

Helping to meet Ireland's water protection challenges

**EPA National Water Event 2017:
Ireland's Water Future**

Trudy Higgins
Environmental Strategy Lead
thiggins@water.ie

June 22nd 2017



Engagement in the RBMP process

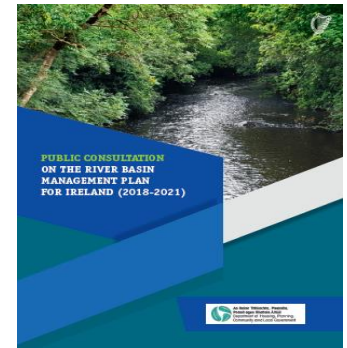
- Draft RBMP consideration of:
 - Irish Water's drinking water resources
 - Irish Water's wastewater discharges
- Actively engaged in the characterisation process, leading to the development of achievable programmes of measures
- Opportunity to deliver Irish Water's investment plans making best use of national evidence base, as steered by the EPA ICSCMU



IW water treatment plants

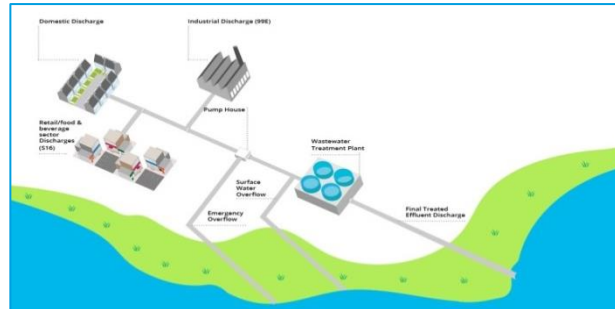


IW wastewater treatment plants



Identification of wastewater assets and discharges

- Working with ICSMU to provide loadings of:
 - current assets
 - improvements IW is working to deliver through the current investment plan
- Assessment of both continuous and intermittent discharges



Wastewater as a significant pressure

- ICSMU assessments in tandem with work delivered through LAWCO/EPA regional workshops identifying where wastewater assets are:
 - Sole significant pressure on a waterbody, or
 - Contributing with other pressures

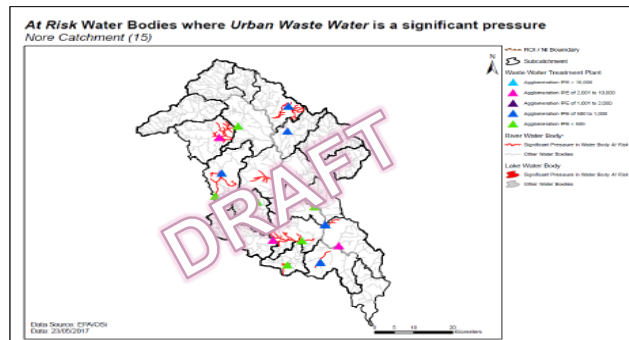
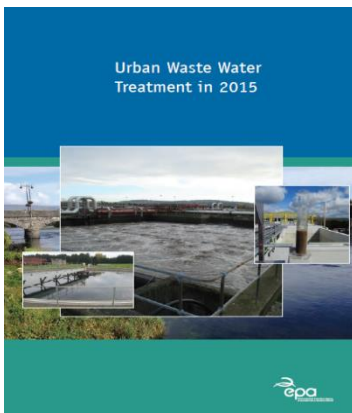


Figure 11. Water bodies that are in At Risk and are impacted by urban waste water

Source: EPA ICSMU 2017

- Draft outputs to-date from this work have identified circa. 25% of agglomerations, for the characterisation baseline year of 2015
- IW wastewater compliance improvements ongoing, and waterbody characterisation may not always reflect present status
- Wastewater compliance is long term, running beyond remaining cycles of RBMP (per current WFD)

Addressing IW pressures with prioritised asset performance and investment delivering improving compliance

Focus on prioritised operation performance, complemented by major capital investment:

- Source control (domestic & non-domestic)
- Auditing of asset performance
- Process optimisation and control
- People and technology - improved operational procedures & training
- Capital maintenance – from reactive to planned
- Improved incident management
- Capital Investment – projects and programmes
- **Wastewater Compliance Strategy**



Implementation steered by the IW Investment Plan

OVERALL INVESTMENT PLAN (2017 – 2021)

Post 2018 subject to CER approval

CATEGORY	TOTAL (€m)
National Programmes	963
- Water National Programme	591
- Wastewater National Programmes	320
- Other Infrastructure Programmes	51
Capital Maintenance	552
Projects	2,074
- Water Projects	841
- Wastewater Projects	1,233
GRAND TOTAL	3,588

From catchment to consumer: protection of drinking water supplies

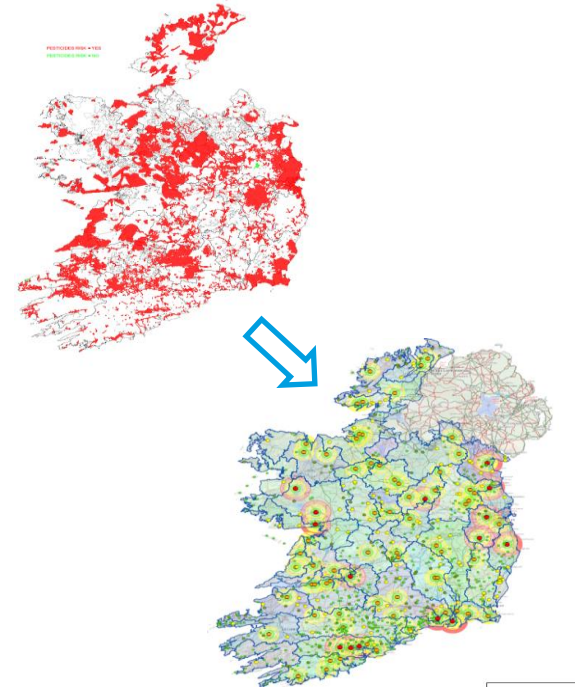
Article 7 - Water Framework Directive

- Article 7(1): identify surface and ground waterbodies for intended abstraction of water for human consumption over a threshold of 10 m³ per day / serving more than 50 persons, updated on a four year cycle
- Article 7(2): confirms the requirements of the Drinking Water Directive remain in place for those designated waterbodies
- Article 7(3): promotes achievement of drinking water compliance through preventative actions to avoid deterioration in raw water quality, thereby reducing investment in additional treatment infrastructure; suggests implementation of safeguard zones (non-statutory) to bring into effect

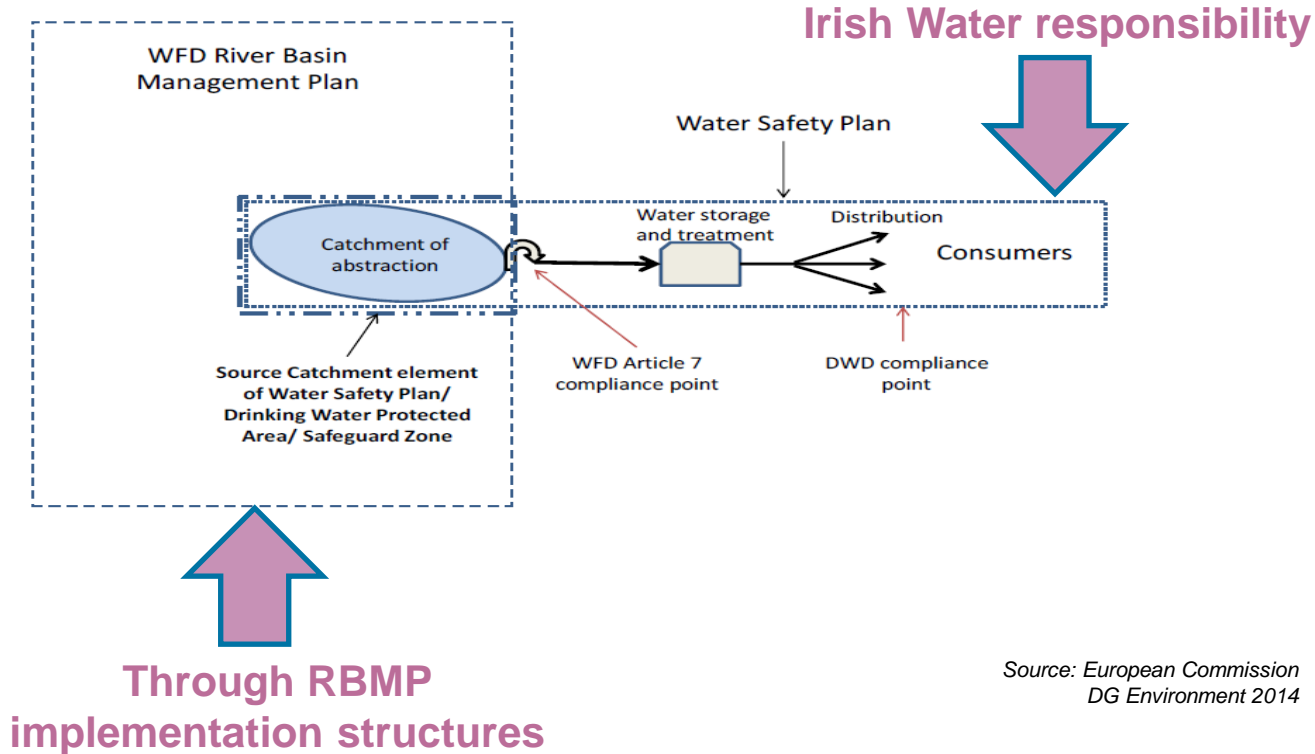
Irish Water's National Water Resources Plan

Strategic planning:

- Long term demand forecasting
- Identifying sustainable supplies
- Targeting a standard level of service & resilience, for quality & quantity
- Development of plans transitioning from local supplies, towards more strategic & interconnected national infrastructure



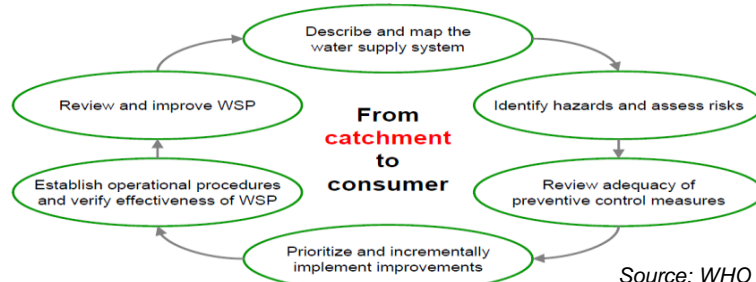
Achieving requirements for Drinking Water Protected Areas



Source: European Commission
DG Environment 2014

Irish Water is developing Drinking Water Safety Plans

WSP steps' overview



Source: WHO 2014

DWSP Elements

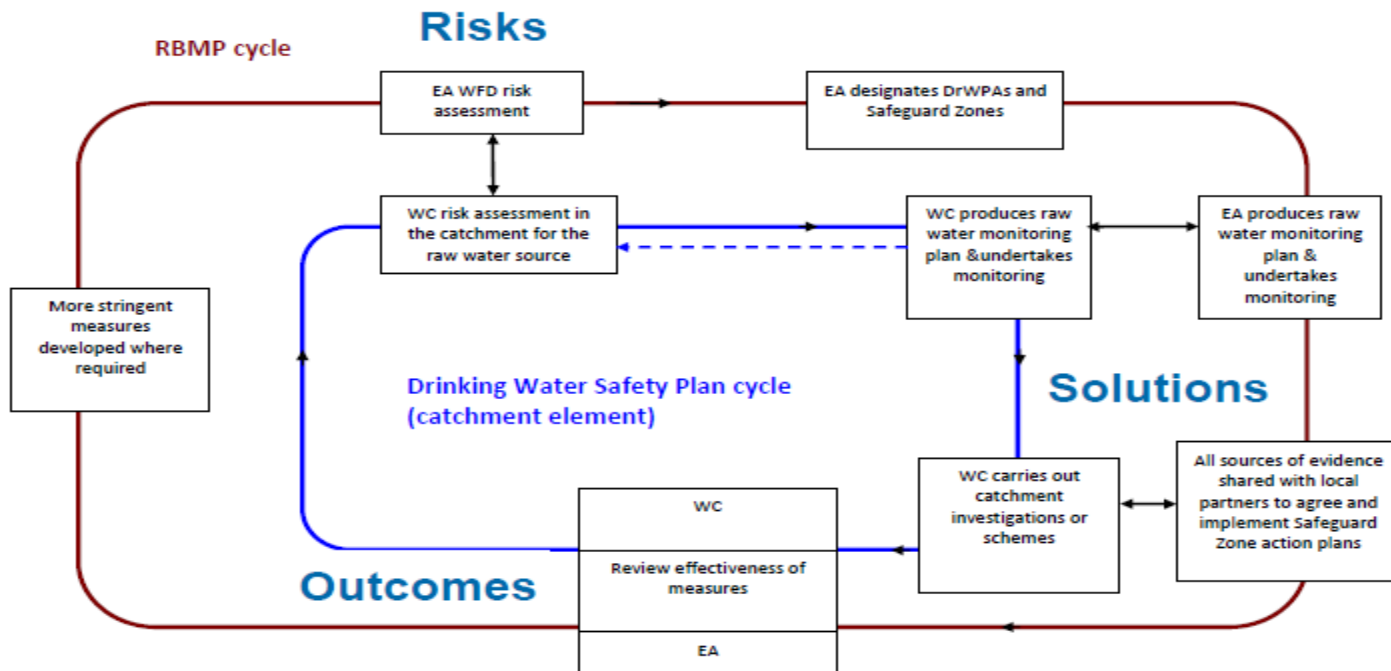
1. Source (37)
2. Raw Water (18)
3. Treatment (74)
4. Distribution (28)
5. Customer (3)
6. Management (4)

Year	Planned Progress	Number Completed
2016	Source Risk Assessments completed as part of full DWSPs already carried out for major capital projects.	55
2018	Source Risk Assessments to be completed as part of a review of existing source protection plans and zones of contribution developed previously by the EPA, LA and GSI.	148
2018	Source Risk Assessments to be completed as part of preparation of a National Water Resource Plan.	100
2021	10 Source Risk Assessments per annum to be completed from 2017-2021.	50
Total		353

WHO Drinking Water Safety Plan Approach

Source				Tap		
Catchment		Treatment		Distribution		
Source Yield	Production Capacity	Microbiological Risk	Protozoa Risk	THM Risk	Lead Risk	Leakage
Red	Red	Green	Red	Red	Red	Yellow
Red	Green	Green	Red	Red	Red	Yellow
Red	Yellow	Green	Red	Red	Yellow	Yellow
Green	Yellow	Green	Red	Red	Yellow	Yellow
Green	Yellow	Green	Yellow	Red	Yellow	Yellow
Yellow	Yellow	Green	Green	Red	Yellow	Yellow

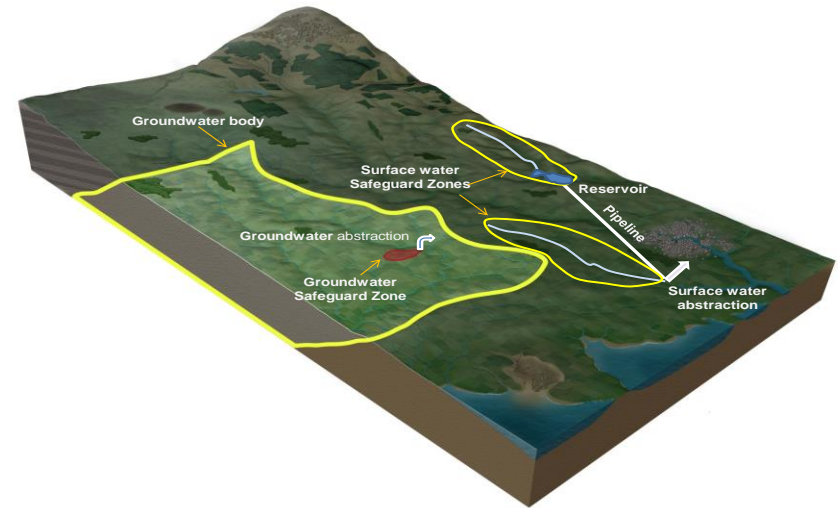
Bridging catchment characterisation and water safety planning



Source: Drinking Water Inspectorate 2011

Future opportunities for targeted drinking water protection measures

- Safeguard protection zones, per Article 7(3): a catchment or any other area defined within which measures are implemented in order to protect water abstracted for drinking water purposes, specifically to prevent deterioration and minimise the need for treatment
- Research and project outputs



Source: European Commission
DG Environment 2014

Ongoing relevant research and project outputs with IW involvement

- STRIVE *Diffuse Tools: Catchment Models and Management Tools for Diffuse Contaminants (Sediment, Phosphorus and Pesticides)*
- H2020 *WaterProtect - Irish case study: assessing the efficacy and uptake of mitigation measures to protect water resources from nitrate and pesticide loss in rural agricultural environment*
- INTERREG VA *Source to Tap*

INTERREG VA *Source to Tap* project

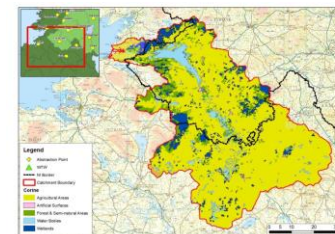
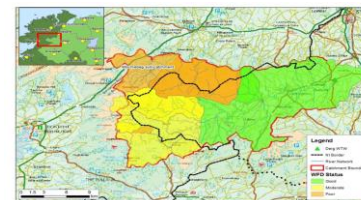


An Roinn Tithíochta, Pleanála,
Pobail agus Rialtais Áitiúil
Department of Housing, Planning,
Community and Local Government



Project aims:

- Produce a Sustainable Catchment Area Management Plan (SCAMP) for the Erne and Derg cross border catchments.
- Prevent pollution of raw water used for drinking water abstraction from pesticides and sediment pollution.



INTERREG VA *Source to Tap* project



An Roinn Tithíochta, Pleanála,
Pobail agus Rialtais Áitiúil
Department of Housing, Planning,
Community and Local Government



- Learning and outreach strategy to engage with local communities on importance of protecting drinking water resources
- Forestry best practice pilot to prevent sediment run-off causing colour and turbidity issues in raw water
- Peat restoration of former afforested land along river banks
- Pilot land incentive scheme to change land management practices by farmers
- Benefits analysis to determine cost effectiveness of removal of pollutants at source, compared with treatment processes



In summary

- Irish Water is fully engaged in the current RBMP process:
 - Protecting public drinking water resources
 - Managing our continuous and intermittent wastewater discharges effectively to minimise impacts
 - Cognisant of Irish Water's economic and environmental regulation

Irish Water helping to meet Ireland's water protection challenges

