

eastern  
river basin district

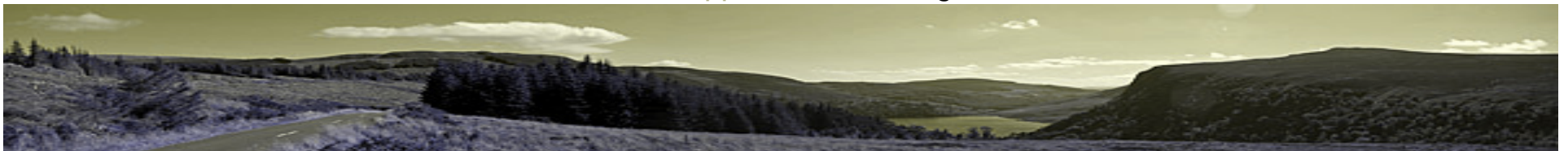
# Draft Programme of Measures

## *Nanny WMU*

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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
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9. What happens next?
10. What can you do?

Appendix 1&2: Programme of Measures



# Document Control Sheet

<b>Project</b>	Eastern River Basin District			
<b>Report</b>	Draft - Nanny - 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

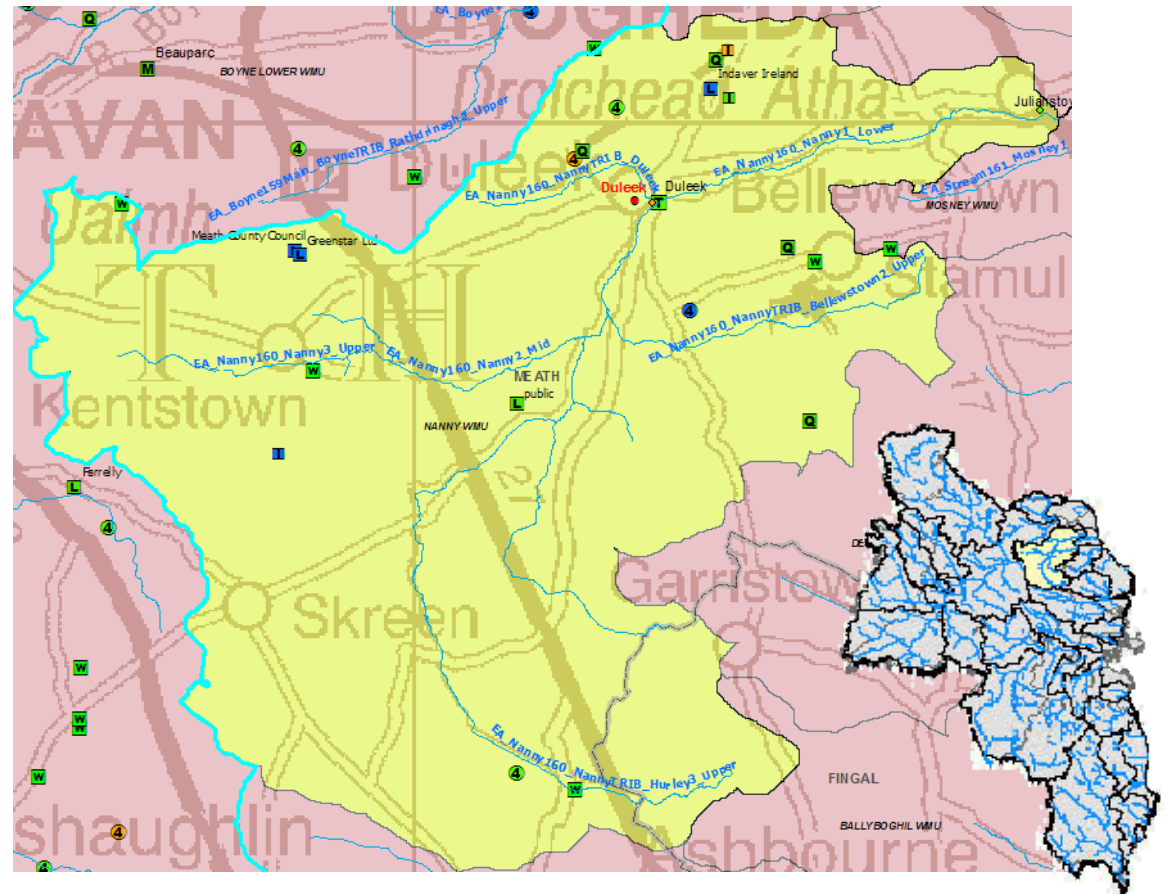
- ❑ The Draft River Basin Management Plan was published on the 22<sup>nd</sup> December 2008 for Public Consultation.
- ❑ This Programme of Measures accompanies the River Basin Management Plan created for the Eastern River Basin District.
- ❑ The River Basin Management Plan can be downloaded from the 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: 95% Meath, 5% Fingal
- ❑ River Length: 71 km
- ❑ Land use:  
Predominantly land-use is for agriculture
  - 58% pasture use
  - 38% arable
  - urban populations cover 2% of the area for example at Duleek



# Risk Assessment Legend

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

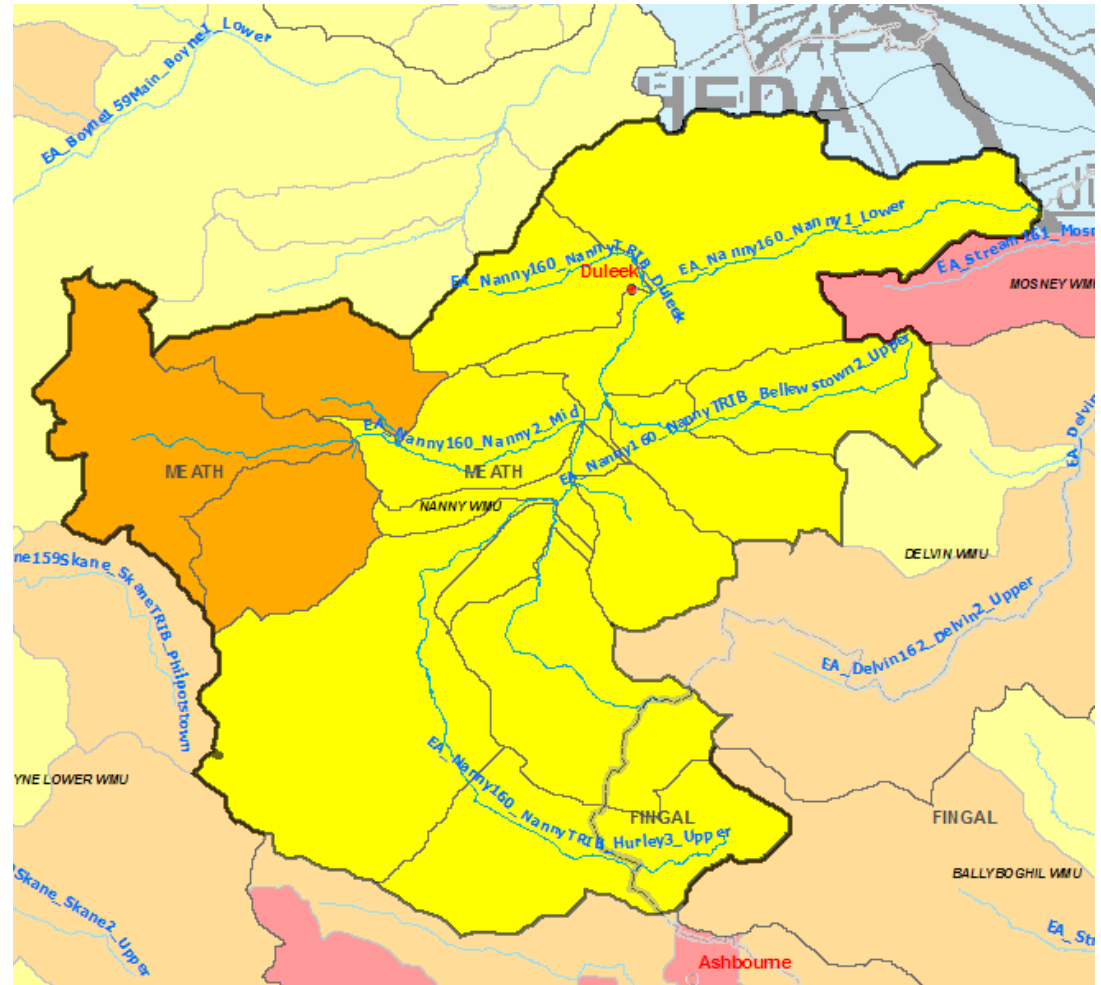
Risk	Symbol with Level of Risk	Risk	Symbol with Level of Risk
Abstraction			
CSO	 1a  1b  2a  2b	WWTPs	 1a  1b  2a  2b
Hydrometric Station	 ACTIVE  INACTIVE  OBSOLETE	WTPs	 2a
IPC Facilities	 1a  1b  2a  2b	Landfills	 1b  2a  2b
IPC Rivers	 1a  1b  2a  2b	Mines	 1a  1b  2a
Section 4	 1a  1b  2a  2b	Quarries	 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:

Moderate	80%
Poor	20%



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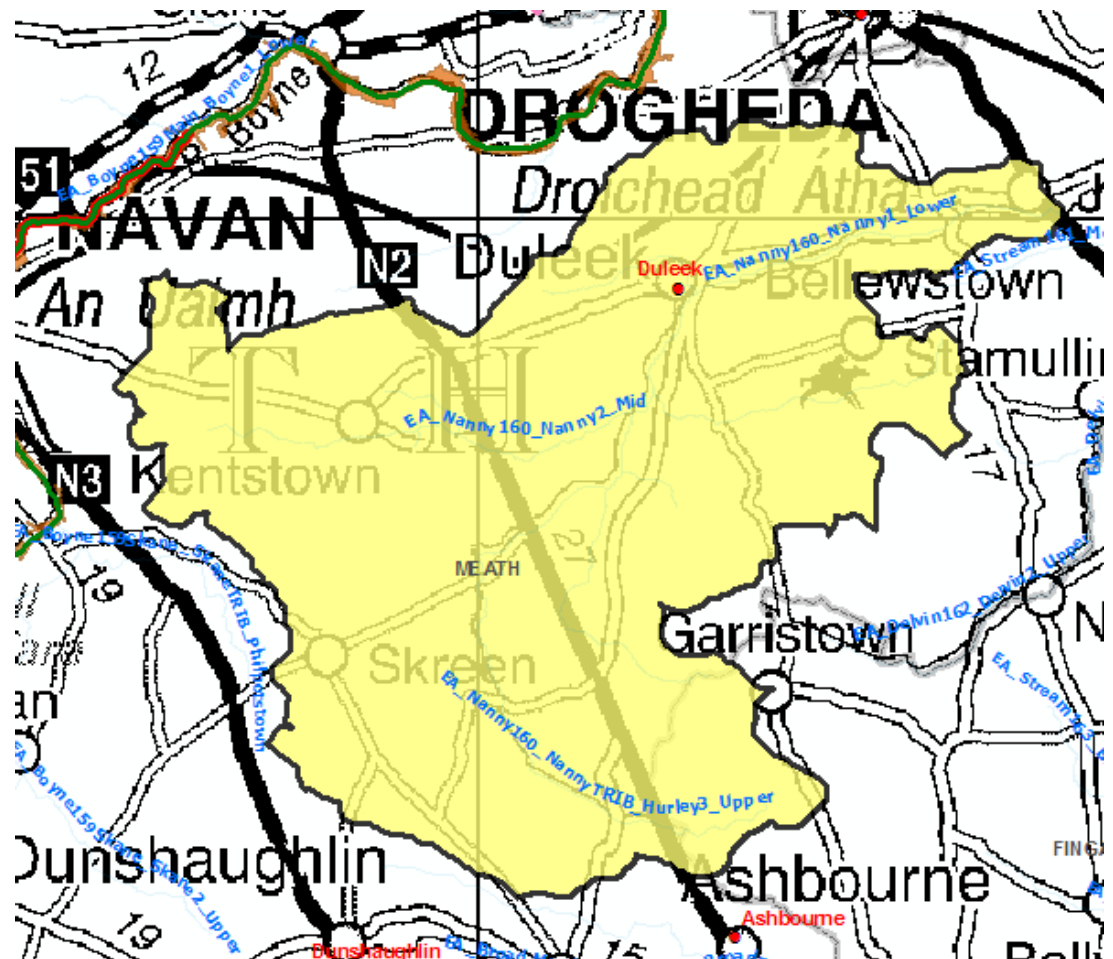
- ❑ Waters must be of satisfactory quality and sufficient quantity to protect the aquatic environment and its beneficial uses.
- ❑ We have four core objectives:
  1. Prevent deterioration and in particular maintain High or Good Status
  2. Improve waters to achieve Good Status where appropriate
  3.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

National Heritage Areas (5)	✓	Laytown Dunes, Nanny Estuary, Duleek Commons, Thomastown Bog, Balrath Woods
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# 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 Nanny the problems are:**

- High Nutrient Concentration (Phosphorus, Ammonia)
- Issues with level of oxygen in water
- Low Ecological Rating

# What could be causing these problems?

Pressure	County	% Contribution
Agriculture	Meath	65
	Fingal	50
Usage and Discharge of Dangerous Substances	Meath	5
	Fingal	1
Landfills, Quarries, Mines and Contaminated Lands	Meath	5
Wastewater and Industrial Discharges	Meath	20
	Fingal	9
Wastewater from Unsewered Properties	Meath	10
	Fingal	40
Morphology	Meath Fingal	At Risk

- ❑ The pressures in the Nanny have been identified as agriculture, wastewater and industrial discharges and septic tanks.
- ❑ Pressures in the Nanny are emphasised due to poorly drained soil leading to greater runoff.
- ❑ In addition there is suspected naturally high nutrients caught in ground. This will be further investigated in the first 6 year cycle.
- ❑ The Nanny is dredged to prevent flooding. Appropriate dredging practises will ensure no morphological risk.

*All percentages are estimated based on available data, analysis and expert judgement.*

# 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 select necessary 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 number 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):

Top Ten Supplementary Measures - River Sub-catchment
Tertiary Treatment
Enforce Regulations on Septic Systems
Upgrade WWTW and Collecting Systems <2000 PE
Implement Community Digestors for Alternative Energy
Restrict Cattle Access to rivers - Create Cattle Drinking points
PCS - Principles for Good Plant Protection Practise
Department of Agriculture - Code of Good Practice and Guidelines on the use of biosolids in Agriculture, 1999
Emphasise linkage between Planning, Water Services, and Environmental Sections within Local Authorities for Planning Purposes
Conduct awareness campaign for sustainable domestic water use, including rainwater harvesting and domestic soakaways for stormwater
Modernise Abstraction Legislation, including a system for licensing surface water abstractions

# 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.

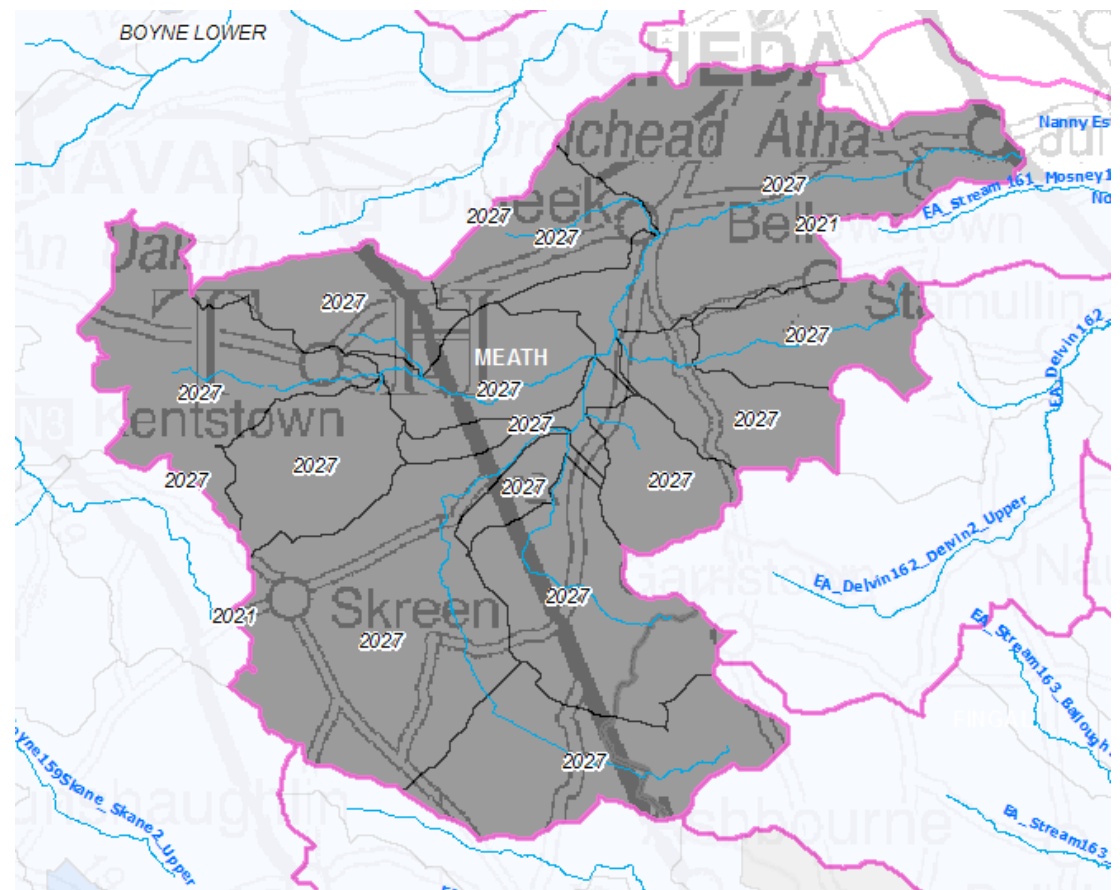


*Phosphorus modelling by the ERBD project shows that of the entire catchment only 48% of the Meath land area and 2% of the Fingal Land area are of high risk of causing direct runoff into the river.*

# Alternative Objectives – Extended Timescale

- In some cases due to technical infeasibility, disproportionate cost or the natural condition of the waterbody 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 and septic tank pollution. Naturally high levels of nutrients in the ground may also be an issue. Full implementation of the measures is expected to correct this, however recovery time will mean that probably no rivers will achieve Good Status before 2015.

<b>2015</b>	0%
<b>2021</b>	0%
<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



# 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
FINGAL	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
FINGAL	National Water Pricing Policy Framework (1998)	National Water Pricing Policy Framework (1998)	ABS
FINGAL	Water Supplies Act 1942	Water Supplies Act 1942	ABS
FINGAL	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
FINGAL	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
FINGAL	Planning Development Acts 2000 - 2006	Planning Development Acts 2000 - 2006	CROSS
FINGAL	Planning and Development Regulations 2001 - 2007	Planning and Development Regulations 2001 - 2007	CROSS
FINGAL	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
FINGAL	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
FINGAL	EPA (Licensing) Regulations, 1994 & 2004	EPA (Licensing) Regulations, 1994 & 2004	IPPC
FINGAL	Local Government (Water Pollution) Act 1 of 1977 and amendments	Local Government (Water Pollution) Act 1 of 1977 and amendments	S4
FINGAL	Waste Water Discharge (Authorisation) Regulations (S.I. 684 of 2007)	Waste Water Discharge (Authorisation) Regulations (S.I. 684 of 2007)	WWTP
FINGAL	Water Services Act 2007	Water Services Act 2007	WWTP
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

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

Local Authority	Parent ID Name	MeasureName	Source
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	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	Urban Waste Water Treatment Regulations, 2001 - 2004	Urban Waste Water Treatment Regulations, 2001 - 2004	WWTP
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

# Proposed Programme of Measures

## – Supplementary Measures for Rivers

Local Authority	Measure Name	Measure Type	Source
FINGAL	Emphasise linkage between Planning, Water Services, and Environmental Sections within Local Authorities for Planning Purposes	Proposed	CROSS
FINGAL	Conduct awareness campaign for sustainable domestic water use, including rainwater harvesting and domestic soakaways for stormwater	Proposed	ABS
FINGAL	Modernise Abstraction Legislation, including a system for licensing surface water abstractions	Proposed	ABS
MEATH	Department of Agriculture - Code of Good Practice and Guidelines on the use of biosolids in Agriculture, 1999	Guidance	Manure
MEATH	Emphasise linkage between Planning, Water Services, and Environmental Sections within Local Authorities for Planning Purposes	Proposed	CROSS
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	Development Plans/Local Area Plans - Plans should integrate OSWTS Risk matrices	Proposed	Septic
MEATH	LAs to adopt a common Register of approved Site Assessors and common Code of Practice for maintaining register	Proposed	Septic
MEATH	LAs to utilise risk maps of OSWTS to inform decision making and target areas for inspections	Proposed	Septic
MEATH	Tertiary Treatment	Supplementary	WWTP
MEATH	Enforce Regulations on Septic Systems	Supplementary	Septic
MEATH	Upgrade WWTW and Collecting Systems <2000 PE	Supplementary	WWTP
MEATH	Implement Community Digestors for Alternative Energy	Supplementary	WWTP
MEATH	Restrict Cattle Access to rivers - Create Cattle Drinking points	Supplementary	AGR-PS
MEATH	PCS - Principles for Good Plant Protection Practise	Supplementary	Chem

# Appendix 2:

## Alternative Programme of Measures



# Alternative Programme of Measures

## – Basic Measures for rivers

Local Authority	Measure Name	Sub-Measure Name	Source
FINGAL	EC (Good Agricultural Practice for Protection of Waters) Regulations (S.I. 378 of 2006 and S.I. 526 of 2007)	Conduct Farm Surveys	AGR
FINGAL	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
FINGAL	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
FINGAL	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
FINGAL	EC (Good Agricultural Practice for Protection of Waters) Regulations (S.I. 378 of 2006 and S.I. 526 of 2007)	Nutrient management	Manure
FINGAL	EC (Good Agricultural Practice for Protection of Waters) Regulations (S.I. 378 of 2006 and S.I. 526 of 2007)	Locate Manure heaps at a specified distance from waterbodies	Manure
FINGAL	Waste Water Discharge (Authorisation) Regulations (S.I. 684 of 2007)	Certify all waste water discharges less than 500 PE.	WWTP
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

# Alternative Programme of Measures – Basic Measures for Rivers (cont.)

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Local Authority	Measure Name	Sub-Measure Name	Source
MEATH	Urban Waste Water Treatment Regulations, 2001 - 2004	Collecting systems for p.e.'s >2,000 (unless negligible benefits or excessive costs)	WWTP

# Alternative Programme of Measures – Supplementary Measures

Local Authority	Measure Name	Measure Type	Source
FINGAL	Modernise Abstraction Legislation, including a system for licensing surface water abstractions	Proposed	ABS
FINGAL	Conduct awareness campaign for sustainable domestic water use, including rainwater harvesting and domestic soakaways for stormwater	Proposed	ABS
FINGAL	Emphasise linkage between Planning, Water Services, and Environmental Sections within Local Authorities for Planning Purposes	Supplementary	CROSS
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	PCS - Principles for Good Plant Protection Practise	Guidance	Chem
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	Development Plans/Local Area Plans - Plans should integrate OSWTS Risk matrices	Proposed	Septic

# Alternative Programme of Measures – Supplementary Measures for Rivers (cont.)

Local Authority	Measure Name	Measure Type	Source
MEATH	LAs to adopt a common Register of approved Site Assessors and common Code of Practice for maintaining register	Proposed	Septic
MEATH	LAs to utilise risk maps of OSWTS to inform decision making and target areas for inspections	Proposed	Septic
MEATH	Enforce Regulations on Septic Systems	Supplementary	Septic
MEATH	Tertiary Treatment	Supplementary	WWTP
MEATH	Upgrade WWTW and Collecting Systems <2000 PE	Supplementary	WWTP
MEATH	Implement Community Digestors for Alternative Energy	Supplementary	WWTP

