

Water Services Training Group

20th Annual Conference

Meeting Standards and Expectations in the Water Industry

Lyrath Estate Hotel, Kilkenny



Meeting Standards and Expectations in the Water Industry

The Waste Water Challenge – agglomerations, licence compliance, trade effluents, sludge

Gerry O'Donoghue

Wastewater and Sludge Strategy Lead
Irish Water



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

Challenges - Context

- * Challenges are largely the same, but context has changed;
 - * Economic Regulation
 - * Single utility engagement with Environmental Regulator
 - * Performance expectation in respect of customer service, compliance and efficiency;
 - * Infrastructural deficit
 - * Information deficit
 - * Funding model

Wastewater Assets

- * Asset Base

- * 1,155 WWTP's

- * 1,909 sewage pumping stations

- * 2,000+ SWOs

- * 25,000 km foul and combined sewer (only 12,000 km currently digitised)

Assets - WWTPs

WWTP Capacity (PE)	Count	Percentage
0-500	587	50.82%
501-1500	285	25.37%
1501-2000	51	4.42%
2001-5000	105	9.09%
5001-10000	49	4.24%
>10000	70	6.06%
Total	1155	100.00%

Compliance areas

- * Compliance with UWWT Regulations
- * Compliance with EPA licences;
 - * ELVs
 - * Specified Improvement Programmes
 - * Assessments
- * Compliance with Certificates of Authorisation
- * Network Compliance

Compliance - WSSP

	Current Compliance level	WSSP targets	
		2021	2027
UWWTD (% PE)	39%	90%	99%
WWDL (WWTPs)	33%	60%	90%

Compliance – EPA Priorities

EPA priorities in waste water enforcement in 2014

Discharges causing pollution of rivers

Discharges contributing to poor quality bathing waters

Waste water treatment required by the Directive is overdue⁴⁰

No treatment or preliminary treatment only provided

Discharges that failed mandatory quality / sampling standards⁴¹

Improvement needed to protect freshwater pearl mussels

Improvement needed to protect shellfish waters

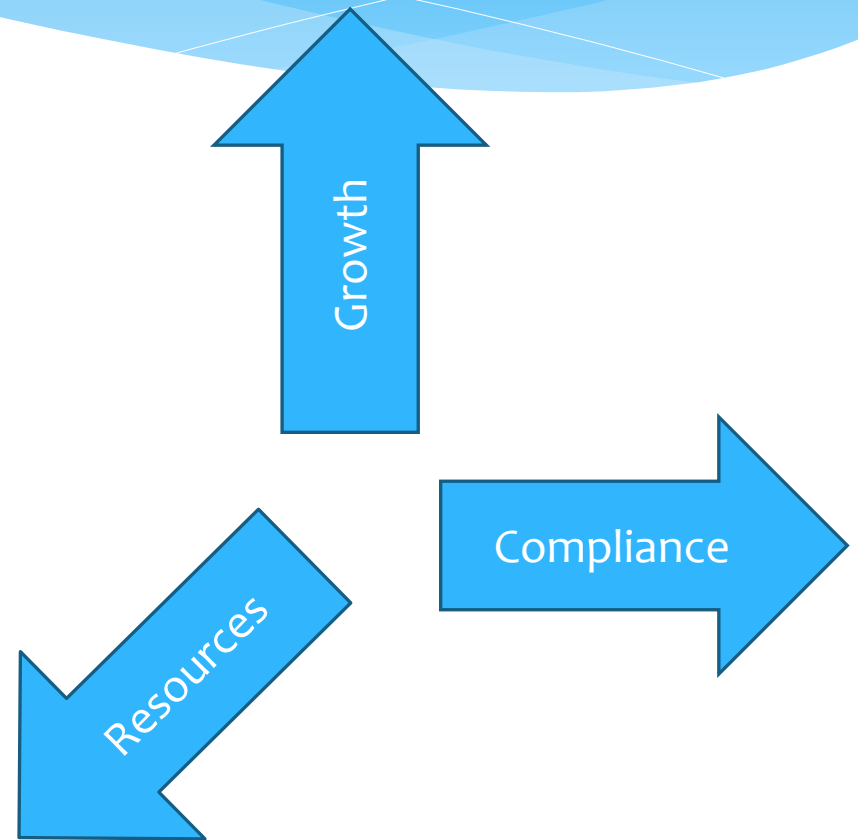
Other environmental pollution risk

Compliance – What are our targets?

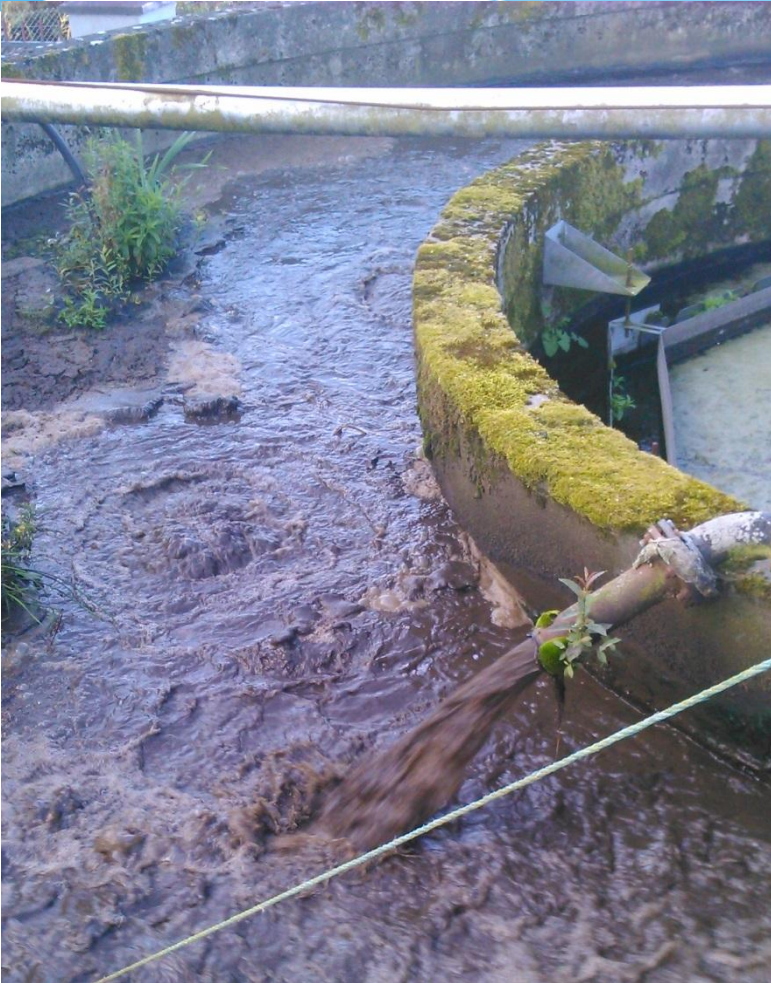
- * Ultimate target is full compliance
- * Compliance to be progressed on a prioritised basis having regard for resources – Journey to Compliance.
- * Investment Plan Compliance Priorities;
 - * UWWT compliance
 - * Priority WWDA compliance
 - * Network assessment and planning

Environmental Compliance - Challenges

- * Asset Condition / Maintaining Service
- * Standards
- * Trade Effluent
- * Sludge Management



Asset Condition / Maintaining Service



- * Maintain current performance.
- * Deteriorating assets
- * Increased demand

Asset Condition / Maintaining Service





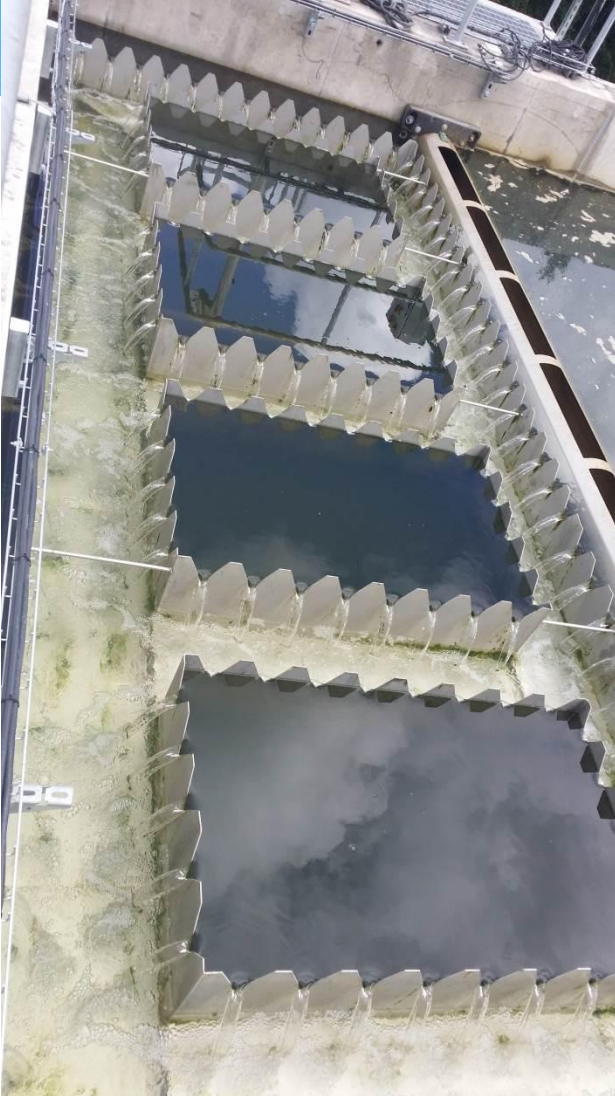








WWTP Standards



- * UWWT 25/35
- * Licences:
 - * Phosphorus
 - * Total
 - * Ortho-P
 - * Ammonia
 - * Total Nitrogen
 - * FC

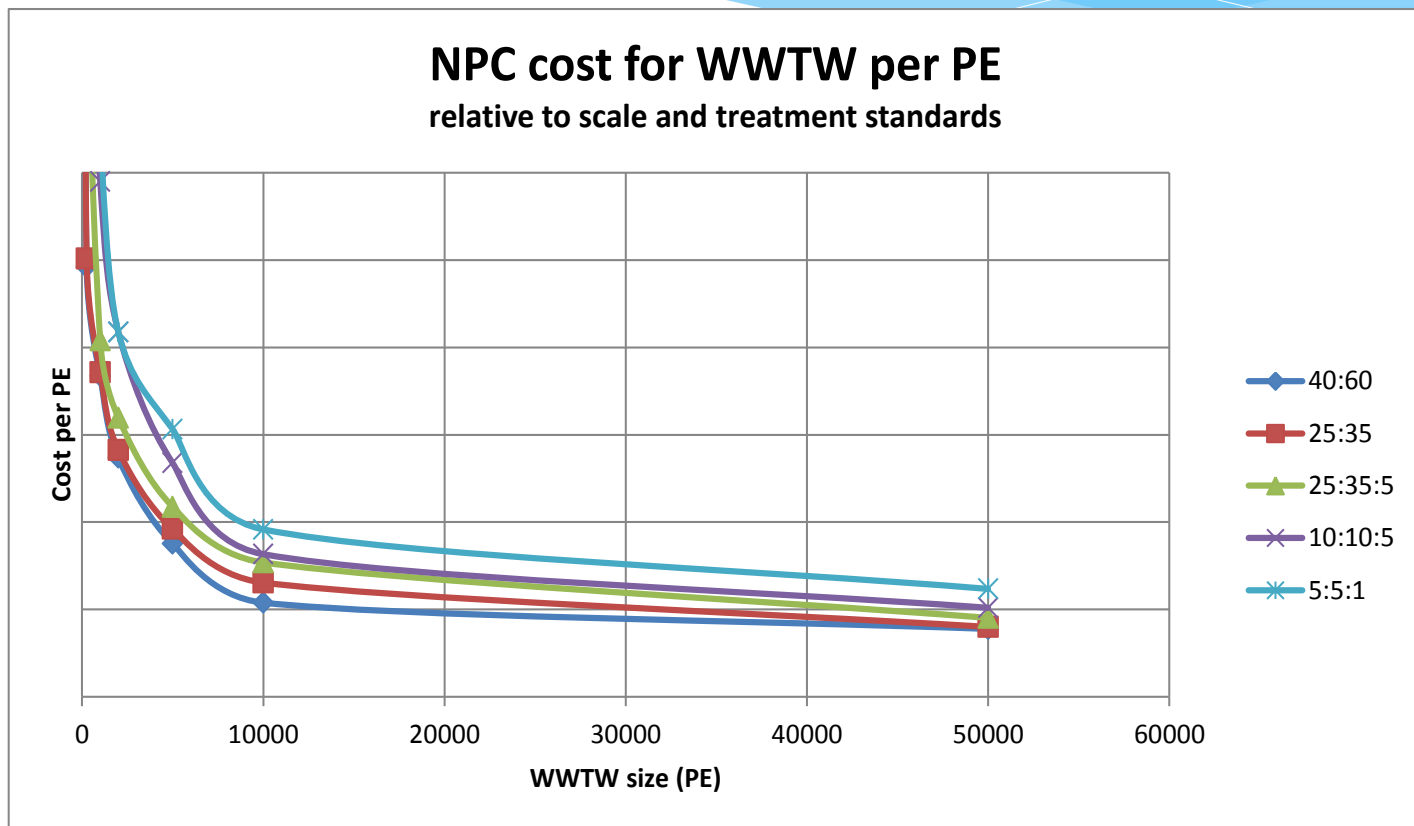
WWTP Standards

	Cavan	Portlaoise	Mullingar	Tullamore
BOD	4.6	5 (4)	7	8
TSS	35	35	10	15
Total P	2		0.3	0.5
Ortho-P	0.13	0.21 (0.13)	0.2	0.25
Ammonia	0.26	(0.26)	0.4	0.5
Total N	15	10	10	
Nitrate N		7.3		

WWTP Standards

- * “For parameters other than pH, cBOD, COD, Suspended Solids, Orthophosphate, Ammonia, Total Phosphorus and Total Nitrogen; eight out of ten consecutive composite results shall not exceed the emission limit value.”
- * “No individual result similarly calculated shall exceed the emission limit value by more than 20%.”

Impact of Standards and Scale on Cost

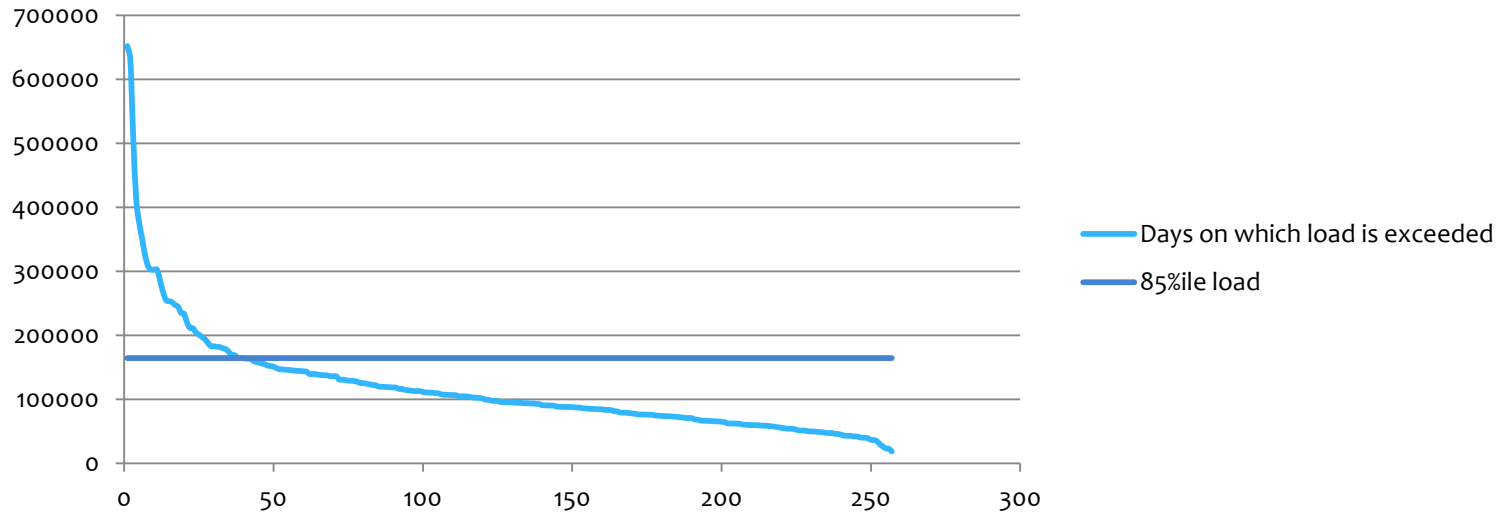
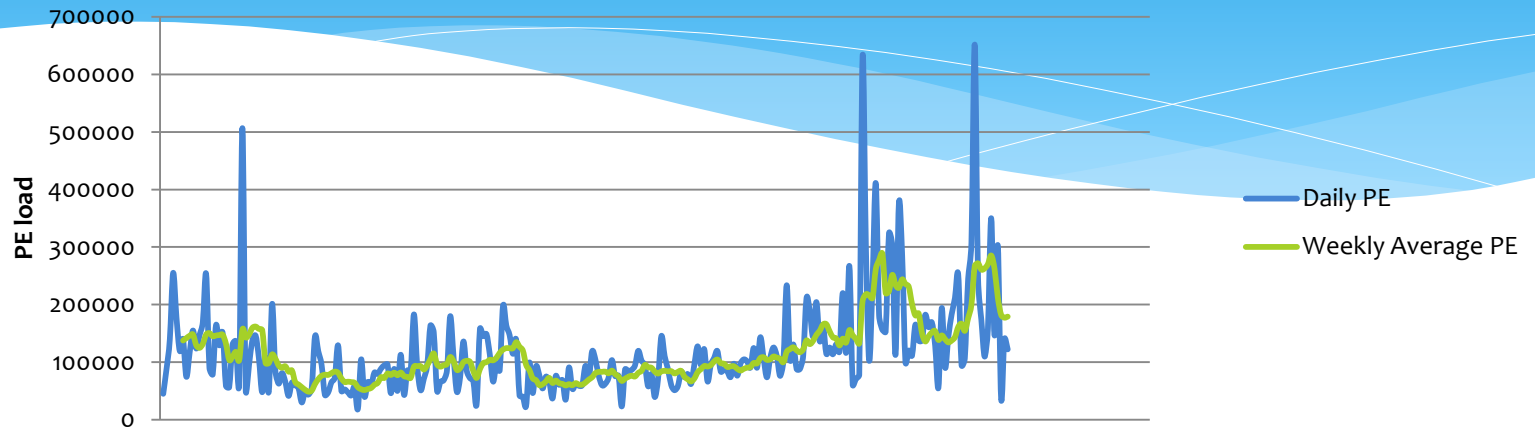


Trade Effluent impact

- * Overloading of WWTPs
- * Low level of monitoring and control
- * Damage to infrastructure



Trade Effluent impact



Sludge Management

* EPA UWWT Report for 2014

Table 6.1: Sewage sludge destination routes in 2014⁵⁵.

	Agriculture	Composting	Landfill	Other ^{5b}	Total
Quantity (tonnes dry solids)	42,483 (79.3%)	9,266 (17.3%)	361 (0.7%)	1,433 (2.7%)	53,543

- * Use of sewage sludge on farms constrained by An Bord Bia QA schemes
- * Activities are largely contracted, with variations in standards, some unacceptable practices, and some nuisance issues.

Sludge Management - Plan

- * Sludge Management Plan,
 - * Investments in management and treatment
 - * Ensuring quality
 - * Recognition of Bord Bia restrictions
 - * Focus on animal feed and non-food crops
 - * Investigation of alternative outlets
- * Standardised sludge management contracts
 - * Quality
 - * Monitoring and reporting

Other issues

- * Information
- * Taking in Charge
- * Growth and Planning
- * Training / Competency Framework

Compliance - Plan

- * Proposed Investment Plan
 - * UWWT Compliance
 - * Priority WWDL compliance
 - * NCAP programme
 - * Wastewater Disinfection Programme
- * Methodologies for
 - * Stormwater Overflow & Sewer Integrity Assessments
 - * COA site methodology
 - * Shellfish impact assessment
- * Review of licences