

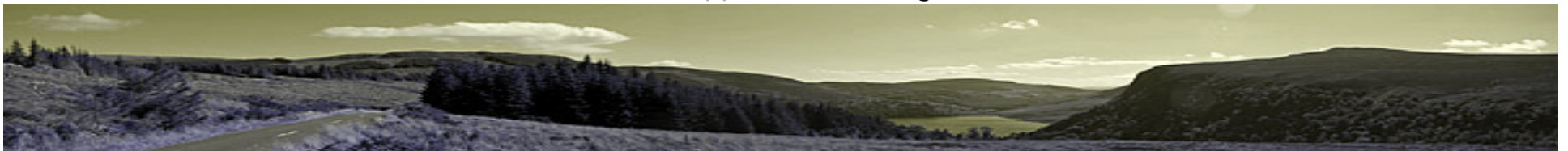
eastern  
river basin district

# Draft Programme of Measures

## *Deel WMU*

- 
1. Water Framework Directive
  2. Overview of Water Management Unit
  3. Status of Water
  4. Objectives
  5. Protected Areas
  6. What are the Problems to address?
  7. Programme of Measures
  8. Alternative Objectives
  9. What happens next?
  10. What can you do?

Appendix 1-4 Programme of Measures



# Document Control Sheet

<b>Project</b>	Eastern River Basin District			
<b>Report</b>	Draft - Deel - River and Lake Programme of Measures - for download			
<b>Date</b>	December 2008			
<b>Project No:</b> 39325		<b>Document Reference:</b> 39325/ERBD40/DG134 - S		
<b>Version</b>	<b>Author</b>	<b>Reviewed</b>	<b>Checked</b>	<b>Date</b>
Draft 1	AOC/AC	AGH	AOC	DEC 2008



# Water Framework Directive

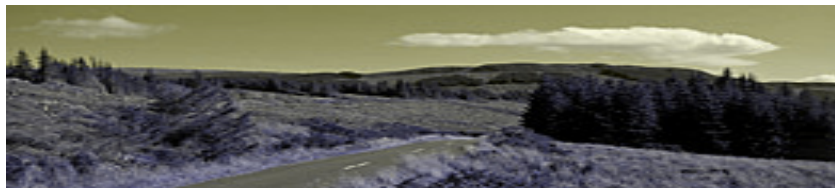
- ❑ The Draft River Basin Management Plan was published on the 22<sup>nd</sup> December 2008 for Public Consultation.
- ❑ This Programme of Measures accompanies the River Basin Management Plan created for the Eastern River Basin District.
- ❑ The River Basin Management Plan can be downloaded from the website, whilst more detail of the Programme of Measures is contained in the River Basin Management System which can be accessed through your Local Authority.
- ❑ The River Basin Management System is a web-based tool that assists Local Authorities to store information about the condition of their waters and the Programme of Measures for their improvement.
- ❑ For more information please visit [www.erbd.ie](http://www.erbd.ie)



# Overview of Water Management Unit

































## Geography

- ❑ Local Authorities: 87% Westmeath, 13% Meath
- ❑ River Length: 76 km
- ❑ Lakes (6): Annagh (White) Lough, Lough Ben, Lough Bane, Lough Doo, Lough Glass, Lough Lene
- ❑ Total Lake Area: 6 km<sup>2</sup>
- ❑ HMWB and AWB: Royal Canal Main Line
- ❑ Land use: Predominantly land-use is for agriculture
  - 79% other Agricultural Land
  - 5% Arable
  - urban populations cover 1% of the area for example at Mullingar



# Risk Assessment Legend

See [www.erbd.ie](http://www.erbd.ie) for more information on Article 5 Risk Assessment

Risk	Symbol with Level of Risk	Risk	Symbol with Level of Risk
Abstraction			
CSO	 1a  1b  2a  2b	WWTPs	 1a  1b  2a  2b
Hydrometric Station	 ACTIVE  INACTIVE  OBSOLETE	WTPs	 2a
IPC Facilities	 1a  1b  2a  2b	Landfills	 1b  2a  2b
IPC Rivers	 1a  1b  2a  2b	Mines	 1a  1b  2a
Section 4	 1a  1b  2a  2b	Quarries	 2a
		Based on Article 5 Risk Assessment: <b>1a</b> : At risk, <b>1b</b> : Probably at risk, <b>2a</b> : Probably not at risk, <b>2b</b> : Not at risk	

# Status of Water

The existing condition of our waters was determined by the Environmental Protection Agency using water quality, ecology and morphology monitoring data.

River Status:

<b>Moderate</b>	100%
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Lake Status:

<b>High</b>	17%
<b>Good</b>	50%
<b>Moderate</b>	33%



*The percentage status is determined by the number of reportable segments or sub basins. For this reason the percentage might not seem representative.*

# Objectives

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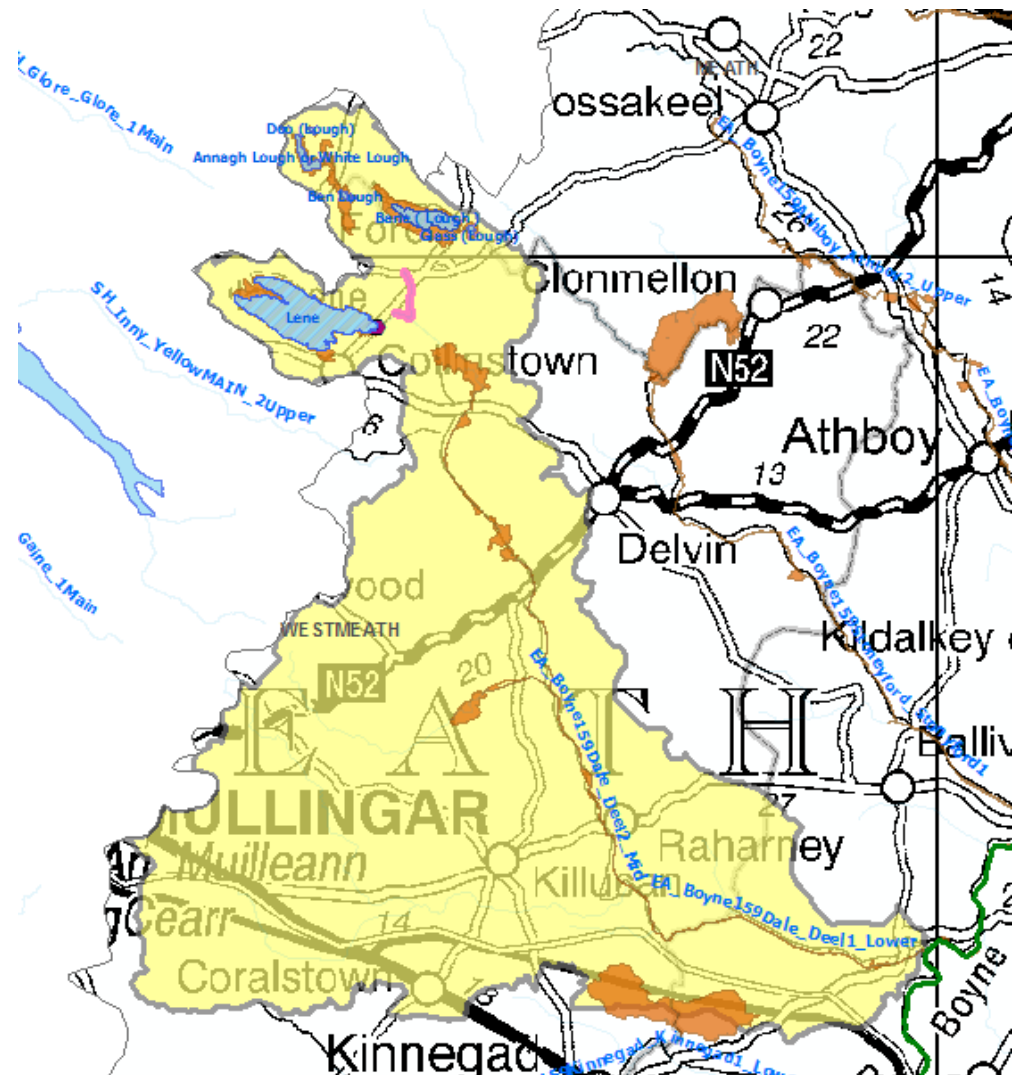
- ❑ Waters must be of satisfactory quality and sufficient quantity to protect the aquatic environment and its beneficial uses.
- ❑ We have four core objectives:
  1. Prevent deterioration and in particular maintain High or Good Status
  2. Improve waters to achieve Good Status where appropriate
  3. Progressively reduce chemical pollution
  4. Achieve our protected area objectives










# Protected Areas








- Some areas require greater protection because they contain rare and vulnerable habitats or wildlife. Other protected areas are sensitive because of their beneficial use for humans, such as drinking water sources or shellfish areas.

Drinking Water (2)	✓	River Deel (2 sections)
Special Areas of Conservation (Habitat) (9)	✓	White Lough, Ben Loughs, Lough Doo, Lough Bane, Lough Glass, River Boyne, River Blackwater, Mount Hevey Bog, Lough Lene
Recreational Water (1)	✓	Lough Lene
Salmonid Water (1)	✓	River Boyne
Register Protected Areas, Water Dependant Habitat (1)	✓	River Boyne
National Heritage Areas	✓	White Lough, Ben Loughs And Lough Doo, Lough Naneagh, Royal Canal, Mount Hevey Bog, Molerick Bog, Wooddown Bog



# Protected Areas Legend

Type of Protected area	Symbol
Drinking water – Monitoring point	
Drinking Water – Rivers	
Drinking Water - Groundwater	
Drinking Water – Surface water	
Nutrient Sensitive rivers	
Nutrient Sensitive Areas	
National Heritage Areas	

Type of Protected area	Symbol
Special Protected Areas	
Special Areas of Conservation	
Beaches	
Recreational lakes	
Salmonid Waters	
Register protected Areas – Water Dependant Habitats	
Shellfish	

# What are the problems to address?

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In the Eastern River Basin District an online management system allows local authorities to store, assess and make Programmes of Measures on all the information emerging relating to the Water Framework Directive.

The first step is to identify any issues that might prevent us from reaching the ultimate target of 'Good Status' (please see plan for a full definition of 'Good Status').

## **In Deel the problems are:**

- Low Ecological Rating
- Over abstraction Risk from Loughs Lene and Bane
- Dredging

# What could be causing these problems?

Pressure	County	% Contribution
Agriculture	Westmeath	90
	Meath	70
Usage and Discharge of Dangerous Substances	Meath	1
Wastewater and Industrial Discharges	Westmeath	1
	Meath	10
Wastewater From Unsewered Properties	Westmeath	5
	Meath	15
Abstraction	Westmeath	At Risk
	Meath	At Risk
Morphology	Westmeath	At Risk
	Meath	At Risk

- ❑ Upper reaches of the catchment contains the 5 lakes grouped. The Deel river then flows from the lakes in Westmeath to Meath.
- ❑ In Westmeath the principal pressure identified is Agriculture.
- ❑ In Meath Agriculture is also identified as the principal pressure followed by septic tanks.
- ❑ The Deel has been found to be at risk from over abstraction. Measures must be implemented to prevent over abstraction.

# Programme of Measures

- Having assessed the current condition of our waters, the extent of areas to protect, and the risks and pressures affecting our waters we can now determine the measures needed to bring them all back to good status.
- We must aim to achieve full implementation of all basic measures before 2015. If the implementation of all Basic Measures before 2015 will not get us to Good Status then we must necessarily select Supplementary Measures.

<i>Basic Measures</i>	Measures required by law
<i>Supplementary Measures</i>	Non-statutory measures deemed necessary

- The following pages detail the proposed Programme of Measures. We have also proposed an Alternative Programme of Measures that, in light of the large amount of measures to be taken, prioritises certain measures for the first cycle of the plan (2010 – 2015).
- ***Please see the Appendix for the full list of basic and supplementary measures selected in both the Proposed and Alternative Programme of Measures.***

# Proposed Programme of Measures

*This proposed Programme of Measures aims to achieve the 4 core objectives as described earlier by fully implementing all basic measures and also implementing supplementary measures where deemed necessary.*

## **Basic Measures:**

A full list of basic measures is listed in the Draft River Basin Management Plan. It includes the regulations enacted from the following 11 European Directives and also requires member states to create measures for 11 other issues:

### **11 European Directives**

1. Bathing Water Directive
2. Habitats Directive
3. Birds Directive
4. Drinking Water Directive
5. Major Accidents (Seveso) Directive
6. Environmental Impact Assessment Directive
7. Sewage Sludge Directive
8. Urban Waste Water Treatment Directive
9. Plant Protection Products Directive
10. Nitrates Directive
11. Integrated Pollution Prevention Control Directive

### **11 Other Basic Measures**

1. Cost recovery for water use
2. Measures to promote efficient and sustainable use
3. Protection of drinking water sources
4. Control of abstraction and impoundment
5. Authorisation of discharges to groundwater
6. Control of point source discharges
7. Control of diffuse source pollution
8. Control of priority substances
9. Control of physical modifications of surface waters
10. Controls on other activities impacting water status
11. Prevention or reduction of the impact of accidental pollution incidents

# Proposed Programme of Measures - Rivers

❑ **Supplementary Measures (In descending order of cost):**

<b>Top Ten Supplementary Measures - River Sub-catchment</b>
Implement Community Digestors for Alternative Energy
Reduce water demand through improved conservation, plumbing code changes, reduce unaccounted for water, rainwater harvesting, domestic water metering, universal water charging, or restricting development where water resources are over-subscribed
Enforce Regulations on Septic Systems
Alter the availability of supply through conjunctive use or integrated water resources management, water reuse, implementing S.U.D schemes in developed areas, implementation of abstraction controls, use of additional storage or alternative water source
Restrict Cattle Access to rivers - Create Cattle Drinking points
Emphasise linkage between Planning, Water Services, and Environmental Sections within Local Authorities for Planning Purposes
Develop Habitat Suitability Curves for salmonids in Irish Rivers
Develop Habitat Suitability Curves for coarse fish and other important aquatic organisms
Investigate implementing smaller water schemes to reduce demand on other resources
Conduct awareness campaign for sustainable domestic water use, including rainwater harvesting and domestic soakaways for stormwater

# Proposed Programme of Measures - Lakes

- ❑ *Annagh Lough or White Lough, Bane Lough , Ben Lough, Doo Lough, Glass Lough, Lene*
- ❑ Basic Measures – Full Implementation of all Basic Measures (2010-2015)

## Supplementary Measures

Reduce water demand through improved conservation, plumbing code changes, reduce unaccounted for water, rainwater harvesting, domestic water metering, universal water charging, or restricting development where water resources are over subscribed

Alter the availability of supply through conjunctive use or integrated water resources management, water reuse, implementing S.U.D schemes in developed areas, implementation of abstraction controls, use of additional storage or alternative water source

Further Investigate cause of failure

Further Research on Abstraction Pressure effects on lake ecology (national)

Initiate field work needed to develop water budgets to determine groundwater-surface water contributions and develop water budgets

Update Forest Service Guidance document on new EQS standards, Aerial Fertilisation Regulations, Updated Acidification protocol.

Forest Service - Forestry and Water Quality Guidelines

Forest Service - Forestry and Aerial Fertilisation Guidelines

Investigate implementing smaller water schemes to reduce demand on other resources

Collect daily water level

# Alternative Programme of Measures – Basic Measures

*We have prepared an Alternative Programme of Measures for comparison. This Programme of Measures selects the measures to prioritise for implementation during the first 6 year plan that are thought to be most effective, but still aims to achieve Good Status as early as possible*

By prioritising the measures to be implemented in the first cycle, the Alternative Scenario aims to save time and money by focussing on the most effective measures first.

*Phosphorus modelling by the ERBD project shows that of the entire catchment only 16% of the Westmeath land area and 2% of the Meath Land area are of high risk of causing direct runoff into the river.*



# Alternative Objectives - Heavily Modified and Artificial Waterbodies

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- ❑ Some surface waters have been substantially changed in character to allow uses such as:
  - Navigation
  - Water storage
  - Public supply
  - Flood defences
  - Land drainage.
- ❑ These waterbodies are called ***Heavily Modified***. This designation recognises that the waterbody cannot be returned to its natural condition and therefore sets an alternative objective of Good Ecological Potential.
- ❑ Some waterbodies are entirely ***Artificial*** for example canals and for the same reasoning are set the alternative objective of Good Ecological Potential.
- ❑ We must still achieve good chemical condition, prevention of deterioration and achieve our protected area objectives.

# Heavily Modified and Artificial Waterbodies Status and Measures






## *Artificial water Body*

### Royal Canal Main Line

- Reason for designation:** Man-made canal
- Status:** Good Ecological Potential
- Measures:** None identified



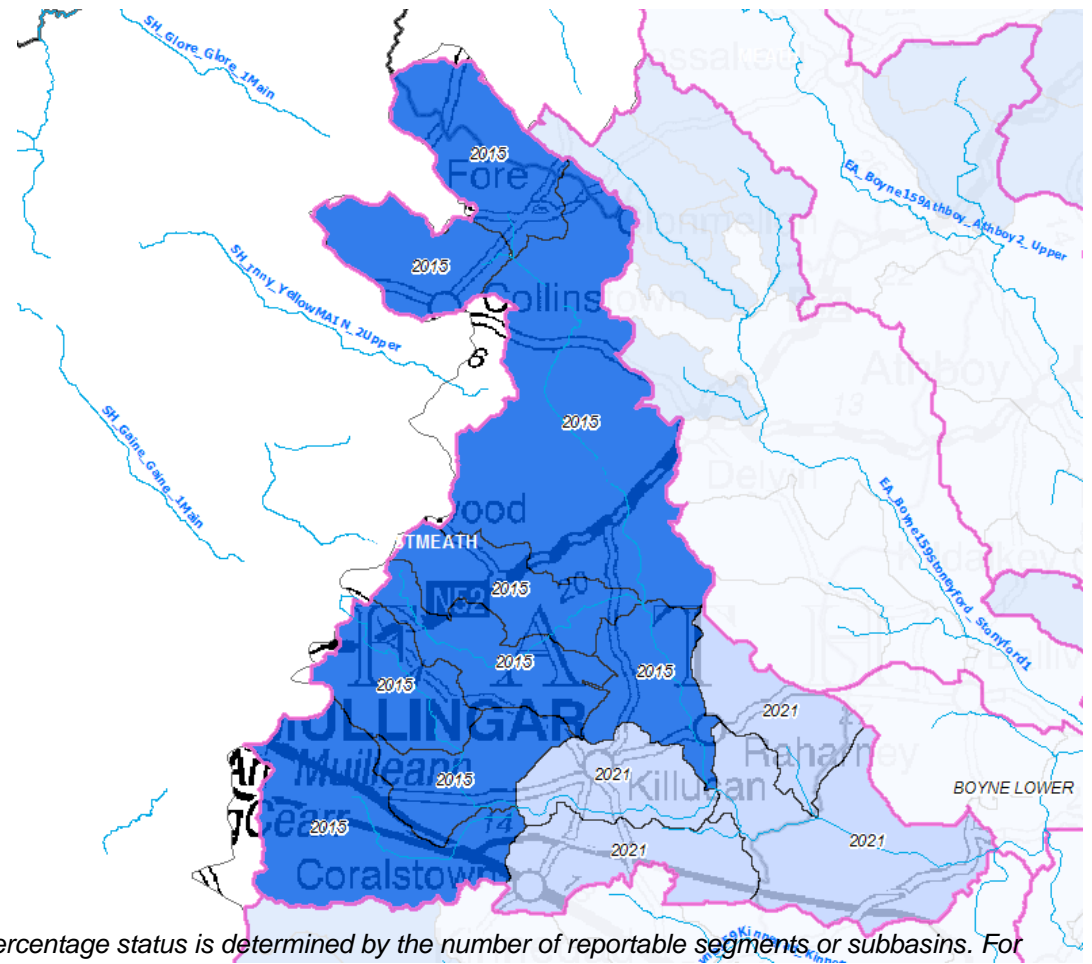
# Heavily Modified and Artificial Water Bodies Legend

Heavily Modified (HM) or Artificial Water Bodies (AWB)	Symbol
HM - Rivers	
HM - Marine	
HM - Lakes	
AWB - Canal	
AWB - Reservoirs	

# Alternative Objectives – Extended Timescale

- In some cases due to technical infeasibility, disproportionate cost, the natural condition of the waterbody or new physical modifications it may not be possible to achieve all core objectives by 2015.
- The main pressure preventing achievement of Good Status is thought to be diffuse agricultural, septic tank and point source pollution. Full implementation of the measures is expected to correct this, however recovery time will mean that some rivers will not achieve Good Status before 2015.

<b>2015</b>	69%
<b>2021</b>	100%
<b>2027</b>	100%



*The percentage status is determined by the number of reportable segments or subbasins. For this reason the percentage might not seem representative.*

# What can you do?

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## ***You have your say!***

- Now is your chance to have a say on the Programme of Measures:
  - Have all issues been addressed?
  - Do you have any measures to add to the proposed Programme of Measures?
  - What do you think about the Alternative Programme of Measures?
  - Would you spend more to achieve our goals faster?
  
- We can all help to implement this important legislation by thinking about our impact on the water environment in our everyday lives.



# How to comment

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Please *have your say* in any of the following ways:

1. Email your comments to [comments@erbd.ie](mailto:comments@erbd.ie) and include River Basin Management Plan Comments in the subject line

2. Write to:

River Basin Management Plan Comments

Project Co-ordinator

Eastern River Basin District Project Office

Dublin City Council

68-70 Marrowbone Lane, 4<sup>th</sup> Floor

Dublin 8



# Appendix 1:

## Proposed Programme of Measures Rivers



# Programme of Measures Key

<b>ABS</b>	Abstractions
<b>AGR</b>	Agricultural Point and Diffuse Sources
<b>AGR-PS</b>	Unlicensed Agricultural Point Sources
<b>Chem</b>	Chemical Fertiliser
<b>CROSS</b>	Planning, Development and other sources
<b>DLRCC</b>	Dun Laoghaire Rathdown County Council
<b>DS</b>	Dangerous Substances
<b>ECO</b>	Poor Ecology
<b>FOR</b>	Forestry
<b>IPPC</b>	Industrial Sources
<b>Manure</b>	Manure Fertilisers
<b>MORP</b>	Intensive Land use
<b>S4</b>	Local Authority Licensed Discharges
<b>WWTP</b>	Wastewater Treatment Plants
<b>DATA+</b>	An Absence of sufficient data
<b>HS</b>	To Protect High Status Waters
<b>Septic</b>	Onsite Wastewater Treatment Systems
<b>U-DIFF</b>	Urban Diffuse Pollution

# Proposed Programme of Measures

## – Basic Measures for Rivers

Local Authority	Parent ID Name	MeasureName	Source
MEATH	Quality of Surface Water intended for the Abstraction of Drinking Water (S.I. 294 of 1989)	Quality of Surface Water intended for the Abstraction of Drinking Water (S.I. 294 of 1989)	ABS
MEATH	National Water Pricing Policy Framework (1998)	National Water Pricing Policy Framework (1998)	ABS
MEATH	Water Supplies Act 1942	Water Supplies Act 1942	ABS
MEATH	EC (Good Agricultural Practice for Protection of Waters) Regulations (S.I. 378 of 2006 and S.I. 526 of 2007)	EC (Good Agricultural Practice for Protection of Waters) Regulations (S.I. 378 of 2006 and S.I. 526 of 2007)	AGR
MEATH	EC (Drinking Water) (No 2) Regulations (S.I. 278 of 2007)	EC (Drinking Water) (No 2) Regulations (S.I. 278 of 2007)	CROSS
MEATH	Planning Development Acts 2000 - 2006	Planning Development Acts 2000 - 2006	CROSS
MEATH	Planning and Development Regulations 2001 - 2007	Planning and Development Regulations 2001 - 2007	CROSS
MEATH	EC (Authorisation, Placing on the Market, Use and Control of Plant Protection Products), 2003 and amendments	EC (Authorisation, Placing on the Market, Use and Control of Plant Protection Products), 2003 and amendments	DS
MEATH	EC (Classification Packaging and Labelling of Plant Protection Products and Biocide Products) Regulations, 2001	EC (Classification Packaging and Labelling of Plant Protection Products and Biocide Products) Regulations, 2001	DS
MEATH	EPA (Licensing) Regulations, 1994 & 2004	EPA (Licensing) Regulations, 1994 & 2004	IPPC
MEATH	Forestry Act 1946 and 1988	Forestry Act 1946 and 1988	Manure
MEATH	Local Government (Water Pollution) Act 1 of 1977 and amendments	Local Government (Water Pollution) Act 1 of 1977 and amendments	S4
MEATH	Waste Water Discharge (Authorisation) Regulations (S.I. 684 of 2007)	Waste Water Discharge (Authorisation) Regulations (S.I. 684 of 2007)	WWTP
MEATH	Water Services Act 2007	Water Services Act 2007	WWTP
WESTMEATH	Quality of Surface Water intended for the Abstraction of Drinking Water (S.I. 294 of 1989)	Quality of Surface Water intended for the Abstraction of Drinking Water (S.I. 294 of 1989)	ABS

# Proposed Programme of Measures

## – Basic Measures for Rivers (cont.)

Local Authority	Parent ID Name	MeasureName	Source
WESTMEATH	National Water Pricing Policy Framework (1998)	National Water Pricing Policy Framework (1998)	ABS
WESTMEATH	Water Supplies Act 1942	Water Supplies Act 1942	ABS
WESTMEATH	EC (Good Agricultural Practice for Protection of Waters) Regulations (S.I. 378 of 2006 and S.I. 526 of 2007)	EC (Good Agricultural Practice for Protection of Waters) Regulations (S.I. 378 of 2006 and S.I. 526 of 2007)	AGR
WESTMEATH	EC (Drinking Water) (No 2) Regulations (S.I. 278 of 2007)	EC (Drinking Water) (No 2) Regulations (S.I. 278 of 2007)	CROSS
WESTMEATH	Planning Development Acts 2000 - 2006	Planning Development Acts 2000 - 2006	CROSS
WESTMEATH	Planning and Development Regulations 2001 - 2007	Planning and Development Regulations 2001 - 2007	CROSS
WESTMEATH	EC (Authorisation, Placing on the Market, Use and Control of Plant Protection Products), 2003 and amendments	EC (Authorisation, Placing on the Market, Use and Control of Plant Protection Products), 2003 and amendments	DS
WESTMEATH	EC (Classification Packaging and Labelling of Plant Protection Products and Biocide Products) Regulations, 2001	EC (Classification Packaging and Labelling of Plant Protection Products and Biocide Products) Regulations, 2001	DS
WESTMEATH	EPA (Licensing) Regulations, 1994 & 2004	EPA (Licensing) Regulations, 1994 & 2004	IPPC
WESTMEATH	Forestry Act 1946 and 1988	Forestry Act 1946 and 1988	Manure
WESTMEATH	Local Government (Water Pollution) Act 1 of 1977 and amendments	Local Government (Water Pollution) Act 1 of 1977 and amendments	S4
WESTMEATH	Urban Waste Water Treatment Regulations, 2001 - 2004	Urban Waste Water Treatment Regulations, 2001 - 2004	WWTP
WESTMEATH	Waste Water Discharge (Authorisation) Regulations (S.I. 684 of 2007)	Waste Water Discharge (Authorisation) Regulations (S.I. 684 of 2007)	WWTP
WESTMEATH	Water Services Act 2007	Water Services Act 2007	WWTP

# Proposed Programme of Measures

## – Supplementary Measures for Rivers

Local Authority	Measure Name	Measure Type	Source
MEATH	Emphasise linkage between Planning, Water Services, and Environmental Sections within Local Authorities for Planning Purposes	Proposed	CROSS
MEATH	Department of Agriculture - Code of Good Practice and Guidelines on the use of biosolids in Agriculture, 1999	Proposed	Manure
MEATH	Conduct awareness campaign for sustainable domestic water use, including rainwater harvesting and domestic soakaways for stormwater	Proposed	ABS
MEATH	Modernise Abstraction Legislation, including a system for licensing surface water abstractions	Proposed	ABS
MEATH	Implement Community Digestors for Alternative Energy	Supplementary	WWTP
MEATH	Enforce Regulations on Septic Systems	Supplementary	Septic
MEATH	Restrict Cattle Access to rivers - Create Cattle Drinking points	Supplementary	AGR-PS
WESTMEATH	Develop Habitat Suitability Curves for coarse fish and other important aquatic organisms	Guidance	ABS
WESTMEATH	Develop Habitat Suitability Curves for salmonids in Irish Rivers	Guidance	ABS
WESTMEATH	Emphasise linkage between Planning, Water Services, and Environmental Sections within Local Authorities for Planning Purposes	Proposed	CROSS
WESTMEATH	Investigate implementing smaller water schemes to reduce demand on other resources	Proposed	ABS
WESTMEATH	In flow regulated rivers, establish guidance on flow variations to support ecology	Proposed	ABS
WESTMEATH	Conduct awareness campaign for sustainable domestic water use, including rainwater harvesting and domestic soakaways for stormwater	Proposed	ABS
WESTMEATH	Record daily abstraction rates	Proposed	ABS
WESTMEATH	Modernise Abstraction Legislation, including a system for licensing surface water abstractions	Proposed	ABS
WESTMEATH	Implement Community Digestors for Alternative Energy	Supplementary	WWTP
WESTMEATH	Reduce water demand through improved conservation, plumbing code changes, reduce unaccounted for water, rainwater harvesting, domestic water metering, universal water charging, or restricting development where water resources are over-subscribed	Supplementary	ABS
WESTMEATH	Alter the availability of supply through conjunctive use or integrated water resources management, water reuse, implementing S.U.D schemes in developed areas, implementation of abstraction controls, use of additional storage or alternative water source	Supplementary	ABS

# Appendix 2:

## Alternative Programme of Measures Rivers



# Alternative Programme of Measures

## – Basic Measures for Rivers

Local Authority	Measure Name	Sub-Measure Name	Source
MEATH	EC (Good Agricultural Practice for Protection of Waters) Regulations (S.I. 378 of 2006 and S.I. 526 of 2007)	Conduct Farm Surveys	AGR
MEATH	EC (Good Agricultural Practice for Protection of Waters) Regulations (S.I. 378 of 2006 and S.I. 526 of 2007)	Improve farmyard structure/operations to divert rainwater runoff	AGR-PS
MEATH	EC (Good Agricultural Practice for Protection of Waters) Regulations (S.I. 378 of 2006 and S.I. 526 of 2007)	Soiled water generation minimisation practises	AGR-PS
MEATH	EC (Good Agricultural Practice for Protection of Waters) Regulations (S.I. 378 of 2006 and S.I. 526 of 2007)	Fertiliser/manure/soiled water/effluent/slurry/silage storage facilities to prevent seepage to ground or surface water	AGR-PS
MEATH	EC (Good Agricultural Practice for Protection of Waters) Regulations (S.I. 378 of 2006 and S.I. 526 of 2007)	Nutrient management	Manure
MEATH	Local Government (Water Pollution) Act 1 of 1977 and amendments	Enforce Section 4s (discharges to waterbodies)	S4
MEATH	Local Government (Water Pollution) Act 1 of 1977 and amendments	Enforce Section 16s	S4
WESTMEATH	EC (Good Agricultural Practice for Protection of Waters) Regulations (S.I. 378 of 2006 and S.I. 526 of 2007)	Conduct Farm Surveys	AGR
WESTMEATH	Bathing Water Quality Regulations (S.I. 79 of 2008)	Test bathing water compliance	CROSS
WESTMEATH	Bathing Water Quality Regulations (S.I. 79 of 2008)	Classify Bathing Waters	CROSS
WESTMEATH	Bathing Water Quality Regulations (S.I. 79 of 2008)	Facilitate public participation and provide public information	CROSS
WESTMEATH	Local Government (Water Pollution) Act 1 of 1977 and amendments	Enforce Section 12s	S4
WESTMEATH	Local Government (Water Pollution) Act 1 of 1977 and amendments	Enforce Section 4s (discharges to waterbodies)	S4
WESTMEATH	Local Government (Water Pollution) Act 1 of 1977 and amendments	Enforce Section 16s	S4
WESTMEATH	Waste Water Discharge (Authorisation) Regulations (S.I. 684 of 2007)	Licence all waste water discharges of greater than 500 PE	WWTP
WESTMEATH	Urban Waste Water Treatment Regulations, 2001 - 2004	Ensure that a treatment plant provided in compliance with the requirements of these regulations is designed, constructed, operated and maintained to ensure sufficient performance under all normal local climatic conditions	WWTP

# Alternative Programme of Measures – Supplementary Measures for Rivers

Local Authority	Measure Name	Measure Type	Source
MEATH	Modernise Abstraction Legislation, including a system for licensing surface water abstractions	Proposed	ABS
MEATH	Conduct awareness campaign for sustainable domestic water use, including rainwater harvesting and domestic soakaways for stormwater	Proposed	ABS
MEATH	Restrict Cattle Access to rivers - Create Cattle Drinking points	Supplementary	AGR-PS
MEATH	Emphasise linkage between Planning, Water Services, and Environmental Sections within Local Authorities for Planning Purposes	Supplementary	CROSS
MEATH	Department of Agriculture - Code of Good Practice and Guidelines on the use of biosolids in Agriculture, 1999	Guidance	Manure
MEATH	Enforce Regulations on Septic Systems	Supplementary	Septic
MEATH	Implement Community Digestors for Alternative Energy	Supplementary	WWTP
WESTMEATH	Modernise Abstraction Legislation, including a system for licensing surface water abstractions	Proposed	ABS
WESTMEATH	Conduct awareness campaign for sustainable domestic water use, including rainwater harvesting and domestic soakaways for stormwater	Proposed	ABS
WESTMEATH	Reduce water demand through improved conservation, plumbing code changes, reduce unaccounted for water, rainwater harvesting, domestic water metering, universal water charging, or restricting development where water resources are over-subscribed	Proposed	ABS

# Alternative Programme of Measures

## – Supplementary Measures for Rivers (cont.)

Local Authority	Measure Name	Measure Type	Source
WESTMEATH	Alter the availability of supply through conjunctive use or integrated water resources management, water reuse, implementing S.U.D schemes in developed areas, implementation of abstraction controls, use of additional storage or alternative water source	Proposed	ABS
WESTMEATH	Record daily abstraction rates	Proposed	ABS
WESTMEATH	Investigate implementing smaller water schemes to reduce demand on other resources	Proposed	ABS
WESTMEATH	In flow regulated rivers, establish guidance on flow variations to support ecology	Proposed	ABS
WESTMEATH	Develop Habitat Suitability Curves for coarse fish and other important aquatic organisms	Proposed	ABS
WESTMEATH	Develop Habitat Suitability Curves for salmonids in Irish Rivers	Proposed	ABS
WESTMEATH	Emphasise linkage between Planning, Water Services, and Environmental Sections within Local Authorities for Planning Purposes	Supplementary	CROSS
WESTMEATH	Implement Community Digestors for Alternative Energy	Supplementary	WWTP

# Appendix 3:

## Proposed Programme of Measures Lakes



# Proposed Programme of Measures

## – Basic Measures for Lakes

Local Authority	WMU	Parent ID Name	MeasureName	Source
MEATH	Annagh Lough or White Lough	Quality of Surface Water intended for the Abstraction of Drinking Water (S.I. 294 of 1989)	Quality of Surface Water intended for the Abstraction of Drinking Water (S.I. 294 of 1989)	ABS
MEATH	Annagh Lough or White Lough	National Water Pricing Policy Framework (1998)	National Water Pricing Policy Framework (1998)	ABS
MEATH	Annagh Lough or White Lough	EC (Environmental Impact Assessment) Regulations and amendments (S.I. 349 of 1989 onwards)	EC (Environmental Impact Assessment) Regulations and amendments (S.I. 349 of 1989 onwards)	CROSS
MEATH	Annagh Lough or White Lough	Planning Development Acts 2000 - 2006	Planning Development Acts 2000 - 2006	CROSS
MEATH	Annagh Lough or White Lough	Planning and Development Regulations 2001 - 2007	Planning and Development Regulations 2001 - 2007	CROSS
MEATH	Annagh Lough or White Lough	EC (Authorisation, Placing on the Market, Use and Control of Plant Protection Products), 2003 and amendments	EC (Authorisation, Placing on the Market, Use and Control of Plant Protection Products), 2003 and amendments	DS
MEATH	Annagh Lough or White Lough	EC (Classification Packaging and Labelling of Plant Protection Products and Biocide Products) Regulations, 2001	EC (Classification Packaging and Labelling of Plant Protection Products and Biocide Products) Regulations, 2001	DS
MEATH	Annagh Lough or White Lough	EC (Prohibition of certain active substances in plant protection products) Regulations, 1981 and amendments	EC (Prohibition of certain active substances in plant protection products) Regulations, 1981 and amendments	DS
MEATH	Annagh Lough or White Lough	EU Regulations Registration, Evaluation, Authorisation and Restriction of Chemical substances (REACH) (1907/2006/EC)	EU Regulations Registration, Evaluation, Authorisation and Restriction of Chemical substances (REACH) (1907/2006/EC)	DS
MEATH	Annagh Lough or White Lough	EC (Natural Habitats) Regulations 1997- 2005	Manage, conserve, restore or protect sites	ECO
MEATH	Annagh Lough or White Lough	EC (Natural Habitats) Regulations 1997- 2005	Select sites for identification as sites of community importance	ECO
MEATH	Annagh Lough or White Lough	EC (Natural Habitats) Regulations 1997- 2005	Survey conservation status of the natural habitats and species	ECO
MEATH	Annagh Lough or White Lough	EC (Conservation of Wild Birds) Regulations and amendments (S.I. 291 of 1985 onwards )	Designate protected areas	ECO
MEATH	Annagh Lough or White Lough	EC (Conservation of Wild Birds) Regulations and amendments (S.I. 291 of 1985 onwards )	Preserve protected areas against pollution deterioration and disturbance	ECO
MEATH	Annagh Lough or White Lough	EC (Conservation of Wild Birds) Regulations and amendments (S.I. 291 of 1985 onwards )	Prosecute those who do not protect wild birds, their nests or eggs	ECO

# Proposed Programme of Measures – Basic Measures for Lakes (cont.)

Local Authority	WMU	Parent ID Name	MeasureName	Source
MEATH	Annagh Lough or White Lough	EC (Aerial Fertilisation) (Forestry) Regulations 2006 and amendment 2007	EC (Aerial Fertilisation) (Forestry) Regulations 2006 and amendment 2007	FOR
MEATH	Annagh Lough or White Lough	Waste Management (Use of Sewage Sludge in Agriculture) Regulations, 1998 - 2001	Waste Management (Use of Sewage Sludge in Agriculture) Regulations, 1998 - 2001	Manure
MEATH	Annagh Lough or White Lough	Forestry Act 1946 and 1988	Forestry Act 1946 and 1988	Manure
MEATH	Bane ( Lough )	National Water Pricing Policy Framework (1998)	National Water Pricing Policy Framework (1998)	ABS
MEATH	Bane ( Lough )	Water Supplies Act 1942	Create a proposal for extending, or providing a supply of water.	ABS
MEATH	Bane ( Lough )	EC (Good Agricultural Practice for Protection of Waters) Regulations (S.I. 378 of 2006 and S.I. 526 of 2007)	EC (Good Agricultural Practice for Protection of Waters) Regulations (S.I. 378 of 2006 and S.I. 526 of 2007)	AGR
MEATH	Bane ( Lough )	EC (Environmental Impact Assessment) Regulations and amendments (S.I. 349 of 1989 onwards)	EC (Environmental Impact Assessment) Regulations and amendments (S.I. 349 of 1989 onwards)	CROSS
MEATH	Bane ( Lough )	Planning Development Acts 2000 - 2006	Planning Development Acts 2000 - 2006	CROSS
MEATH	Bane ( Lough )	Planning and Development Regulations 2001 - 2007	Planning and Development Regulations 2001 - 2007	CROSS
MEATH	Bane ( Lough )	EC (Natural Habitats) Regulations 1997- 2005	Manage, conserve, restore or protect sites	ECO
MEATH	Bane ( Lough )	EC (Natural Habitats) Regulations 1997- 2005	Select sites for identification as sites of community importance	ECO
MEATH	Bane ( Lough )	EC (Natural Habitats) Regulations 1997- 2005	Survey conservation status of the natural habitats and species	ECO
MEATH	Bane ( Lough )	EC (Conservation of Wild Birds) Regulations and amendments (S.I. 291 of 1985 onwards )	Designate protected areas	ECO
MEATH	Bane ( Lough )	EC (Conservation of Wild Birds) Regulations and amendments (S.I. 291 of 1985 onwards )	Preserve protected areas against pollution deterioration and disturbance	ECO
MEATH	Bane ( Lough )	EC (Conservation of Wild Birds) Regulations and amendments (S.I. 291 of 1985 onwards )	Prosecute those who do not protect wild birds, their nests or eggs	ECO
MEATH	Bane ( Lough )	Waste Management (Use of Sewage Sludge in Agriculture) Regulations, 1998 - 2001	Waste Management (Use of Sewage Sludge in Agriculture) Regulations, 1998 - 2001	Manure
MEATH	Doo (Lough)	National Water Pricing Policy Framework (1998)	National Water Pricing Policy Framework (1998)	ABS
MEATH	Doo (Lough)	Water Supplies Act 1942	Water Supplies Act 1942	ABS

# Proposed Programme of Measures – Basic Measures for Lakes (cont.)

Local Authority	WMU	Parent ID Name	MeasureName	Source
MEATH	Doo (Lough)	EC (Good Agricultural Practice for Protection of Waters) Regulations (S.I. 378 of 2006 and S.I. 526 of 2007)	EC (Good Agricultural Practice for Protection of Waters) Regulations (S.I. 378 of 2006 and S.I. 526 of 2007)	AGR
MEATH	Doo (Lough)	EC (Environmental Impact Assessment) Regulations and amendments (S.I. 349 of 1989 onwards)	EC (Environmental Impact Assessment) Regulations and amendments (S.I. 349 of 1989 onwards)	CROSS
MEATH	Doo (Lough)	Planning Development Acts 2000 - 2006	Planning Development Acts 2000 - 2006	CROSS
MEATH	Doo (Lough)	Planning and Development Regulations 2001 - 2007	Planning and Development Regulations 2001 - 2007	CROSS
MEATH	Doo (Lough)	EC (Natural Habitats) Regulations 1997- 2005	Manage, conserve, restore or protect sites	ECO
MEATH	Doo (Lough)	EC (Natural Habitats) Regulations 1997- 2005	Select sites for identification as sites of community importance	ECO
MEATH	Doo (Lough)	EC (Natural Habitats) Regulations 1997- 2005	Survey conservation status of the natural habitats and species	ECO
MEATH	Doo (Lough)	EC (Conservation of Wild Birds) Regulations and amendments (S.I. 291 of 1985 onwards )	Designate protected areas	ECO
MEATH	Doo (Lough)	EC (Conservation of Wild Birds) Regulations and amendments (S.I. 291 of 1985 onwards )	Preserve protected areas against pollution deterioration and disturbance	ECO
MEATH	Doo (Lough)	EC (Conservation of Wild Birds) Regulations and amendments (S.I. 291 of 1985 onwards )	Prosecute those who do not protect wild birds, their nests or eggs	ECO
MEATH	Doo (Lough)	Waste Management (Use of Sewage Sludge in Agriculture) Regulations, 1998 - 2001	Waste Management (Use of Sewage Sludge in Agriculture) Regulations, 1998 - 2001	Manure
MEATH	Glass (Lough)	National Water Pricing Policy Framework (1998)	National Water Pricing Policy Framework (1998)	ABS
MEATH	Glass (Lough)	Water Supplies Act 1942	Water Supplies Act 1942	ABS
MEATH	Glass (Lough)	EC (Good Agricultural Practice for Protection of Waters) Regulations (S.I. 378 of 2006 and S.I. 526 of 2007)	EC (Good Agricultural Practice for Protection of Waters) Regulations (S.I. 378 of 2006 and S.I. 526 of 2007)	AGR
MEATH	Glass (Lough)	EC (Environmental Impact Assessment) Regulations and amendments (S.I. 349 of 1989 onwards)	EC (Environmental Impact Assessment) Regulations and amendments (S.I. 349 of 1989 onwards)	CROSS
MEATH	Glass (Lough)	Planning Development Acts 2000 - 2006	Planning Development Acts 2000 - 2006	CROSS
MEATH	Glass (Lough)	Planning and Development Regulations 2001 - 2007	Planning and Development Regulations 2001 - 2007	CROSS
MEATH	Glass (Lough)	EC (Natural Habitats) Regulations 1997- 2005	Manage, conserve, restore or protect sites	ECO

# Proposed Programme of Measures – Basic Measures for Lakes (cont.)

Local Authority	WMU	Parent ID Name	MeasureName	Source
MEATH	Glass (Lough)	EC (Natural Habitats) Regulations 1997- 2005	Select sites for identification as sites of community importance	ECO
MEATH	Glass (Lough)	EC (Natural Habitats) Regulations 1997- 2005	Survey conservation status of the natural habitats and species	ECO
MEATH	Glass (Lough)	EC (Conservation of Wild Birds) Regulations and amendments (S.I. 291 of 1985 onwards )	Designate protected areas	ECO
MEATH	Glass (Lough)	EC (Conservation of Wild Birds) Regulations and amendments (S.I. 291 of 1985 onwards )	Preserve protected areas against pollution deterioration and disturbance	ECO
MEATH	Glass (Lough)	EC (Conservation of Wild Birds) Regulations and amendments (S.I. 291 of 1985 onwards )	Prosecute those who do not protect wild birds, their nests or eggs	ECO
MEATH	Glass (Lough)	Waste Management (Use of Sewage Sludge in Agriculture) Regulations, 1998 - 2001	Waste Management (Use of Sewage Sludge in Agriculture) Regulations, 1998 - 2001	Manure
WESTMEA TH	Annagh Lough or White Lough	National Water Pricing Policy Framework (1998)	National Water Pricing Policy Framework (1998)	ABS
WESTMEA TH	Annagh Lough or White Lough	Water Supplies Act 1942	Water Supplies Act 1942	ABS
WESTMEA TH	Annagh Lough or White Lough	EC (Environmental Impact Assessment) Regulations and amendments (S.I. 349 of 1989 onwards)	EC (Environmental Impact Assessment) Regulations and amendments (S.I. 349 of 1989 onwards)	CROSS
WESTMEA TH	Annagh Lough or White Lough	Planning Development Acts 2000 - 2006	Planning Development Acts 2000 - 2006	CROSS
WESTMEA TH	Annagh Lough or White Lough	Planning and Development Regulations 2001 - 2007	Planning and Development Regulations 2001 - 2007	CROSS
WESTMEA TH	Annagh Lough or White Lough	EC (Authorisation, Placing on the Market, Use and Control of Plant Protection Products), 2003 and amendments	EC (Authorisation, Placing on the Market, Use and Control of Plant Protection Products), 2003 and amendments	DS
WESTMEA TH	Annagh Lough or White Lough	EC (Classification Packaging and Labelling of Plant Protection Products and Biocide Products) Regulations, 2001	EC (Classification Packaging and Labelling of Plant Protection Products and Biocide Products) Regulations, 2001	DS
WESTMEA TH	Annagh Lough or White Lough	EC (Prohibition of certain active substances in plant protection products) Regulations, 1981 and amendments	EC (Prohibition of certain active substances in plant protection products) Regulations, 1981 and amendments	DS
WESTMEA TH	Annagh Lough or White Lough	EU Regulations Registration, Evaluation, Authorisation and Restriction of Chemical substances (REACH) (1907/2006/EC)	EU Regulations Registration, Evaluation, Authorisation and Restriction of Chemical substances (REACH) (1907/2006/EC)	DS

# Proposed Programme of Measures – Basic Measures for Lakes (cont.)

Local Authority	WMU	Parent ID Name	MeasureName	Source
WESTMEATH	Annagh Lough or White Lough	EC (Natural Habitats) Regulations 1997- 2005	Manage, conserve, restore or protect sites	ECO
WESTMEATH	Annagh Lough or White Lough	EC (Natural Habitats) Regulations 1997- 2005	Select sites for identification as sites of community importance	ECO
WESTMEATH	Annagh Lough or White Lough	EC (Natural Habitats) Regulations 1997- 2005	Survey conservation status of the natural habitats and species	ECO
WESTMEATH	Annagh Lough or White Lough	EC (Conservation of Wild Birds) Regulations and amendments (S.I. 291 of 1985 onwards )	Designate protected areas	ECO
WESTMEATH	Annagh Lough or White Lough	EC (Conservation of Wild Birds) Regulations and amendments (S.I. 291 of 1985 onwards )	Preserve protected areas against pollution deterioration and disturbance	ECO
WESTMEATH	Annagh Lough or White Lough	EC (Conservation of Wild Birds) Regulations and amendments (S.I. 291 of 1985 onwards )	Prosecute those who do not protect wild birds, their nests or eggs	ECO
WESTMEATH	Annagh Lough or White Lough	EC (Aerial Fertilisation) (Forestry) Regulations 2006 and amendment 2007	EC (Aerial Fertilisation) (Forestry) Regulations 2006 and amendment 2007	FOR
WESTMEATH	Annagh Lough or White Lough	Forestry Act 1946 and 1988	Forestry Act 1946 and 1988	Manure
WESTMEATH	Bane ( Lough )	National Water Pricing Policy Framework (1998)	National Water Pricing Policy Framework (1998)	ABS
WESTMEATH	Bane ( Lough )	Water Supplies Act 1942	Create a proposal for extending, or providing a supply of water.	ABS
WESTMEATH	Bane ( Lough )	EC (Good Agricultural Practice for Protection of Waters) Regulations (S.I. 378 of 2006 and S.I. 526 of 2007)	EC (Good Agricultural Practice for Protection of Waters) Regulations (S.I. 378 of 2006 and S.I. 526 of 2007)	AGR
WESTMEATH	Bane ( Lough )	EC (Environmental Impact Assessment) Regulations and amendments (S.I. 349 of 1989 onwards)	EC (Environmental Impact Assessment) Regulations and amendments (S.I. 349 of 1989 onwards)	CROSS
WESTMEATH	Bane ( Lough )	Planning Development Acts 2000 - 2006	Planning Development Acts 2000 - 2006	CROSS
WESTMEATH	Bane ( Lough )	Planning and Development Regulations 2001 - 2007	Planning and Development Regulations 2001 - 2007	CROSS
WESTMEATH	Bane ( Lough )	EC (Conservation of Wild Birds) Regulations and amendments (S.I. 291 of 1985 onwards )	EC (Conservation of Wild Birds) Regulations and amendments (S.I. 291 of 1985 onwards )	ECO
WESTMEATH	Bane ( Lough )	EC (Natural Habitats) Regulations 1997- 2005	EC (Natural Habitats) Regulations 1997- 2005	ECO
WESTMEATH	Bane ( Lough )	Waste Management (Use of Sewage Sludge in Agriculture) Regulations, 1998 - 2001	Waste Management (Use of Sewage Sludge in Agriculture) Regulations, 1998 - 2001	Manure

# Proposed Programme of Measures – Basic Measures for Lakes (cont.)

Local Authority	WMU	Parent ID Name	MeasureName	Source
WESTMEATH	Ben Lough	National Water Pricing Policy Framework (1998)	National Water Pricing Policy Framework (1998)	ABS
WESTMEATH	Ben Lough	Water Supplies Act 1942	Water Supplies Act 1942	ABS
WESTMEATH	Ben Lough	EC (Good Agricultural Practice for Protection of Waters) Regulations (S.I. 378 of 2006 and S.I. 526 of 2007)	EC (Good Agricultural Practice for Protection of Waters) Regulations (S.I. 378 of 2006 and S.I. 526 of 2007)	AGR
WESTMEATH	Ben Lough	EC (Environmental Impact Assessment) Regulations and amendments (S.I. 349 of 1989 onwards)	EC (Environmental Impact Assessment) Regulations and amendments (S.I. 349 of 1989 onwards)	CROSS
WESTMEATH	Ben Lough	Planning Development Acts 2000 - 2006	Planning Development Acts 2000 - 2006	CROSS
WESTMEATH	Ben Lough	Planning and Development Regulations 2001 - 2007	Planning and Development Regulations 2001 - 2007	CROSS
WESTMEATH	Ben Lough	EC (Conservation of Wild Birds) Regulations and amendments (S.I. 291 of 1985 onwards )	EC (Conservation of Wild Birds) Regulations and amendments (S.I. 291 of 1985 onwards )	ECO
WESTMEATH	Ben Lough	EC (Natural Habitats) Regulations 1997- 2005	EC (Natural Habitats) Regulations 1997- 2005	ECO
WESTMEATH	Ben Lough	Waste Management (Use of Sewage Sludge in Agriculture) Regulations, 1998 - 2001	Waste Management (Use of Sewage Sludge in Agriculture) Regulations, 1998 - 2001	Manure
WESTMEATH	Glass (Lough)	National Water Pricing Policy Framework (1998)	National Water Pricing Policy Framework (1998)	ABS
WESTMEATH	Glass (Lough)	Water Supplies Act 1942	Water Supplies Act 1942	ABS
WESTMEATH	Glass (Lough)	EC (Good Agricultural Practice for Protection of Waters) Regulations (S.I. 378 of 2006 and S.I. 526 of 2007)	EC (Good Agricultural Practice for Protection of Waters) Regulations (S.I. 378 of 2006 and S.I. 526 of 2007)	AGR
WESTMEATH	Glass (Lough)	EC (Environmental Impact Assessment) Regulations and amendments (S.I. 349 of 1989 onwards)	EC (Environmental Impact Assessment) Regulations and amendments (S.I. 349 of 1989 onwards)	CROSS
WESTMEATH	Glass (Lough)	Planning Development Acts 2000 - 2006	Planning Development Acts 2000 - 2006	CROSS
WESTMEATH	Glass (Lough)	Planning and Development Regulations 2001 - 2007	Planning and Development Regulations 2001 - 2007	CROSS
WESTMEATH	Glass (Lough)	EC (Conservation of Wild Birds) Regulations and amendments (S.I. 291 of 1985 onwards )	EC (Conservation of Wild Birds) Regulations and amendments (S.I. 291 of 1985 onwards )	ECO
WESTMEATH	Glass (Lough)	EC (Natural Habitats) Regulations 1997- 2005	EC (Natural Habitats) Regulations 1997- 2005	ECO

# Proposed Programme of Measures – Basic Measures for Lakes (cont.)

Local Authority	WMU	Parent ID Name	MeasureName	Source
WESTMEATH	Glass (Lough)	Waste Management (Use of Sewage Sludge in Agriculture) Regulations, 1998 - 2001	Waste Management (Use of Sewage Sludge in Agriculture) Regulations, 1998 - 2001	Manure
WESTMEATH	Lene (Lough)	National Water Pricing Policy Framework (1998)	National Water Pricing Policy Framework (1998)	ABS
WESTMEATH	Lene (Lough)	Water Supplies Act 1942	Create a proposal for extending, or providing a supply of water.	ABS
WESTMEATH	Lene (Lough)	EC (Good Agricultural Practice for Protection of Waters) Regulations (S.I. 378 of 2006 and S.I. 526 of 2007)	EC (Good Agricultural Practice for Protection of Waters) Regulations (S.I. 378 of 2006 and S.I. 526 of 2007)	AGR
WESTMEATH	Lene (Lough)	Bathing Water Quality Regulations (S.I. 79 of 2008)	Bathing Water Quality Regulations (S.I. 79 of 2008)	CROSS
WESTMEATH	Lene (Lough)	EC (Environmental Impact Assessment) Regulations and amendments (S.I. 349 of 1989 onwards)	EC (Environmental Impact Assessment) Regulations and amendments (S.I. 349 of 1989 onwards)	CROSS
WESTMEATH	Lene (Lough)	Planning Development Acts 2000 - 2006	Planning Development Acts 2000 - 2006	CROSS
WESTMEATH	Lene (Lough)	Planning and Development Regulations 2001 - 2007	Planning and Development Regulations 2001 - 2007	CROSS
WESTMEATH	Lene (Lough)	EC (Conservation of Wild Birds) Regulations and amendments (S.I. 291 of 1985 onwards )	EC (Conservation of Wild Birds) Regulations and amendments (S.I. 291 of 1985 onwards )	ECO
WESTMEATH	Lene (Lough)	EC (Natural Habitats) Regulations 1997- 2005	EC (Natural Habitats) Regulations 1997- 2005	ECO
WESTMEATH	Lene (Lough)	Waste Management (Use of Sewage Sludge in Agriculture) Regulations, 1998 - 2001	Waste Management (Use of Sewage Sludge in Agriculture) Regulations, 1998 - 2001	Manure

# Proposed Programme of Measures

## – Supplementary Measures for Lakes

Local Authority	WMU Name	Measure Name	Measure Type	Source
MEATH	Annagh Lough or White Lough	Forest Service - Forestry and Water Quality Guidelines	Guidance	FOR
MEATH	Annagh Lough or White Lough	Forest Service - Forestry and Aerial Fertilisation Guidelines	Supplementary	Manure
MEATH	Annagh Lough or White Lough	Update Forest Service Guidance document on new EQS standards, Aerial Fertilisation Regulations, Updated Acidification protocol.	Proposed	FOR
MEATH	Annagh Lough or White Lough	Conduct awareness campaign for sustainable domestic water use, including rainwater harvesting and domestic soakaways for stormwater	Supplementary	ABS
MEATH	Bane ( Lough )	Conduct awareness campaign for sustainable domestic water use, including rainwater harvesting and domestic soakaways for stormwater	Proposed	ABS
MEATH	Glass (Lough)	Conduct awareness campaign for sustainable domestic water use, including rainwater harvesting and domestic soakaways for stormwater	Supplementary	ABS
MEATH	Doo (Lough)	Conduct awareness campaign for sustainable domestic water use, including rainwater harvesting and domestic soakaways for stormwater	Supplementary	ABS
MEATH	Annagh Lough or White Lough	Modernise Abstraction Legislation, including a system for licensing surface water abstractions	Supplementary	ABS
MEATH	Bane ( Lough )	Modernise Abstraction Legislation, including a system for licensing surface water abstractions	Proposed	ABS
MEATH	Glass (Lough)	Modernise Abstraction Legislation, including a system for licensing surface water abstractions	Supplementary	ABS
MEATH	Doo (Lough)	Modernise Abstraction Legislation, including a system for licensing surface water abstractions	Supplementary	ABS
MEATH	Glass (Lough)	Further Investigate cause of failure	Supplementary	DATA+

# Proposed Programme of Measures

## – Supplementary Measures for Lakes (cont.)

Local Authority	WMU Name	Measure Name	Measure Type	Source
WESTMEATH	Bane ( Lough )	Further Research on Abstraction Pressure effects on lake ecology (national)	Supplementary	ABS
WESTMEATH	Lene (Lough)	Further Research on Abstraction Pressure effects on lake ecology (national)	Proposed	ABS
WESTMEATH	Bane ( Lough )	Initiate field work needed to develop water budgets to determine groundwater-surface water contributions and develop water budgets	Proposed	ABS
WESTMEATH	Lene (Lough)	Initiate field work needed to develop water budgets to determine groundwater-surface water contributions and develop water budgets	Proposed	ABS
WESTMEATH	Annagh Lough or White Lough	Forest Service - Forestry and Water Quality Guidelines	Supplementary	FOR
WESTMEATH	Annagh Lough or White Lough	Forest Service - Forestry and Aerial Fertilisation Guidelines	Supplementary	Manure
WESTMEATH	Annagh Lough or White Lough	Update Forest Service Guidance document on new EQS standards, Aerial Fertilisation Regulations, Updated Acidification protocol.	Supplementary	FOR
WESTMEATH	Bane ( Lough )	Investigate implementing smaller water schemes to reduce demand on other resources	Proposed	ABS
WESTMEATH	Lene (Lough)	Investigate implementing smaller water schemes to reduce demand on other resources	Supplementary	ABS
WESTMEATH	Bane ( Lough )	Collect daily water level	Supplementary	ABS
WESTMEATH	Lene (Lough)	Collect daily water level	Proposed	ABS
WESTMEATH	Bane ( Lough )	Record daily abstraction rates	Supplementary	ABS
WESTMEATH	Lene (Lough)	Record daily abstraction rates	Supplementary	ABS
WESTMEATH	Ben Lough	Conduct awareness campaign for sustainable domestic water use, including rainwater harvesting and domestic soakaways for stormwater	Proposed	ABS

# Proposed Programme of Measures

## – Supplementary Measures for Lakes (cont.)

Local Authority	WMU Name	Measure Name	Measure Type	Source
WESTMEATH	Annagh Lough or White Lough	Conduct awareness campaign for sustainable domestic water use, including rainwater harvesting and domestic soakaways for stormwater	Supplementary	ABS
WESTMEATH	Bane ( Lough )	Conduct awareness campaign for sustainable domestic water use, including rainwater harvesting and domestic soakaways for stormwater	Proposed	ABS
WESTMEATH	Lene (Lough)	Conduct awareness campaign for sustainable domestic water use, including rainwater harvesting and domestic soakaways for stormwater	Proposed	ABS
WESTMEATH	Glass (Lough)	Collect daily abstraction rates and compensation flow releases	Supplementary	ABS
WESTMEATH	Ben Lough	Modernise Abstraction Legislation, including a system for licensing surface water abstractions	Supplementary	ABS
WESTMEATH	Annagh Lough or White Lough	Modernise Abstraction Legislation, including a system for licensing surface water abstractions	Supplementary	ABS
WESTMEATH	Bane ( Lough )	Modernise Abstraction Legislation, including a system for licensing surface water abstractions	Supplementary	ABS
WESTMEATH	Lene (Lough)	Modernise Abstraction Legislation, including a system for licensing surface water abstractions	Proposed	ABS
WESTMEATH	Glass (Lough)	Modernise Abstraction Legislation, including a system for licensing surface water abstractions	Supplementary	ABS
WESTMEATH	Ben Lough	Further Investigate cause of failure	Proposed	DATA+
WESTMEATH	Lene (Lough)	Further Investigate cause of failure	Guidance	DATA+
WESTMEATH	Glass (Lough)	Further Investigate cause of failure	Supplementary	DATA+

# Proposed Programme of Measures

## – Supplementary Measures for Lakes (cont.)

Local Authority	WMU Name	Measure Name	Measure Type	Source
WESTMEATH	Bane ( Lough )	Reduce water demand through improved conservation, plumbing code changes, reduce unaccounted for water, rainwater harvesting, domestic water metering, universal water charging, or restricting development where water resources are over-subscribed	Supplementary	ABS
WESTMEATH	Lene (Lough)	Reduce water demand through improved conservation, plumbing code changes, reduce unaccounted for water, rainwater harvesting, domestic water metering, universal water charging, or restricting development where water resources are over-subscribed	Supplementary	ABS
WESTMEATH	Bane ( Lough )	Alter the availability of supply through conjunctive use or integrated water resources management, water reuse, implementing S.U.D schemes in developed areas, implementation of abstraction controls, use of additional storage or alternative water source	Supplementary	ABS
WESTMEATH	Lene (Lough)	Alter the availability of supply through conjunctive use or integrated water resources management, water reuse, implementing S.U.D schemes in developed areas, implementation of abstraction controls, use of additional storage or alternative water source	Proposed	ABS

# Appendix 4:

## Alternative Programme of Measures Lakes



# Alternative Programme of Measures – Basic Measures for Lakes

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Local Authority	WMU	Measure Name	Sub-Measure Name	Source
WESTMEATH	Bane ( Lough )	Water Supplies Act 1942	Create a proposal for extending, or providing a supply of water.	ABS
WESTMEATH	Lene (Lough)	Water Supplies Act 1942	Create a proposal for extending, or providing a supply of water.	ABS

# Alternative Programme of Measures – Supplementary Measures for Lake

Local Authority	WMU	Measure Name	Measure Type	Source
MEATH	Annagh Lough or White Lough	Modernise Abstraction Legislation, including a system for licensing surface water abstractions	Proposed	ABS
MEATH	Bane ( Lough )	Modernise Abstraction Legislation, including a system for licensing surface water abstractions	Proposed	ABS
MEATH	Glass (Lough)	Modernise Abstraction Legislation, including a system for licensing surface water abstractions	Proposed	ABS
MEATH	Doo (Lough)	Modernise Abstraction Legislation, including a system for licensing surface water abstractions	Proposed	ABS
MEATH	Annagh Lough or White Lough	Conduct awareness campaign for sustainable domestic water use, including rainwater harvesting and domestic soakaways for stormwater	Proposed	ABS
MEATH	Bane ( Lough )	Conduct awareness campaign for sustainable domestic water use, including rainwater harvesting and domestic soakaways for stormwater	Proposed	ABS
MEATH	Glass (Lough)	Conduct awareness campaign for sustainable domestic water use, including rainwater harvesting and domestic soakaways for stormwater	Proposed	ABS
MEATH	Doo (Lough)	Conduct awareness campaign for sustainable domestic water use, including rainwater harvesting and domestic soakaways for stormwater	Proposed	ABS
MEATH	Glass (Lough)	Further Investigate cause of failure	Supplementary	DATA+
MEATH	Annagh Lough or White Lough	Forest Service - Forestry and Water Quality Guidelines	Guidance	FOR
MEATH	Annagh Lough or White Lough	Update Forest Service Guidance document on new EQS standards, Aerial Fertilisation Regulations, Updated Acidification protocol.	Proposed	FOR
MEATH	Annagh Lough or White Lough	Forest Service - Forestry and Aerial Fertilisation Guidelines	Guidance	Manure
WESTMEATH	Ben Lough	Modernise Abstraction Legislation, including a system for licensing surface water abstractions	Proposed	ABS
WESTMEATH	Annagh Lough or White Lough	Modernise Abstraction Legislation, including a system for licensing surface water abstractions	Proposed	ABS
WESTMEATH	Bane ( Lough )	Modernise Abstraction Legislation, including a system for licensing surface water abstractions	Proposed	ABS
WESTMEATH	Lene (Lough)	Modernise Abstraction Legislation, including a system for licensing surface water abstractions	Proposed	ABS

# Alternative Programme of Measures

## – Supplementary Measures for Lake (cont.)

Local Authority	WMU	Measure Name	Measure Type	Source
WESTMEATH	Glass (Lough)	Modernise Abstraction Legislation, including a system for licensing surface water abstractions	Proposed	ABS
WESTMEATH	Ben Lough	Conduct awareness campaign for sustainable domestic water use, including rainwater harvesting and domestic soakaways for stormwater	Proposed	ABS
WESTMEATH	Annagh Lough or White Lough	Conduct awareness campaign for sustainable domestic water use, including rainwater harvesting and domestic soakaways for stormwater	Proposed	ABS
WESTMEATH	Bane ( Lough )	Conduct awareness campaign for sustainable domestic water use, including rainwater harvesting and domestic soakaways for stormwater	Proposed	ABS
WESTMEATH	Lene (Lough)	Conduct awareness campaign for sustainable domestic water use, including rainwater harvesting and domestic soakaways for stormwater	Proposed	ABS
WESTMEATH	Glass (Lough)	Collect daily abstraction rates and compensation flow releases	Proposed	ABS
WESTMEATH	Bane ( Lough )	Collect daily water level	Proposed	ABS
WESTMEATH	Lene (Lough)	Collect daily water level	Proposed	ABS
WESTMEATH	Bane ( Lough )	Reduce water demand through improved conservation, plumbing code changes, reduce unaccounted for water, rainwater harvesting, domestic water metering, universal water charging, or restricting development where water resources are over-subscribed	Proposed	ABS
WESTMEATH	Lene (Lough)	Reduce water demand through improved conservation, plumbing code changes, reduce unaccounted for water, rainwater harvesting, domestic water metering, universal water charging, or restricting development where water resources are over-subscribed	Proposed	ABS
WESTMEATH	Bane ( Lough )	Alter the availability of supply through conjunctive use or integrated water resources management, water reuse, implementing S.U.D schemes in developed areas, implementation of abstraction controls, use of additional storage or alternative water source	Proposed	ABS
WESTMEATH	Lene (Lough)	Alter the availability of supply through conjunctive use or integrated water resources management, water reuse, implementing S.U.D schemes in developed areas, implementation of abstraction controls, use of additional storage or alternative water source	Proposed	ABS

# Alternative Programme of Measures

## – Supplementary Measures for Lake (cont.)

Local Authority	WMU	Measure Name	Measure Type	Source
WESTMEATH	Bane ( Lough )	Record daily abstraction rates	Proposed	ABS
WESTMEATH	Lene (Lough)	Record daily abstraction rates	Proposed	ABS
WESTMEATH	Bane ( Lough )	Further Research on Abstraction Pressure effects on lake ecology (national)	Proposed	ABS
WESTMEATH	Lene (Lough)	Further Research on Abstraction Pressure effects on lake ecology (national)	Proposed	ABS
WESTMEATH	Bane ( Lough )	Investigate implementing smaller water schemes to reduce demand on other resources	Proposed	ABS
WESTMEATH	Lene (Lough)	Investigate implementing smaller water schemes to reduce demand on other resources	Proposed	ABS
WESTMEATH	Bane ( Lough )	Initiate field work needed to develop water budgets to determine groundwater-surface water contributions and develop water budgets	Proposed	ABS
WESTMEATH	Lene (Lough)	Initiate field work needed to develop water budgets to determine groundwater-surface water contributions and develop water budgets	Proposed	ABS
WESTMEATH	Ben Lough	Further Investigate cause of failure	Supplementary	DATA+
WESTMEATH	Lene (Lough)	Further Investigate cause of failure	Supplementary	DATA+
WESTMEATH	Glass (Lough)	Further Investigate cause of failure	Supplementary	DATA+
WESTMEATH	Annagh Lough or White Lough	Forest Service - Forestry and Water Quality Guidelines	Guidance	FOR
WESTMEATH	Annagh Lough or White Lough	Update Forest Service Guidance document on new EQS standards, Aerial Fertilisation Regulations, Updated Acidification protocol.	Proposed	FOR
WESTMEATH	Annagh Lough or White Lough	Forest Service - Forestry and Aerial Fertilisation Guidelines	Guidance	Manure