

### **Avonmore Demonstration Catchment**

Water Quality and Assessment

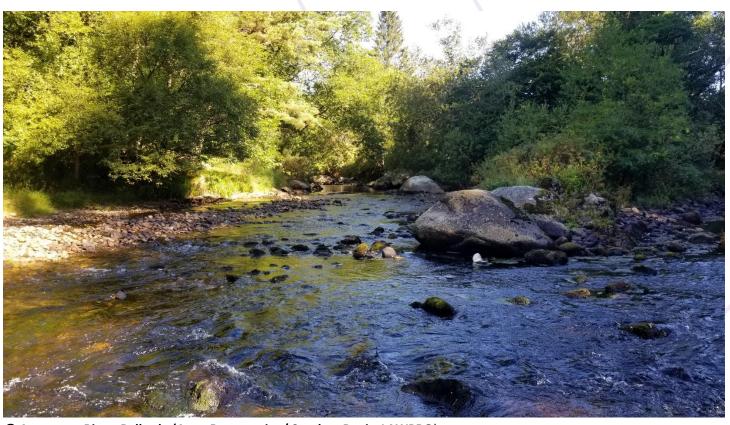




#### **Presentation Contents**



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



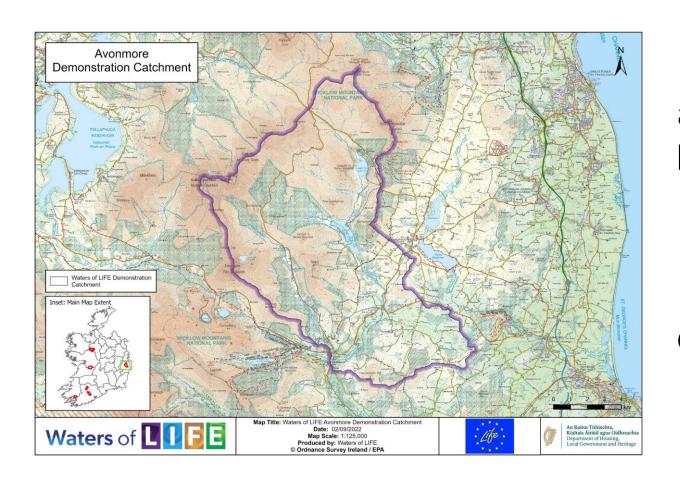
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#### **Catchments**





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.

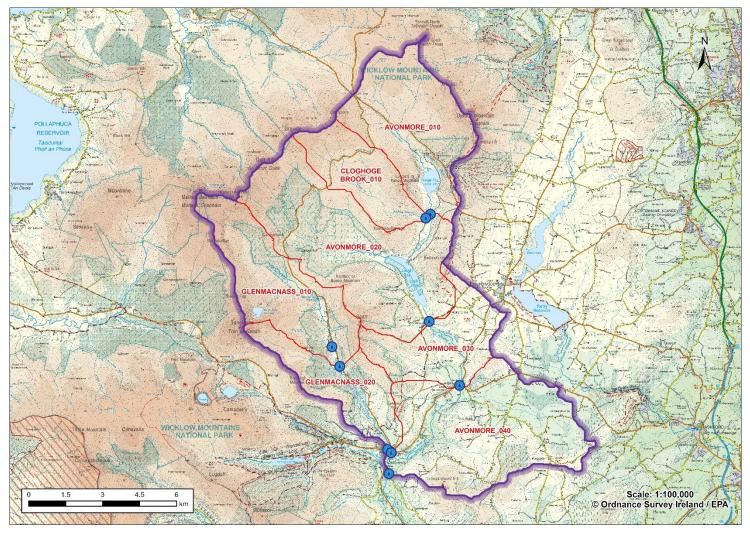
The health of water within a catchment reflects both the natural attributes and the human activities occurring within that specific area.





#### **Avonmore Demonstration Catchment**





- Avonmore\_SC\_010 sub-catchment is 141km<sup>2</sup>.
- It consists of seven river waterbodies:
  - Avonmore\_010,
  - Avonmore\_020,
  - Avonmore\_030,
  - Avonmore\_040,
  - Cloghoge Brook\_010,
  - Glenmacnass\_010,
  - Glenmacnass\_020;
- and three lake waterbodies:
  - Tay,
  - Dan,
  - Ouler





# **Desk Study**

Waters of

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



Waters of LIFE

Avonmore\_SC\_010\_Desktop Assessment

**Desk Study Report** 

June 2022

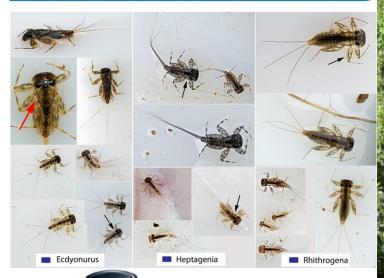






# Measuring Water Quality

#### The Biological Indicators (INV)







One out all out!!!!



# Aquatic insects can be Indicators of Clean Rivers

Clean River



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 two groups: cased caddisflies (the portable case-building type) and case-



Caddisfly larvae can be divided into two groups: cased caddisflies (the portable case-building type) and caseless caddisflies (the type that construct non-portable shelters). Cases come in large variety of shapes and structures. They are made of silk and wide range of materials (such as sand, bits of leaves and twigs and even the shells of small aquatic snails.



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



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



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.



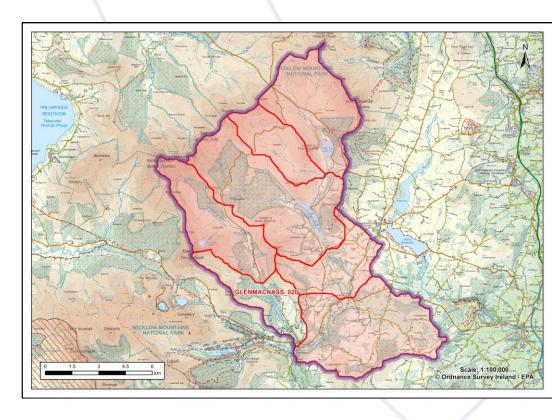
The large red Chironomus or bloodworm are a useful indicator of a stream that is at serious risk.

**Images curtesy of LAWPRO** 

# **Water Quality in Avonmore**



WB name	High status obj.	Ecological Status				B
		2009	2012	2015	2018	Pressure category
AVONMORE_010	Yes	Н	M	М	G	Atmospheric
						Agriculture
AVONMORE_020	Yes	Н	Н	G	G	Forestry
AVONMORE_030	No	G	G	G	G	No Pressure Impacts data available
AVONMORE_040	No	G	Н	G	Н	No Pressure Impacts data available
CLOGHOGE BROOK_010	No	M	M	M	M	Extractive Industry
GLENMACNASS_010	No	M	M	M	G	Forestry
GLENMACNASS_020	No	M	M	G	G	No Pressure Impacts data available







## **Immediate Next Steps**



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



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# Thank you for listening

