

Northern Ireland  
Environment Agency

River Basin Management Plans (2015 - 2021)

# Programme of Measures

**Key Sectors:** Abstraction and Flow Regulation

**Pressure Type:** Water Quantity and Flow

*Pressure Type – Water Quantity and Flow*

## **Abstraction and Flow Regulation**

Abstraction is the removal of water, permanently or temporarily, from the water environment. Water is abstracted to meet a wide range of uses in Northern Ireland, including provision of water for public drinking water supply, industrial use, use in the food and drink industry, hydropower generation, agricultural and agri-industry use, recreational use and for use in fisheries.

### **Why is this a significant issue?**

The effect abstraction has on the environment depends on the amount and timing of the abstraction and the location and amount of water that may be returned after it has been used. Taking too much water from rivers and groundwater may result in lower flows and reduced water levels, which may not support a healthy ecology, affect wildlife and the look of a river, as well as impacting on other water users.

There are a number of reservoirs in Northern Ireland which impound water used for drinking water supply. Structures like this can impact rivers downstream by reducing or altering sediment movement and flows, or by preventing fish movement.

Where hydro power schemes are not designed or managed appropriately, adverse impacts on the local environment, and in particular, fish populations and other aspects of river ecology can occur. Fish can be harmed if they pass through a turbine and some hydropower schemes can lead to reduced flows in rivers, increase flood risk or adversely affect land drainage.

### **What are we already doing about this?**

In 2006, the Water Abstraction and Impoundment (Licensing) Regulations were introduced to secure efficient and sustainable water use.

Since 2010, Northern Ireland Water have produced and reviewed Drinking Water Safety Plans for Drinking Water Protected Areas which assess and mitigate against risks to drinking water quality. Similar regulatory assessments are also in place for private water supplies since 2009.

Water levels are managed by NIEA through controls on the quantity of water abstracted and the management of dams. Northern Ireland Water has developed targets to control water supply leakage levels, and its Water Resource Management Plan (2010-2035) promotes efficient water use by the industry and agriculture sectors through charging incentives. Further water efficiency measures have been developed to manage water demand through the Water Efficiency Plan. NIEA also controls abstractions from groundwater.

When assessing the potential impact of hydro power proposals, either in isolation or in combination, NIEA consults widely with the government bodies responsible for protecting fish, fish habitats and fish migration. Non governmental bodies that represent anglers and

angling clubs are also consulted. Data held on fish monitoring, fish passage, fishery and protected species habitat is assessed during determinations. If an activity or a combination of activities like hydro power plants were impacting, or were likely to impact adversely in the future, then NIEA and other government Agencies have powers to request further mitigation measures or take steps to revoke the licence.

For a full list of measures already in place in the first cycle please see our website.

### **What further actions will deliver environmental improvements?**

#### **RBMP 1 (2009-2015)**

Table 1 summarises the progress we have made against the existing and planned measures.

#### **RBMP 2 (2015-2021)**

The new measures which we will take forward in the second cycle are summarised in Table 2.

These are measures which will improve our understanding of the pressures, enable us to improve the evidence base to target actions, and build on actions already complete.

In the current economic climate there is no certainty at this stage around future funding and budgets that will be available throughout the lifetime of this plan. However DOE will in collaboration with other departments and agencies continue to make a strong case for additional funding through the standard government bidding processes.

**Key Sectors: Water supply, industry, agriculture, hydropower and flood control**

**Pressure Type:** Abstraction and flow regulation

**Table 1 Summary of existing and planned measures 2009-2015**

<b>Improvement Required</b>	<b>Actions</b>	<b>Delivery mechanism</b>	<b>Lead Department / Agency</b>	<b>Support Provider</b>	<b>Deadline for delivery of action (year end)</b>
<b>Improve flows in rivers and levels in lakes</b>	Reduce leakage rates	Leakage reduction targets to be reviewed through the Price Control process	NIW	DRD / Northern Ireland Authority for Utility Regulation (NIAUR)	In Place
	Monitor actual abstraction and compensation flows	Water Abstraction and Impoundment (Licensing) Regulations (NI) 2006	NIEA	NIW , DRD	In Place/ Ongoing
	Develop biological tools to assess the ecological impacts of changes in hydrology	Research and development	NIEA		Complete
	Monitor pressures and impacts and incorporate the newly developed biological monitoring tools	Northern Ireland’s Aquatic Monitoring Programme	NIEA		In Place
	Develop our understanding of the relationship between groundwater and surface waters	Research and development	NIEA	NIW , DRD	In Place
	Targeted assessment of water resource availability to set management priorities	Research and development	NIEA	NIW , DRD	In Place

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Improvement Required	Actions	Delivery mechanism	Lead Department / Agency	Support Provider	Deadline for delivery of action (year end)
<b>Protect drinking water sources and provide safe drinking water</b>	Enforce compliance. Complete catchment and treatment risk assessments for all water supply systems.	Development of Drinking Water Safety Plans	NIW	DRD	In Place
<b>Promote sustainable development of public water supply</b>	Provide for additional demand whilst minimising environmental harm	NI Water Resource Strategy 2002-2030 Water Resource Plan Drought management plan Education and awareness campaigns	NIW	NIEA , DRD	2002-2030
<b>Allow fish migration</b>	Construction of fish passes where weirs are built or reinstated	Fisheries Act (Northern Ireland) 1966 Foyle and Carlingford (N Ireland) Fisheries Order (2007)	DCAL, Rivers Agency, Loughs Agency		In Place
	Develop tool for assessing the extent to which barriers impede migration of a wide range of species	SNIFFER steering group	NIEA, Loughs Agency	DCAL	Complete

**Table 2 Summary of supplementary measures for 2015 to 2021.**

Improvement Required	Actions	Delivery mechanism	Lead Department / Agency	Support Provider	Deadline for delivery of action (year end)
<b>Improve flows in rivers and levels in lakes</b>	DRD Water Policy to prepare a Long- Term Water Strategy for Northern Ireland	Publish Long-Term Water Strategy for Northern Ireland	DRD Water Policy		2015
	Northern Ireland Water (NIW) to prepare a Water Resource and Supply Resilience Plan by 2017	NIW Water Resource and Supply Resilience Plan	NIW		2017
	Implement a programme of water resource assessments and multi-disciplinary studies to provide evidence to inform abstraction and impoundment licence reviews	Programme of investigations	NIEA		2020
	Increase awareness of importance of water efficiency and saving	Joint stakeholder events and meetings	NIW	NIEA	2021
	Use burst water mains records to identify 'hotspots' and use to prioritise mains replacement to help reduce wastage in water supply	PC15 programme of Water Mains Rehabilitation	NIW		2021
	Implement catchment level assessments to inform NIW AIL licence reviews and monitoring requirements.	Project initiated in March 2014.	NIEA	NIW	2021
	Consider whether groundwater licences can be issued as annual licences rather than the daily maximum volumes. This would reduce requirements for licence increase in some areas.	Regulatory Position Paper	NIEA		In Place

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Improvement Required	Actions	Delivery mechanism	Lead Department / Agency	Support Provider	Deadline for delivery of action (year end)
<b>Improve flows in rivers and levels in lakes</b>	As part of implementation of the floods directive, develop and implement Natural water retention measures and sustainable flood management options including role of bogs and wetlands.	As part of flood risk management plans. Tranche 1 by 2021: tranche 2 by 2027	DARD RA	NIEA WMU/ NED	2021
<b>Protect drinking water sources and provide safe drinking water</b>	Provide details of private drinking water supplies >10 cubic meters to inform WMU and GW designation and monitoring of DWPA's	Through establishing a biannual information return	DWI		Ongoing
	NIEA teams to have a reciprocal arrangement for transferring information to DWI on risks which could affect private water supplies either through monitoring programme or pollution incidents	Electronic transfer of data	NIEA	DWI	2021
<b>Protection of fisheries and allow fish migration</b>	Draft a guidance document for small scale hydro power scheme applicants to include advice on fish/lamprey passage	Hydro power scheme interdepartmental working group	NIEA/ DCAL/ Loughs Agency (LA)		2016
	Co-ordination between DCAL and NIEA on the regulation of hydro power schemes, including pilot studies to examine the impact of hydro power schemes on fish stocks	Hydro power scheme interdepartmental working group	NIEA/ DCAL/ LA		2016
	Clarify roles and responsibilities around fisheries and Abstraction and Impoundment Licensing legislation and enforcement	Hydro power scheme interdepartmental working group	NIEA/ DCAL/ LA		2016
	Adopt a consistent UK methodology for assessing the passability of obstacles to fish migration and use the protocol at abstraction points to inform licence conditions and to inform the decision making process on weir design.	AIL Licensing process	NIEA	DCAL/ LA	Ongoing

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Improvement Required	Actions	Delivery mechanism	Lead Department / Agency	Support Provider	Deadline for delivery of action (year end)
<b>Protection of fisheries and allow fish migration</b>	Integration of fuller ecological considerations into hydro power scheme licensing	Ongoing research and networking and capturing best practice from the other fishery bodies and regulators within the UK. DCAL are initiating an inspection programme of fish screens and fish passes for both the adult and smolt runs	DCAL/ AFBI/ NIEA		Ongoing
	Research into recovery times for groundwater bodies to achieve good chemical status/ travel times through the unsaturated zones	Research community	Research community e.g Queens University (QU), University of Ulster (UU), Trinity College Dublin (TCD)		2021
	Consider Common Implementation Strategy (CIS) guidance on Ecological Flows during the next review of UKTAG Environmental Flow Standards	UKTAG Water Resources Task Team	UKTAG Members		2021
	Develop a programme of Reservoir surveys to assess the impact of impoundments on the aquatic environment	Surveys to be completed by NIW	NIW	NIEA	2021





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