

Northern Ireland  
Environment Agency

## RIVER BLACKWATER

Local Management Area Information Leaflet



## **Information Leaflet - River Blackwater Local Management Area**

The River Basin Management Plans will be implemented through Local Management Areas (LMAs) during the 2010 to 2015 planning cycle. This information leaflet is one of a series, for each of the 26 LMAs, across the Neagh Bann, North Western and North Eastern Districts. The leaflet includes details of the characteristics and quality of the water environment within the area and specific local measures identified to improve the water environment.

The leaflet will inform work with stakeholders, through **Catchment Stakeholder Groups**, to develop focused implementation plans for each LMA in the Neagh Bann District. These LMA Plans will be implemented on a three-year rolling programme within the Neagh Bann District as set out below:

- Ballinderry and Lough Neagh in 2010;
- Blackwater, Lower Bann and Carlingford & Newry in 2011;
- Upper Bann, Moyola, Six Mile Water and Braid & Main in 2012.

### **Introduction**

River Blackwater LMA, part of the Neagh Bann River Basin District, drains into Lough Neagh at Maghery and covers an area of 1103 km<sup>2</sup>. The main river is the River Blackwater which rises in the west of the catchment near the towns of Clogher and Fivemiletown and flows westward to Lough Neagh. There are several significant tributaries of the River Blackwater, the Oona Water, Callan, Tall, Torrent and Tynan Rivers. The rivers support a wide diversity of natural habitats, several of which are protected. The western part of the catchment borders County Monaghan, which straddles Slieve Beagh. This is both an Area of Special Scientific Interest and a Special Protection Area. The river also supports a wide range of recreational activities including angling, walking and canoeing.

The main towns in River Blackwater LMA are Armagh and Dungannon with significant smaller towns of Augher, Clogher, Aughnacloy and Richhill. The main land use in the area is improved grassland, arable horticulture and acid grass.

**Key Facts**

**LMA area:** 1103 km<sup>2</sup>

**WFD water bodies:**

51 river water bodies  
9 groundwater bodies

**Main land use:**

Agriculture (dairy, sheep & arable)

**Key industries:**

Agriculture  
Tourism  
Fishing

**Main cities/towns and populations:**

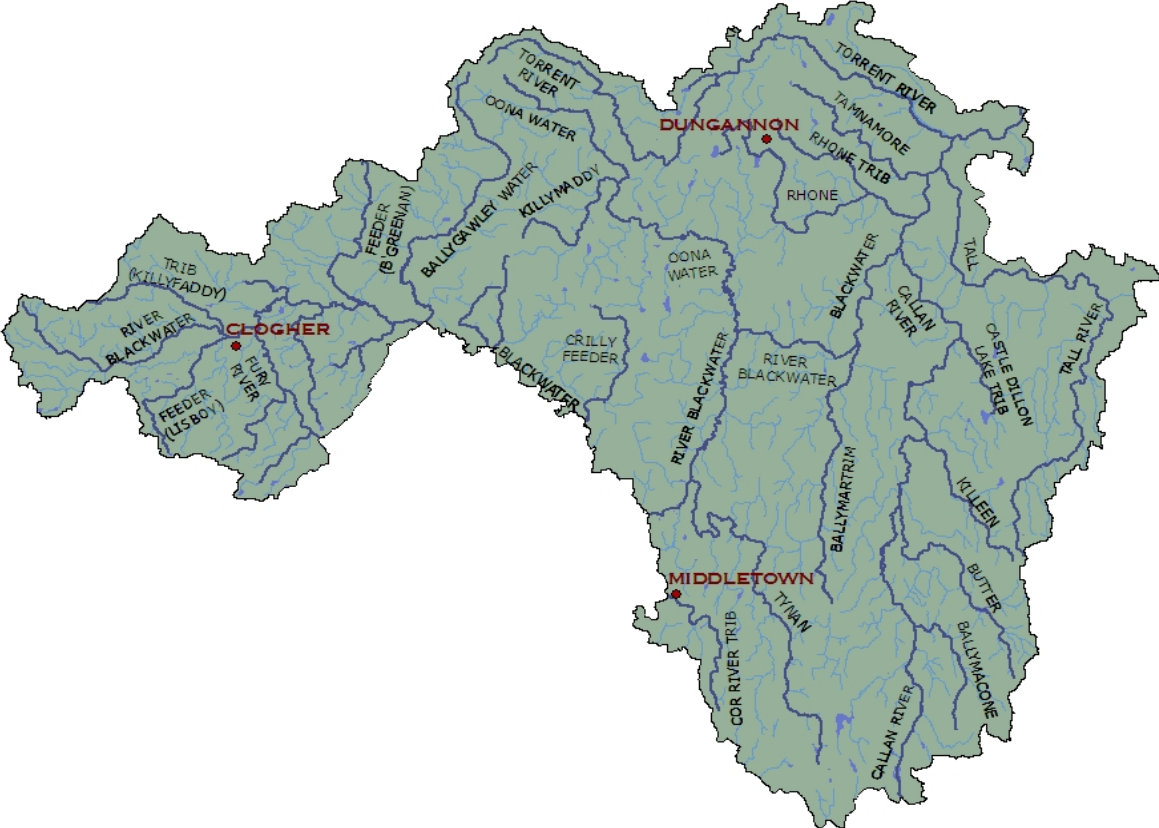
Armagh (14590\*)  
Dungannon (11139\*)  
Coalisland (4917\*)  
Keady (2960\*)  
Richhill (2818\*)  
Moy (1218\*)

\*Figures based on 2001 census.



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**River Blackwater LMA with main rivers identified**



## The quality of water bodies in River Blackwater LMA

Our understanding of the state of Northern Ireland's water environment and River Blackwater LMA has developed as we have adapted to the requirements of the Water Framework Directive. Now, when assessing water quality, we consider both ecological and chemical quality, as well as the pressures that can affect these factors.

Some water bodies have been changed to such a degree that they can no longer be restored to their original condition without compromising their current use. For example, some have been deepened to allow for navigation, others have flood defences or have been dammed to provide a source of drinking water. These are called Heavily Modified or Artificial water bodies and are required to meet Good Ecological Potential (GEP) rather than good status.

Five river water bodies in River Blackwater LMA are classified as heavily modified.

### What is the current status of surface waters in River Blackwater LMA?

88% of surface water bodies in River Blackwater LMA have been classified as less than good status. Many of the rivers failed to achieve good status due to low levels of dissolved oxygen and elevated levels of phosphorous. Invertebrates have been heavily impacted.

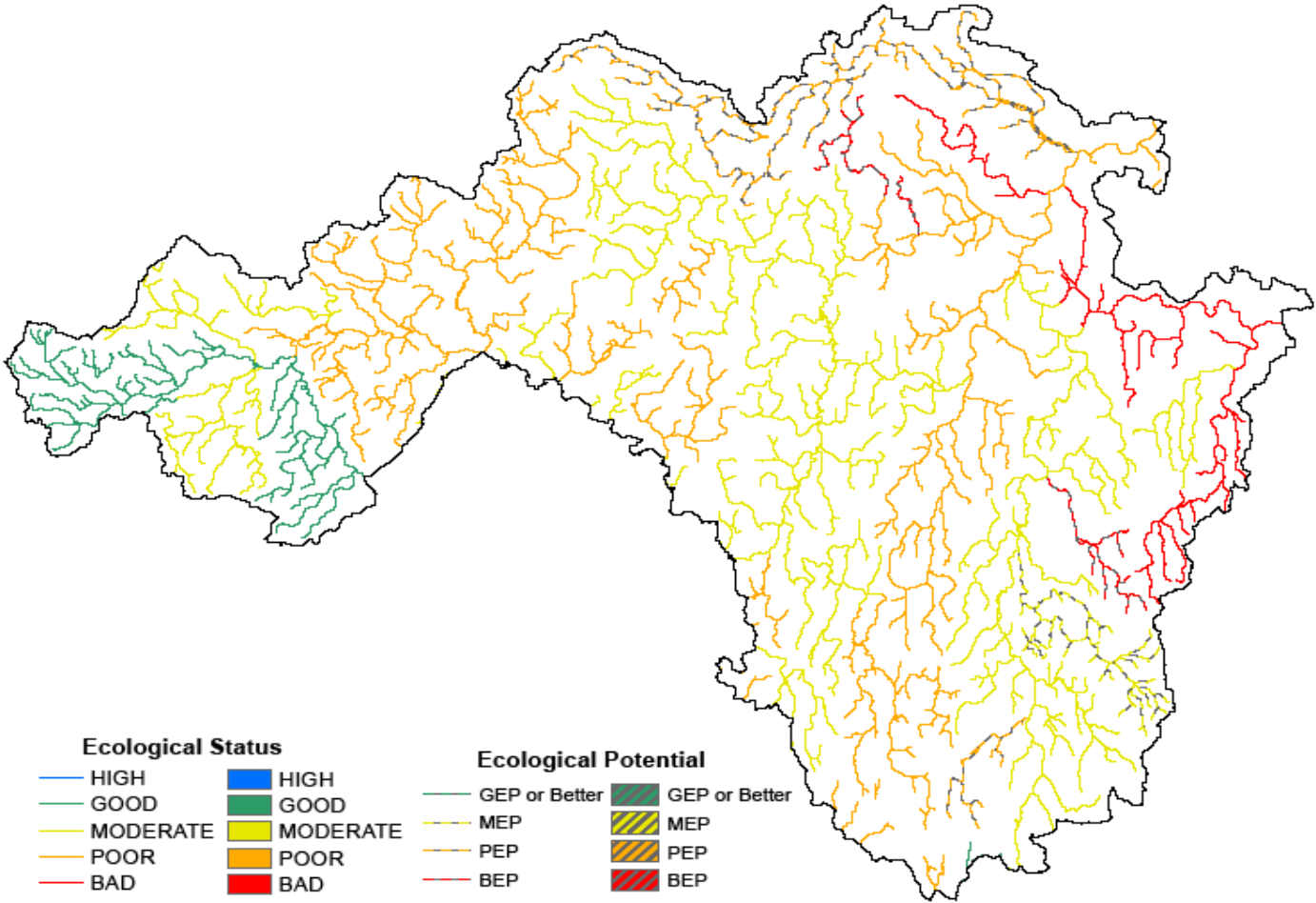
**Table 1: Status of surface waters in River Blackwater LMA**

Water body type	High	Good	Moderate	Poor	Bad	GEP	MEP	PEP	BEP
River	0	6	20	15	4	0	1	3	2
%	0	12	39	29	8	0	2	6	4
Lake	0	0	0	0	0	0	0	0	0
%	0	0	0	0	0	0	0	0	0
Transitional & Coastal	0	0	0	0	0	0	0	0	0
%	0	0	0	0	0	0	0	0	0
Total Surface Water	0	6	20	15	4	0	1	3	2
%	0	12	39	29	8	0	2	6	4

**Groundwaters** (underground water) interact with the surface waters around them, thus the quality and quantity of an area's groundwater can affect the surface waters.

There are 9 groundwater bodies which are wholly or partly within River Blackwater LMA. They are Aughnacloy, Tandragee, Keady, Monaghan town, Knockatallon, Louth, Neagh, Cookstown and Moygashel. All groundwater bodies in this LMA are achieving good status.

**Overall status of water bodies in River Blackwater LMA**



## Protected areas in River Blackwater LMA

The LMA supports important habitats and wildlife. These areas have been designated under European Directives and require special protection. The protected areas are summarised in the following table.

**Table 2: Protected areas in River Blackwater LMA**

Protected Area Type	Location
<a href="#">Waters used for the abstraction of drinking water (drinking water protected areas)</a>	There are 3 drinking water protected areas.
<p><a href="#">Areas designed to protect economically significant aquatic species</a></p> <p>Freshwater Fish Directive (78/659/EEC)</p> <p>Shellfish Waters Directive (79/923/EC)</p>	<p>There are 415 km of rivers (66 km designated Cyprinid, 349 km designated Salmonid) and 2.4 km of canal (designated Cyprinid) identified under the Freshwater Fish Directive.</p> <p>There are no designated shellfish waters.</p>
<p><a href="#">Bathing Waters</a></p> <p>These are bathing waters identified under the Bathing Waters Directives (76/160/EEC)</p>	There are no identified bathing waters.
<p><a href="#">Nutrient Sensitive Areas</a></p> <p>Areas designated as sensitive under the Urban Waste Water Treatment Directive (91/271/EEC) and the Nitrates Directive (91/676/EEC)</p>	<p>There is 1 Urban Waste Water Treatment Directive sensitive area; Lough Neagh.</p> <p>A total territory approach has been adopted in Northern Ireland for the Nitrates Directive.</p>
<p><a href="#">Areas designated for the protection of habitats or species (Natura 2000 sites)</a></p> <p>These are areas designated for the protection of habitats or species where the maintenance or improvement of the status of water is an important factor in their protection.</p> <p>Habitats Directive (92/43/EEC)</p> <p>Birds Directive (79/409/EEC)</p>	<p>There are 2 water dependent Special Area of Conservation; Peatlands Park and Slieve Beagh.</p> <p>There are 2 Special Protection Areas; Lough Neagh &amp; Lough Beg and Slieve Beagh and Mullaghafad-Lisnaskea.</p>

## Why are some waters not reaching good status?

There are a number of pressures that may prevent some waters reaching good quality. The main ones are considered to be:

- **Abstraction and flow regulation**
- **Diffuse and point source pollution**
- **Changes to morphology (physical habitat)**
- **Invasive alien species**

Five water bodies in the area were identified as being impacted by **abstraction and flow regulation**. Seaghan Reservoir is used for abstraction. Clay River has an impoundment. Killeen Water has been channelled for flood management. The Torrent River at Altmore has impoundments and the Torrent River at Coalisland Canal has been extensively straightened with bank reinforcements.

A number of the biological and chemical water quality elements used in classification can be affected by both **diffuse and point source pollution**.

**Table 3: Water bodies not reaching good status due to diffuse and point source pollution**

Classification element affected*	Number of water bodies showing impacts
	River
Macrophytes	18
Diatoms	6
Phytoplankton	N/A
Macroalgae	N/A
Angiosperms	N/A
Invertebrates	33
Fish	4
DIN	N/A
Phosphorous	8
Dissolved Oxygen	16
Specific Pollutants / Priority Substances	6

\*More than one element may be affected in each individual water body.

In this LMA the main impact was observed in invertebrate suppression. The rivers affected were: Rhone, Callan, Oona, Blackwater, Curlagh, Ballymortrim, Butter, Clay, Drumard, Cor, Tall, Killeen, Ballymacone, Torrent, Ballygawley and Knockmany Burn.

Twelve river water bodies were identified as being affected by **changes to morphology (physical habitat)**. The main rivers affected were: Callan, Oona, Ballymortrim, Blackwater, Cor, Tall, Ballymacone, Ballygawley and Fury.

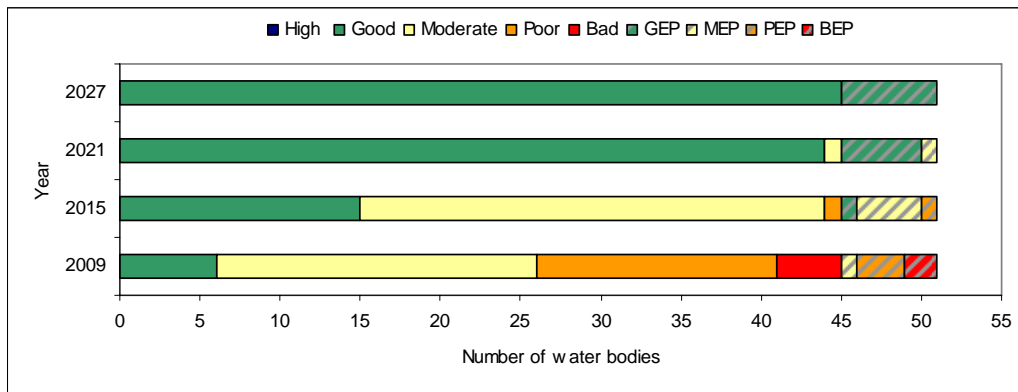
The water environment in Northern Ireland has been impacted by the introduction of invasive alien species. Some species which have already become established in this LMA include:

- Giant Hogweed (*Heracleum mantegazzianum*)
- Himalayan Balsam (*Impatiens glandulifera*)
- Japanese Knotweed (*Fallopia japonica*)

### What improvements do we plan to achieve?

We have set environmental objectives to deliver improvements as shown below. We aim to achieve good status or better in 31% of our surface waters and maintain good status in 100% of our groundwaters.

#### Current status and proposed objectives for surface waters in River Blackwater LMA



## How are we going to maintain and improve the water environment in River Blackwater LMA?

There are a number of measures which will be implemented in River Blackwater LMA in order to maintain and improve the water environment.

The programme of measures described in the Neagh Bann River Basin Management Plan has been categorised into two types of measures: **existing and planned** and **supplementary**. Existing and planned measures aim to ensure that existing water uses are appropriately managed and that the water environment remains at good status.

**Existing and planned measures** include those which have been put in place to meet legal requirements. Those which apply in this LMA include:

- The Birds Directive (79/409/EEC);
- The Drinking Water Directive (80/778/EEC) as amended by Directive (98/83/EC);
- The Major Accidents Directive (96/82/EC);
- The Environmental Impact Assessment Directive (85/337/EEC);
- The Urban Waste-water Treatment Directive (91/271/EEC);
- The Plant Protection Products Directive (91/414/EEC);
- The Nitrates Directive (91/676/EEC);
- The Habitats Directive (92/43/EEC); and
- The Integrated Pollution Prevention Control Directive (96/61/EC).

A number of **other existing and planned measures** apply in this LMA:

- Cost recovery for water use and promotion of efficient and sustainable water use;
- Protection of drinking water sources;
- Abstraction and impoundment control;
- Point source and diffuse source discharge control;
- Controls on physical modifications to surface waters;
- Prevention or reduction of the impact of accidental pollution incidents;
- Authorisation of discharges to groundwater;
- Priority substances control;
- Controls on other activities impacting on water status; and
- Controls to avoid increase in pollution of marine waters.

Further information on existing and planned measures for each sector is available on the **programme of measures** section of the website.

The following measures are in place to manage the problems with alien species:

- Rivers Agency Management protocols (Giant Hogweed, Himalayan Balsam and Japanese Knotweed)
- NIEA/National Parks and Wildlife Service best practice management guidance for Japanese Knotweed, Giant Hogweed and the Himalayan Balsam.

[www.ni-environment.gov.uk/wfd](http://www.ni-environment.gov.uk/wfd)

- A number of codes of practice, educational and awareness leaflets have been prepared and are available to download from [www.invasivespeciesireland.com](http://www.invasivespeciesireland.com)

## What measures are agreed for water dependent Natura 2000 sites in unfavourable condition?

**Special Areas of Conservation** (Habitats Directive) and **Special Protection Areas** (Birds Directive) are assessed as being in favourable or unfavourable condition. These areas have been examined to determine if **water dependent features** are present.

There are no specific measures for Slieve Beagh Special Area of Conservation as there are no water related adverse activities causing this condition assessment of the water dependent features. The Peatlands Park Special Area of Conservation has water dependent features which are in unfavourable condition.

**Table 4: Measures for water dependent features of Special Areas of Conservation**

Name	Current condition assessment of water dependent features	Measures in place
Peatlands Park	Active raised bogs unfavourable due to invasive species (including bracken or scrub) and burning	Ongoing invasive management  Investigation ongoing
	Degraded raised bogs still capable of natural regeneration. Unfavourable due to invasive species (including bracken or scrub) and also water management (including drainage, dredging or alterations to the water table. Could be too much water or too little) Unfavourable: Un-classified Invasive species (including bracken or scrub)	Investigation ongoing

The Special Protection Area of Lough Neagh and Lough Beg is in unfavourable condition. Unfavourable Special Protection Areas require investigation to identify external and internal factors. The issues affecting this Special Protection Area are unclear. There may be changes in migratory patterns, disturbance to high tide roost sites, water quality and/or ecological factors. The condition of all the features of Slieve Beagh and Mullaghfad-Lisnaskea Special Protection Area have not yet been assessed. Further details on Special Areas of Conservation and Special Protection Areas in the River Blackwater LMA are available in the **protected areas** section of the website.

**Supplementary measures** required to achieve environmental objectives for rivers, lakes, transitional and coastal water bodies have been identified for a number of sectors and pressures in this LMA. Supplementary measures will be applied during the implementation phase of the River Basin Management Plans subject to necessary funding and tests to justify technical feasibility and cost effectiveness.

**Table 5: <sup>1</sup>Supplementary measures in River Blackwater LMA**

Key sectors	Supplementary measures	Additional information
Agriculture	Target education, advice and regulatory action	See Table 3 for number of water bodies where invertebrates are less than good.
Collection & treatment of sewage	Assess significance of septic tanks and take action accordingly	See Table 3 for number of water bodies where invertebrates are less than good.
	Upgrade WWTWs under the Rural Wastewater Investment Programme	<sup>2</sup> Drumman Hill and Farmacaffley to be completed by 2010
	Upgrade WWTWs with a population equivalent greater than 250	<sup>3</sup> Coalisland upgrade under PC10
	Upgrade sewer network	<sup>3</sup> Upgrades to Armagh sewer network under PC10.
Industry & other business	Improve compliance with discharge consents	There are 28 non compliant discharges based on 2008 compliance data
Agriculture Collection & treatment of sewage Industry & other business	Assess point source phosphorus loads	See Table 3 for number of water bodies where SRP, diatoms or macrophytes are less than good.
	Target further phosphorus controls from point sources	
	Assess diffuse nutrient loads using mathematical modelling	
	Target further phosphorus controls from diffuse sources	
Pressures	Supplementary measures	Additional Information
Specific & priority substances	Develop and implement Pollution Reduction Programmes	See Table 3 for number of water bodies impacted by specific pollutants/priority substances
Abstraction & Flow Regulation Morphology	Develop mitigation measures identified for hydromorphology pressures	There are 6 HMWBs at <GEP and 12 water bodies are affected by changes to morphology
Pressure unknown	Need for further Investigation	There is 1 water body that fails due to zinc. There are 12 water bodies where confidence in class is low
Invasive alien species	Deliver education and awareness campaigns Eradicate alien species, where possible	

<sup>1</sup> Strategic Environmental Assessment has considered the impacts associated with the suite of supplementary measures proposed. Where impacts were identified, mitigation measures were proposed and are detailed in the SEA Mitigation Measures document which is available on the website.

<sup>2</sup> The dates/works upgrades may be subject to change

<sup>3</sup> PC10 upgrades cover the period April 2010 – March 2013

Responses from the draft River Basin Management Plan consultation were used to identify the measures below:

- promote efficient use of water;
- introduce seasonal discharge consents, where possible, to promote installation of reed beds and constructed wetlands for sewage treatment;
- improve septic tank maintenance, installation and design;
- review and investigate the effectiveness of wetlands in the reduction of nutrient loadings;
- facilitate River Trusts across Northern Ireland.

The improvements in water quality proposed above will be delivered through a programme of measures coordinated by the Department of the Environment. Some of these measures are already being applied in River Blackwater LMA.

**Local measures** are also being applied in this LMA. There are a number of projects and initiatives run, for example, by local communities, angling groups and voluntary environmental organisations that will contribute to achieving the objectives we have set for our waters. Some of those happening in River Blackwater LMA are shown below.

#### **National Trust Projects**

- The National Trust has local measures against point and diffuse pollution through their Environmental Compliance Audit of all National Trust owned sites. Emergency remedial action has been or is being completed on possible diffuse and point pollution sources. A code of practice has also been issued for sites with septic tanks. This specifically relates to properties at Address House and The Argory.
- Ongoing advice to farm tenants on resource management, waste control and environmental performance. Encouraging tenants to adhere to best practice for pollution control. This specifically relates to all land holdings around Address House and The Argory.
- Control of invasive species on National Trust land. Participation in invasive species control forums and provide advice on good practice in invasive species control. Ongoing at The Argory.
- Audit of water use at all National Trust sites to establish a baseline then set targets for reduction and introduce water efficiency measures. Ongoing at Address House and The Argory.
- Site specific projects to improve fish habitats and access for salmonids, main pressure is fishing. Ongoing projects for Address House and The Argory.
- Site specific projects to improve river corridor habitats and create new wetlands and habitats. Ongoing project at Address House.
- Promoting the importance of water and its efficient use to our supporters through information, campaigns and events. Planned for The Argory.

[www.ni-environment.gov.uk/wfd](http://www.ni-environment.gov.uk/wfd)

**The Blackwater Issue Log** is a catchment investigation by NIEA Regional Operations into reported point and diffuse pollution sources highlighted by Clogher Anglers. A number of point source pollution problems have been identified which has led to action being taken to remedy the situation and cease the discharge. The relevant authorities in the Republic of Ireland have also been involved in supporting this initiative in the River Blackwater.

### **Protect and Preserve Ballysaggart Lough**

Ballysaggart Environmental Group co-ordinate environmental awareness to protect the biodiversity and address pollution issues in Ballysaggart Lough.

If you are running a project or carrying out work that will assist in protecting the water environment or water dependant features, or restoring natural waters then we would encourage you to let us know.

Contact details for your **Catchment Stakeholder Group** are available on the **public participation** section of the website.

Our aim is to protect, conserve and promote the natural environment and built heritage for the benefit of present and future generations.

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