



Protecting our environment while optimising organic manures

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Introduction

Protecting our environment while optimising organic manures



- Water = Surface, Groundwater, Estuaries
- Odour
- Noise
- Disease



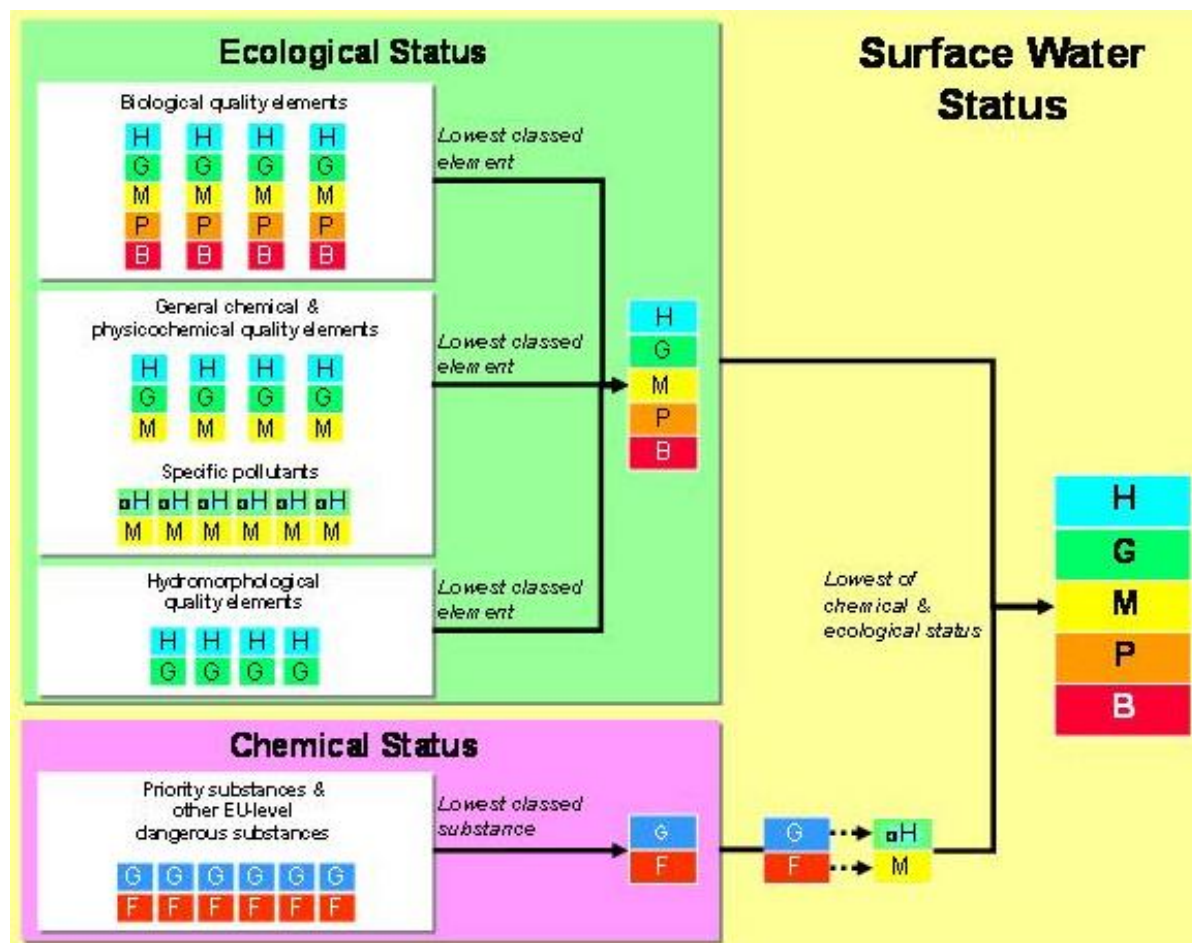
Water



- **Water = Surface and Groundwater**
 - & lakes, wetlands, canals, ocean, estuaries, rivers, streams
- **Water Quality =**
 - Good ecological status & good chemical status
- **LA's responsibility**
 - Water Pollution Acts
 - GAP Regulations
 - (Waste Management Acts)



Water Framework Directive Quality Indices



Insects and Plant Life

pH, BOD, Colour,
Nitrates, Phosphates

River Morphology
(shape and structure)

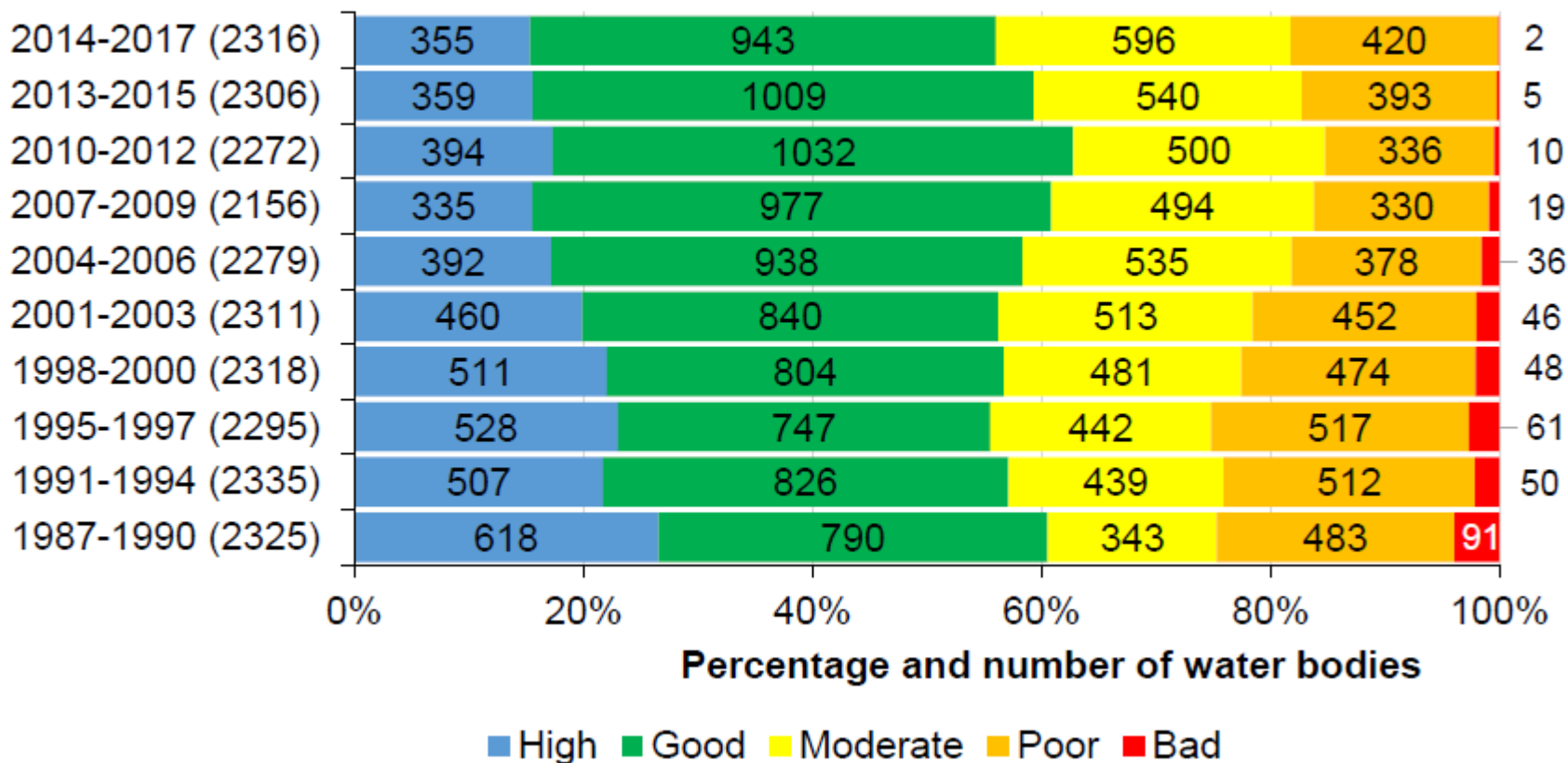
Pesticides, herbicides
and other priority
chemicals



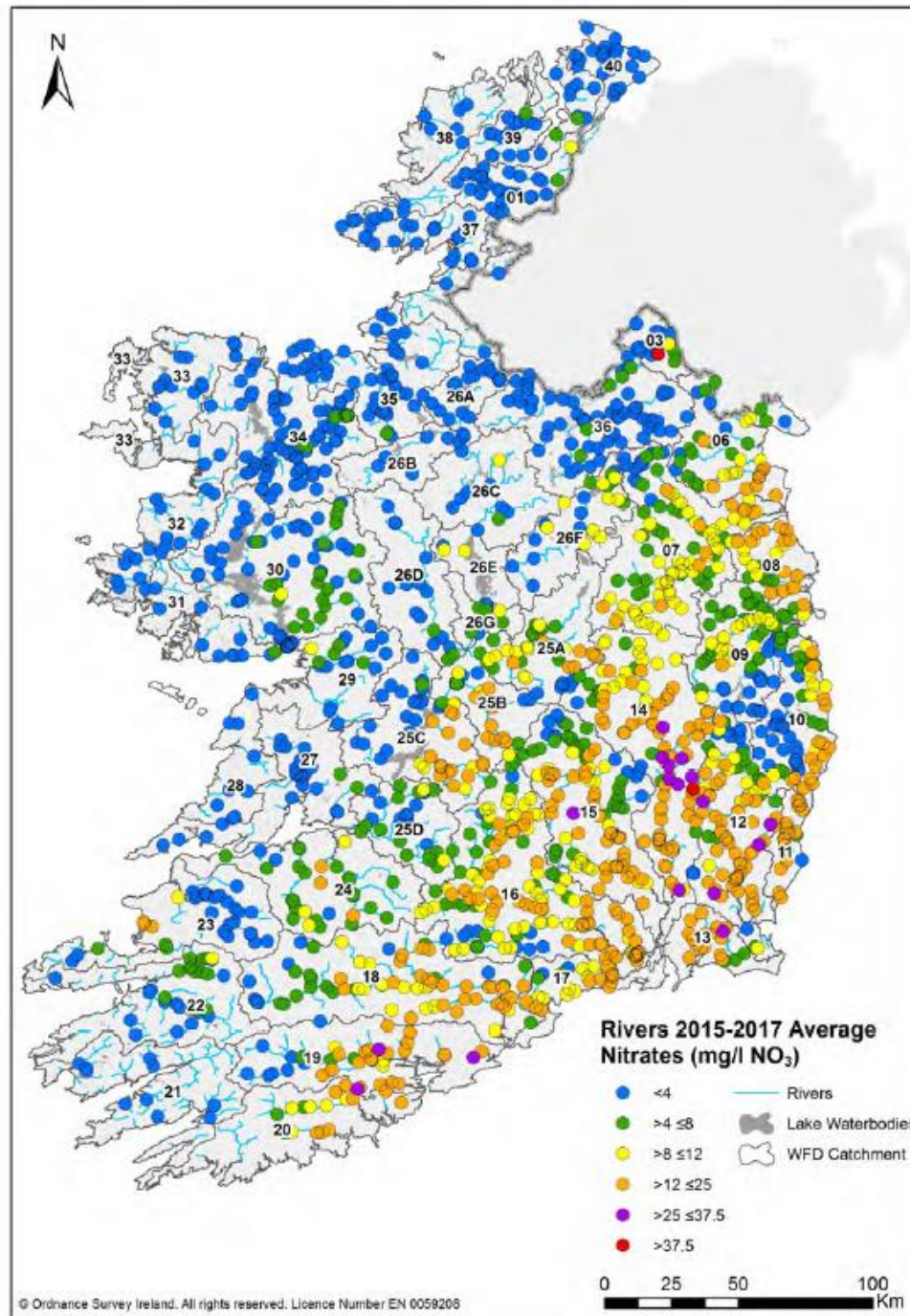
Water Quality



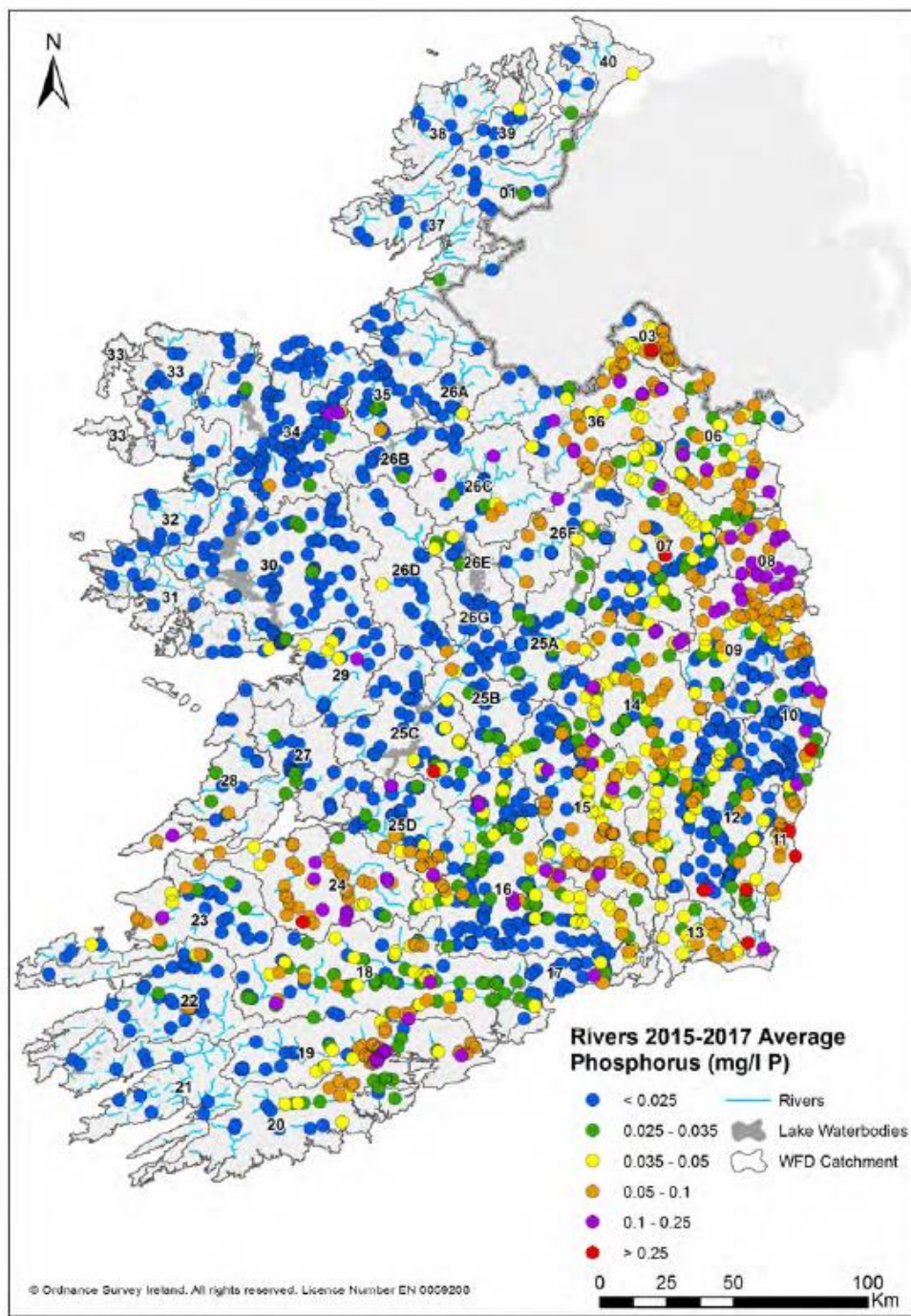
River Quality - (Q value)



Map 2: Average nitrate concentration at river sites for 2015–2017.

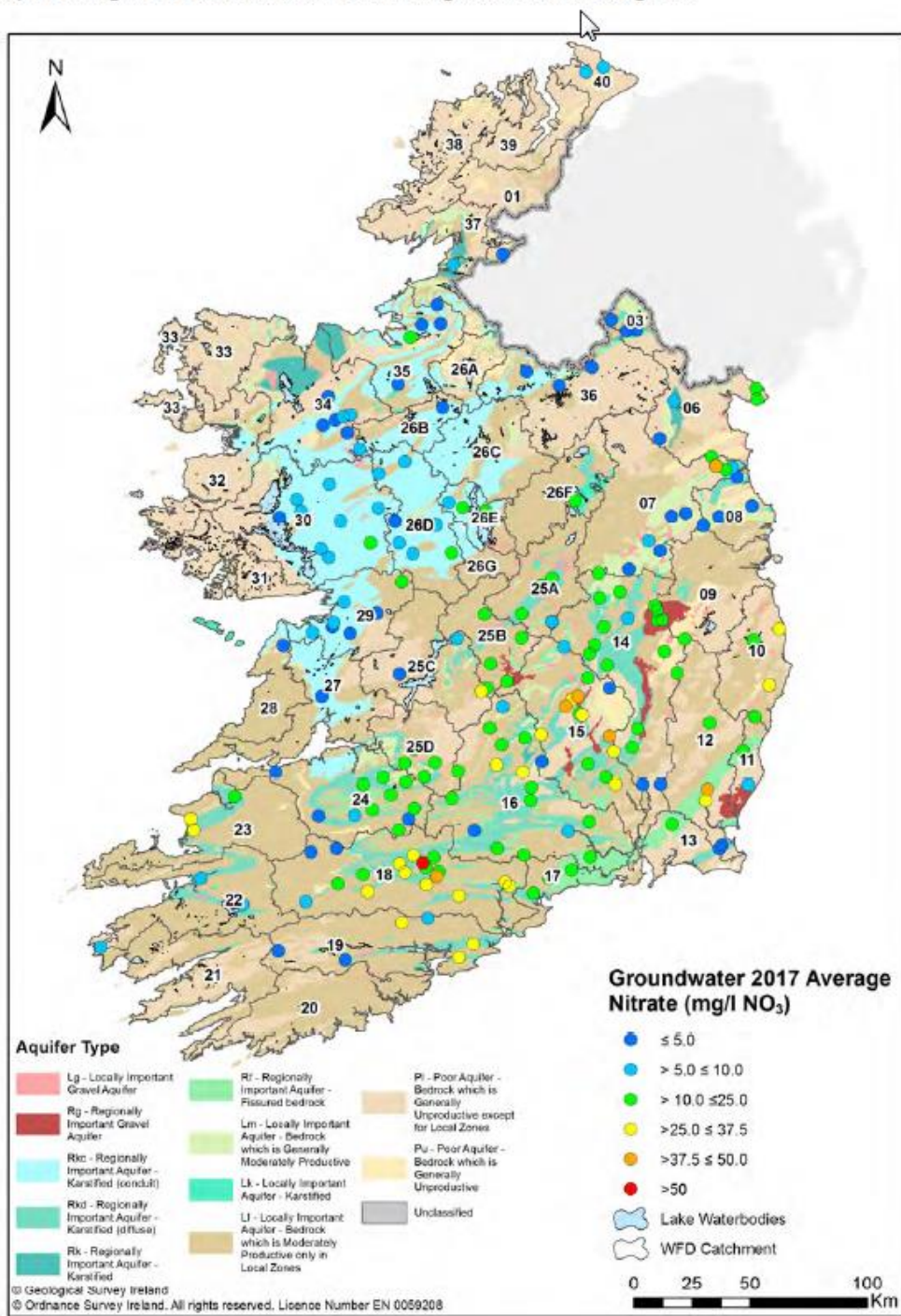


Map 4: Average phosphate concentrations at river sites for the period 2015–2017.

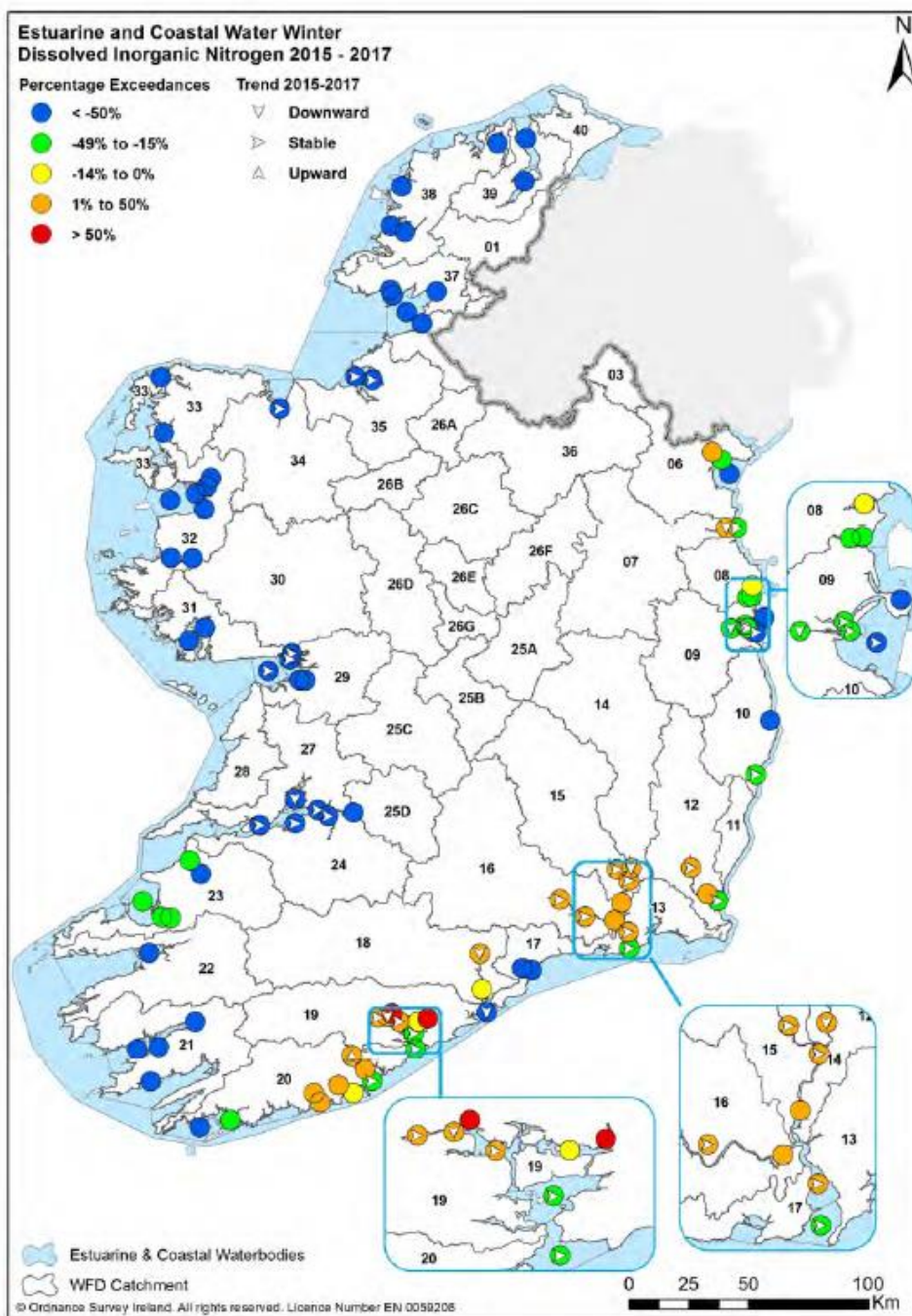




Map 13: Average nitrate concentrations in 2017 at EPA groundwater monitoring sites.



Map 11: Winter dissolved inorganic nitrogen levels in estuarine and coastal waters 2015–2017 showing percentage exceedances, above and below assessment level and trend analysis in 19 catchments.³⁰





LA Water Quality Priorities

(Selection Criteria)



1. Human Health

- Drinking Water Sources
- Shellfish Catchments
- Bathing Waters

2. Protected areas

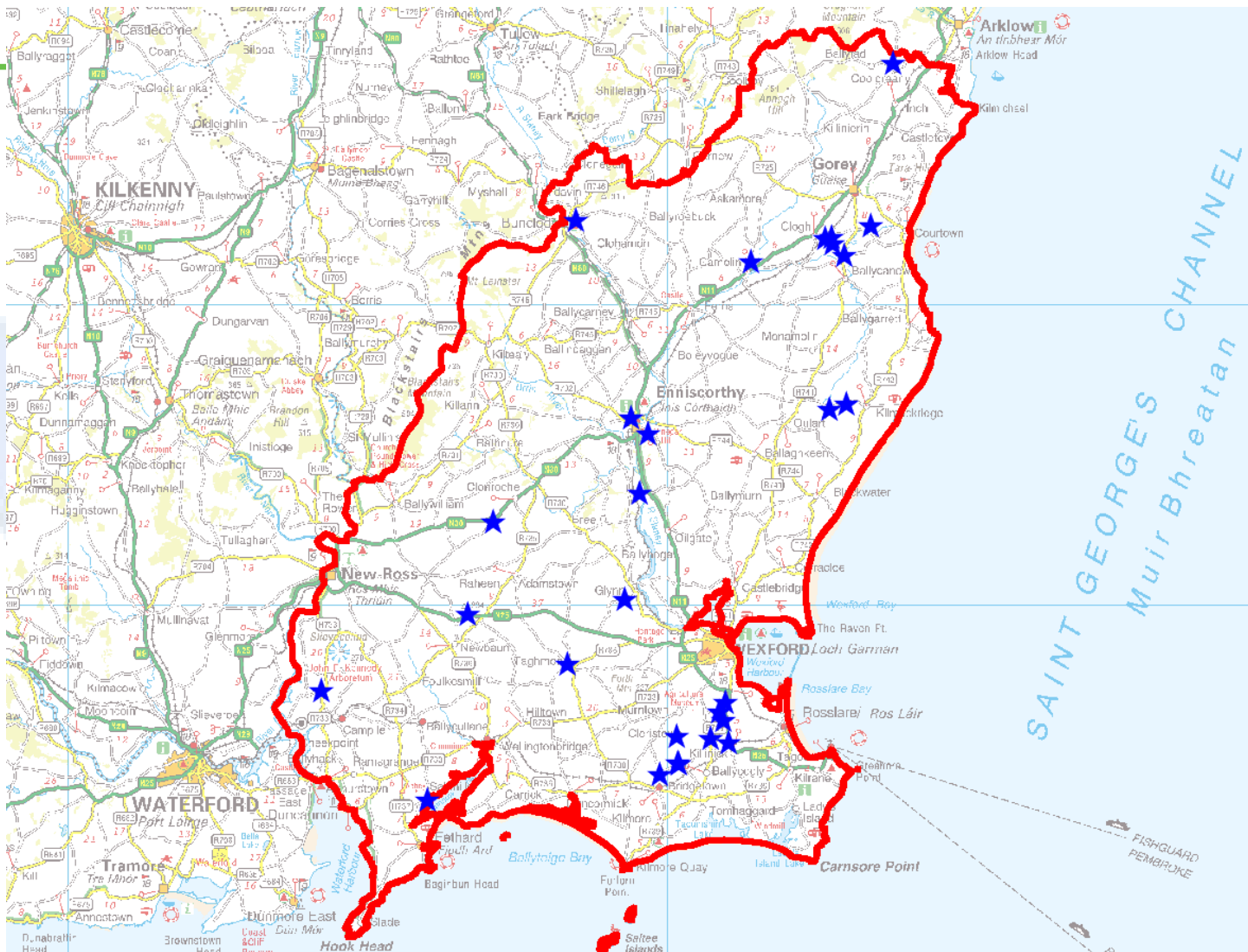
- Freshwater Pearl Mussel
- Habitats & Birds

3. General Water Quality

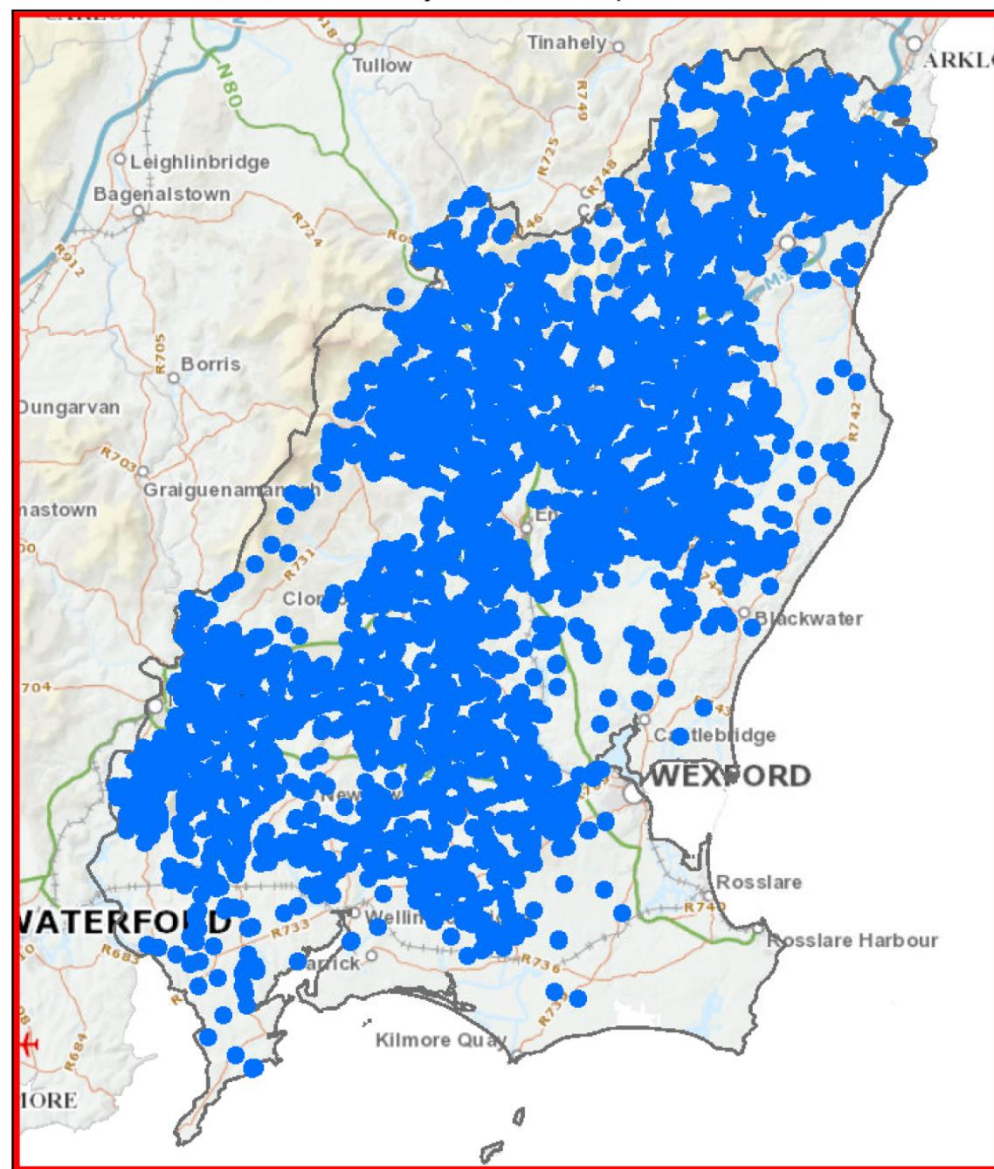
- Protect & Restore



Public Boreholes in Wexford

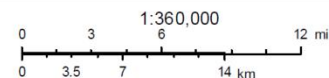


Wexford County Council Map Well Grants



October 24, 2017

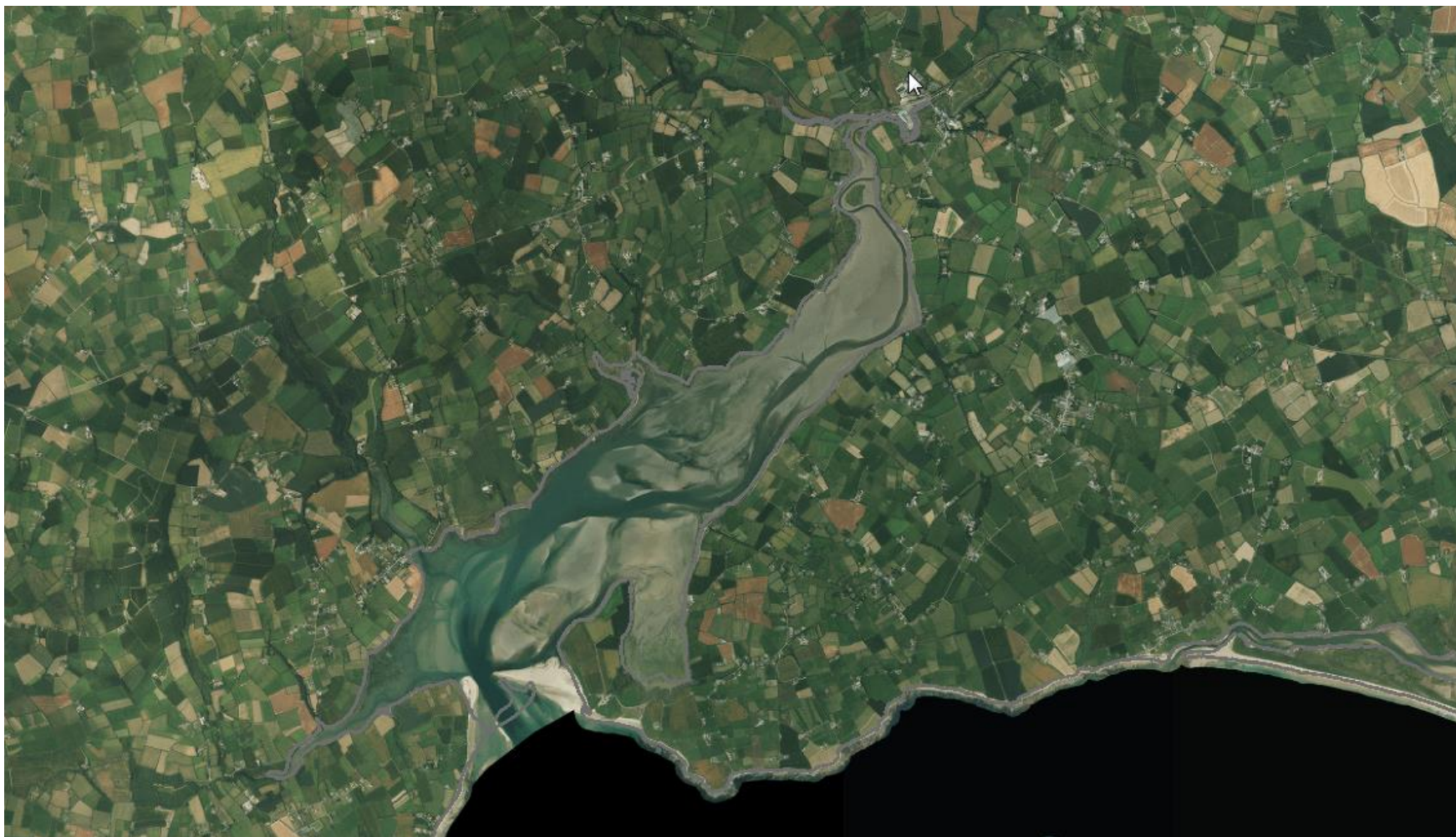
- Well Grants
- County Boundary



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Bannow Bay Wexford



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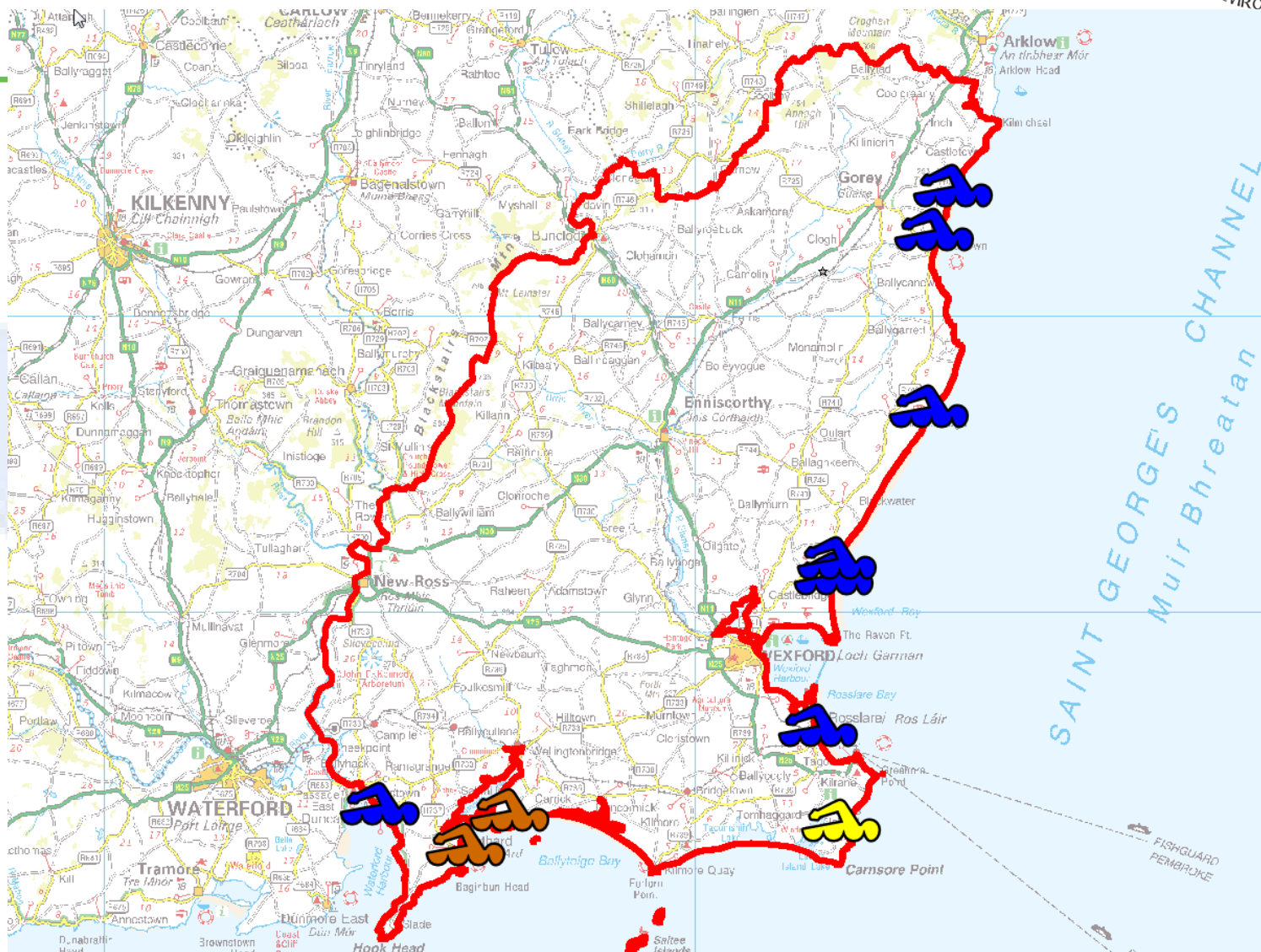


Mussel and Oyster Trestles in Bannow Bay





Bathing Waters in Wexford



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**62,749 Domestic Dwellings
in County Wexford
of which
30,853 are houses with
their own OSWWTS**



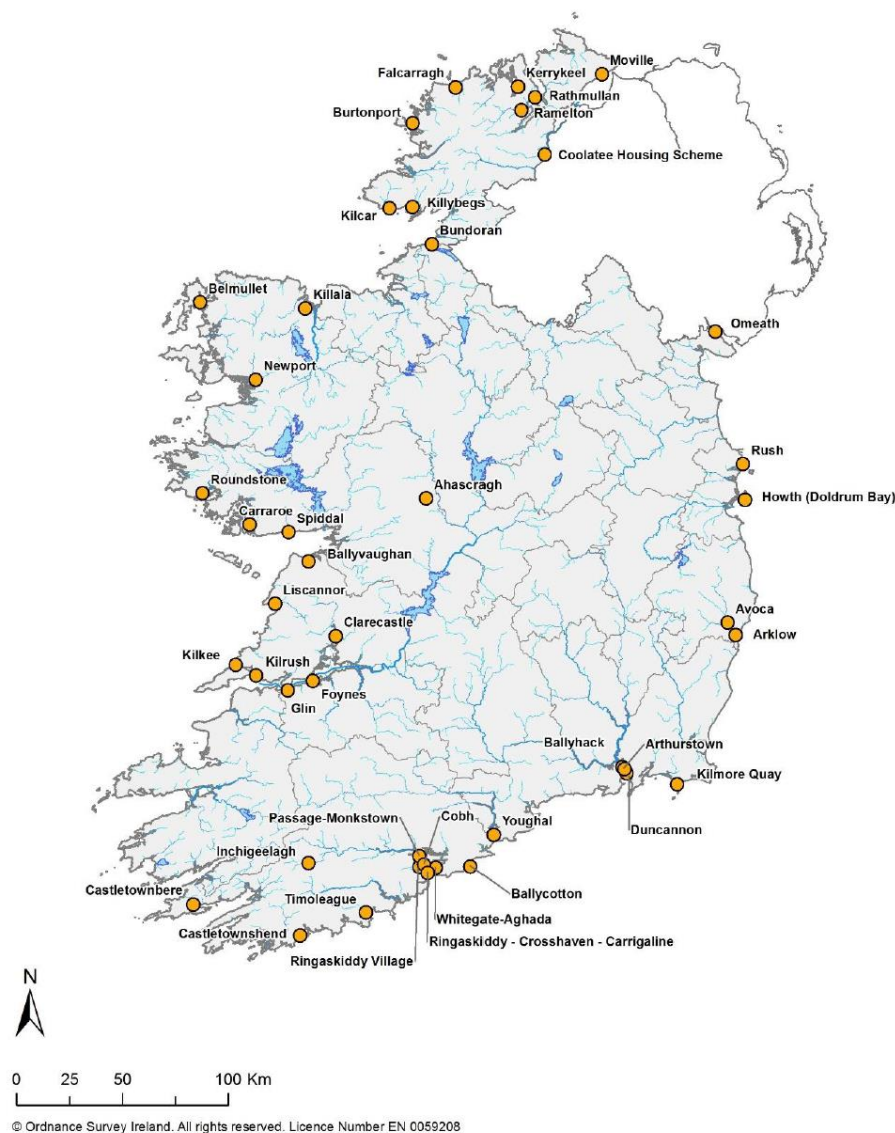


~ 40 septic tank inspections done to date in catchment – 16 failed, 6 directly discharging
Blocked sewer in housing estate
Direct discharge (unlicensed, treated) from community and adventure centre, schools, houses in Ramsgrange



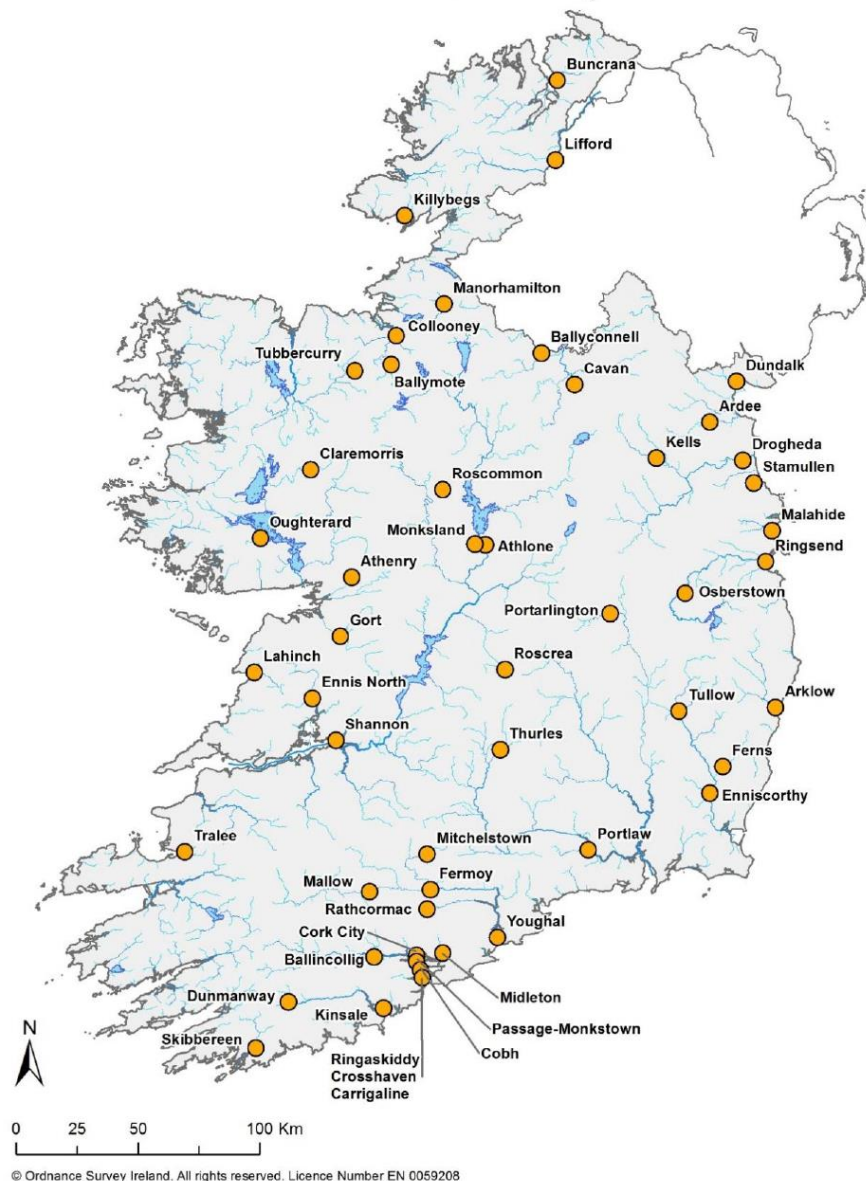


Areas Discharging Raw Sewage





Large urban areas where the collection and treatment of urban waste water did not meet European Union standards in 2016

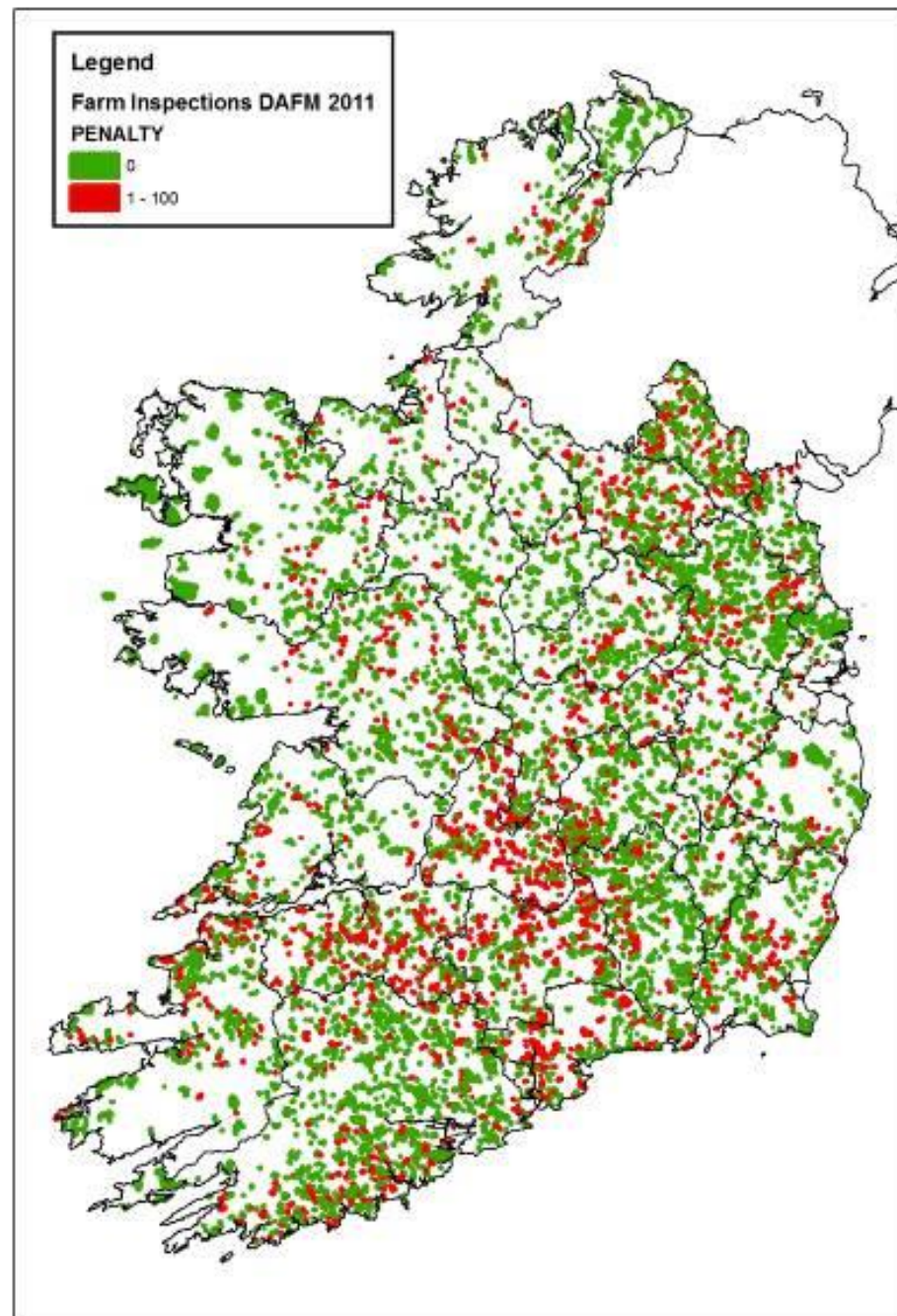


LA Inspections (by DAFM)



Selection Criteria

Agriculture Risk		Weighting
•	Riverside	+ 100
•	S.R. > 140	+ 100
•	> 250 stock + 50	
•	Dairying	+ 100
•	GAP penalty + 200	
•	Previous clear - 300	





Organic manures NMPs!!!



The principles are simple:

Applying fertilizer to make up the difference between what there is and what is required, to achieve the target yield only;

Ensuring that the added nutrient is available to the crop.

In other words, the right amount of the right product in the right place at the right time.



Organic Manure Nutrients



“ There is huge variation between poultry manure from different farms and there is variation between broiler and layer manure.

Analysis Of Total Nutrient Content Of Poultly Manure						
Nutrient levels	Nitrogen	Phosphorous	Potassium	Sulphur	Magnesium	Calcium
2016	35kg/t	6.8kg/t	17.5kg/t	4.5kg/t	1.2kg/t	39.2kg/t
2015	34kg/t	9.9kg/t	20kg/t		5.4kg/t	34kg/t

TABLE S

Table 1 Minimum, maximum, mean and standard deviation of selected plant nutrients and physical parameters on SMC samples (n=63) on a dry matter basis.

Parameter	Min	Max	Mean	SD	CV (%)
Dry matter (g kg ⁻¹)	216	512	312	46.4	14.8
Organic matter (g kg ⁻¹)	407	761	645	58.6	9.2
pH	6.0	7.9	6.8	0.48	7.1
EC (mS cm ⁻¹)	6.8	15	10	1.8	17.1
Bio-available P (g kg ⁻¹)	1.3	25	4.0	3.8	95.0
Total P (g kg ⁻¹)	11	38	18	5.8	32.2
Bio-available K (g kg ⁻¹)	8.0	21	13	2.9	22.3
Total K (g kg ⁻¹)	11	34	20	6.2	31.0
Total N (g kg ⁻¹)	17	28	21	2.0	15.5
C/N ratio	14	24	18	2.0	11.1
Total Ca (g kg ⁻¹)	3.0	101	28	49.1	83.3
Total Mg (g kg ⁻¹)	0.55	39	18	19.4	26.0
Total Na (g kg ⁻¹)	0.05	5.32	1.68	2.7	52.4
Lignin (%)	11	49	25	9.5	36.5
Cellulose (%)	18	62	38	8.6	22.1
Hemicellulose (%)	2.0	41	19	8.7	45.8
Mushroom yield (kg kg ⁻¹)	0.12	0.28	0.21	0.328	15.5



WEXFORD COUNTY COUNCIL



Protocol for the Use of Sewage Sludge in Agriculture in County Wexford



February 2012



Table 2 Soil Sampling Requirements

Parameter	Units	Minimum Frequency of Analysis*
Organic Matter	TOC as % dry solids	Every 2 years
pH		Every 2 years
Clay content	% of dry solids	Every 2 years
Total Phosphorus	% of dry solids	Every 2 years
Total Nitrogen	% of dry solids	Every 2 years
Total Potassium	% of dry solids	Every 2 years
Cadmium	mg/kg dry solids	Every 5 years
Chromium	mg/kg dry solids	Every 5 years
Copper	mg/kg dry solids	Every 5 years
Lead	mg/kg dry solids	Every 5 years
Mercury	mg/kg dry solids	Every 5 years
Nickel	mg/kg dry solids	Every 5 years
Zinc	mg/kg dry solids	Every 5 years



7.6 The following buffer strips must be observed when landspreading Biosolids:

	Buffer zone (m)
Sensitive buildings (hospitals, schools and churches)	200
Dwelling houses ¹	100
Karst features	30
Lakes and main river channels ¹	20
Small watercourses ¹	10
Public roads ¹	10
Domestic wells ¹	50
Public water supplies ^{1, 2}	50 – 300

¹ Specified distances to be increased if the gradient is greater than 6%.

² The appropriate distance depends on vulnerability and direction of groundwater flow.



However

Probe into poultry link to botulism - Up to 30 cattle dead in suspected cases



Three cases of suspected botulism have been reported in Meath and Kildare

Botulism is one of the world's deadliest toxins. Sniffing as little as 13 billionths of a gram of the toxin can be lethal. It is fatal within hours once ingested by an animal. While poultry manure that does not contain "residual poultry carcasses" is a valuable soil fertiliser, it must be spread without delay and, in the event that the material is being held for a short time prior to land-spreading, strict control measures are required to be taken

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Air Quality



Table 6: Ranking of 20 generic and 20 environmental odours according to like or dislike by a group of people professionally involved in odour management, in the Netherlands, 1997

Descriptor	Ranking	Ranking	Descriptor
Generic odours	mean	mean	Environmental odours
Roses	3.4	1.7	Bread Factory
Coffee	4.6	4.6	Coffee Roaster
Orange	5.8	5.1	Chocolate Factory
Cinnamon	6.0	8.1	Beer Brewery
Mowed lawn	6.4	8.3	Car Park Bldg
Soap	7.3	9.4	Charcoal Production
Hay	7.5	9.6	Frozen Chips production
Brandy	7.8	9.8	Eel smoking
Raisins	7.9	9.8	Car Paint Shop
Beer	9.3	9.8	Sugar Factory
Cork	10.5	9.8	Fragrance & Flavour Factory
Peanut Butter	11.1	11.2	Asphalt
Cleaning Agent	12.1	12.8	Intensive Livestock Farming
Sauerkraut	12.8	12.9	Wastewater Treatment
Wet Wool	14.1	13.2	Livestock Feed Factory
Paint	14.4	13.2	Refinery
Vinegar	14.8	14.0	Green Fraction compositor
Sweat	17.2	14.1	Landfill
Sour Milk	17.5	15.7	Fat & Grease Processing
Cat's Urine	19.4	17.0	Slaughter House



Noise



2014

Memoranda of Understanding

Contact Us

► FAQ

Noise

What steps are open to me under the law regarding nuisance caused by noise?

What can be done about noise arising from commercial and construction activities?

Noise emanating from construction activities or the activities of a commercial premises are dealt with under Section 107 of the Environmental Protection Agency Act 1992, which provides local authorities with the powers to limit or prevent noise.

Noise from Commercial Premises:

Section 107 of the Environmental Protection Agency Act 1992 provides local authorities with powers to require measures to be taken to prevent or limit noise. These powers are generally exercised in preventing and limiting noise from commercial and industrial premises within their functional areas. A Notice can be served by a local authority on any person in charge of any premises, processes or works, other than an activity controlled by the Environmental Protection Agency.

Construction Noise:

There is no statutory period during which certain works e.g. construction, road works, DIY etc. are prohibited. However, a Planning Authority may attach conditions to individual planning permissions for any development on a case by case basis. These tailored conditions may include restrictions on the times when construction work can be undertaken.

If you are encountering noise from a construction site you should, in the first instance, contact your Planning Authority to ascertain whether any such conditions apply. A local authority can still address the issue under Section 107 of the Environmental Protection Agency Act 1992 which provides them with powers to require measures to be taken to prevent or limit noise. You can also address the issue by taking a case under the Noise Regulations.



Noise



What can be done about the noise from crow guns/bangers?

If the use of noise devices by farmers, to scare off birds eating their crops (known as "crow guns/bangers") is causing a nuisance, and you consider that the noise to be so loud, so continuous, so repeated, of such duration or pitch, or occurring at such times that it gives you **reasonable cause for annoyance** you can initiate action to deal with it.

What action can I take?

1. Initially, it may be sufficient to explain to the farmer that it is a nuisance and so come to some mutually acceptable understanding.
2. If this does not resolve the matter you may wish to consider contacting the Environmental Section of your local authority/county council to ascertain whether it is in a position to take action.
3. Finally, you may exercise your right to take redress through the District Court under the Noise Regulations. However, before proceeding with a complaint, you are advised, to consult your local authority (where applicable) or seek legal advice.

The role of the District Court

The District Court hears both sides of the case. If it finds in your favour, it can order the reduction of the noise to a specified level, limit it to specific times or to cease altogether.

How do I complain to the District Court?

1. Consult with the Clerk of your local District Court about a date for the hearing of your case.
2. You must inform the person concerned that you will be making a complaint to the District Court. The date for the hearing of the case must be at least seven days later than the date you inform the person or body causing the noise.
3. You have to fill out a form and present your case in court. As a general rule, it is important to have a record of the times and dates when the noise nuisance occurred.



Other



- **Pesticides**

- 6 Counties have MCPA in Drinking Water
- a stray foil cap has the potential to cause an exceedance of the 0.1 microgram/L level along 30 km of channel length for a water body that is 1 m wide and 30 cm deep

IRISH FARMERS JOURNALSEARCH Q JOIN SIGN IN

MENU

MCPA in 80% of drinking water pesticide contaminations

The Environmental Protection Agency (EPA) has called for a national pesticides strategy as multiple water supplies continue to exceed maximum residue standards.

NEWS > NEWS
[Thomas Hubert](#) on 13 Jun 2018

[f](#) [t](#) [e](#)

...

RELATED STORIES

[Hannah Quinn-Mulligan](#) on 06 Dec 2018
Up to €5m in organic payments to issue

[Barry Cassidy](#) on 06 Dec 2018
Farmers to be compensated when a



Why is there an issue?

One foil seal contains enough pesticide to breach 0.1 microgram/L level along **30 km** of a typical stream



- 0.1 microgram/L = 0.1 ppb (1 part in 10 billion)
- Equivalent to one drop in an Olympic-sized swimming pool
- Not a health-based standard



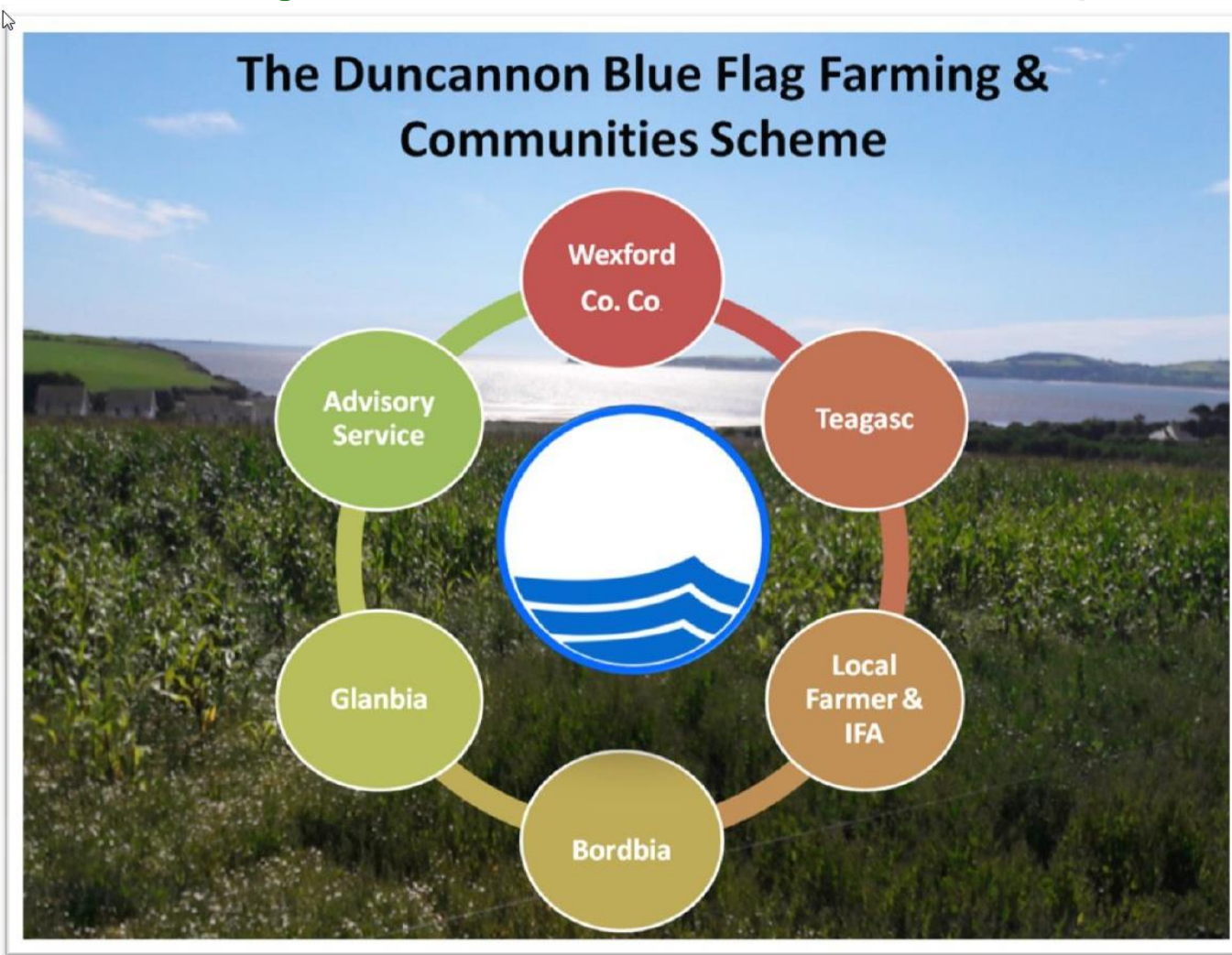
Where to from here ?



- 1. No more blame game**
- 2. We are all in this together**
- 3. We all are required to provide part of the solution**
- 4. The old way hasn't worked so we are looking for help and ideas as to how we can get both clean rivers and continue production on our farms.**
- 5. If anybody has ideas we would be very grateful if you can contact us**



Wex Co Co has submitted an European Innovation Partnership Project application aimed at agriculture



Our Operational Group



Geoff Barry
Redmond
Barry

Wexford Co. Co.

Eoin Kinsella
Gerry Forde
Brendan Cooney
Nicholas Rossitor

Agri
Advisory

Emma O'
Grady
Anne Browne
Pat Ryan

Glanbia

Eleanor
Murphy

Duncannon
Blue Flag
Scheme

BordBia

Teagasc

David Wall
Eddie Burgess
Kay O'Connell
Catherine
Colfer
Larry Murphy

Local
Farmer and
IFA

Jamesie
Wallace

Brendan Cooney, Environment Section, WCC.



Education/Engagement



- 2 'citizen science' courses in Duncannon for farming community (18 participants)
- Ken Whelan showed participants how to monitor the water quality of local streams
- Focused on SSCS – identifying & scoring the benthic invertebrates
- Huge interest and enthusiasm, particularly for their own farms





Thank You

