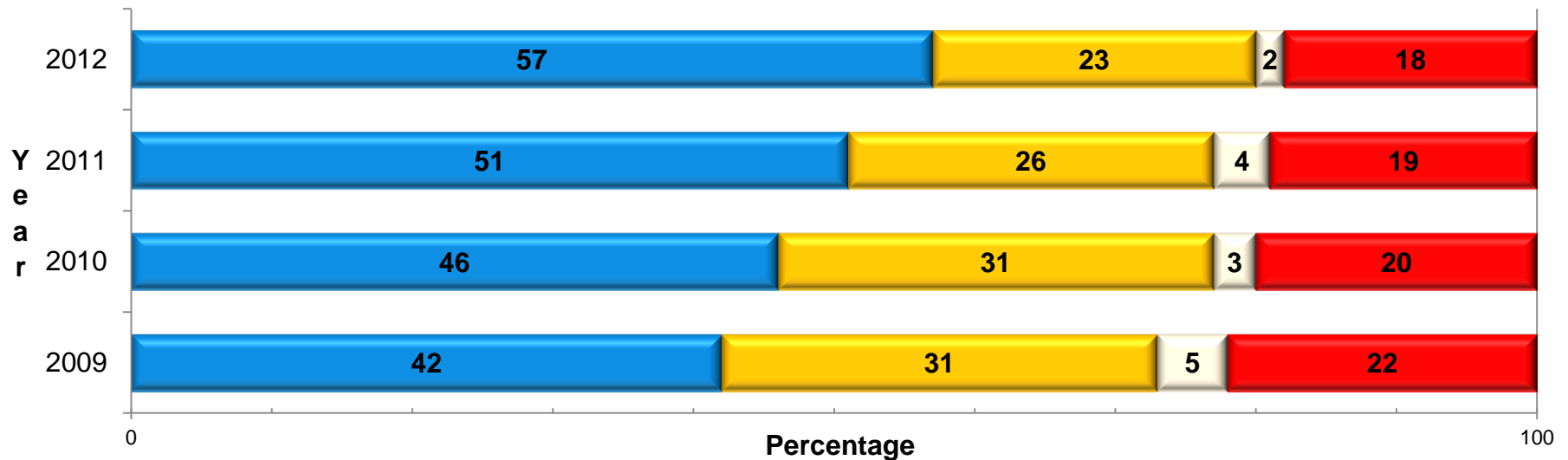
Urban Waste Water Issues

- * 7 large plants without secondary treatment
- * 42 urban areas with no waste water treatment
- * 44/170 large urban areas did not achieve the Directive effluent standards



Effluent Monitoring 2009 – 2012

Compliance with BOD, COD and Suspended Solids all ~541 agglomerations



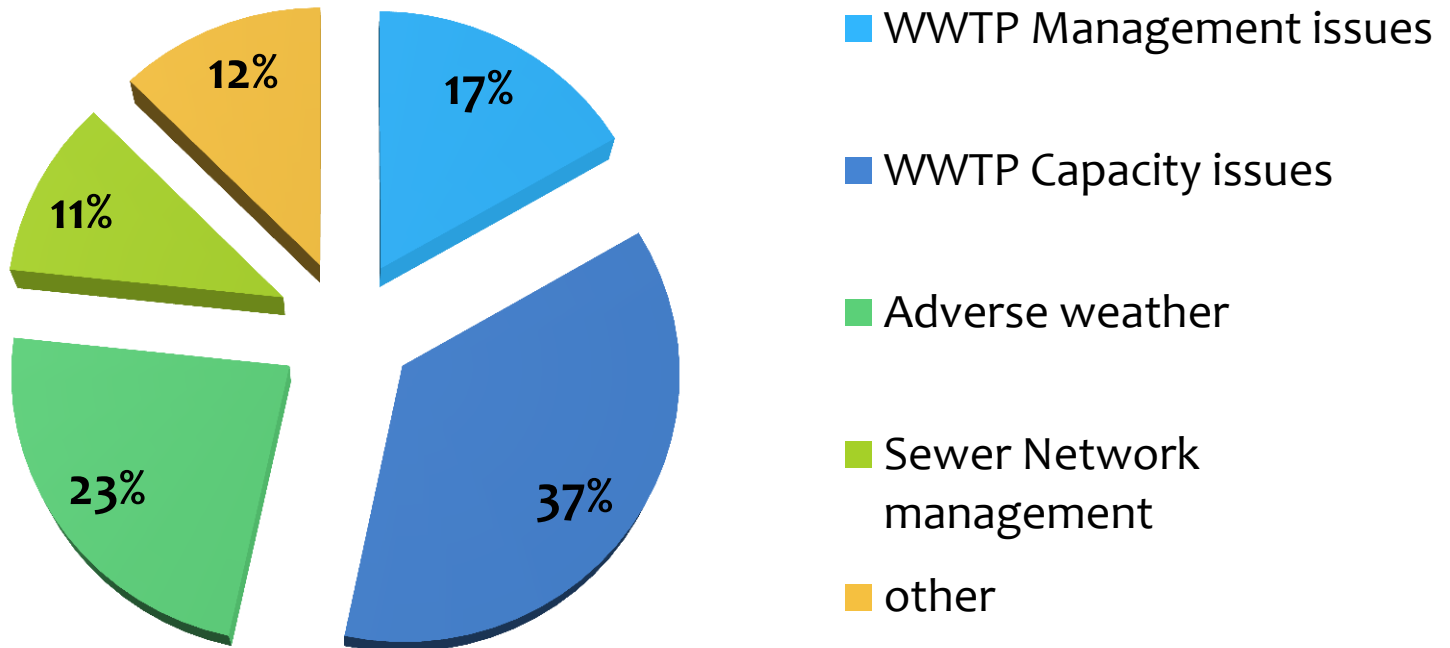
■ Achieved all the effluent quality and sampling standards

■ Did not achieve the effluent quality standards

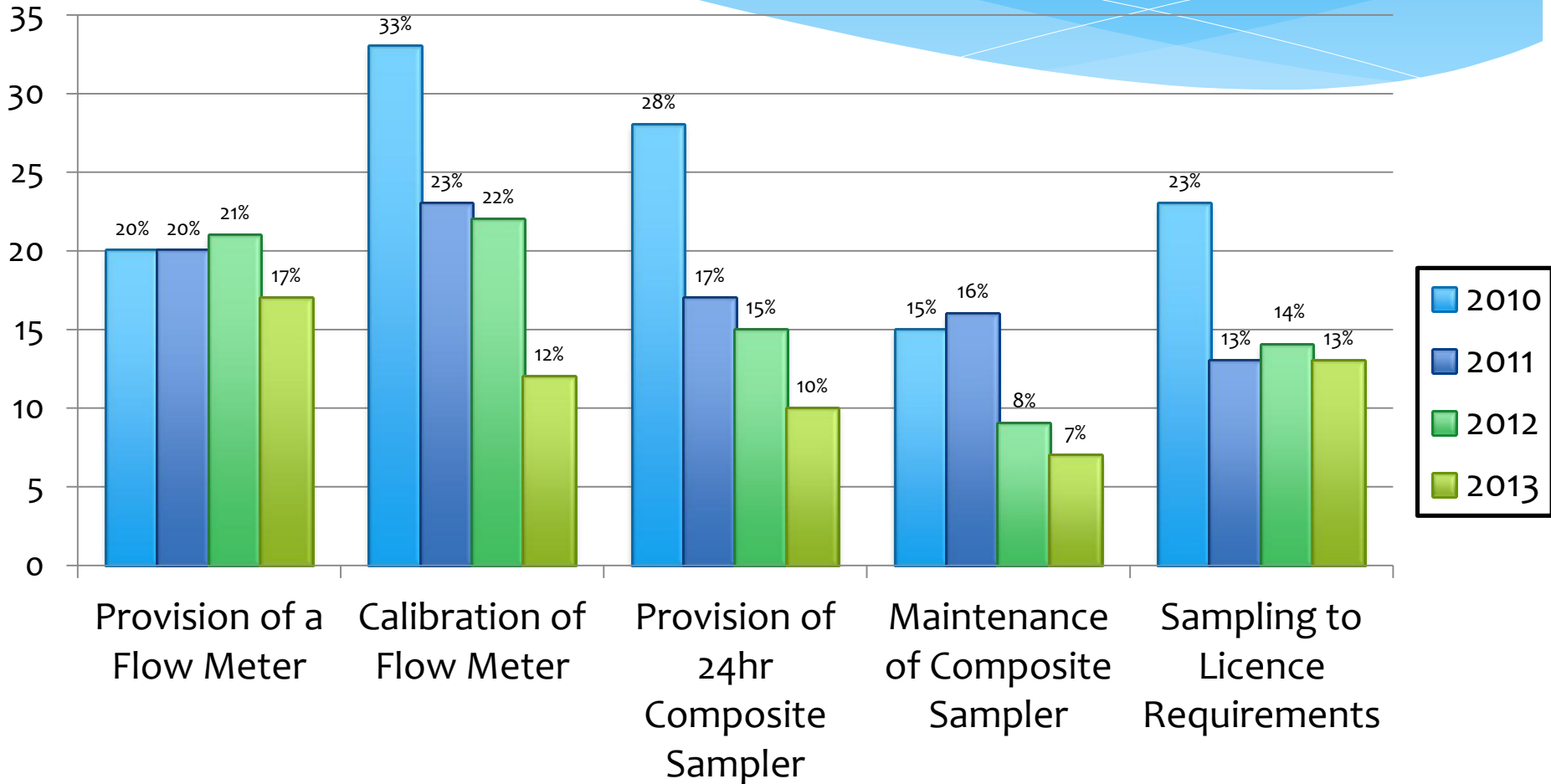
■ Did not achieve the standards due solely to insufficient effluent sampling

■ Could not achieve the standards due to lack of secondary treatment (Note in some cases the standards may not apply where primary treatment is in place and it is regarded as appropriate treatment for that location)

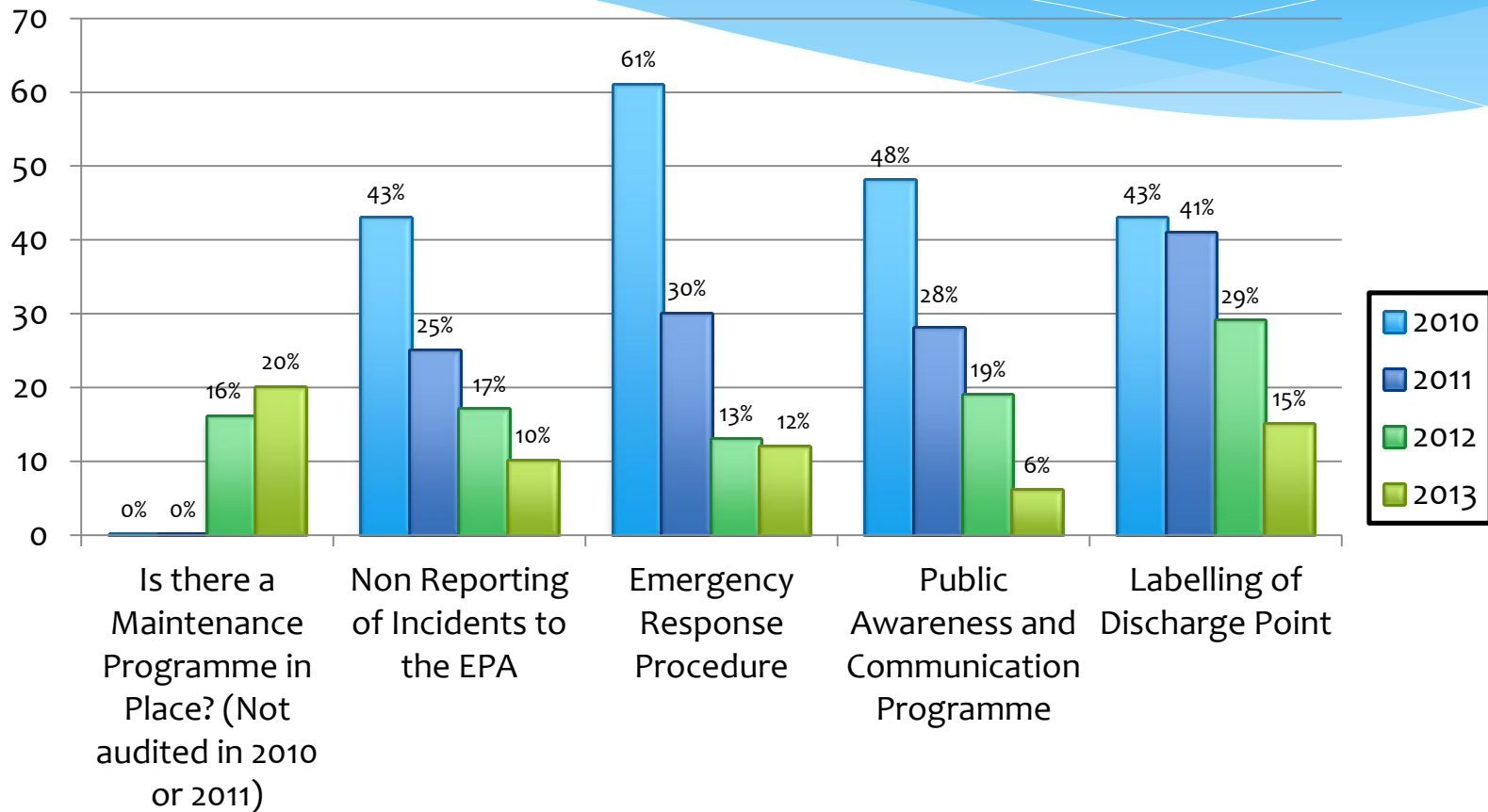
Incidents (by cause) 2014



Audit Findings

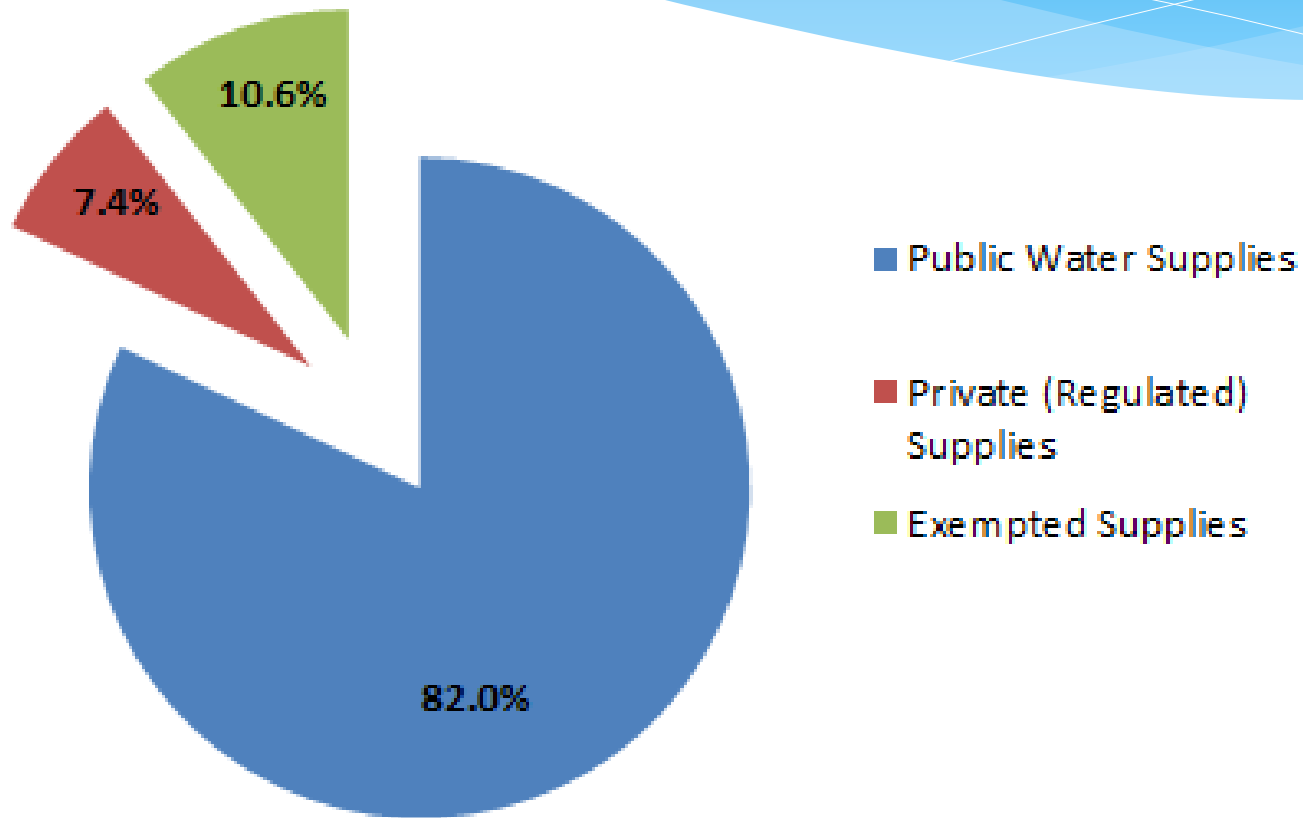


Audit Findings

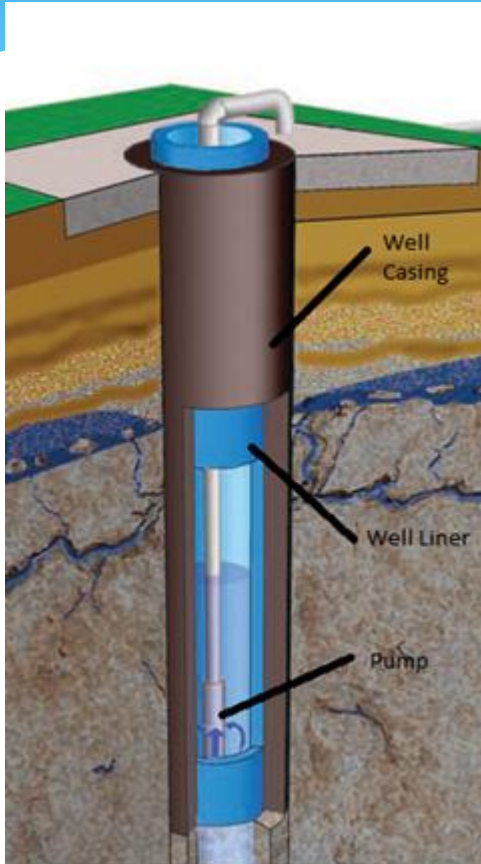


Private Water Supply & Waste Water Treatment

Private Wells



VTEC & Private Wells



- * 170,000 private wells serving single households
- * 30% of private wells contaminated by E. coli
- * HSE reports a growing number of cases of VTEC - a particularly nasty form of E.coli.
- * Ireland has highest incidence of VTEC in Europe

http://erc.epa.ie/water EPA Public

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Understanding the risks to your private well

Is your drinking water safe? **STEP 1 CHECK YOUR WELL** Ensure your health is not at risk. Can you find water get into the well?

STEP 2 CHECK FOR ANY SOURCES OF POLLUTION

- 1. SEWER LEAKS
- 2. SEWER LANDFILLS
- 3. OTHER SEWAGE
- 4. FUEL STORAGE TANKS

STEP 3 TEST YOUR WELL WATER ONCE A YEAR Identify 'leaking' or 'unfit' water before it enters your household.

Go directly to the Householder Landing Page (if need to be supplied with this link)

Learn about risks to your well

View Video Presentation

Video presentation won't play? You need some special software installed in your web-browser or viewing application called Flash Player. You can download it and install here [Adobe Flash Player](#)

Assess if your private well is at risk of contamination

Assess your private well

- * Analysis of cases finds that patients are up to **four times** more likely to have consumed untreated water from private wells.
- * 'Protect your Well' assessment app is now available from the EPA.

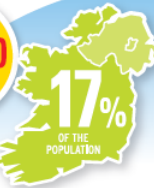
PRIVATE WELLS



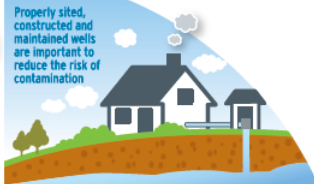
720,000
PEOPLE
IN IRELAND

are supplied
by private
groundwater
sources*

*EPA 2010: CSO 2012



Properly sited,
constructed and
maintained wells
are important to
reduce the risk of
contamination



MANY PRIVATE WELLS ARE AT RISK FROM CONTAMINATION



STEP 1
CHECK YOUR WELL
Ensure your health is not at risk



STEP 2 CHECK FOR ANY SOURCES OF POLLUTION

STEP 3
TEST YOUR WELL WATER AT LEAST ONCE A YEAR
Ideally following wet weather
(treatment may be necessary if contaminated)

FOR MORE INFORMATION
See the Protect your Well app on www.epa.ie to assess your own water supply

FOR MORE ADVICE & GRANT INFORMATION
Check with your local authority, your local environmental health officer or the EPA at www.epa.ie



Septic Tanks

- * First year of inspections now complete – preliminary data;
 - * Pending verification; **+1,000** inspections completed
 - * Pending verification; ~ **51%** compliance rate
- * Reviewing data and will publish 5-yr plan in late 2014/early 2015

Final words...

- * Significant improvements in UWW & DW
- * Challenge is to continue *and accelerate* these improvements in the midst of the very substantial challenge presented by water services reform process
- * Need to move from RAL-driven to Water Safety Plan driven investment
- * Challenges benefit from a strategic approach but action must continue



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