



SPECIAL EU PROGRAMMES BODY

Project Case Study: CatchmentCARE (Community Actions for Resilient Eco-systems) - Groundwater Monitoring Stations Update April 2021

THEME:

Environment

FUNDING (ERDF+MATCH):

€13,792,435.55

MATCH FUNDING:

Department of Agriculture, Environment and Rural Affairs;
The Department of Housing, Planning and Local Government, Ireland

LEAD PARTNER:

Donegal County Council

PROJECT PARTNERS:

Agri-Food & Biosciences Institute, Armagh, Banbridge and Craigavon Borough Council, British Geological Survey, Geological Survey of Ireland, Inland Fisheries Ireland, Ulster University Loughs Agency

Start Date: 01/10/2017

End Date: 31/10/2022

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Despite the impact of COVID-19, the CatchmentCARE project continues to make progress. Over the last few months, the Groundwater Team have completed some drilling for the groundwater monitoring stations, with further activity planned, including spring-flow monitoring and water quality analyses.

Derg Catchment Groundwater Monitoring Stations Completed

The first set of CatchmentCARE project Groundwater Monitoring Stations (GWMS) in Northern Ireland were successfully installed and completed. Three stations in the Derg Catchment, containing eight boreholes, were designed by staff from both the British Geological Survey (BGS) and Geological Survey Ireland (GSI) with supervision by Hydrogeologist, Paul Wilson, from the BGS and drilled by Dullea Drilling.

Each station has up to three boreholes, each targeting a different groundwater horizon. In the Derg Catchment, the ground is made up of very hard and old rocks that usually contain very little groundwater. However, during the drilling, this was not the case. One of the boreholes was drilled to 102 metres and is estimated to comfortably produce more than 10,000 litres of water per hour. Groundwater level and temperature loggers were installed immediately after the boreholes were completed. One of the boreholes has already had an innovative sampling system installed that is enabling a sampler working for the INTERREG VA, 'Source to Tap' project, to collect a sample of groundwater weekly to test for the herbicide component MCPA.

Finn Catchment Groundwater Monitoring Stations Installation

Adding to the first CatchmentCARE GWMS at St Columba's College in Stranorlar, Co. Donegal, two more GWMSs were successfully installed and completed in the upper Finn catchment. The boreholes were commissioned and designed by staff from the GSI and the BGS. GSI hydrogeologist, Taly Hunter Williams, managed the drilling with support at the rig-side from hydrogeologist Conor McCabe from CDM Smith. Dullea Drilling from Co. Donegal drilled the boreholes. Three boreholes of different depths (shallow, medium and deeper) were drilled near the top of a hill between two lakes. This GWMS will allow the team to understand the groundwater system at the top of a catchment. The second GWMS has two boreholes (shallower and deeper) and is sited at the side of Lough Finn. This will help the team to understand the relationship between groundwater and lake water levels and chemistry.