Waters of DBE

Graney Demonstration Catchment

Water Quality and Assessment Cormac Mc Conigley

5th October 2022



An Roinn Tithíochta, Rialtais Áitiúil agus Oidhreachta Department of Housing, Local Government and Heritage

Presentation Contents



- Introduction to Catchments
- The Graney Catchment
- Water Quality Measurements
- Water Quality in Graney Catchment
- Next Steps field work

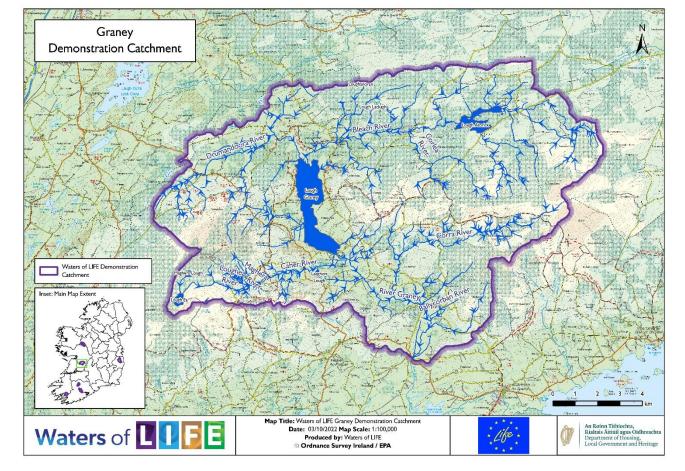


© Lough Atorick (Photo by: Aine Donnellan, LAWPRO)



Catchments



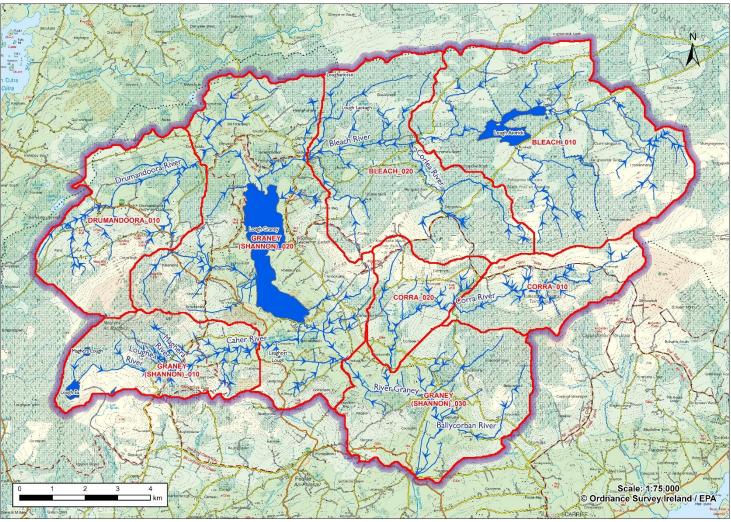


A catchment is a specific area of the landscape that collects rainfall and allows it to flow through rivers, lakes and groundwater to reach the sea.

The health of water within a catchment reflects both the natural attributes and the human activities occurring within that specific area.



Graney Demonstration Catchment





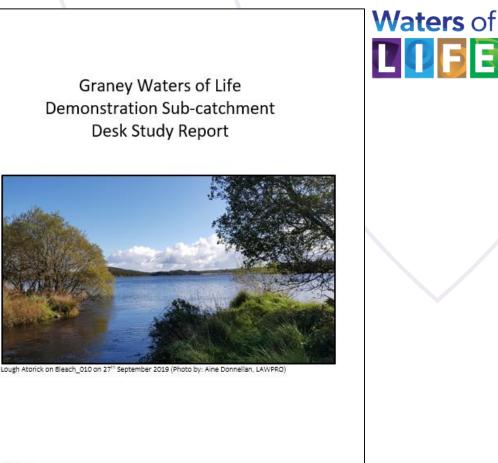
- Graney sub-catchment is 174km²
- It consists of eight river waterbodies:
 - Bleach_010
 - Graney (Shannon)_010
 - Graney (Shannon)_020
 - Drumandorra_010
 - Corra_010
 - Bleach_020
 - Corra_020, and
 - Graney (Shannon)_030
- And 2 Lakes
 - Lough Atorick, and
 - Lough Graney



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Desk Study

- Background
- Receptor information water quality data/ assessments -> conclusions on the issue affecting water quality
- Pressure EPA information, other assessments
- Pathways how pollutants move from land to the river



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Measuring Water Quality

The Biological Indicators (INV)







One out all out!!!!



Aquatic insects can be Indicators of Clean Rivers

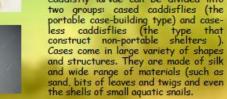


Mayfly nymphs have elongated bodies, large heads, well developed mouthparts and stout legs and three tails. Paired gills on the abdomen are the most characteristic feature to distinguish mayfly nymphs from other insects.

Stoneflies nymphs are strictly aquatic and occur under stones in every kind of unpolluted stream with an abundance of oxygen. They have six legs with hooked tips, antennae and two tails.

Caddisfly larvae have elongated bodies resembling caterpillars. They have hardened heads, a soft abdomen. Caddisfly larvae can be divided into





streams in Ireland.







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Blackfly larvae have elongated, wormlike bodies, with eyes and legs absent. The bodies are soft, naked, or covered with bristles or scales.

Baetis is a genus of Mayfly and the most common and most abundant genus of invertebrate found in riffled

Aquatic snails some shade of brown and rarely with any distinctive markings. Freshwater snails are mostly herbivorous, feeding on water plants or more commonly on the film of algae, which covers most submerged objects.

The large red Chironomus or

bloodworm are a useful indicator of a stream that is at serious risk.

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Water Quality in Graney



WB name	High status obj.	Ecological Status				Significant		
		2009	2012	2015	2018	Pressures	Critical Contraction of the Cont	
Bleech_010	No	U	G	Р	G	-		
Bleech_020	Yes	н	Н	М	G	Forestry		
Drumandorra_010	No	н	G	G	G	-		
Graney (Shannon)_010	No	G	G	G	G	-	Res CORRA 1020	
Graney (Shannon)_020	No	н	G	G	G			
Graney (Shannon)_030	Yes	н	Н	н	G	Forestry	Bier Graney	
Corra_010	No	U	Р	G	G		And the second sec	
Corra_020	Yes	н	н	н	н			

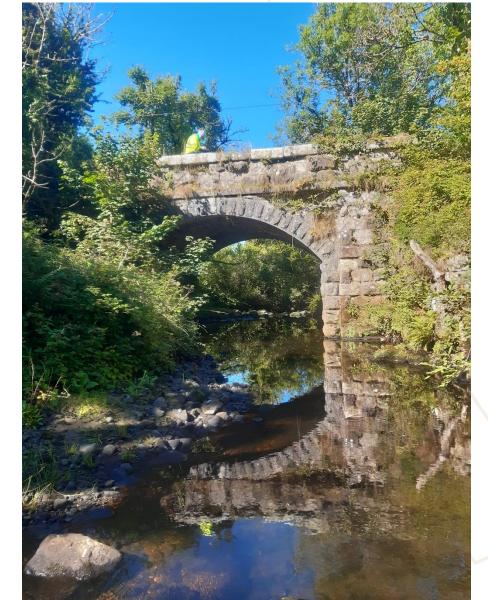


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Scale: 1:75,000 © Ordnance Survey Ireland / EPA

Immediate Next Steps

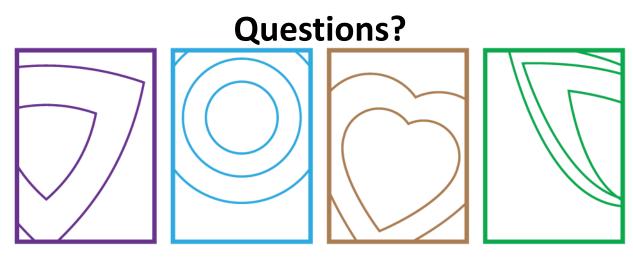
- You will see us in the catchment
- Assessment of the catchment
 - Commence October 2022
 - Identify all issue that may affect water quality
- Plan further detailed assessment
 - Catchment walks



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Thank you for listening



protect restore respect sustain

