MAY 2008

SIGNIFICANT WATER MANAGEMENT ISSUES – DIGEST OF COMMENTS

A Response to Stakeholders' Submissions in Northern Ireland

Environment & Heritage Service
www.ehsni.gov.uk

Section 1 GLOSSARY OF ABBREVIATIONS

AIL	Abstraction and Impoundment Licensing
ARA	Assets Recovery Agency
ASSI	Areas of Special Scientific Interest
CMB	Countryside Management Branch
CPMPs	Crop Protection Management Plans
CSG	Catchment Stakeholder Groups
CSO	Combined Sewer Overflow
DARD	Department of Agriculture and Rural Development
DCAL	Department of Culture, Arts and Leisure
DETI	Department of Enterprise, Trade and Industry
DM	Dry Matter
DOE	Department of the Environment
DRD	Department of Regional Development
EA	Environment Agency
EC	European Community
EGAUM	Expert Group for Alternative Uses of Manure
EHS	Environment and Heritage Service
EIA	Environmental Impact Assessment
EPA	Environmental Protection Agency
ETP	Effluent Treatment Plant
EU	European Union
FCB	Fisheries Conservancy Board
FQAS	Farm Quality Assurance Scheme
FS	Forestry Service
GAEC	Good Agricultural and Environmental Condition
HSE	Health and Safety Executive
IPC	Industrial Pollution Control
IPPC	Integrated Pollution Prevention Control
IPRI	Industrial Pollution and Radiochemical Inspectorate
LA	Loughs Agency
LRMU	Land and Resource Management
N	Nitrates
NAP	Nitrates Action Programme
NERBD	North Eastern River Basin District
NIAUR	Northern Ireland Authority for Utility Regulation
NICMS	Northern Ireland Countryside Management Scheme
NIRDP	NI Rural Development Plan
NIW	Northern Ireland Water
R&D	Research & Development
RA	Rivers Agency
RBD	River Basin District
RBMP	River Basin Management Plan
ROI	Republic of Ireland
RSPB	Royal Society for the Protection of Birds
P	Phosphorous
PEPG	Planning and Environmental Policy Group
PPS	Public Prosecution Service
PPS14/15	Planning Policy Statement 14/15
PRP	Pollution Reduction Programme
PS	Planning Service
SAC	Special Area of Conservation

SAP	Species Action Plan
SRC	Short Rotation Coppice
SPA	Special Protection Area
SSAFO	Silage, Slurry and Agricultural Fuel Oil
STW	Sewage Treatment Works
SuDS	Sustainable Urban Drainage Systems
SWMI	Significant Water Management Issues
UKAS	United Kingdom Accreditation Service
VI	Voluntary Initiative
WFD	Water Framework Directive
WMU	Water Management Unit
WWTW	Waste Water Treatment Works

Section 2 INTRODUCTION

2.1 Background

The EC Water Framework Directive (WFD) (2006/60/EC) was adopted in 2000 and requires all Member States to adopt a new approach to managing all their waters; coastal, estuaries, groundwater, rivers and lakes. In particular, the Directive sets a general target of achieving at least Good status in all waters by 2015, although there is provision for exceptions.

On the 22 December 2006 the DOE published a consultation document "Programme & Timetable for the implementation of the Framework Directive". A key step in the programme was to publish an overview of Significant Water Management Issues (SWMI) for the three International River Basin Districts (IRBDs) [Neagh Bann, North Western and Shannon] and the North Eastern River Basin District, which is contained wholly in Northern Ireland.

These documents, titled, "Water Matters – Have Your Say", were issued jointly by the responsible authorities for the three IRBDs; Environment and Heritage Service (Northern Ireland) and the lead County Councils of Monaghan, Donegal and Limerick (Ireland). They were published for public comment on the 22 June 2007. The documents identified the NS SHARE project[17] as the co-ordinator of all responses for the Republic of Ireland portions of the North Western and Neagh Bann IRBDs on behalf of the lead county Councils and the Shannon IRBD project as the co-ordinator of responses for the Shannon IRBD.

The documents were published on the internet, distributed at local meetings and sent directly on request to individuals. Hard copies of the SWMI reports were also circulated to various groups and individuals (SWMI reports circulated totalled 1100 Neagh Bann; 1080 North Eastern and 1260 North Western).

The principal aim of these documents is the identification of significant issues which threaten the achievement of Good status, both locally and nationally, and to identify suggested actions to address these issues. The SWMI booklets were, in effect, a provisional outline of the proposed draft River Basin Management Plans (RBMPs), designed to inform interested parties of water management processes and to facilitate their participation in identifying both issues and management options. This will inform the preparation of Draft RBMPs, which will be published for consultation in December 2008.

Environment and Heritage Service (EHS) are promoting nine Catchment Stakeholder Groups (CSGs) to help support better integration and focus of water management at a more localised level. The Water Matters Reports were the sole agenda item for a series of autumn 2007 meetings of these Groups. Many inputs were recorded at these meetings, which were chaired by independent facilitators. As well as clarifying local issues, these meetings identified many examples where locally based groups are working to protect and improve the aquatic environment.

2.2 Aim of the consultation process

This consultation process was to seek comments on the issues identified in order to direct the correct management emphasis to deliver protection and improvements. Interested party involvement is an important aspect of the WFD. EHS invited the public to comment on the issues that were identified, after discussions with stakeholders, which were considered to be the most significant issues affecting water quality and quantity and preventing our waters achieving the required objectives by 2015.

2.3 Questions Posed

The public were asked to consider 14 questions in the SWMI document:

Q1. Do you agree that these are the key causes of water problems within the river basin district?

Q2. What is your view of these suggested themes? Have we missed something that would be helpful within the river basin district?

Q3. What is your view about the suggested actions to control problems related to wastewater and industrial discharge within the river basin district? Are these actions appropriate? Have we missed something important?

Q4. What is your view about the suggested actions to control problems related to landfills, quarries, mines and contaminated lands within the river basin district? Are these actions appropriate? Have we missed something important?

Q5. What is your view about the suggested actions to control problems related agriculture within the river basin district? Are these actions appropriate? Have we missed something important?

Q6. What is your view about the suggested actions to control problems related to unsewered properties within the river basin district? Are these actions appropriate? Have we missed something important?

Q7. What is your view about the suggested actions to control problems related to forestry within the river basin district? Are these actions appropriate? Have we missed something important?

Q8. What is your view about the suggested actions to control problems related to dangerous substances within the river basin district? Are these actions appropriate? Have we missed something important?

Q9. What is your view about the suggested actions to control problems related to physical modifications within the river basin district? Are these actions appropriate? Have we missed something important?

Q10. What is your view about the suggested actions to control problems related to abstraction within the river basin district? Are these actions appropriate? Have we missed something important?

Q11. What is your view about the suggested actions to address alien species problems within the river basin district?

Q12. What is your view about the suggested actions to address sensitive area problems within the river basin district?

Q13. What is your view about the suggested actions to address the shared water issues within the river basin district?

Q14. What is your view about our approach to assessing future risks within the river basin district?

2.4 Other Consultations and Participation Activities

Consultation responses were invited from the public and were received through written submissions and feedback at the CSG meetings. These CSGs provided stakeholders with the opportunity to identify concerns to both Statutory Agencies and Non Governmental Organisations and have them addressed at a local level. At the meetings on the SWMI reports members of the public were invited to debate the key problems affecting the waters in the local area and to assist in both finding and delivering solutions. Attendees were given the opportunity to make specific comments, complete questionnaires, and use a 'talking wall'. Facilitator's reports were compiled from each meeting.

The inputs to the consultation are summarised as follows:

- Formal written responses to the four Water Matters Consultation Documents;
- Questionnaires and "Post-its" at the autumn 2007 CSG Meetings;
- Facilitators Reports of those meetings and
- Detailed notes taken at the CSG meetings by EHS staff

The outputs from the consultation are summarised as follows:

- This SWMI Digest
- The Facilitators Report
- Matters to be addressed in future CSG meetings
- Follow up on specific issues by EHS and other government agencies

2.5 Scope of This Document

There were four consultations covering the three IRBDs and North Eastern RBD. There was huge commonality in the responses from all four areas. To improve readability the responses have been collated in this single document "Significant Water Management Issues Digest". This document summarises the comments received and the responses from appropriate government Departments/Agencies. This consultation feedback will directly contribute to the development of the draft RBMPs. The Draft RBMPs will be published for public consultation by EHS on 22 December 2008.

2.6 North South Aspect of SWMI digest

The consultation process invited comments relating to the three IRBDs (Neagh Bann, North Western and Shannon). Responses were also received from stakeholders relating to issues identified in the Republic of Ireland for the cross border basins. Similarly, comments relating to waters in Northern Ireland were received by NS SHARE (this cross border project will co-ordinate and publish a formal response to issues relating to the Republic of Ireland portion of the North Western and Neagh Bann IRBDs). EHS and NS SHARE have exchanged responses to the consultation to ensure that all issues are clearly identified and make appropriate contribution to the RBMPs which are being prepared. This exchange of responses will make a particular contribution to the ongoing coordinated management of cross border waters.

Section 3 SUMMARY OF COMMENTS

3.1 Products and Actions from this Consultation Response

This consultation process identified issues addressed through extensive stakeholder involvement. Consultation responses mentioned previously included specific comments recorded by facilitator's reports, EHS staff, completed questionnaires, 'post-its' retrieved from a 'talking wall' at each meeting and supplementary written submissions received by email and by post. All comments received have been collated and are reviewed and represent the subject matter of:

- The SWMI digest publication
- Facilitators report of meetings of Catchment Stakeholder Groups
- Future agenda work for Catchment Stakeholder Groups
- Actions and follow up by EHS staff

This document has been produced as the formal Government response to the Consultation. The facilitators report for the nine CSG meetings has been completed and will be published on the NS SHARE website. The EHS staff notes are being used as a basis for the agendas of ongoing CSG meetings being coordinated by EHS and to follow up on apparent ongoing pollution problems by EHS staff and other government agencies.

3.2 Comments from Catchment Stakeholder Groups

EHS has formed nine CSGs providing a forum for anyone with an interest in local water issues to pinpoint matters and have them dealt with at a local level. The nine groups are

- Belfast Lough & Lagan
- Lower Foyle
- Lower Neagh Bann
- Upper Foyle
- Erne & Melvin
- Upper Neagh Bann
- Bush & Glens
- Carlingford & Mourne and
- Strangford & Lecale.

At each group, members of the public were invited to debate the key problems affecting the waters in their local area and to assist in finding and delivering solutions to protect and sustain our rivers, lakes, estuaries, seas and groundwater. Attendees were given the opportunity to make specific comments from the floor, complete questionnaires, and use post-its on a 'talking wall' to submit comments. Facilitator's reports, notes by EHS staff were compiled from each meeting. 122 Questionnaires were returned in total from the nine public meetings.

3.3 Comments by Written Submission

A total of twenty three written submissions were received by the 22 December 2007. The names of individuals/organisations who took part in the consultation process are listed in Section 7. Responses were received from a wide range of sectors including industry and environmental non-government organisations and private individuals. A detailed compendium of comments received can be found in Section 4.

3.4 Other Comments

Numerous comments were received which were personal opinions, general statements or opinions on the river basin planning process. These comments are considered outside the scope of this document. However, all have been noted to the editors so that they can appropriately influence future Water Framework Directive related publications.

3.5 Departmental Response to Comments received on the SWMI reports

A wide range of environmental problems and issues were raised in the comments submitted. On analysis a number of the issues were similar in nature and as a result a generic list of issues has been compiled as follows:

Biodiversity
Alien Species
Marine
Policy
River Basin Management Plans
Physical Modification of Rivers
Coastal Erosion
Planning Policy Statements
Judicial
Pollution Guidelines
Regulatory Controls
Enforcement
Septic Tanks
Sustainable Drainage Systems
Waste Management Licensing
Illegal Waste Removal
Abstractions and Hydro Schemes
Forestry Guidelines
Environmental Crime Enforcement
Contaminated Land
Endocrine Disruptors
Sewage Infrastructure
Sustainable Water Use
Agriculture
Weed Control
Sewage Sludge Disposal
Nutrient Budgets
Monitoring Points

The majority of the responses have been provided by EHS, though where relevant input has been sought from other Departments/ Agencies.

3.6 Ongoing Management of Local Water Issues

Local significant water management issues identified at each CSG meeting through comments, questionnaires, notes and "post-its" were collated. They were sorted and distributed to EHS staff for appropriate follow up action. Feedback will be provided to stakeholders at the future Catchment Stakeholder Group meetings. A second round of meetings have been completed. Invitations were sent to those who expressed an interest in being involved.

Erne & Melvin	19th February 2008	Upper Foyle	16th April 2008
Lower Neagh Bann	6th March 2008	Bush & Glens	10th Apri l2008
Belfast Lough & Lagan	12th March 2008	Strangford & Lecale	23rd April 2008
Lower Foyle	19th March 2008	Carlingford & Mourne	30th April 2008
Upper Neagh Bann	3rd April 2008		

Further information on future meetings can be received by contacting EHS as follows: by E-mail at watermatters@doeni.gov.uk; by Fax on 028 92623011; or by post to The Catchment Officers, Environment and Heritage Service, Water Management Unit, 17 Antrim Road, Lisburn, BT28 3AL.

Section 4 DETAILED COMMENTS

4.1 Table of Detailed Comments

The following table assembles the comments and their source along with the respondent details and response to the various issues raised through the consultation. Please note any supporting documentation and/or useful web links are denoted by superscript numbers for example [1], [2].

4.1.1 Marine

Comment	Correspondent/Source	Respondent	Response
Would like to know if shellfish water is protected under the EU directive. Are areas to be designated for licensed shell fishing to protect and keep the water standard up? It would be good if the whole Lough could be protected	Anonymous, Facilitators report, CSG Newtownards Meeting	Environment & Heritage Service (EHS)	There are currently 9 designated shellfish waters in Northern Ireland, which include 3 sites in Strangford Lough at Reagh Island/Paddy's Point, Skate Rock and Marlfield Bay. Responsibility for new designations lies with Planning and Environmental Policy Group (PEPG)[18] of DOE. Their policy is to keep designations broadly in line with shellfish harvesting areas licensed by DARD[2], rather than whole sea loughs. However, the level of protection required at sites is the same. PEPG is planning to go out to consultation on new Shellfish Waters Designations during 2008.
Concern over the amount of plastic bags in rivers. What effect do they have on environment and do we know what effect they are having in estuaries or at sea?	Anonymous, Facilitators report, CSG Newtownards Meeting	EHS	There are many scientific papers reporting the problems with plastics in the marine environment, and the ecological problems these can cause when ingested by birds, fish, marine mammals etc. Tackling the problems with plastics in our marine waters is complex and can only be sustainably managed by reductions at source i.e. better education about the fate of plastics in the environment and campaigns to restrict the use of plastic bags and plastics in general.

Integrated coastal management – coastal and estuarine waters have largely been neglected in the SWMI reports. Management of these areas is key to achieving the WFD objectives and must not be neglected in the RBMPs.	CNCC	EHS	The management of estuarine and coastal waters out to one nautical mile from baseline will form part of the river basin management plans.

4.1.2 Coastal Erosion

Comment	Correspondent/Source	Respondent	Response
No consideration has been given to the problem of coastal erosion	NIEL FWTF WWF CNCC	Department of Agriculture & Rural Development (DARD)	Coastal erosion is a natural phenomenon caused by wave action. Presently coastal erosion is not perceived as a major problem in Northern Ireland. It may become more important in the future given the likely sea level rise as a result of global warming.
Coastal erosion - coastal erosion is a major problem. The Bateman formula is currently applied to determine who has responsibility. Tourism assets are not protected from coastal erosion.	Anonymous	DARD	The Bateman formula is an historic interdepartmental agreement detailing the procedure for executing essential coastal protection works. Within this formula cost beneficial works, to protect essential infrastructure, may be undertaken by the Department or authority responsible for the asset at risk. DARD, Rivers Agency[4] undertakes essential cost effective works, which do not fall within the functional area of other Departments or Agencies. A recent independent review of River Agency Flood Management Policy stated" It is evident that the current piece -meal administrative arrangements for the protection of the coast are inappropriate" At this stage a Government response to the Review is being prepared. This may propose that Rivers Agency will undertake a role in the regulation of coastal works.

4.1.3 Alien species

Comment	Correspondent/Source	Respondent	Response
Concerned about the numbers of invasive species being recorded within Carlingford Lough	Loughs Agency	EHS	A comprehensive response has been collated for all comments relating to Alien Species as follows For clarity: 'Alien species' are those not native to the eco regions. 'Invasive species' are species with high impacts capable of causing ecological imbalance
A large number of wetland invasive alien species are present in Northern Ireland. These include zebra mussel, floating pennywort and water fern and have been shown to create ecological problems in our water bodies.	NIEL FWTF WWF	EHS	

Particularly concerned about the increased risk of alien species spreading as a consequence of joining waterways, e.g. Lough Erne and Lough Neagh, to facilitate better navigation. Whilst improved enjoyment of waterways is extremely important, the risk of alien species spread must be acknowledged and addressed.	NIEL FWTF WWF	EHS	EHS recognises the threat posed by invasive alien species and as such in partnership with the National Parks and Wildlife Service (part of the Department of the Environment Heritage and Local Government in the Republic of Ireland) commissioned the 'Invasive Species in Ireland Project'[19] in 2006. The project comprises of many different aspects. Through the project a risk assessment process has been carried out to identify the most high risk invasive alien species currently in the island of Ireland and those which have the potential to arrive here. Lists for each have been produced. Subsequently the most high risk species from each list are having either management or contingency plans produced for them. Examples include alien crayfish and floating pennywort. In addition wide spread species, which may not have scored highly in the risk assessment process but are still considered to be of a threat, will have best practice management plans produced for them. These species include the better known Japanese knotweed, Giant hogweed, Spartina and Himalayan balsam.
Concern about the risk spreading alien species when opening up Northern Ireland's water ways and urges caution. Proposals to enable navigation between Lough Neagh and Lough Erne should be scrutinized very closely in this regard	CNCC	EHS	
Advised where SAP exists for invasive species, implementation at a local level can have significant positive impacts. There is currently a draft Invasive species action plan for the Lough Neagh Wetlands and a dedicated Invasive Species officer.	LN&LBAC	EHS	
Felt that there are also excellent opportunities for trial projects along whole length of river systems e.g. Colin River, use of river officers in delivering plans, or specific projects such as alien species control plans.	Belfast Hills Partnership	EHS	

Concern that while there is a reasonable emphasis on aquatic alien species there is also a need to include the more terrestrial alien problem species with strong or medium associations with waterways e.g. Giant Hogweed.	Belfast Hills Partnership	EHS	The project recognises that public awareness and education are a key aspect to preventing the introduction of new species and the further spread of established species. As such the project has identified several key events to distribute information at. These events have been selected as an ideal opportunity to raise the profile of invasive alien species to a wide ranging target audience. As part of the project a new website has been developed at www.invasivespeciesireland.com. The website aims to help raise awareness of invasive alien species in Ireland and will enable users to find information on a wide range of invasive alien species from a range of habitat types. In addition to obtaining information they can also report any sightings of invasive alien species through the websites 'Alienwatch' facility.
Alien species –Wren?? More common in forest now seen more frequently Giant hogweed more prevalent.	Anonymous, Facilitators report, CSG Armagh Meeting	EHS	
Intrinsic to understanding potential problems posed by alien species is an understanding of fundamental ecological principles. Any new species is limited in its colonisation of new habitat by the geographical limits to that habitat, its existing ecology and its food supply. It is normal for an 'alien' species, newly occupying an empty environmental niche, to produce a population explosion. A population explosion of a previous unfamiliar species invariably evokes a feeling of panic in the human observer.	D Harding	EHS	

In most cases, this panic is totally unjustified, and in the course of a few years, the reproduction of the new species declines rapidly, it adapts into the ecology of the habitat, finds a balance and moreover, the 'natural' species of the habitat adapt to it. Apart from a few Arctic and sub-Arctic species, all of Ireland's flora and fauna were once 'alien' species invading new territory. However, there are two situations in which a new species could cause a problem a) where there is no natural control – as in the spread of the Grey Squirrel where the Pine Marten was extinct and b) where there is already, in place, a closely related species. It is axiomatic in ecology that no two closely related species can occupy the same ecological niche, the more 'aggressive' species rapidly out competing the other.	D Harding	EHS	Through raising awareness of invasive alien species it is hoped to stop the spread of established invasive alien species and prevent the introduction of any new invasive alien species. As part of the WFD implementation, EHS, in conjunction with our counterparts in Ireland, have developed a draft ecoregion 17 list of invasive alien species judged to pose a threat to waterbodies. Please refer to Appendix 1 – Note 17 Provisional Invasive Alien List for Ecoregion 17

This is the case regarding the roach (not mentioned in the booklet, but nevertheless a very recent arrival to the Shannon Basin – only about 10/15 years – illegally deliberately introduced by anglers from the Blackwater in Cork, to which it was previously restricted.) The rapid breeding, faster and more active feeding pattern, greater tolerance of turbid water and its general unconcern as to whether the water is flowing or still, has had a major impact and initiated the rapid decline of its close relative and more 'native' Rudd. On the positive side it has been of benefit to both Trout and Pike, providing easy food for both species and creating a buffer between them – Roach are much more easily caught by Pike than Trout.	D Harding	EHS	DOE has recently reviewed the Wildlife Order (NI) 1985 and are currently consulting the public on it. As part of the review Article 15 and Schedule 9, deals with invasive alien species have been significantly updated and new proposals to deal with alien species included. In 2008 EHS will be distributing signage to local authorities for placement around many of Northern Ireland's waterbodies. This signage will aim to prevent the further spread of Zebra Mussels and also aim to raise awareness of the problems associated with aquatic weeds.
The other major 'alien' species is the Mink – again not mentioned in your booklet. The mink has no natural enemies or control system (other than man) and has resulted in the virtual extermination of many previously common waterbirds in some areas – moorhen, coot and mallard particularly. However there is some evidence the mink population is declining slightly and moorhens and coots re-appearing.	D Harding	EHS	Please refer to the response above

Of the species mentioned in the booklet as alien species of concern, the Zebra Mussel seems to be the most widespread and is popularly held to be a major threat to the aquatic ecology. It is my firm belief that this concern is totally unwarranted and that in time the situation will solve itself. The current millions of Zebra Mussels in the Shannon Basin will disappear and the species decline to the occasional specimen seen only by an observant biologist. The reason is simply that of food supply. They are filter feeders and feed on the algal blooms resulting from phosphate enrichment. Once they have eaten all the algae they will die of starvation and there is already plenty of evidence that this is already happening. In 2005/6 the water clarity in Lough Derg was greater than it had been for 30 years, the water quality was at its best in my memory, there was no algae left and the zebra mussel was dying in its millions. Great banks of dead shells lined the shores and islands. The authorities monitored the water quality and found it well within EC parameters so they decided it cold take a greater effluent load and increased the permits to discharge – hence the decline and re-assertion of algal blooms in 2006/7 and far fewer Zebra Mussels to control it. The Zebra	D Harding	EHS	Please refer to the response above

Mussel is not a problem – the pollution that feeds it is. Eliminate the pollution and you eliminate the algae – No algae is no Zebra Mussel.			
I cannot comment on Nuttall's Pondweed as I am not familiar with it or perhaps I know it by another name, but water violet, duckweed and Canadian pondweed have all been a normal part of Irish aquatic flora as long as I can remember and fluctuate in density in a natural manner from year to year – I cannot understand why you include them at all.	D Harding	EHS	Please refer to the response above
As for Dace, they are a small harmless species, limited in their habitat preference, do not compete with any other species except possibly small roach (and that is no harm), create another buffer between Trout and Pike and are a valid anglers quarry giving good and fast sport. I think the only complaint against them would be that they take the fly fisherman's fly intended for trout and thus considered a nuisance by some anglers in trout waters. The remedy to that would be simply use a different fly. I would consider dace a bonus fish in most waters. Any attempt to try to control them would be pointless, as waste of time and money, ineffectual and unnecessary.	D Harding	EHS	Please refer to the response above

Increase in invasive species especially Himalayan balsam	Anonymous	EHS	Please refer to the response above
Alien Species - invasion by alien species like Spartina and Sargassum needs to be looked at.	Anonymous	EHS	Please refer to the response above
Alien Species - Didemnum is a marine sea-squirt species which is making its way here.	Anonymous	EHS	Please refer to the response above

4.1.4 Biodiversity

Comment	Correspondent/Source	Respondent	Response
Similarly, it should be noted that whilst harnessing wind power is commendable in terms of reducing our carbon emissions, the siting of wind farms must acknowledge and compensate for the damage that physical infrastructures like this can cause to laminar water flows through wetlands	NIEL FWTF WWF	EHS	The impact of wind farms on the water flow is assessed during the Environmental Impact Assessment and mitigated. Geological Survey NI[20], EHS[9,] WMU[13] and Natural Heritage[14] would look at this from each of our specialities.
Similarly, it should be noted that whilst harnessing wind power is commendable in terms of reducing our carbon emissions, the siting of wind farms must acknowledge and compensate for the damage that physical infrastructures like this can cause to laminar water flows through wetlands. Notes a particular concern about this in the Fermanagh district.	CNCC	EHS	As response given above

Natural flood plains should be retained and managed for lapwings, waders and geese. Farmers are key to the environment in NI more than anywhere in the UK.	Anonymous	EHS/DARD	Approximately 13,000 farmers are currently participating in agri-environment schemes. Effective pollution control and farm waste management are requirements of these schemes. Farmers have also been provided with the opportunity to carry out measures such as the creation of ungrazed grass margins along the edge of watercourses to reduce the possibility of nutrient run-off. Under the new agri-environment scheme (NICMS)[22], being developed as part of the NIRDP[21] 2007 - 2013, new measures are being introduced which will incorporate existing pollution control requirements, and further encourage farmers to enhance farm waterways in keeping with the objectives of the WFD. There will also be a range of options to protect and enhance habitats for a range of bird species including geese, swans, lapwing and waders.

Upper Ballinderry River is an area of SSI but people don't seem to know that the river is protected need to put up signs and improve its status	Anonymous, Facilitators report, CSG Armagh Meeting	EHS	EHS designates ASSIs under the Environment (Northern Ireland) Order 2002 and it has a statutory duty to give notice to the owners and occupiers of lands at the time of designation. The vast majority of lands that have been designated are in private ownership and the designation does not afford the public right of access to these nor, importantly, does the Order empower EHS to erect signs. In these circumstances, and to avoid a possible adverse impact on the naturalness that may be caused by effective signage, EHS do not routinely erect signs.

4.1.5 Physical Modifications to Rivers

Comment	Correspondent/Source	Respondent	Response
Concerns about `fly-tipping` in ditches, water courses etc. This is a problem throughout Northern Ireland and needs to be tackled and not only leads to deterioration of water quality but can result in flooding if a waterway is blocked. The Union feels that local councils must take more responsibility in the clean up of such incidents. Local farmers are often penalised when someone else has dumped material on the land outside of their control – this is unfair	UFU	DARD	Rivers Agency (RA) will remove material from watercourses which is causing impedance to flow. Fly tipping is the responsibility of Local Councils. If material is causing pollution EHS becomes involved
Dredging of rivers leads to sediment loading problems - can dredging operations be timed to minimise damage to fishing?	LNLBAC	DARD	RA has a close working relationship with the Department of Culture, Arts and Leisure (DCAL)[23] to identify watercourses with a fishery interest. When a watercourse has been identified as a fishery river no works are carried out on it from October to April. At all other times good working practices are employed to minimise the release of sediment.
There is too much silt entering rivers from worked over and eroding banks which are unarmoured. This affects fish and aquatic life. Is it not Loughs Agency & Rivers Agency's responsibility to stop this happening?	Anonymous	DARD	RA only carries out works to prevent bank erosion when material assets such as a road or dwellings are at risk. In agricultural areas bank reinstatement works will only be carried out to ensure that flows are maintained or if erosion threatens a flood defence.

Canals are popular places for people to walk but many of them have been badly neglected. They are choked from eutrophication and alien invasive plants leaving them stagnant. Can these be cleared to help improve the local water quality?	Anonymous	DARD	Responsibility for navigation on canals lies primarily within the remit of Waterways Ireland[24]. RA carries out maintenance works adjacent to those canals which have a drainage function. For example the Newry Canal, Coalisland Canal and parts of the Lagan Canal. RA in undertaking works employs standard good working practices in locations where vegetation of an environmental value is known to exist. Clearance of vegetation is unlikely to address water quality issues and indeed the value of submerged and emergent vegetation in improving water quality should be recognised.

4.1.6 Planning

Comment	Correspondent/Source	Respondent	Response
Why when WMU advise Planning that the sewage system is not suitable/ can't cope is planning permission still allowed to be given? Planning - (a) development is permitted too close to river banks; (b) sewers are connected into storm drains; (c) planners allow 1 large house to be demolished and 20 apartments to be build this adds too an already overloaded system; (d) planted buffers zones adjacent to rivers should be used.	Anonymous, CSG Ballymena Meeting	EHS	The provision of sewerage infrastructure is one of several issues considered by Planning Service when making a decision. There is no strict legal obligation in European law that connection to the sewerage system should be restricted on the grounds of non compliance of the relevant waste water systems with legal requirements. Where EHS discovers that sewers have been connected into storm drains action is taken to remedy the situation. In addition EHS recommends the use of sustainable drainage systems where possible.
Planning Service must ensure that the possible impact of a septic tank in a catchment is fully taken into account when considering planning applications. The cumulative impact of septic tanks in a water catchment should also be addressed.	UFU	EHS	The provision of water supply and the disposal of sewage are considerations in the planning process and EHS offers comment on the environmental implications of development. Research is currently underway into the effect of the dispersed settlement pattern in Northern Ireland on water quality.
Where planning approval can be obtained prior to consent to discharge approval for the proposed provisions of a septic tank etc. to single dwellings in rural areas should be addressed. Planning approval should always be obtained after consent to discharge approval has been obtained	Armagh City & District Council	EHS	Where private sewage treatment is to be provided planning approval should be conditional on the necessary Consent to Discharge under The Water (Northern Ireland) Order 1999 being obtained from EHS. No building should be permitted until the necessary Consent to Discharge is obtained.

Dozens of new developments are popping up around the country. Many of these are built below the sewage pumping line and the pumping stations associated with them are not meeting their discharge consents. Responsibility for these private pumping stations lies with the developers. Are they being chased up and being held accountable when maintenance is needed or where breaches occur. The pumping stations are often the last thing to go in so not planned as well as could be and the water is not treated as well as it would be were it to go to a works. The consent conditions are not strict enough and even when public bodies make recommendations about these they are ignored.	Anonymous	EHS	All new pumping stations are required to have a telemetry link to alert the person responsible of any breakdown and to provide storage equivalent to 6 hours at the average design flow to enable a repair to be made before an overflow occurs. Facilities for installing a standby generator are also sometimes required. Greater storage has been provided at a number of pumping stations where the potential receiving watercourse was particularly sensitive or it was an amenity area.
Remarked that the development of effective on-site sewage treatment systems should not be seen as a green light for all development in the countryside. There is a real need for joined up government and the development of an accepted update of PPS14. There is also a need to tailor policy to land type to ensure proper functioning of on site treatment systems – all systems may not work where the water table is high.	LNLBAC	Planning and Environmental Policy Group (PEPG)	These issues are the subject of ongoing consideration in the review of Planning Policy Statement 14[5]. As work in progress PEPG cannot comment on the prospective detail of individual policies in PPS 14 at this time.

Percolation tests are not adequate. Land near him does not percolate. The present system is a farce. Planners are part of the problem with houses being dotted all over the countryside. More nucleus for settlement is needed.	Anonymous, Facilitators report, CSG Lough Erne Meeting	PEPG	The issue raised appears to refer to the generality of rural planning policy and is thus bound up in the review of PPS14. Please refer to the response given to the previous comment.
There is concern that development on floodplains is still allowed to take place.	Anonymous	PEPG	PPS15 on Flood Risk sets out the relevant planning policy on flood plain development[5].
Planning - The public purse is been used to build flood defences so that houses can be built on flood plains. 27 ha of land is zoned for 197 houses all on floodplain land in Newcastle. Rivers Agency have completed a flood protection scheme but I'm not sure if this is adequate. Rivers Agency need to talk to Planning.	Anonymous	PEPG	The land in question was only zoned after lengthy and detailed consultation between Planning Service and Rivers Agency.
Do Planning Service have a policy of nucleated settlements with treatment plants rather than dispersed settlements?	Anonymous	PEPG	This question appears to refer to the policies which control development in the countryside. As such it would again be an issue to be addressed in the review of PPS14. Please refer to the response given in relation to PPS14.
Urged that some form of EIA should be required for all quarries regardless of size, as even a small quarry could have a significant impact on a designated wetland	LNLBAC	DOE, Planning Service (PS)	The Environmental Impact Assessment Regulations provide schedules and thresholds for assessing whether or not an Environmental Statement is required for certain developments including quarries. If covered, all such developments are subject to formal assessment under the EIA Regulations.

Small ad hoc landfill sites are established first and then seek and get retrospective planning by default	NIEL FWTF WWF CNCC	PS	As with any application for retrospective planning application this is only granted if it meets legislative and policy requirements.
Concerned that there does not appear to be a requirement for planning permission for road projects.	NIEL FWTF WWF	PS	Under the Planning (General Development) Order (Northern Ireland) 1993 DRD Roads Service have certain permitted development rights. However, DRD Roads Service would required planning permission:- (1) To construct a completely new road that was not designated a trunk road or a special road; (2) Layout out of Car Parks; (3) Any other development not associated with its statutory functions under the Roads Order for example the erection of a workshop at a maintenance depot. Also subject to planning control and Environmental Impact Assessment Regulations.
Poor disparate planning process does not take account of cumulative development.	NIEL FWTF WWF	PS	The planning process takes account of cumulative development where it is material to the determination of planning applications. It is also addressed in planning policy; see for e.g. PPS 15 on Flood Risk.

Planning regulation does not require developers to protect and preserve riparian vegetation and its removal is causing soil, gravel and aggregate to contaminate waterways during development	NIEL FWTF WWF	PS	Where a proposal may do such damage the planning process allows the imposition of conditions seeking to prevent it happening. The formulation of such conditions is heavily dependent on the identification of potential problems and solutions by expert consultees such as EHS, RA etc.
Area plans should note a minimum distance from waterways that must be adhered to by developments that would allow for river corridors to be maintained.	NIEL FWTF WWF CNCC	PS	Local Landscape Policy Area's identified by development plans already draw attention to the protection of river corridors in the proximity of settlements where appropriate. The intricacies of effecting this suggestion are perhaps best dealt with at operational level when dealing with individual applications
Planning has a major and central role in how waterways are managed in all districts, but particularly in the NERBD. This district has seen very high levels of development and urbanisation in recent years and is likely to continue to face such growth for the foreseeable future. Some of this development has in practice has had a very negative impact on waterways, for example housing developments too close to or actually altering water courses. The need and potential for watercourse management and future public access should be taken into account when applications	Belfast Hills Partnership	PS/EHS	The point raised here is largely dealt with by the responses to the previous 3 comments. It is however incorrect to suggest that the role of Planning Service is major and central in managing waterways. Planning Service function is to regulate development (as defined under the Planning NI Order 1991). It does not have statutory powers to undertake the environmental management role suggested, although the impact of development upon the natural environment is of course a material consideration in the determination of planning applications. However, it is envisaged

are being considered.			that the RBPs will feed directly into the planning process and help inform decisions.
Concerned about building right up to the river bank of the east side of the Clanrye River at Carnbane Industrial Estate, Newry.	G Berry	PS	Please refer to response given to previous comments.
In Newcastle there is a problem with developments too close to the river banks – affecting eco systems and soil and gravel over spills into the rivers – Planning doesn't seem to stipulate that there should be a protective strip along the edge to protect rivers and vegetation.	Anonymous, Facilitators report, CSG Newry Meeting	PS	Please refer to response given to previous comments.
Planning - Development & building near river banks are causing water quality problems i.e. ripping out vegetation on the bank destabilizing bank structure, soil & gravel silts up the river. No consideration is taken into account by planning - riverbanks and their associated vegetation need to be protected.	Anonymous	PS	Please refer to response given to previous comments.

4.1.7 Septic Tanks

Comment	Correspondent/Source	Respondent	Response
There are 90,000 septic tanks-not working properly. What are EHS going to do? Don't know location of many of them, they are affecting rivers, lake water, drinking water – planning "running riot"	Anonymous, Facilitators report, CSG Belfast Meeting	EHS	EHS has secured funding to undertake a study to determine the impact of Northern Ireland's dispersed population on water quality. This comprehensive piece of work will look at the current legislation, policies, and guidance in relation to septic tanks. It will also include a literature review to look at nutrient and microbial loadings and the cumulative impacts of septic tanks on the aquatic environment. This will be followed by a data validation and integration exercise and field investigations within pilot catchments. Once this work has been completed there will be a review of the consenting policy and application process
Septic tanks are biological systems that work best when receiving a regular supply of material. They are totally unsuited for holiday homes where long periods of inactivity are suddenly interrupted. This leads to 'shock loading' and failure of the tank to work effectively. This must be taken into account when planning permission is being sought for holiday homes and accommodation as they often sited near sensitive water bodies	NIEL FWTF CNCC WWF	EHS	See answer above
Building control should be enforced at septic tank stage to ensure an adequate soak away is put in place.	Anonymous	EHS	See answer above

There is currently a lack of control and inadequate policing of septic tanks. EHS have currently insufficient resources to properly deal with the approximately 125,000 septic tanks throughout NI. Poorly maintained septic tanks must be addressed and householders must be educated about their septic tank and the importance of ensuring that it is working properly. Many are not aware of their responsibility to ensure that this is working effectively and the need to de-sludge tanks. The public should also be educated into the use of household detergents and the potential negative impact these can have on the working of a septic tank	UFU	EHS	See answer above
Is there a survey to establish how many septic tanks there are? No one know how many there are	Anonymous, Facilitators report, CSG Lower Foyle Meeting	EHS	See answer above
In Sixmilewater there are over 80 septic tanks – there is a need to have a regular monitoring system in place.	Anonymous, Facilitators report, CSG Ballymena Meeting	EHS	See answer above. It would be disproportionate to monitor every single one in line with our approach to monitoring.
Different outlets from septic tanks. What expert help is EHS taking; most departments think they know it all. Fishermen know where the outlets are; EHS need to send people out to find out where they started. 150000 tanks are known 70000 unknown there needs to be a central policy EHS	Anonymous, Facilitators report, CSG Omagh Meeting	EHS	See answer above

need to validate all data and put all data together then approach anglers for help in locating the rest in 6 – 8 months.			
Challenge from farmer. Where are the signs that septic tanks are polluting and where is the evidence that they are polluting?	Anonymous, Facilitators report, CSG Omagh Meeting	EHS	In certain areas where there are clusters of septic tanks the signs of pollution can be very obvious. EHS is working to try and get solutions to such problems.
Blackwater river water quality was monitored, no records recently. Who did it –a Professor? If septic tanks are polluting so much why give them money. They looked at capacity of rivers to cope with the waste and the quality of the water. Septic tanks now available are much better quality; the £3000 cost is better than sewage treatment and makes a vast difference if people use the new tanks. But we do need the tanks cleaned free.	Anonymous, Facilitators report, CSG Omagh Meeting	EHS	Comments noted
Is it sewage that is causing the problem or disinfectants? Water Service only comes if there is a proper road to the tanks. They don't know where the septic tanks are and will spend the next six months finding out where they are located.	Anonymous, Facilitators report, CSG Omagh Meeting	EHS	See answer above
Those who live in the countryside should abide by the rules. People build houses with septic tanks but where are the controls?	Anonymous, Facilitators report, CSG Lough Erne Meeting	EHS	See answer above

Is there a grant for septic tanks? New applications have to do a test, consented if results were adequate, if not you have to be joined to nearest main waterway. Percolation test are a new way to assess. Bottle tanks only hold sewage but don't separate. People often don't look for consent and they have got away with this for years. When replaced – 560 applications this year takes a long time to deal with applications. Blockages – we need to look to see if these have been installed properly. What action has been taken to see if sewage is coming from Co Cavan?	Anonymous, Facilitators report, CSG Lough Erne Meeting	EHS	See answer above
Question was asked if EHS had the resources to keep tabs on all these properties. Also question on many septic tanks there were?	Anonymous, Facilitators report, CSG Armagh Meeting	EHS	If the question is have we the staff resource to monitor all consented septic tanks in NI the answer is no.
It was claimed that in Cavan and Monaghan up to a third of tanks might not be working and some of these fed into our systems.	Anonymous, Facilitators report, CSG Armagh Meeting	EHS	Comment noted

The proposals and suggestions here are all perfectly valid. Septic tanks do pose a major problem to groundwater quality. However a properly functioning septic tank should pose no problem whatsoever. What is generally misunderstood is that for a septic tank to function properly, it depends on bacterial action within the tank and this is easily killed off by the common household practice of regularly using chemical disinfectants and detergents. The current obsession with hyper-cleanliness and the disinfectant/detergent industry's constant blitz of advertising propaganda to 'kill all germs' is a major cause of septic-tank dysfunction. Regulating the design and upkeep of septic tanks is not the answer here. Either a ban on the products themselves and/or a major educational program is the solution here. In addition 'grey water' should not be fed into the septic tank but led away separately to its own percolation area.	D Harding	EHS	Comment noted
How many septic tanks are there in NI. Has EHS the resource to monitor these? If not how can good water quality be achieved by 2015?	Anonymous, CSG Facilitators notes	EHS	EHS believe that there are around 120,000 septic tanks of which 99,781 are consented. EHS does not have the staff resource to monitor these tanks individually.

More than 100,000 septic tanks in NI. Some are not being emptied by NIW due to access problems. The effluent from septic tanks is nutrient rich and what effect is this having on the environment?	Anonymous	EHS	This will be informed by the Dispersed Settlement Study.
Bacteria used to work in septic tanks but now with the increase in detergents it doesn't. DOE need to find a new way of dealing with domestic sewage. Farmers have put in tanks, decreased chemical (fertiliser) use and are making better use of slurry - why can't households do this? Farmers get the blame for septic tank runoff as the tanks are on farmers land.	Anonymous	EHS	Comment noted.
NI Water needs to review their policy on de-sludging rural septic tanks where access is difficult. Currently if there is not lane or road access to a septic tank, NI Water will not provide a de-sludging service which is unacceptable.	UFU	EHS	NIW is currently providing a septic tank emptying service which entitles customers to one free desludging in any twelve month period, providing conditions relating to access and safety are met. Site access requirements are important for Health and Safety reasons and the conditions set out in the NIW information leaflet "Septic Tank, Domestic Treatment Plant and Cesspool Services"[34]

4.1.8 Waste Management Licensing

Comment	Correspondent/Source	Respondent	Response
Although closed, Culmore landfill is still leaching toxic effluent into the Foyle. Concerns over potential impact on shell fisheries in the area.	Loughs Agency	EHS	A draft closure waste license has been issued to the local Council. This will help minimise the escape of leachate beyond the site boundary.
Official landfill sites have been sited on unprotected flood plains.	NIEL FWTF WWF	EHS	PPC permits and closure licenses cover landfill requirements to minimise risks
Official landfill sites have been sited on unprotected flood plains.	CNCC	EHS	As above
Hospital waste is going into landfill and subsequently contaminating surrounding land and waterways. More careful disposal controls of this type of high risk material are required.	NIEL FWTF WWF	EHS	Factually incorrect - hospital waste is pre-treated before being landfilled. This is an EC Landfill Directive requirement.
Particular care should be taken with hospital waste to avoid contamination of land and waterways.	CNCC	EHS	Comment Supported
Green waste should also not be overlooked as leachate/effluent from composting facilities is extremely harmful if it reaches waterways	NIEL FWTF WWF	EHS	Comment Supported
The potential of leachate / effluent from green waste to damage water ways should not be overlooked	CNCC	EHS	Comment Supported

Many disused landfill sites across the Province were operated/closed without being sealed against leaching. These sites should be identified in each RBMP and specifically monitored to determine whether they are polluting waterways.	Peter Archdale	EHS	Sites which closed after July 2001 will be closed in compliance with the EC Landfill Directive. EHS continue to monitor the impact of leachate on groundwater and surrounding surface waters at a number of waste disposal sites (currently 24) as part of the Agencies Aquatic Monitoring and Assessment Programme.
Specific instance in Larne Lough where 150000 tons were dumped on an unprotected flood plain, complained about it for 5 years. The landowner was eventually prosecuted because he had no planning permission, despite paperwork no criminal charges.	Anonymous, Facilitators report, CSG Bush and Glens Meeting	EHS	An issue for Larne Borough Council as they would have been the regulating authority at the time.
Sand pits are not properly managed and can pollute nearby streams and rivers with silt. Around Kilkeel they are not managed or backfilled and can be used as illegal dumps.	Anonymous, Facilitators report, CSG Newry Meeting	EHS	Illegal sites are outside EHS' licensing remit. If you suspect illegal waste activity please report the incident to the EHS Environmental Crime Section[35].
Problem of old sites where for example Councils dug out gravel pits and filled them with rubbish then soil. How are EHS going to deal with these?	Anonymous, Facilitators report, CSG Armagh Meeting	EHS	An issue for Armagh Council as they would have been the regulating authority at the time. The sites may be regulated under the Contaminated Land regime once implemented in NI.
Effluent from landfill on Black Mountain entering river. How regularly are landfills checked. Paultry fines by DOE!	Anonymous, CSG Belfast Meeting	EHS	Licensing staff regularly inspect exempt/licensed/ permitted sites[15].
Mullaglass was fined during construction but there is no more mention of increased monitoring to check status now.	Anonymous	EHS	The site is regularly audited to ensure compliance with the PPC permit.

4.1.9 Illegal Waste Enforcement

Comment	Correspondent/Source	Respondent	Response
Concerns about the general lack of knowledge in relation to illegal landfill contents in particular. this must receive priority otherwise it is impossible to plan for good water quality management with what is in effect a ticking time bomb present in various sites within the Belfast Hills.	Belfast Hills Partnership	EHS	Inspections of illegal sites assess what category of waste is present, i.e. inert; non-hazardous; hazardous as per the Landfill Regulations (Northern Ireland) 2003. This assessment is facilitated by intrusive surveys of the site and sampling of waste.
Highlighted illegal dumping at Comber river mouth and the site is still contaminated and needs monitored. Quarry infills need watched carefully and it is important that any breeches are followed up with enforcement.	Anonymous, Facilitators report, CSG Newtownards Meeting	EHS	This site is currently being assessed and there are discussions with the new landowners in relation to removal of non-inert waste. Illegal sites will be investigated and where relevant statutory notices issued for the removal of controlled waste.
Waste fill site outside Dungannon going on for last 5 years DOE doing nothing	Anonymous, Facilitators report, CSG Armagh Meeting	EHS	More detail required as to location of this incident for comment. If you suspect illegal waste activity please report the incident to the EHS Environmental Crime Section[35].

Dumping of residue from illegally laundered diesel is a problem in the area. There appears to be much debate over whose responsibility it is to clear this up with neither EHS nor the local councils taking responsibility.	Anonymous	EHS	From experience the majority of dumping of diesel laundering waste takes place on unregistered land. Where EHS investigates and identifies no responsible person then the incident is referred to the district council for consideration of an Article 28 Notice under the Waste and Contaminated Land (Northern Ireland) Order 2003 as amended by the Waste (Amendment) (Northern Ireland) Order 2007. It should be noted that Article 28 gives a district council powers to enter a site and remove the waste. Article 27 only allows EHS to direct a keeper of waste (if identifiable) to remove the waste on lands to a licensed facility. EHS has used waste and water legislation in dealing with diesel laundering waste in the past. in dealing with diesel laundering waste in the past.

4.1.10 Illegal Waste Removal

Comment	Correspondent/Source	Respondent	Response
Illegal dumps are a problem and it is compounded by the fact that the materials are not removed immediately if at all. In one particular case the materials are still there even though the dumper has been prosecuted. EHS needs to act quickly and remove the materials immediately.	Anonymous	EHS	A comprehensive response has been collated for all comments relating to the removal of illegal waste deposits; please refer to Appendix 1 Note 14 – Illegal Waste Removal.
Illegal landfill sites have been used for waste dumps including from the republic contaminating rivers that feed into Lough Neagh. This is leaching into the drinking water and needs addressed immediately but HAS is not responding.	LNLBAC	EHS	Please refer to Appendix 1 See Note 14 Illegal Waste Removal
Both legal and illegal landfills are a problem, who will remove illegal waste? Who can afford to remove it? Someone must take responsibility for the amount of illegal waste coming across the border. For example £30000 was recently spent on an oil spill, money which would have been better spent on schools or hospitals.	Anonymous, Facilitators report, CSG Omagh Meeting	EHS	Please refer to Appendix 1 See Note 14 Illegal Waste Removal

In a case of illegal waste coming from the South landowners who permitted its burial were jailed. If the landowners doing this can't afford to remove the waste then their land should be forfeited to pay for it. Is there legislation to cover this? If landfill leads to water pollution we should concentrate on getting it out rather than prosecution.	Anonymous, Facilitators report, CSG Omagh Meeting	EHS	Please refer to Appendix 1 See Note 14 Illegal Waste Removal
DOE and the South did get together on Waste Management spent 3million on TV ads which does not deal with the issue. This is an International River basin and the issue must be dealt with on a cross border basis. Can polluters be fined in the area they come from? Administrative support is needed.	Anonymous, Facilitators report, CSG Omagh Meeting	EHS	Please refer to Appendix 1 See Note 14 Illegal Waste Removal

Anglers in Lough Melvin area concerned about illegal dumping in catchment, over 4 years have written to various Government departments. Melvin is an ASSI and the jewel in the crown of Fermanagh, how long is it going to take to have this removed form the catchment area? Response by Ulster Angling Association, we met with the Minister last week and were concerned by the lack of response. If you are serious about the Water Framework and making water quality correct we need to tackle this. Brussels will levy severe penalties and the ratepayer will end up paying for it. The problem is lack of money.	Anonymous, Facilitators report, CSG Lough Erne Meeting	EHS	Please refer to Appendix 1 See Note 14 Illegal Waste Removal
There is a lake (not local) where there was an illegal dumped and the person was charged and jailed for the offence but the pollutants are still there needs cleaned up EHS is not delivering the Framework directive.	Anonymous	EHS	Please refer to Appendix 1 See Note 14 Illegal Waste Removal
Spoken to the minister re: an illegal dump, the person concerned has been imprisoned but the waste is still there - issues like this need to be tackled otherwise WFD will not be delivered on.	Anonymous	EHS	Please refer to Appendix 1 See Note 14 Illegal Waste Removal

It is a great concern that the EHS budget of £30k for illegal waste removal is so small. a cross department contingency fund should be established in order to have funding available for clear up operations before pollution reaches groundwater.	Peter Archdale	EHS	Please refer to Appendix 1 See Note 14 Illegal Waste Removal

4.1.11 Contaminated Land

Comment	Correspondent/Source	Respondent	Response
The future of the DU PONT Complex (INVISTA) is one of the most critical significant water management issues within the Lower Foyle area. The proximity of the site to the River Faughan, future development of the site, and concerns of ground contamination.	Loughs Agency	EHS	The process discharges from the Du Pont and Invista textile and power operations are controlled under IPC and IPPC regimes respectively at the point where they enter the site's Effluent Treatment Plant (ETP) – a pH adjusting facility. The combined discharge from the ETP is controlled under a Water Order consent. In addition Water Order consents control other discharges from the site and there are no compliance issues with these discharges. Over recent years EHS has been and continue to work with Du Pont in relation to contaminated land. In particular the Company are undertaking monitoring to inform proposed remedial action on the site. This work is being audited by EHS.

4.1.12 Pollution Guidelines

Comment	Correspondent/Source	Respondent	Response
Is the Pollution Hotline local? We seem to be routed to Lisburn or England after office hours. Disillusioned need local/ regional office.	Anonymous, Facilitators report, CSG Omagh Meeting	EHS	The pollution hotline will ring in the Lisburn office during working hours. Outside office hours calls transfer to the Environment Agency in Reading. The caller's details are taken and the call passed to a Duty Pollution Officer based in Northern Ireland.
There needs to be an awareness campaign to make owners understand the damage caused by dysfunctional tanks	NIEL FWTF CNCC WWF	EHS	Comment noted
There is no education about septic tank use, would you please consider looking into this. Guest houses in France have notices on them saying, do not use bleach. Education is important.	Anonymous, Facilitators report, CSG Omagh Meeting	EHS	Comment noted
Education of householders with septic tanks-use of zero phosphate detergent –septic will do its job	Anonymous, "Post its" CSG Lower Neagh Meeting	EHS	Comment noted

More and more houses are putting in these new septic tanks and running the sewage into rivers. How will our rivers improve if we keep dumping sewage directly into it?	Anonymous, "Post its" CSG Lower Neagh Meeting	EHS	EHS has secured funding to undertake a study to determine the impact of Northern Ireland's dispersed population on water quality. This comprehensive piece of work will look at the current legislation, policies, and guidance in relation to septic tanks. It will also include a literature review to look at nutrient and microbial loadings and the cumulative impacts of septic tanks on the aquatic environment. This will be followed by a data validation and integration exercise and field investigations within pilot catchments. Once this work has been completed there will be a review of the consenting policy and application process.
There needs to be greater awareness among the general public of the impact of inappropriate use and disposal of everyday chemicals that are potentially damaging to aquatic systems and more information on how to avoid it. Point of sale information on use and disposal of such chemicals should be compulsory.	NIEL FWTF WWF CNCC	EHS	Use and disposal advice is usually given on the label. Failing that the point of sale is best placed to give advice.
Regular checks should be conducted on dangerous chemical stores situated close to rivers.	Anonymous, CSG Facilitators notes	EHS	EHS regularly inspects pesticide stores with fire and rescue Service. EHS has also run a long campaign of site visits to all the oil depots and timber treaters to improve chemical storage

Anyone storing dangerous chemical should be licensed	Anonymous, CSG Facilitators notes	EHS	The projected EU REACH regulations will deal with this matter. The competent authority is HSE.
Education - Public need educated about simple measures they can take to improve water quality e.g. ensuring the washing machine out in the garage discharges to the foul drain and not the storm drain. Proper disposal of fats and oils etc	Anonymous	EHS	There is scope for a significant education programme here. Generally grey water discharge is to the property of NIW who are responsible for enforcement. A small local initiative in Londonderry had some success. Improper disposal of fats and oils has considerable impact on septic tank systems. Collection of such waste for biodiesel production may reduce the scale of the problem.

4.1.13 Regulatory Controls

Comment	Correspondent/Source	Respondent	Response
EHS should take into consideration the cumulative effect of industrial discharges rather than individual consents. This effect can be very damaging to rivers. Question asked as to how many of the 2900 consents were monitored properly. The effect on one river has been to concrete it over.	Anonymous, Facilitators report, CSG Armagh Meeting	EHS	EHS administers a system of discharge consents which lay down conditions relating to the quality and quantity of effluent that may be discharged. The comprehensive response to this issue should be referred to in Appendix 1 Note 10 - Regulation of Industrial Discharges under the Water (Northern Ireland) Order 1999
On the matter of discharge Consents, Does EHS have the capacity to deal with the sheer number of these?	Peter Archdale	EHS	Please refer to Appendix 1 See Note 10 Regulation of Industrial Discharges
How can EHS demonstrate that the models used to calculate cumulative impact are valid? Who peer reviewed and validated the proposed modelling?	Peter Archdale	EHS	Please refer to Appendix 1 See Note 10 Regulation of Industrial Discharges
Concerned that the authorities will have insufficient resources to deal adequately with the volume of Discharge Consents and ensure a robust assessment of cumulative impact within catchments is made?	NIEL FWTF WWF	EHS	Please refer to Appendix 1 See Note 10 Regulation of Industrial Discharges
Suggested serious consideration needs to be given to the cumulative impact of permitted discharge along the length of a waterway	LNLBAC	EHS	Please refer to Appendix 1 See Note 10 Regulation of Industrial Discharges

Further controls may be needed on areas where hauliers etc wash out their vehicles e.g. on building sites to is common practice for hauliers to wash vehicles close to drains or watercourses which can result in considerable water pollution. Education and regulation is required to ensure that this practice is minimised.	UFU	EHS	Please refer to Appendix 1 See Note 10 Regulation of Industrial Discharges
How many of the 2900 or so industrial consents are monitored properly	Anonymous, CSG Facilitators notes	EHS	Please refer to Appendix 1 See Note 10 Regulation of Industrial Discharges
The accumulative effect of industrial discharge are not being taken into consideration What % of industrial consents are monitored and what % comply?	Anonymous		Please refer to Appendix 1 See Note 10 Regulation of Industrial Discharges
Why are standards for industrial and other discharge not set for low flow conditions e.g. summer so the the utmost protection is given to fish and insect life?	Newry & District Anglers Association		Please refer to Appendix 1 See Note 10 Regulation of Industrial Discharges
A quarry was recently fined – needs dealt with if companies are not checked – if polluting water supply – fined and prosecuted – one drains into the Stoneyford reservoir- It will be good to quantify how much pollution there is.	Anonymous, Facilitators report, CSG Belfast Meeting		Please refer to Appendix 1 See Note 10 Regulation of Industrial Discharges
Would like to see a requirement to measure regulated substances (e.g. metals) at outfall.	Loughs Agency		Please refer to Appendix 1 See Note 10 Regulation of Industrial Discharges

Other pressures from chemicals used in more unique situation must not be overlooked. For example the urea/ ammonia used by airports to de-ice runways.	NIEL FWTF WWF	EHS	Please refer to Appendix 1 See Note 10 Regulation of Industrial Discharges
Similarly the use of food macerators as a convenient method of disposing of domestic food waste needs to be taken into consideration.	NIEL FWTF WWF	EHS	Please refer to Appendix 1 See Note 10 Regulation of Industrial Discharges
The problem of toilets is particularly acute in harbours and other areas of semi-enclosed water with no natural current, when, in summer time with warm water temperatures and numerous boats, the discharge of raw sewage is extremely offensive and potentially a health hazard.	D Harding	EHS	Please refer to Appendix 1 See Note 10 Regulation of Industrial Discharges
If a river is in poor condition already and industries etc are already breaching their consents then it is unlikely that the measures we currently have in place will be adequate for the achievement of Good Ecological Status by 2015.	Anonymous	EHS	Please refer to Appendix 1 See Note 10 Regulation of Industrial Discharges
Car wash's run by charities, church groups etc on the side of the road/ roundabout – how to stop this?/policy on this? Prosecute this?	Anonymous, "Post its", CSG Lower Neagh Meeting	EHS	Please refer to Appendix 1 See Note 10. The best option here may be for these operations to ensure that they set up on sites which will drain to foul sewer and should contact NIW in relation consent to discharge to sewer. If not they would require Water Order consent and should be reported to EHS to regularise.

Run off from local car washes into stream should be stopped and the waste piped away through the drainage system.	Anonymous, Facilitators report, CSG Ballymena Meeting	EHS	Please refer to Appendix 1 See Note 10. These sites either, need to drain to foul sewer and should contact NIW in relation consent to discharge to sewer or if not they would require Water Order consent and should be reported to EHS to regularise.
Larne has a new sewage works and is a SPA and ASSI but has over 20 unregulated discharge into the Inver River. Ballycarry is discharging raw sewage; there is a septic tank issue and Ballylumford Power Station. Part of the dual carriage which was built by Road services has no drainage, several trucks have overturned and fuel ran down the road into the Inver River – don't see much being done to improve this situation.	Anonymous, Facilitators report, CSG Bush and Glens Meeting	EHS	Please refer to Appendix 1 See Note 10. Any unregulated discharges should be reported to EHS to investigate. Ballylumford Power Station is an IPPC regulated facility. There are two principal releases from the station to Larne Lough (i) old B station cooling water discharge and (ii) new C station cooling water discharge. Release standards (including temperature) have been set for both discharges and the station routinely comply with these standards. A response to this issue should also be referred to in Appendix 1 Note 11: Road Run-Off

Pointed out that Larne Lough hadn't been mentioned anywhere and foam was killing baby shell fish. Waste water treatment was to start last march, why is not working? All sewage is not being pumped into it.	Anonymous, Facilitators report, CSG Bush and Glens Meeting	EHS	The Larne Waste Water Treatment Works is now treating all the sewage from Larne and the surrounding area that it was planned to serve. Sewage from the Mill Bay area is pumped across to Mullaghboy and by June 2011 the sewage from Ballycarry and Ballystrudder will be treated at Whitehead. All combined sewer systems have combined sewer overflows to allow flows above the design capacity of the system to discharge safely and prevent flooding and damage to property. There is no routine monitoring of the overflows on the Larne sewerage system which has also been upgraded in recent years. EHS is aware of the problem of intermittent foaming in Larne Lough and has made a number of investigative visits and surveys to try to establish the root of the problem. Results have been inconclusive to date, but further analysis is being carried out. EHS is in contact with the Mill Bay Aquaculture Industry. The foaming has not been occurring for the last few months.
Lignite mining causing pollution, is this being measured?	Anonymous, Facilitators report, CSG Bush and Glens Meeting	EHS	Not aware of any lignite mining activity requiring consent-operations should be reported to EHS to regularise.

The Glenmornan WWTW and local dairy pose significant water management issues as they cause continuous damage.	Loughs Agency	EHS	The Glenmornan WWTW is currently overloaded and an inspection in August 2007 confirmed that it was having a significant impact on the Glenmornan River. A subsequent inspection recorded an improvement. The works is on the priority list for small works upgrade. TMC Dairies Ltd is an IPPC regulated facility since 1st May 2006. The company has a release to the Glenmornan River from its effluent treatment plant. The release has routinely been found to be in compliance with the required standards detailed in the IPPC Permit.
Upper Bann problem with tannery discharge, 2 fines but now they have a grant for expansion. Will EHS keep a special watch for discharging?	Anonymous, Facilitators report, CSG Armagh Meeting	EHS	EHS are currently assessing the site for consent
Upper Bann 1996 heavily polluted from plant now being updated will this be monitored?	Anonymous, Facilitators report, CSG Armagh Meeting	EHS	Banbridge WWTW has now been upgraded and now takes in sewage from Lenaderg and Seapatrick.
The cumulative impact of salt on roads must be factored into the system through licensing.	CNCC	EHS	EHS recognised that road run-off is a potentially significant source of pollution. The comprehensive response to this issue should be referred to in Appendix 1 Note 11 Road Run-Off

Can holding tanks be put in put in to collect the discharge from an industry where an outfall has failed its consent in the past or has polluted a water course. If this tank is monitored then toxic inputs will be prevented and if it is too polluting to be added to the water course it can then be transported out to somewhere where it can be properly treated rather than disposed to the river.	Newry & District Anglers Association	EHS	Holding or containment tanks are a possible solution and would not require Water Order consent as long as there are no overflow pipes. The comprehensive response to this issue should be referred to in Appendix 1 Note 12 Holding Tanks
Gravel, licensing, testing and monitoring is inadequate and where breaches occur EHS seem to think bad luck due to adverse weather. If there is a breach the license should be affected.	Anonymous, Facilitators report, CSG Omagh Meeting	EHS	The comprehensive response to this issue should be referred to in Appendix 1 Note 13 Quarry Sector
If only 90 bore holes are being monitored some may be abandoned and therefore the water may not be up to standard what is being done?	Anonymous, Facilitators report, CSG Omagh Meeting	EHS	The comprehensive response to the issues raised on Groundwater Monitoring should be referred to in Appendix 1 Note 15 Groundwater Monitoring
Is there a policy to monitor the well water- only when necessity arises or there is contamination?	Anonymous, Facilitators report, CSG Lower Foyle Meeting	EHS	Appendix 1 Note 15 Groundwater Monitoring
Is quality / quantity of groundwater monitored?	Anonymous	EHS	Appendix 1 Note 15 Groundwater Monitoring
Sewage sludge injection to ground - Who monitors groundwater?	Anonymous	EHS	Appendix 1 Note 15 Groundwater Monitoring

Industrial discharges. EHS allow individual discharges but no one looks at the cumulative effect of all the discharges. Where there are 5 or 6 discharges permitted the cumulative effect can be severe. EHS tends to only look when there is an incident but discharge permissions are being exceeded regularly. Farmers tend to be punished when they do it but Industrial firms are not being punished for this.	Anonymous , Facilitators report, CSG Omagh Meeting	EHS	EHS currently regulates some 230 installations under the Pollution Prevention and Control Regulations (NI) 2003. Less than 10% of these have a process discharge to water - the remainder have process discharges to sewer or surface water run off only. In the event of non compliance, a range of enforcement options are available including warning letters, notices and prosecution. The appropriate action in each case is decided in accordance with the EHS enforcement and prosecution policy. Please also refer to Appendix 1 See Note 10 Regulation of Industrial Discharges.

Raised concerns on self monitoring of discharge water quality by industrial users through FEPA/IPPC licensing. A system that requires the potential polluter to monitor their discharge seems potentially open to abuse. Potential impact on water quality is huge; does the legal system recognise the dangers and the need for swinging penalties on offenders? If not it should be addressed specifically through the licensing regime to penalise offenders very harshly if they offend. Placed on an independent monitoring regime that they have to fund and suspension of the license for a period for further infringements.	Peter Archdale	EHS	Installations regulated under the Pollution Prevention and Control Regulations (NI) 2003 are inspected regularly. Monitoring requirements are specified in permits including use of appropriate standards for sampling and analysis where relevant. This compliance monitoring is supplemented by independent check monitoring carried out by EHS.

Industrial sites like Coolkerragh and Invista as well as chemical side and heatload issues. The whole way discharge are treated is suspect. 700 applications but no system to look at cumulative effect except monitoring. Is any modelling being done? Pollution is screened by the Rivers Agency.	Anonymous	EHS	Please refer to Appendix 1 See Note 10 Regulation of Industrial Discharges. Coolkeeragh ESB Ltd is an IPPC regulated facility. The principle release from the station to Lough Foyle is the cooling water discharge. Release standards (including temperature) have been set for this discharge and the station routinely comply. The process discharges from the Invista and Du Pont operations are controlled under IPPC where the discharges enter the site's ETP - a pH adjusting facility. The combined discharge from the ETP to Lough Foyle is controlled under a Water Order consent. The discharges into the ETP routinely comply with the standards set.
Farmers not happy about consent to discharge being granted to Water Service resulting in raw sewage and its debris being deposited on fields, when will farmers get consent to discharge slurry?	Anonymous, Facilitators report, CSG Lough Erne Meeting	EHS	All sewer systems that contain an element of storm water require an overflow to allow excess flows to discharge in a controlled way rather than cause out of sewer flooding from manholes that may cause damage to property.

The current discharge consent regime does not properly regulate the operation of Waste Water Treatment plants. It is my understanding that some plants have discharge standards that allow them to operate with impunity because the standards are not sufficiently robustly phrased.	Peter Archdale	EHS	Environmental Needs Standards have been developed for all WWTWs. The implementation of some of these standards has been phased until the treatment works is upgraded to be capable of meeting them. In the meantime interim standards apply which as a minimum meet the requirements of the Urban Waste Water Treatment Directive.
Are sewage works regularly monitored? Are new ones complying with regulations and is this information available to the public?	Anonymous, Facilitators report, CSG Lough Erne Meeting	EHS	The effluent discharges from all sewage works serving populations greater than 250 are sampled regularly and the smaller works are inspected annually. An annual report on the compliance of water utility discharges is produced. The results of samples taken as part of the monitoring programme are available from EHS.
Many commercial properties are disposing of used fat into waste water systems. Would like to see a requirement for grease traps to be installed wherever necessary as part of Environmental Health regulations.	NIEL FWTF WWF	EHS	It is an offence under Article 168 of the Water and Sewerage Services (Northern Ireland) Order 2006 to discharge into the sewer any matter which may interfere with the free flow of wastewater. In addition the local authority environmental health department will deal with any reported complaints of statutory nuisance such as smells, effluents, or accumulation of refuse.

Problem of factories- grease traps, they should incorporate degreaser as NIW end up with the problem smells etc. The treatment plants can block because of the grease, fats and oils. It would be better if this was treated at source and the polluters taxed at source.	Anonymous, Facilitators report, CSG Lower Foyle Meeting	EHS	Industry is usually required to install grease traps or interceptors. Enzyme dosing systems can also be used to prevent accumulation of grease but it is better to prevent grease entering the system.
CSO discharge continue to pose a significant water management issue within Lower Foyle. Many are unregulated and unmeasured at the final discharge point, with examples from the CSO and sewer network in Derry.	Loughs Agency	EHS	There is an upgrade of the sewerage system nearing completion in this area. All sewer systems that deal with storm water require overflows to allow excess flows to be released in a controlled way to prevent flooding and consequent damage to property. The upgrade has been formally agreed with EHS and will deliver the required level of protection for the environment.
Limavady WWTW causes the Agency concern and in particular, the visible pollution of the Back Burn that flows into the River Roe towards the north of the town.	Loughs Agency	EHS	The discharge to the Back Burn arises from a CSO on the sewer system and not from the treatment works. All sewer systems that deal with storm water require overflows to allow excess flows to be released in a controlled way to prevent flooding and consequent damage to property. The Limavady sewer system is listed in the top 20 for study and subsequent upgrade.

Although Northern Ireland Water can now be prosecuted for failure to meet waste water discharge standards, they are still protected by corporate indemnity which will in practice allow them to continue to pollute where they can prove that the problem is arising from problems in place before they were created.	NIEL FWTF WWF	EHS	NIW is now subject to the published EHS Enforcement and Prosecution Policy and there is no legal constraint on prosecution due to considerations such as underinvestment. EHS however recognises that issues caused by the history of under investment will take some time to resolve. There is no discretion in relation to breaches of the numeric standards required under Urban Waste Water Treatment Directive and enforcement action will result.
Where there are failures to comply with water quality standards, NI Water should be adequately penalised for polluting the water environment as would happen with other industries. The UFU are aware that NI Water looses Crown Immunity in 2010.	UFU	EHS	As part of the Water Reform process NIW which came into being on 1 April 2007 does not have crown immunity and is subject to the EHS Enforcement and Prosecution Policy. The first prosecution of NIW, in respect of a pollution incident at Dunmurry, has been successfully completed.
Altnahinch Dam water treatment with sludge spilt into Glendun River. They opened sluice gates for the slurry, how can we address this?	Anonymous, Facilitators report, CSG Bush and Glens Meeting	EHS	Altnahinch Reservoir is on the Bush River which runs adjacent to the WTW. NIW are consented for an emergency discharge of treated drinking water to the Bush River. They are not consented to discharge process wastewater to anywhere other than the reservoir. 'Slurry' discharged to any river is not consented. If this was to occur, then enforcement action would be taken against NIW for an unconsented discharge.

Sewage is regularly discharged from pumping stations into the Shimna river this severely damages the eco systems for years – would like to see better technical solutions to pumping stations	Anonymous, Facilitators report, CSG Newry Meeting	EHS	The Newcastle sewerage system is being upgraded and the nature and extent if this has been agreed with EHS. This coupled with more extensive use of telemetry to give warning of equipment failure will reduce the number of incidents.
The water works at Fafney remove effluent and dump it on the shore of Spelga Dam and this is making its way into the Bann waterway.	Anonymous, Facilitators report, CSG Newry Meeting	EHS	The practice of disposing of residual material form Fofanny water treatment works has now ceased. The old works has now been replaced with a new plant, most of which is underground, at a cost of £18m
Expressed concern about poor quality of the water in Strangford Lough and the increase in discharge of sewage at Ballyrickard – the sea bed is changing because of this. On occasions there is raw sewage on the streets in Portaferry.	Anonymous, Facilitators report, CSG Newtownards Meeting	EHS	The Northern part of Strangford Lough has been designated as sensitive area (eutrophic) and this will have to be reflected in discharge consents. Ballyrickard WWTW is being upgraded at present with a completion date of December 2008. The upgrade will include nitrogen removal and UV treatment for bacterial reduction. In addition new waste water treatment works are planned at Strangford and Portaferry to add to those installed in recent years at Greyabbey and Kircubbin.

Fines from Europe due to DRD W/S to be inherited by NIW who will pay? Tax payers? Sewage incinerator? Reprocessing of waste water.	CSG Belfast Meeting	EHS	There have been no fines levied yet by the European Court in relation to the provision of water and sewage services. In the event of the UK being fined by Europe in respect of some matter relating to NI, where the cost should be borne would be political decision. Over 50% of the sludge produced in Northern Ireland is incinerated and this is likely to increase in the future with the development of a second incinerator. The pressure on landfill and the loss of the agricultural disposal route in Northern Ireland has meant that incineration is left as the only secure solution. There has been some research on the re-use of grey water in GB but treatment to the point where wastewater could be treated and used for supply purposes is not economically viable in UK conditions.

Farmers have invested millions of pounds over a short period of time to upgrade facilities and changes to business systems have been introduced while others continue to pollute e.g. NI water continues to discharge raw sewage into the water, have been given considerable time and significant Government funding to upgrade facilities and due to Crown Immunity cannot be prosecuted – this is not fair.	UFU	EHS	NIW is now required to have discharge consents under the Water (Northern Ireland) Order 1999 in respect of all its discharges. Approximately 1100 waste water treatment works, 30 water treatment works and 300 sewer systems have been issued discharge consents effective from 1 April 2007. Each discharge consent contains conditions relating to the quality and quantity of effluent that may be discharged to the water environment, and these are formulated by taking into consideration a number of factors, including the requirements of relevant European Directives, such as the Urban Wastewater Treatment Directive (UWWTD). NIW is also subject to the EHS Enforcement and Prosecution Policy and the first case in relation to a pollution incident at Dunmurry has recently been successful.
Have limits on phosphates – NI water doing regulation?	Anonymous, Facilitators report, CSG Belfast Meeting	EHS	Phosphate is removed by adding iron or a mixture of iron and aluminium salts to the sewage at primary settlement stage or to the aeration stage at an activated sludge works. If water later abstracted for drinking contains any residual chemical this is dealt with at the water treatment plant.

There are phosphates in Lagan, like to see NI Water reducing "stripping out" chemicals	Anonymous, Facilitators report, CSG Belfast Meeting	EHS	The entire Lagan catchment was designated as a Sensitive Area (Eutrophic) in 2006 as all of the river displays characteristics symptomatic of eutrophic conditions. The tidal Lagan and inner Belfast Lough were similarly designated in 2001 and Newtownbreda, Dunmurry and New Holland WWTWs will be required to have nutrient removal by the end of 2008. All works which use "stripping out" chemicals have consent limits on the relevant parameters to prevent overdosing.
Sulphate tanks pollution incident in Lough Neagh. EHS should carry out checks on NIW sites	Anonymous, CSG Belfast Meeting	EHS	NIW has an Environmental Management System accredited to ISO14001. Storage tanks are protected by bunds and leakages from the tank, associated pipes or pumps can be retained. Nevertheless an unforseen incident occurred at Bullay's Hill WWTW caused by high winds. Lessons will be learnt from this incident. WWTWs are inspected by EHS selected using a risk based approach.

The new sewage treatment plant in Newry cost £1m but it is suppose to be out of date already – on Sunday past there was a coloured discharge coming out of the plant which creates a doubt that it is working properly.	Anonymous, Facilitators report, CSG Newry Meeting	EHS	The new sewage treatment plant in Newry was provided at a cost of £15.2m. EHS records show that the works is meeting its consent standards. There is however an indication that the works will reach capacity at an earlier date than predicted. Upper Bann 1996 heavily polluted from plant now being updated will this be monitored?
Upper Bann 1996 heavily polluted from plant now being updated will this be monitored?	Anonymous, Facilitators report, CSG Armagh Meeting	EHS	Banbridge WWTW has now been upgraded and now takes in sewage from Lenaderg and Seapatrick.
The pumping station in Dunmurry is inadequate. There is an antiquated system with clay pipes that suffer from shrinkage and breaking. Despite the overloaded system Planning Service, NI Water and EHS are still allowing more development.	Anonymous	EHS	EHS provides comment on planning applications to Planning Service with respect to the environmental impact of development, including the capacity of the sewerage system and treatment works. The Dunmurry sewerage system is one of the top 30 in Northern Ireland due for study.
Are there phosphate reduction methods in place for discharges into NI lakes (in particular Lough Neagh) and rivers?	Anonymous	EHS	Phosphorus reduction is in place at all qualifying works discharging to the sensitive areas where it was due by 1998 i.e. Lough Neagh and Lough Erne. Implementation is due in further sensitive areas, e.g. the Quoile pondage.

Request more information on pollution as they consider the main problem comes from sewage and they use the hot line to report it. It is becoming very common on fishing trips to encounter raw sewage in water ways and also strewn over fields after flooding episodes.	Anonymous, Facilitators report, CSG Newtownards Meeting	EHS	Over the three years 07/08 - 09/10 NIW will spend £270m on upgrades to WWTW.
What is done with the waste that is taken from the septic tanks, where is it disposed?	Anonymous	EHS	The waste from septic tanks is taken to designated waste water treatment works where the capacity exists to treat it.
Why does Lisnaskea WWTW output pipe get piped through a number of fields and discharge from a pipe in the middle of the Colebrook River which is much more fast flowing than the local stream if the effluent discharge is good quality?	Anonymous	EHS	The Colebrook River offers greater dilution for the effluent, so while the requirement for good quality effluent is achieved the cost is less than would be required to meet an even tighter effluent discharge standard to the small watercourse running close to the WWTW site.

4.1.14 Enforcement

Comment	Correspondent/Source	Respondent	Response
Polluters must be made to pay, sending them a letter does not work yet EHS sends out letters to polluters.	Anonymous, Facilitators report, CSG Omagh Meeting	EHS	EHS has a range of enforcement tools available to our regulatory staff. The choice of enforcement action taken will depend on the individual case. There are a number of factors such as sufficiency of evidence, public interest, attitude of offender and the effect of the offence on the environment which need to be taken into account.
Farmers concerned about rogue farmers are they going to be pursued and prosecuted? EHS response, it is our job to collect evidence which is passed to the Public prosecution Service which then decides on prosecution.	Anonymous, Facilitators report, CSG Bush and Glens Meeting	EHS	EHS aims to protect the environment by consistent and fair application of the legislation we enforce. We will work co-operatively with those we regulate in order to secure improved performance. We acknowledge however that enforcement action also needs to be taken to ensure compliance with legislative requirements.
Anglers complained that they received no feedback from the pollution hotline when they reported incidents.	Anonymous, Facilitators report, CSG Armagh Meeting	EHS	Field staff endeavour to feed back to individuals reporting pollution incidents. Staff will be reminded of the importance of such feedback.
What happens now that FCB have gone? The Dept. do not prosecute themselves.	Anonymous, "Post its", CSG Belfast Meeting	EHS	FCB[18] and Loughs Agency[25] are both still in existence and operational. The removal of Crown Immunity from NI Water removes the barrier to prosecution what existed whilst Water Service was in existence.

What is EHS's follow up to polluters who have been prosecuted?	Newry & District Anglers Association	EHS	EHS provide pollution prevention information to those that have statutory samples served on them. With additional staffing resources now available every polluter who is found guilty will have follow up visits undertaken to ensure pollution does not reoccur.
In future EHS needs to look at chemical stores-water service could do more e.g. secure areas. Need proper policing and staffing.	Anonymous, Facilitators report, CSG Belfast Meeting	EHS	EHS inspects pesticide stores along with the NI Fire and Rescue Service. All oil depots have been visited and visits have been followed up with enforcement action as appropriate. Known chemical stores have also been subject to random visits. With the introduction of EU REACH legislation this will tighten up all aspects of chemical use and storage.
Action needs to be taken on pollution. Incident of industrial pollution reported on hotline, someone did something but there was no prosecution. The river is dead and has not recovered. The matter was not handled properly, someone got away with it. Our main concern is that actions should result in prosecution.	Anonymous, Facilitators report, CSG Bush and Glens Meeting	EHS	All water pollution incidents reported to EHS are investigated with a view to stopping the pollution and taking suitable enforcement action in accordance with our enforcement policy.

JCBs in waterways carrying out work-how will EHS prosecute pollution incidents from this. Is there a practical solution to this?	Anonymous, "Post its", CSG Lower Neagh Meeting	EHS	A difficult problem in that suspended solids can blanket river beds and disrupt in river habitats but given that they have been disturbed from the river bed rather than introduced the Water Order does not cover this situation. One for discussion within stakeholder groups to ensure any work undertaken is done at a time when it will cause least damage.
There is an equipment failure and on 9 occasions raw sewage has got into the River Main – with consent – this should not happen at all. No level of pollution is acceptable. The EHS class pollution as high, medium or low but low is still bad for anglers any form of river pollution should be prosecuted not just when there is a fish kill.	Anonymous, Facilitators report, CSG Ballymena Meeting	EHS	Incidents are all investigated with a view to stopping pollution and taking suitable enforcement action in accordance with our published enforcement policy[12].
The Pollution hotline service is not a 24 hour service - rang the service after hours and the line was not answered. What is EHS doing about this? Pollution Hotline - What exactly happens when you ring this number? Need to receive feedback on the call made - preferably by email.	Anonymous	EHS	The Water Pollution Hotline is a 24 hour service with operates round the clock throughout the year. Any problems with this service need to be reported to EHS as soon as possible so that complaints can be resolved at the time.
EHS staff do not know how to deal with fish kills - training is needed	Anonymous	EHS	EHS have a number field staff with an FCB background. Their expertise is being used and developed for the investigation of fish kills.

Are EHS staff going to be carrying out bund checks on chemical stores situated close to waterways?	Anonymous	EHS	Any visit to a site where there is a bund present will include an inspection of that bund.
70% of pollution incidents recorded by EHS are low severity. These low severity cases have major impacts on hatcheries and fishing.	Anonymous	EHS	Pollution prevention work is an important area for EHS and such work should help further reduce the overall number of pollution incidents.
What is the point in giving offenders 4 or 5 warning letters and no further action?	Anonymous	EHS	Enforcement action is taken in accordance with our published enforcement policy. EHS would need specific details of this report to be able to respond fully.
What follow up is there on prosecution cases that have been through the courts?	Newry & District Anglers Association	EHS	Where statutory samples have been lifted pollution prevention advice is provided to the individual or company concerned. In future additional staffing resource will be made available to follow up polluters found guilty of causing pollution.
Why is the polluter-pays principle not adopted?	Anonymous	EHS	The polluter pays principle is in force.
There should be a public register detailing the extent of pollution and those polluters responsible.	Anonymous	EHS	There are public registers available which detail any consents issued. A public register of notices issued is also available.
Boat Waste - Initiatives like The Green Blue which look at boat waste should be considered.	Anonymous	EHS	Agreed - some informal discussions have taken place with Green / Blue staff and when staffing resources permit these will be followed up. EHS are working to enforce the Erne Regulations which deal with waste from boats on the Erne System.

Electro fishing - by eastern European immigrants is a big problem now in many of our rivers. What is being done to stop this illegal activity and the poaching of fish?	Anonymous	EHS	Not an EHS responsibility, but will make FCB, DCAL & LA aware of the issue.
Request more information on pollution as they consider the main problem comes from sewage and they use the hot line to report it. It is becoming very common on fishing trips to encounter raw sewage in water ways and also strewn over fields after flooding episodes.	Anonymous, Facilitators report, CSG Newtownards Meeting	EHS	EHS publish an annual report on Water Pollution Incidents and Enforcement. The report for 2004 showed that of 1227 substantiated incidents 429, i.e. 35 % were attributed to 'Sewage' as Category. This includes domestic as well as Water Service sources. Any pollution seen should be reported using the Water Pollution Hotline 0800 807060 for further investigation.
EHS can take 4-5 hours to respond to an incident and in that time the pollution may have dispersed. Bailiffs should be allowed to collect water samples at the time to provide evidence. Currently samples collected by bailiffs are not acceptable for prosecution purposes however they are a resource that could be trained and used.	Anonymous, Facilitators report, CSG Ballymena Meeting	EHS	This issue has been considered before and numerous problems were identified such as health and safety and availability to appear in court. EHS would be keen to work closer with bailiffs during pollution investigations to ensure a successful result.
Bailiffs should be allowed to collected water sample as evidence in court	Anonymous	EHS	As response above
In the absence of the Fisheries Conservancy Board what is going to replace it?	Anonymous	EHS	FCB and Loughs Agency are both still in existence and operational.

Lough Neagh N&P problems. Agric partly at fault – acting positively unlike NIW. Farmers are easy target to prosecute.	"Post its" report, CSG Belfast Meeting	EHS	Since NIW lost Crown Immunity on 1 April 2007 over 30 statutory samples have been lifted with a view to prosecution. The first case was heard in court on 19 February 2008 and NIW were found guilty of causing pollution from Dunmurry Waste Water Treatment Works.

4.1.15 Judicial

Comment	Correspondent/Source	Respondent	Response
A key barrier to progress in this area is the weak penalties imposed by the judicial system. A concerted effort needs to be made to raise awareness among the judiciary of the seriousness of these offences.	NIEL FWTF WWF	EHS	The average level of fine imposed for pollution offences has almost doubled over the past few years, from an average of £503 in 2001 to a present average of over £900. Fines of thousands of pounds are now commonplace for pollution offences and several individuals have recently been jailed for water pollution and waste offences. It should be emphasised that the individual penalties imposed for pollution offences are a matter for the individual magistrates or courts, and EHS has no direct influence on these penalties. Moreover, there is a strict protocol which prohibits any pressure on penalties being brought to bear on the judiciary. Within the limits of these restrictions EHS has, however, endeavoured to make its views on penalties known, which may account for the significant increase in penalties.
Magistrates do not understand the extent of the problems pollution causes and do not set fines appropriately.	Anonymous	EHS	Please refer to the response given above.
Local industries which are polluting need to be fined. There were 3 massive pollution incidents in Donacloney but the fines were too small to put the polluter off letting it happen again.	Anonymous	EHS	Please refer to the response given above.

Concerned that farmers are easy targets for environmental inspectors and through the cross-compliance Single Farm Payment System can be easily penalised without even going to Court. This system also means that penalties are likely to be substantial compared to those imposed by the Courts on other offenders.	UFU	EHS/DARD	The 2003 CAP Reform Agreement requires applicants to meet certain obligations regarding the protection of the environment, animal health and welfare, and public health in return for receipt of direct agricultural support (including Single Farm Payment). This is known as "Cross-Compliance". Farmers play a vital role in protecting our countryside and EHS accepts that the great majority of farmers take their environmental responsibilities seriously. Nevertheless, farmers are in the unique position of being paid Direct Agricultural Support to protect the environment. While recognising the potential financial implications for farmers, EHS believes it is appropriate that where a farmer fails to meet the Cross-Compliance requirements s(he) should face the possibility of financial reduction on a scale established in line with European Commission guidelines.

Need on the spot fines for polluters	Anonymous	EHS	The ability to take firm and coherent enforcement action to deal with breaches and threats to the environment is central to EHS 'Better Regulation'[8] approach. EHS is in favour of the shift towards a wider range of sanctions and penalties for regulators and we are reviewing our powers to identify the full extent of our options for enforcement. The use of sanctions such as fixed penalty notices, as well as cessation notices and voluntary undertakings, will empower the regulator to work closely with business/industry to bring about more immediate measures to safeguard the environment. The availability of more flexible administrative penalties for less damaging or technical offences will reduce the burden on businesses and free up valuable regulatory resources to focus on more serious or persistent offenders, who would be subject to more rigorous enforcement action. This will help to redress the anti-competitiveness of illegal activity and provide assurance for legitimate businesses. EHS will scope the application and suitability of fixed penalty notices for different types of offences to determine how these would be administered in practice. However, spot fines would not be considered suitable for pollution offences due to

			the level of investigation required to establish the exact source and cause of the pollution.
Low % of cases reported become prosecutions and maximum fines never given - no real deterrent to offenders. Very poor enforcement. 2183 pollution cases confirmed, 182 warning letters and 39 prosecutions - where is the deterrent? Where is the justice?	Anonymous, CSG Facilitators notes	EHS	EHS does not recognise any of the figures quoted in this question, so it may be helpful to begin by outlining the correct figures. Firstly, the question suggests that there are almost 2,200 confirmed water pollution incidents in NI annually. The true figure is about half that - running, for the past few years, at a little over 1,100 incidents per year. Secondly, the question quotes a figure of only 39 prosecutions - again a figure which EHS does not recognise. While a marked reduction in the annual number of pollution incidents in NI (down to a little over half the level of a decade ago) has resulted in a lesser number of prosecutions, the average annual number of pollution prosecutions over the past five years still runs at about 83 per year. If we now turn to the number of prosecutions and warning letters when compared to the number of pollution incidents, the most important point to stress is that over 80% of all confirmed incidents (about 900 incidents per year) are very minor incidents for which, very often, neither prosecution nor a warning letter is appropriate. Of the remaining more serious incidents, there

			will still often be good reasons why prosecution is not the most appropriate response. Examples include where the incident was the result of a genuine accident and/or where the offender immediately spent a lot of money to prevent more serious environmental damage. In such cases, where the offender will often have already spent much more money remedying the problem than is ever likely to be imposed in a fine, the issue of a formal warning letter or the use of a legally binding notice can be a very effective remedy. Finally, EHS would make the point that even prosecution does not always act as a deterrent to a determined polluter. For example, EHS has successfully prosecuted one major NI company on twelve separate occasions, resulting in fines of up to £7,500; and yet that company still continues to cause occasional pollution problems.

Do EHS let the magistrates know how much it costs to restore a river back to its original condition after there has been a pollution incident? This might help them to understand the environmental and financial impact of these events.	Newry & District Anglers Association	EHS	Until recently, EHS invariably asked courts to impose the costs of remedying pollution on the offender (e.g. requiring the polluter to pay for fish restocking or to pay for removing pollution from a river). Thus courts and magistrates were always aware of the costs of remedying the pollution when imposing sentence. Unfortunately, EHS found that many defendants would then use these costs to argue in court that they had already been penalised enough, resulting in some courts imposing very small fines for very serious offences. EHS has therefore recently moved to a system whereby these costs are separately recovered from the polluter following conviction, over and above any penalties imposed by the court. However, courts and magistrates are still always fully informed of the extent of the environmental damage caused and the efforts required to repair it.
Carried out trout and salmon works and has reported numerous incidents to the pollution hotline. The Loughs Agency were engaged by EHS to survey the river, 30 polluters were identified but were only given warning letters - is this a wasted exercise - the fines need to increase to reduce pollution. One industry was fined £50.	Newry & District Anglers Association	EHS	Please refer to the responses given to the previous comments.

4.1.16 Abstractions and Hydro Schemes

Comment	Correspondent/Source	Respondent	Response
What percentage of electricity in the South comes from turbines? Don't know UFU when oil was cheaper they didn't use as much hydro now they are using more.	Anonymous, Facilitators report, CSG Lough Erne Meeting	EHS	6% of electricity in Republic of Ireland is generated by hydroelectric schemes[27].
Salmon take six weeks to come from Bushmills to Quince, asked powers that be if leaked section could be monitored. Scientists not responsible couldn't modify leak section. Fishing is a big tourist attraction and there are plans to build a hydro plant, this should include fish passes or ladders for the salmon.	Anonymous, Facilitators report, CSG Bush and Glens Meeting	EHS	EHS understand that planning permission, RA consent, Fisheries Act authorisation / exemption have been applied for with respect of a hydro-turbine development on the river Bush. EHS received and have now determined an abstraction / impoundment license at the Salmon leap on the river Bush.
Renewable energy is being promoted and grants given. Will the hydro power need licence? Have the Gov got together or are grants being given without consents? This is a major concern.	Anonymous, Facilitators report, CSG Bush and Glens Meeting	EHS	All hydroelectric schemes will require a license to abstract water. EHS consult externally with Northern Ireland Water, Loughs Agency, Planning Service, DCAL and internally with Natural Heritage and Hydrology about the possible impacts of the scheme before issuing a license. All environmental impacts are considered and mitigation measures are included in any license issued. The amount of water permitted for abstraction will depend upon the scale and nature of the project and site-specific fishery, nature conservation protection designations and WFD hydrology standards.

Hydro power projects without screens etc should be correctly managed. There should be no conflict between Anglers and hydropower. Need EHS to correctly regulate.	Anonymous, CSG Belfast Meeting	EHS	Screens, fishery protection measures and fish passes - design issues, guidance, inspection and enforcement are the responsibility of DCAL
Is there provision to stop fish being removed from the river when water is being abstracted?	Newry & District Anglers Association	EHS	Please refer to the response given to the previous comment.
Farmers sucking up water from rivers to put into tanks - what prevents the fish being sucked up in this case?	Newry & District Anglers Association	EHS	As above
Do hydro schemes have EIAs carried out under new regs? What about older schemes will these be revisited?	Anonymous, CSG Belfast Meeting	EHS	Dependant on the scale of the project and the sensitivity of the location an EIA can be requested - Planning Service would co-ordinate that process. Existing turbines will have planning permission and authorisation under the Fisheries Act, under the Abstraction / Impoundment Regulations existing operation will be required to apply for a license.
Concern about Hydro projects in middle of fishing stretch. Need for consultation through EHS on impact an animal and fish life	Anonymous, Facilitators report, CSG Belfast Meeting	EHS	Fishery protection and migration issues are the responsibility of DCAL, LA and FCB. The Fishery agencies are consultees to both Planning Service and EHS re: any abstraction and impoundment license application; with respect of protected animal life staff working within EHS Natural Heritage provide input and advice to the process.

Too much water is being abstracted, no information is being given to anglers and it poses an expensive threat to angling. We have 700 members and lots of visitors. Hydro electric schemes and fishing don't mix; the Mourne hydro is killing salmon fishing as they can't run upstream. Juvenile fish returning to sea are extracted by turbines. Proposed Hydro schemes in Omagh can't be controlled; so much money has been put in that they will want to generate electricity no matter what. The Tech was supposed to use it for their building but they want a bigger scheme so that they can sell it to the grid. We need more information on how much water is being taken out, how much electricity used and an environmental impact study. The viability of the scheme should be re-evaluated.	Anonymous, Facilitators report, CSG Omagh Meeting	EHS	Any hydro proposal will require Planning permission, authorisation under the Fisheries Act, and a license under the Abstraction and Impoundment Regulations. Issues such as diverted water volumes, diversion controls, compensation water, fishery protection & migration risks are addressed through these processes.

The agreement to the hydro scheme being done is to provide power to the Leisure centre not the Tech. Money generated will be used for local community bursaries not going to the Tech or the Council. The community will benefit and fish stock will not be harmed. Why don't they put 4/5 turbines on top of the hill then no fish will be harmed? The Council claim that they are sensitive to the issue and that proper scientific consultation will take place to ensure that all resources in Omagh are maximised for the benefit of all people. It will take a long time, cost a lot but the grant aid will be used wisely and bring benefit to the area and education benefit to young people. Consultation is useless our 700 member club has been ignored we only got dribs and drabs.	Anonymous, Facilitators report, CSG Omagh Meeting	EHS	Please refer to the response given to the previous comment.

Mill owners can abstract as much as they want, Councillors say regrettable it shouldn't happen but they did not consult. There is no agreement to go ahead and the funding should be withdrawn. Stipulations to be put in place e.g. Sion Mills and these have to be adhered to. Rural funding for renewable sources. Comoan River has a private hydro scheme and it is still fishing well. Look at the Americans and Canadians they are taking out their hydros because of adverse experience. When you build weirs its not just fish that have to get over them it is also invertebrates. Rivers Agency have drained bogs so where is the water coming from to run hydros, there is not enough water for fish life and the environment and hydros.	Anonymous, Facilitators report, CSG Omagh Meeting	EHS	Please refer to the response given to the previous comment.
Fishermen were concerned about the amount of water being abstracted for power generation and who was monitoring this. River beds were also being drained.	Anonymous, Facilitators report, CSG Armagh Meeting	EHS	The abstraction / diversion of water will now be licensed, monitored and regulated under The Abstraction and Impoundment (Licensing) Regulations (Northern Ireland) 2006 - the regulations can be viewed on EHS' Website www.ehsni.gov.uk
Power generators are leaving rivers dry - do EHS give consents to abstract water to this level?	Anonymous	EHS	Please refer to the response given to the previous comment.

Concerned about the amount of water being abstracted for power generation and who was monitoring this. River beds were also being drained.	Anonymous, Facilitators report, CSG Armagh Meeting	EHS	As above
Too much water is abstracted from rivers to support fish and insect life. Assessments are not carried out for low flow conditions and the differential between the intake and the outtake point has caused the killing of fish and insect life. Where abstractions do take place are there provisions in place to make sure aquatic life is not being affected?	Anonymous	EHS	As above
Hydroflow jacks have gone ahead in some areas without anglers' consent. These have gone through EHS, DCAL and Planning Service. Over abstraction in places like Sion Mills has a negative effect on plants and animals.	Anonymous	EHS	Dependant on volumes and if an abstraction / diversion or impoundment is associated with a hydro jack then a licence may be required under the Abstraction / Impoundment Regulations.
Are EIAs carried out for hydropower installations? A number of them have no screens to protect smolt. In some cases where there is low flow all water is diverted to the hydro, this practice is very damaging to the river habitat.	Anonymous	EHS	Dependant on the scale of the project and the sensitivity of the location an EIA can be requested - Planning Service would co-ordinate that process. Existing turbines will have planning permission and authorisation under the Fisheries Act, under the Abstraction / Impoundment Regulations existing operation will be required to apply for a license.

Action renewables are encouraging hydro-electric schemes through grant aiding. What is the consultation process? What happens if a grant is issued but consent not given? Joined up government needs to be addressed here with DETI and EHS consulting.	Anonymous	EHS	EHS and grant assisting Agencies / other bodies have been and are in consultation re: this issue.
Abstraction for fish farms needs to be closely monitored.	NIEL FWTF WWF CNCC	EHS	The abstraction / diversion of water for fish farming will now be licensed, monitored and regulated under the Abstraction and Impoundment (Licensing) Regulations (Northern Ireland) 2006 - the regulations can be viewed on EHS's Website www.ehsni.gov.uk. Fish farms are also already closely monitored by EHS under the discharge consent compliance assessment and monitoring regime (the Water (NI) Order 1999). Abstraction licensing will further increase the monitoring of this sector.
Concerned about the water levels especially in the lower Bann. River flow is also important and there is a need to be sensitive to the results of the abstraction process.	Anonymous, Facilitators report, CSG Ballymena Meeting	EHS RA	The management of water levels is the responsibility of Rivers Agency. A comprehensive response has been collated for this comment; please refer to Appendix 1 Note 16 – Water Levels

Are water levels and ground water levels being monitored?	Anonymous, Facilitators report, CSG Bush and Glens Meeting	EHS	The AIL regulations aim to provide a single and consistent environmental risk based approach that covers all abstractions and impoundment operations. The regulations will help protect the water environment including protected species and dependent ecosystems to deliver efficient and sustainable water usage in Northern Ireland. EHS will consult with all relevant parties before an abstraction license is issued for any scheme. The monitoring of quality and quantity of groundwater resources is carried out by EHS.
If levels are falling are they sustainable?	Anonymous, Facilitators report, CSG Bush and Glens Meeting	EHS	Falling levels in aquifers, lakes, rivers etc. are not sustainable - the Abstraction and Impoundment Regulations give the Department powers to manage a licensing regime to ensure sustainable management of Northern Ireland's water resources.

Concerned about the navigation water levels of Lough Erne.	M Clarke	RA	Rivers Agency is responsible for managing the water levels of Lough Erne, Lough Neagh and stretches of the River Bann and River Lagan. On Lough Erne control is achieved in conjunction with the Electricity Supply Board (ESB) who manage the hydro electric power station at Cliff, near Ballyshannon. The control in Lough Erne is undertaken under the terms of an agreement made in 1950 when the River Erne was harnessed for hydroelectric power generation. The agreement requires that levels are maintained in the Upper Lough between 150 ft. and 154ft. (Apr. – Sept.) / 155ft. (Oct. – Mar.), and in the Lower Lough between 147ft. and 152ft. These levels relate to the base reference at Poolbeg for imperial (i.e. feet and inches) measurements. Water levels in Upper and Lower Lough Erne are managed by control structures located at Portora (Enniskillen), Cliff (near Belleek) and Ballyshannon in the Republic of Ireland. Rivers Agency is responsible for the control structure at Portora only. During the summer period the ESB aims to maintain the water level at Portora, at or above, 150ft. to avoid the need for these gates (locks) to be closed. This is to prevent undesirable restriction to boat traffic using the navigation

			facilities at this peak tourist period. Rapid draw down of water levels in the Upper Lough is prevented by the restricted capacity of the inter-lough channel section. Allowance for this has to be made, as best as possible, in level control management procedures.
With the expansion in population there will be an increased demand for drinking water and abstractions. How will this be managed?	Anonymous, CSG meeting	EHS	The provision of a potable supply is the responsibility of Northern Ireland Water, the management of resources will be through the above Regulations.
Considers the future issues of abstraction on the Derg and the Strule as significant	Anonymous, CSG meeting	EHS	The NIW proposal for abstracting water from the Strule River for the Derg water treatment works will require planning permission, a fisheries authorisation and an abstraction license.

Sheep-dip- farmers need a license to dispose of it. The license is given in Belfast but not all boreholes are known or shown on a map, new boreholes may be in the area where sheep-dip is disposed of and pollution occurs. If authorisation is given by EHS then it is not the farmers fault. Are EHS aware of all boreholes? Is a license needed to abstract from new boreholes? If the land around a borehole is in conacre and a farmer is disposing of dip who is responsible?	Anonymous, Facilitators report, CSG Omagh Meeting	EHS	Disposal of sheep dip by application to land requires an authorisation from EHS. EHS carryout a suitability determination using a geographic computer system which can tell about soil type, soil depth, wells, springs and boreholes (as documented by OSNI and EHS) streams and rivers, slope, groundwater vulnerability and aerial photography. The authorisation will contain a set of conditions to be complied with such as the maximum quantity of sheep-dip related dangerous substances (please see Appendix 1 Note 18 Dangerous substances), which is permitted for disposal and the minimum distance from water ways that spraying is allowed. It is the holder of the authorisation who has responsibility to meet the conditions of the Groundwater Authorisation. If you wish to have land held in conacre authorised you must obtain the land owners consent for the application. If failure to meet the conditions of the authorisation has occurred then action may be taken under two separate regulations. 1 Under the Groundwater Regulations (1998) it is then the holder of the Authorisation who is responsible regardless of the land owner.

			2 Under the Common Agricultural Policy Single Payment and Support Schemes (Cross Compliance) Regulations (Northern Ireland) 2005 (i.e. your Single Farm Payment application) it is the applicant claiming single farm payment for the land who is responsible, irrespective of the holder of the Authorisation.
Sad fact that there are many properties along the rivers with no septic tanks and they just discharge into the river. No register to drill for wells, how many abstractions are there with contaminants? Farmers have to register everything.	Anonymous, Facilitators report, CSG Lower Foyle Meeting	EHS	It is a legal requirement for all current discharges to the underground stratum, or to a waterway, to be consented under the Water Order before the discharge commences. This also applies to longstanding discharges which were not previously consented under the Water Act, irrespective of the commencement date. EHS do hold an historical register of borehole locations this will be improved as licenses issue under the Abstraction and Impoundment Regulations.
A lot of farmers have boreholes and there are heavy charges to bore and pump from them. To charge for a license for water abstraction in a country with so much water is a joke. It is currently free but what will the currently unseen charges be for abstractions	UFU	EHS	The proposals for the introduction of fees and charges will be issued by 31st March 2008. The consultation period will end on 23rd June 2008. Written comments are invited from all stakeholders by this date.
Will these costing proposals for abstraction be going out to public consultation?	Anonymous	EHS	Please refer to the response given to the previous comment.

Abstraction of water from Lough Fad is a cause for concern for LA due to the impact on the native Artic Char population.	Anonymous	EHS	Lough Fad is situated in Co. Donegal near Carndonagh; this risk may need to be discussed further with the representatives of the EPA, Northern Fisheries Board and County Council.

4.1.17 Sustainable Urban Drainage Systems (SuDS)

Comment	Correspondent/Source	Respondent	Response
Household discharge going into our water how is this allowed? No consent is required for storing sewage, household waste but consent is required for road run off and storm sewage.	Anonymous, Facilitators report, CSG Bush and Glens Meeting	EHS	Occasionally developers may make a wrong connection of household waste water or even foul sewage to a storm drain. Where this is detected by EHS steps are taken to remedy it. Storm water discharges resulting purely from uncontaminated surface run off are not normally consented by EHS.
Encourage the use of sustainable drainage systems (SUDs) throughout the Lower Foyle catchment. With particular reference to the Derry urban area, SUDs are generally not being adopted.	Loughs Agency	EHS	NIW is responsible for storm drainage and in general is reluctant to adopt SuDs features and this reduces their uptake. EHS encourages the use of SuDS in all responses to Planning and Permitted Development applications. Roads Service has designed SuDS into the new road system to City of Derry Airport. A Working Party chaired by EHS has produced a draft Strategy to promote the uptake of SuDS.

The implementation of Sustainable Urban Drainage systems is therefore very important and the overall need for high quality infrastructure to be in place before development. This is required not just at site but also down the watercourse and systems where antiquated infrastructure may not be fit for purpose. There is concern that SUDs guidance and systems are gradually being put in place while in contrast urban development is happening now at a tremendous rate.	The Belfast Hills Partnership	EHS	The current NIW policy in relation to SuDS means that uptake is only possible in a few areas e.g. roads. EHS considers that properly designed SuDS would allow sustainable development as it would stop any further storm discharge to combined systems. There is also the possibility of retrofit in appropriate circumstances.
Waste water should be treated at source SUDS poorly implemented. Ballygawley Road needs SUDs but no money for it.	Anonymous, Facilitators report, CSG Omagh Meeting	EHS	Waste water generally is understood to mean foul sewage. There is a policy of not encouraging proliferation of small STWs. However if the meaning is 'storm water' EHS would agree. The new Ballygawley to Dungannon road will have SuDS drainage. EHS has been negotiating with the designer since inception.
Can SUDs be used to treat biological agents? What measures are in place to deal with chemical spills e.g. oil into roadside SUD systems?	Anonymous	EHS	SuDS are generally poor at treating anything other than weakly polluted material (apart from large wetlands). However many provide an opportunity to collect polluting material for appropriate disposal – not ideal but better than nothing.

Believes that the use of sustainable urban drainage systems (SuDS) must become the first option for developers. In Scotland there is a requirement on local authorities to use the most sustainable option for drainage in all development projects. A similar approach should be adopted in Northern Ireland	NIEL FWTF WWF CNCC	EHS	This is a political decision and would require legislation and a major change in practice. Good examples are Scotland and the Greater Dublin Authority. The draft SuDS strategy for NI will, if implemented, promote the wider use of SuDS
SUDS - Can SUDS be made mandatory for all new developments?	Anonymous	EHS	As noted above
Sustainable Urban Drainage Systems need to be looked at at the planning stage. Too many areas are covered with impermeable surfaces making flooding more likely. Planning Service need to be engaged in this process at a planning and pre-development stage. This is a problem throughout the whole island of Ireland.	Anonymous	EHS	EHS considers that use of SuDS should be addressed at the beginning of the design phase and so responds to most Planning applications. Managing Stormwater - A Strategy for promoting the use of SuDS within Northern Ireland has been drafted by a working party representing relevant government bodies and it is anticipated will go out to consultation early in 2008. It appears that the proliferation of impermeable surfaces is not currently subject to legal control.

4.1.18 Endocrine Disruptors

Comment	Correspondent/Source	Respondent	Response
There needs to be greater consideration of the impact of 'non-monitored' chemicals like oestrogens and antibiotics especially the issue of antibiotic resistance.	NIEL FWTF CNCC WWF	EHS	There is no monitoring at present but oestrogens are on the WFD monitoring list and environmental quality standards and analytical methods are being developed. Demonstration projects have been undertaken in England and Wales on the removal of oestrogens from sewage.
The framework directive does not deal with antibiotics and oestrogen mimickers plus plastic bags discharged into the sea is there something coming generally.	Anonymous , Facilitators report, CSG Bush and Glens Meeting	EHS	The WFD does deal with a number of important oestrogen mimicks primarily under Annex X e.g. the nonylphenol ethoxylates, phthalates and some Polycyclic Aromatic Hydrocarbons. It can also potentially deal with antibiotics under Annex VIII of the Directive (which covers Specific Pollutants identified by individual Member States). To date the UK has not proposed that any antibiotics should be treated as Specific Pollutants (please see Appendix 1 Note 18 Dangerous Substances). The issue with plastic bags is that phthalates leach from them into the water but this is a relatively minor problem compared to the potential impacts of effluent discharges.

The SWMI reports do not emphasise enough the potential problems with pharmaceutical and personal care products in trace amounts that are not removed by wastewater treatment. These products are the subject of much current research and it might be necessary to consider their future regulation if they are found to have significant impact on aquatic ecosystems.	NIEL FWTF WWF CNCC	EHS	Antibiotics are known to be present in waste water treatment works effluents arising form personal pharmaceutical products. They can be toxic to fish at very low levels. There will be some investigative monitoring in 2008 for the main antibiotics.
Is there any R&D into the level and effects of the Increasing levels of hormones/oestrogen found in NI waters - e.g. increasing female fish? Can oestrogen be removed from water?	Anonymous	EHS	EHS is planning to conduct R&D into the development of a method for the ultra trace level analysis of oestrogens in waters. It is planned that this development work will enable the monitoring for oestrogens to be conducted in the period 2009-2010. There is a lack of local evidence but potentially a problem. It is possible to deduce that they are having an effect on the ecosystem. Oestrogen can be removed form water - it is expensive and achieved by a combination of advanced treatment processes.

Are the effects of human and animal medication entering our water ways monitored?	Anonymous	EHS	Medicines are not monitored at present. £170k is being invested in analytical equipment for this type of monitoring. There will be limited investigative monitoring planned in 2008. There is also a significant contribution from agricultural run-off as both cattle and pig food contain significant quantities of antibiotics a proportion of which is excreted and is present in slurry.

4.1.19 Sewage Infrastructure

Comment	Correspondent/Source	Respondent	Response
Government should invest in the local sewers to ensure that rainwater run-off and sewage are kept separate. There is concern that the current system of Combined Sewage Overflows which carry both sewage and rainwater run-off cannot cope in incidents of heavy rainfall and have led to a number of flooding incidents e.g. Omagh in summer 2007. It is likely that such incidents will become more frequent in the future with climate change possibly resulting in increases flooding in urban areas and therefore increases in pollution incidents	UFU	EHS	New developments are now served by separate sewerage systems although in some areas these feed into older parts of the network which may be combined. EHS encourages the use of sustainable drainage systems that are intended to slow down the rate at which rainfall enters the drainage system.

Opposed to the use of Emergency Overflow systems which EHS permits to discharge raw sewage under emergency conditions. This is unacceptable given that farmers and industry would be fined for releasing pollutants into water courses in similar situations. Investment should be made in treatment works and storage systems to ensure that emergency overflows are not necessary, discharge consents for emergency situations should be revoked and NI Water fined if such a situation occurs as with other industries. A specific incident of this nature in the Neagh Bann River Basin District at Ballinacor works resulted in the discharge of raw sewage to the Closet River which flooded and spilled over onto farmland. Government agencies have been refusing to take responsibility for the clean-up of this land despite several requests for action. This has resulted in losses for the farmers concerned as this land cannot be used for grazing due to the level of contamination. This practice is totally unacceptable and should be stopped and protocols must be developed to tackle the clean-up operation when such discharges occur.	UFU	EHS	All sewer systems that are not completely separate from storm waste water drainage have emergency overflows otherwise out of sewer flooding would occur which may put properties at risk. The philosophy of the combined sewer overflow is that by the time an overflow occurs the sewage will be very dilute and the flow in the receiving watercourse will also have risen, thus providing greater dilution. In relation to the lands at Ballynacor, this discharge will either be reduced to a once in five year event or completely cease, if technically feasible, when the upgrade to the local WWTW is complete in 2009. NIW is required under the terms of the Consent for the intermittent discharge to clean up any deposited material resulting form the spills.

Investment in sewage treatment works must be progressed as quickly as possible to ensure water quality targets under the Water Framework directive are met. NI Water should install treatment works in areas were there is currently no treatment taking place; it is unacceptable that raw sewage is being discharged into watercourses/sea. Monitoring also needs to be improved to ensure that adequate funding is made available to NI Water to ensure that this investment can take place.	UFU	EHS	There has been a history of under-investment in water and sewerage infrastructure but NIW has a capital works programme in place in which the priorities have been agreed by EHS. There is further work to be done and EHS will be involved in agreeing the investment priorities for the period 2010 to 2015 to meet the requirements of the Water Framework Directive.
Planning Service continues to permit housing development in areas despite there being a lack of infrastructure for sewage treatment – this must be addressed and planners fully take into account the capacity of the local sewage works before granting planning permission. Planning Service and NI Water must work together to ensure that there are adequate wastewater treatment works for the growing population demands. Would suggest that consideration should be given to requiring developers to contribute financially towards ensuring treatment facilities are available for the house that the build	UFU	EHS	EHS will continue to highlight concerns about the impact of development on the environment. It is increasingly the case that NIW will refuse connections to the sewerage system if the infrastructure cannot cope and this is being made clear to Planning Service. In the longer term infrastructure investment should be linked to the area planning process.

Capacity of sewerage and drinking water supplies should be a key determinant of planning permission	NIEL FWTF WWF	EHS	The provision of water supply and the disposal of sewage are considerations in the planning process and EHS offers comment on the environmental implications of development.
There is a need for more information on smaller waste water treatment works at local level to enable full understanding of local issues. Many key hot spots were not mentioned in the SWMI reports, possibly as a result of this lack of information.	CNCC	EHS	One of the tasks of the CSGs will be to highlight local issues including the performance of small works. EHS has an annual inspection programme that covers all the small waste water treatment works. A research project is being planned to determine the impact of the dispersed rural population served by small works, particularly their contribution to diffuse pollution.
The capacity of sewerage and drinking water supplies must become a determining factor of planning permission.	CNCC	EHS	The provision of water supply and the disposal of sewage are considerations in the planning process and EHS offers comment on the environmental implications of development.

Town sewers should be maintained to ensure there is no sediment build-up which could further impact on the ability to hold water and sewage. Concerned that continued development may lead to increased flooding incidents due to an increase in the number of hard surfaces resulting in increased flow-rates in urban areas and a lack of infrastructure to cope with heavy rainfall incidents. Agricultural land could also be affected further downstream as the flow of water is increased resulting in flooding of land destroying crops etc.	UFU	EHS	There will be an incentive for NIW to maintain the sewers in order to prevent out of sewer flooding as this is one of the Key Performance Indicators by which its performance will be assessed. There will soon be consultation on a strategy for the wider adoption of SuDS in Northern Ireland.
Why is high density building allowed before infrastructure is in place? What is planned for water treatment plants? What is happening about Lough Neagh? In the absence of a fisheries conservation board what is going to replace them - Department doesn't prosecute itself	Anonymous, Facilitators report, CSG Belfast Meeting	EHS	The provision of water and sewerage infrastructure is a consideration in determining planning applications. The Review of Public Administration recommended that the functions of the FCB should transfer to DCAL. Lough Neagh is a sensitive area for eutrophication under the Urban Waste Water Treatment Directive and significant discharges to it are required to have more stringent treatment to limit nutrient enrichment. One of the outcomes of the water reform process was that NIW, unlike its predecessor the Water Service, does not have crown immunity and is liable for prosecution under the Water (Northern Ireland) Order 1999.

If a developer makes an application to connect with sewage system can the planners say no? This makes a mockery of the whole system.	Anonymous, Facilitators report, CSG Lower Foyle Meeting	EHS	The Planners may refuse an application if there are not adequate provisions for dealing with sewage, only NIW can refuse a connection.
The planning system only looks at the overall system there is no monitoring of the installation e.g. septic tanks installed. The waste water is not monitored and has a potential to pollute.	Anonymous, Facilitators report, CSG Lower Foyle Meeting	EHS	All discharges require a Consent under the Water (Northern Ireland) Order 1999.
The Water Service actually contributes to the pollution problem through failure of their pumps at sewage stations leading to river pollution. When incidents like this are reported there is no response from EHS staff.	Anonymous, Facilitators report, CSG Ballymena Meeting	EHS	NIW pumps can break down and normally there is some storage capacity provided to allow time for maintenance staff to respond. Inevitably though some spills do occur as a result of pump break down and when there has been a management failure, enforcement action is taken.
Farmers feel that there is a high level of scrutiny about how they deal with effluent but developers can operate with no sewage and there is no inspection. We need joined up government to prevent this. The real answer is to prohibit building in the countryside.	Anonymous, Facilitators report, CSG Omagh Meeting	EHS	Developers must either be able to connect to the public sewerage system or after obtaining a consent to discharge from EHS, install their own waste water treatment plant to meet the conditions. EHS will not issue a consent when there is not a suitable watercourse into which the effluent may be discharged.
In developments turned down can developers put in their own sewage system? Yes is the short term answer.	Anonymous, Facilitators report, CSG Omagh Meeting	EHS	Developers may only put in their own sewage treatment systems if they have applied for and obtained a consent to discharge from EHS.

Issues regarding cost to taxpayers of meeting properly EHS & EC legislative limits to properly treat sewage etc – money into infrastructure will take years.	Anonymous, "Post its", CSG Lower Neagh Meeting	EHS	There will be a cost to water customers in meeting the requirements of European legislation and local water quality objectives but expenditure will be regulated by the Northern Ireland Authority for Utility Regulation (NIAUR) and the customers' interests will be protected by the Consumer Council for Northern Ireland which now has a statutory role.
Why is high density development allowed before infrastructure is in place? What planning for WWTW. Lough Neagh sewage industrial and agricultural waste entering it. Lining of waste sites and what happens to old sites.	Anonymous, CSG Belfast Meeting	EHS	EHS will draw attention to any development which could have an adverse environmental impact. NIW is also reluctant to connect properties that could result in it failing to meet its discharge consents and risking prosecution. Lough Neagh is designated as a sensitive area under the Urban Waste Water Treatment Directive for eutrophication and the discharge consents for major sewage works within the catchment contain a phosphorus limit.
Welcomes the proposed additional actions as the existing controls are grossly inadequate and constantly flouted. Local Authorities are one of the major offenders. The addition of reed-bed systems should be seriously considered between wastewater outfalls and river systems. They would be inexpensive, very effective, and create extra biodiversity habitats.	D Harding	EHS	Reed bed systems do have advantages in providing a polishing stage for effluent (tertiary treatment), not least in energy efficiency, where land is available.

WWTW equipment failure is the most common cause of pollution incidents - resulting in raw sewage entering the water - this need to be addressed. When incidents like this are reported EHS provide no response.	Anonymous	EHS	Equipment failure, particularly at sewage pumping stations is a major cause of pollution incidents involving NIW and if there is management failure EHS will take enforcement action.
NIW leaks need to be addressed	Anonymous	EHS	The NIAUR will set leakage targets for the company as part of the price review process. There already is a target to reduce leakage to half of what it was in 2001 by 2010. It will take many years to bring the water and sewerage system up to a satisfactory standard but Water Reform has injected impetus into the process.
Good and bad farmers ≥90% ind cons not being met. Why are misconnected sewers not being fixed?	Anonymous CSG Belfast Meeting	EHS	Where misconnections are identified EHS initiates a process for ensuring that they are addressed.
There are estimated to be 120,000 septic tanks and about 30,000 are not working properly and are causing pollution. The water service has a responsibility to make sure tanks are dealt with properly.	Anonymous, Facilitators report, CSG Ballymena Meeting	EHS	NIW, formerly Water Service, is not responsible for making sure septic tanks are dealt with properly. EHS consents the discharges form septic tanks and if pollution is identified appropriate action is taken. NIW is currently providing a septic tank emptying service which entitles customers to one free desludging in any twelve month period, providing conditions relating to access and safety are met.

We must have a suitable water system and upgrade old system. Grant aid should be available to help people.	Anonymous, Facilitators report, CSG Omagh Meeting	EHS	NIW will be allowed to spend an amount of money, agreed by Ministers as being both justified and affordable, on projects agreed with NIAUR with input from EHS.
Is Silverhill extracting phosphates and if so when?	Anonymous, Facilitators report, CSG Lough Erne Meeting	EHS	Agreed as recorded at meeting Comment by NIW "Yes phosphates are treated. Garrison, Lisnaskea and Enniskillen treat all year round as phosphates in washing machines happen all year round."
Has emptying of septic tanks stopped? Complaint that farmer had called 12 times and received no response but had been told that it would be done soon, how soon is soon?	Anonymous, Facilitators report, CSG Lough Erne Meeting	EHS	There was a perception that free emptying was going to end and a large number of customers had asked for the service before the deadline and numbers doubled resulting in inevitable delays.
7 million people living in London and the chemicals from washing machines and dishwashers are getting into the Thames yet water is being abstracted from the Thames. What chemicals are being used to extract the phosphates and what damage is it doing to our health?	Anonymous, Facilitators report, CSG Lough Erne Meeting	EHS	Phosphate is removed by adding iron or a mixture of iron and aluminium salts to the sewage at primary settlement stage or to the aeration stage at an activated sludge works. If water later abstracted for drinking contains any residual chemical this is dealt with in the water treatment process.

Planning - planning permission should not be granted unless there is adequate provision for sewage disposal.	Anonymous	EHS	Enforcement action can now be taken against NIW for failing to meet discharge consent conditions. Overloading a system can lead to a failure and therefore there is an incentive for NIW to refuse connections to developers. There is a headroom document for all works and NIW use the volume going into the works and its capacity to determine if additional houses can be connected. All NIW's 1100 + works need consents to discharge.
The development boom and associated planning issues needs to be managed better. Hot spots were identified but this was overturned on agreement that the proper infrastructures for sewage treatment would be put in place before any new developments were granted planning permission. This has not been the case and must be addressed for there to be public confidence in the system.	Anonymous	EHS	Hot Spots were identified by EHS in 2002 and development stopped for a period. Development was eventually allowed to proceed when a programme of upgrades were agreed with Water Service. Ideally it would be more desirable to have infrastructure needs identified at the Area Plan stage before individual developments are seeking planning permission.
Domestic sewage can it cope with washing up liquids?	Anonymous		Sewage treatment systems can cope with the residual amounts of washing up liquid they receive. Washing up liquids do increase the amount of phosphorus present and this adds to the treatment costs where reduction is required.

4.1.20 Sewage Sludge Disposal

Comment	Correspondent/Source	Respondent	Response
Glens of Antrim cultivated land being used for waste. Altnarichard in 2006 a quantity of treated sewage was dropped in the forest- are you monitoring this?	Anonymous, Facilitators report, CSG Bush and Glens Meeting	EHS	The following response has been collated in response to issues raised:
Concerns about the large quantities of sludge from Water Treatment Works being used in forests as an organic fertiliser. Agricultural land is restricted to applying sludges up to an annual crop requirement however the current practices of applying large quantities of sludge from WWTWs to forestry land amount to double standards. There are concerns that the spreading of such large quantities of material could lead to water pollution in the future as nutrients etc. leach out of sites. Farmers are also concerned that any seepage from these sites could be attributed to agriculture land and therefore controls on agriculture unnecessarily tightened and increased.	UFU	EHS	The application of sewage sludge to land other than agricultural land as defined in the Sludge (Use in Agriculture) Regulations (Northern Ireland) 1990 (i.e. land which is not used for food or forage production) is controlled through the Waste Management Licensing Regulations (Northern Ireland) 2003.

In Baronscourt slurry is being buried in the forest to assist willow crops. Farmers are concerned that if the willow trees can't use up all the nutrients that some may run into the rivers. Has there been enough thought put into this and is it being monitored?	Anonymous, Facilitators report, CSG Omagh Meeting	EHS	This would include both forestry and short rotation coppice (SRC) willow. Anyone wishing to undertake this activity must obtain an exemption from EHS. The applicant would have to demonstrate site suitability in terms of land and water media, that the application of the sewage sludge to land did not cause levels of certain toxic elements to be elevated in the soil and that the application results in benefit to the crop.
The trees do not use up the nutrient, will it leak into water and does it do harm? How many years has it been monitored and will it do damage. We have a license to put it to forestry land. Are there any conditions or regulation regarding this? NIW has the contract EHS give the license but it is not used in vast quantities most of it goes to Belfast.	Anonymous, Facilitators report, CSG Omagh Meeting	EHS	Please refer to response provided above.
Concern about nutrient enrichment on the Abercorn Estate. Sludge from treatment plants is dried out and taken to Belfast to be burned but some is being used as landfill on Abercorn estate. The cake is buried and trees planted on top, also being done in Derry area with willows planted as energy crop. Product has been approved EC watch this as a product for green energy. Sludge cake mostly to Belfast to be burned, some to Aberdeen. Anonymous	Anonymous, Facilitators report, CSG Omagh Meeting	EHS	Approximately 46.5% of the sewage sludge produced in Northern Ireland is incinerated in Belfast, with 51.0% going to forestry, SRC willow, 1.0% going to landfill but not to Aberdeen. About 1.5% is used on agricultural land and regulated under the Sludge (Use in Agriculture) Regulations (Northern Ireland) 1990.

4.1.21 Sustainable Water Use

Comment	Correspondent/Source	Respondent	Response
The booklet mentions economic analysis of water use and it would be useful to know how this would be achieved.	Anonymous, Facilitators report, CSG Newtownards Meeting	EHS	Economic analysis focuses on the economic sectors identified as a source of potential pressures. There is an estimation of the contribution waste water makes to an individual process - how it contributes to output value. A value can also be assigned to water used in recreation or tourism.
We should be looking at ways to reuse our waste water i.e. converting it back into drinkable water.	Anonymous, Facilitators report, CSG Omagh Meeting	EHS	In NI it is neither environmentally justified nor economically viable to return waste water directly to drinking water standards.
Believes that more work could be done on educating agriculture, industry and the general public on using water more efficiently. Further incentives should be provided to encourage rainwater harvesting etc. NI Water must be seen to be working more efficiently to reduce leakage and therefore set an example in efficient use of water in Northern Ireland.	UFU	EHS	The value of water will be impressed on the public when separate charging is introduced. Rainwater harvesting will also be promoted as part of the forthcoming Sustainable Drainage Strategy. NIW will be set leakage targets by the economic regulator (NIAUR) within the periodic review process.
In places our demand for water to supply growing domestic use is unsustainable and can be damaging to the natural environment. Predicted reductions in summer rainfall because of climate change will put further pressure on scarce water supplies.	NIEL FWTF WWF	EHS	The reinforcement that has been accomplished in the water supply network has reduced the pressure on water availability. This is not a serious problem in NI.

Firmly believes that water should be recognised as a valuable resource and therefore the charging structure should reflect usage through metering for all users.	CNCC	EHS	The Strand 1 Report of the Independent Review of Water Reform[29] recommended that universal metering should not be adopted but the issue remains under consideration.
Demand for water is increasing and Northern Ireland currently has a higher consumption per capita than any other part of the UK. This is likely to become more critical and risk significant damage to the natural environment if predicted reductions in summer rainfall because of climate change materialise. The impact on habitat and species of removing water from the natural ecosystem must a major consideration in all new water abstraction and storage proposals.	CNCC	EHS	The protection of habitats and the management of water ecosystems are key drivers for the introduction of the Water Abstraction and Impoundment (Licensing) Regulations (Northern Ireland) 2006. These require consideration of the needs of industry and agriculture and strive for sustainability
Registry of all ground water users, there should be a scale for charging, small users should not be charged same as large users. There should be an incentive not to let water run, for example the use of meters. Farmers already have meters.	Anonymous, Facilitators report, CSG Lower Foyle Meeting	EHS	There are proposals to introduce a charging scheme for the abstraction of water and volume will be a factor in determining the charge. In relation to the public water supply the effect of water meters on demand will be one of the considerations in decisions about wider metering.

4.1.22 Forestry Guidelines

Comment	Correspondent/Source	Respondent	Response
Do Forest Service permit planting and harvesting right up to river's edge – a corridor should always be left to allow colonising with native trees which can be left in situ. In private woodlands land owners spread slurry over the tree crop – is this regulated. There is a good example of a buffer strip along the lower Bann in Coleraine at the " Bann Dumps"	Anonymous, Facilitators report, CSG Ballymena Meeting	DARD	The comments relating to Riparian Zones have been responded to as follows: The multiple benefits of riparian woodland are recognised and the creation of more wet woodland is a specific target under the Northern Ireland Biodiversity Strategy[14]. Forests and Water Guidelines[30], best practice states that a buffer area is required in both existing forests and new planting to protect the riparian and aquatic zones from disturbance. Key aspects of the design of a buffer area are management, width, choice of species, structure and landscaping. The aim is to provide a riparian zone with a structure which includes a mosaic of 5 vegetation habitat types; open ground, occasional large trees, trees with open glade, scrub thicket and closed canopy woodland. Together, these provide the structural diversity that is attractive to woodland fauna and to the plants that flourish in semi-natural woodland. Species mix is important and the buffer areas are managed to protect both water quality and freshwater habitats. The vegetation within the riparian zone should be native to the location and soils. Natural regeneration is the favoured means of
Would like to know if forest service permit harvesting right up to rivers edge and new planting up to rivers edge. A corridor should always be left in the case of new planting or re-planting and allowed to colonise with new trees, which can be left in situ.	Anonymous, "Post its", CSG Bush Meeting		
Why are trees allowed to be cut down along river banks?	Anonymous, "Post its", CSG Belfast Meeting		
Do Forest Service permit planting and harvesting right up to river's edge? A corridor of native trees should be planted and left in situ.	Anonymous, CSG Facilitators notes		

			establishing native tree and shrub species where an appropriate seed source exists. Opportunities for re-designing and enhancing buffer areas will arise, particularly after clearfelling. On appropriate sites, consideration is given to the needs of priority and protected species, such as the Freshwater Pearl Mussel.
During certain forestry activities like felling, extra protection should be put in place where vulnerable species present, e.g. the freshwater pearl mussel.	NIEL FWTF CNCC WWF	DARD	The comments relating to Pearl Mussel have been responded to as follows: When planning forest operations, checks are carried out for the presence of protected and priority species such as Freshwater Pearl Mussel. Plans can be modified to minimise risk of damage to their habitat and avoid disturbance to the species. This takes place through consultation with regulatory authorities and conservation agencies.

There is a long legacy of past bad practice, e.g. drainage patterns that will prevent the natural recovery of land and associated water flows after forests have been felled unless there is a concerted effort to repair the damage.	NIEL FWTF WWF	DARD	The comments relating to Drainage have been responded to as follows: Many of the current problems associated with afforestation are a legacy of old practices, which have been subsequently amended. The main factor in addressing drainage problems is dealt with at the ground preparation stage, prior to planting. Sites are now only cultivated when necessary and all plans are developed with the aim of minimising adverse effects. Drains are aligned up-valley to maintain an even gradient throughout their length and are designed not to exceed 2 degrees slope and less on erodible soils. Drain ends are kept back from watercourses and riparian zones. Discharges from drains should, as far as possible, be on flat ground so that the water can fan out rather than be allowed to emerge in a concentrated flow. On very erodible sites, consideration is given to doubling the recommended width of buffer area. However, emphasis is on minimising soil disturbance through careful choice of cultivation practice rather than relying on the protective function of buffer areas. Collector drains are installed immediately after cultivation with silt traps being used in areas of higher risk to provide extra protection. Clearfelling
Claimed that there is no assessment of areas less than one half a hectare – nothing about felling urban trees and the effect on runoff – how significant is this? Private individuals can fell no licensing control.	Anonymous, Facilitators report, CSG Lower Foyle Meeting		
50 years ago the Forestry Service drained the upland bogs so that they no longer held water. Water run off led to monumental floods. In 1963 this happened and with global warming it will happen again. The Forestry has done monumental damage and now they are doing this again. Who is monitoring this, the legacy remains?	Anonymous, Facilitators report, CSG Bush and Glens Meeting		
50 years ago damage was done are there any plans to reverse drainage. River Glen Dunn flows through forest ground and the amount of water is now much more, drains are still running and will be for ever more.	Anonymous, Facilitators report, CSG Bush and Glens Meeting		
Bally Patrick forest concerns are exactly the same. The hatchery on the edge of Ballycastle forest is now happier with	Anonymous, Facilitators report, CSG Bush and Glens Meeting		

the Forestry Service. We always have had problems with flooding but now global warming will be the problem. In upland areas there are problems related to older forestry plantations. These are mainly due to the drainage channels which mean that there is no water retention in the catchment. Deforestation is also taking place - what impact will this have?	Anonymous		presents opportunities to correct problems caused by pre-existing deficiencies in the drainage system. For instance, existing drains that are either on too steep a gradient or leading directly into watercourses can be either blocked or by-passed.

There is a perception that the standards for applying fertilizer and pesticides to forestry are not as rigorous as those that now apply to agriculture. Concern expressed about Forestry plans to rectify points raised but how can it be policed. You would need someone there every day. Heavy rain causes sediment and nutrient to run into the water courses, policing needed, could this be part of the Woodlands Trust? Spraying from the air indiscriminately causes problems in lakes and has a detrimental effect on water` quality. Harvesting of forests especially pine whose needles contain something which makes the water `acidic. If trees are planted to the waters edge they cause problems and drains get blocked up. Harvesting needs to be supervised. and maintenance should not interfere with the spawning of fish. Forestry regularly uses herbicides and fungicides and there is zero communication between Forestry and Fisheries in this area the system is not working. Farmer in area surrounded by trees never seen pollution on N or S side. Sprayed from the air but never seen pollution. Where is the consultation	NIEL FWTF WWF Anonymous, Facilitators report, CSG Lower Foyle Meeting Anonymous, Facilitators report, CSG Omagh Meeting Anonymous, Facilitators report, CSG Omagh Meeting Anonymous, Facilitators report, CSG Omagh Meeting	DARD	The comments relating to Pesticide and Fertiliser use have been responded to as follows: Forestry, in comparison with agriculture, has a very low input requirement of both pesticides and fertilisers. This is due to the long-term, stable nature of woodlands with rotations of up to 60 years in commercial conifer crops and longer in broadleaved woodlands. Pesticide and fertiliser applications don't usually occur more than twice on average throughout the crop rotation. Additionally, forestry objectives have been modified in recent years with a requirement to manage an increased area with biodiversity as a major objective where minimal chemical usage takes place. Aerial fertiliser applications do present a threat and are carefully planned to ensure that nutrient losses do not exceed environmental quality standards in receiving reservoirs or watercourses. No applications take place without prior consultation with water regulatory authorities as well as other interested bodies. Buffer zones around watercourses depend on topography and hydrology and generally exceed the Forest and Water Guidelines. procedure, allowing the accuracy of the application to be monitored. Aerial applications use prilled

with farmers from the Loughs Agency?			fertiliser which is applied under the control of a precise GPS flying procedure, allowing the accuracy of the application to be monitored. Applications only take place when weather conditions meet strict requirements in terms of wind and rainfall. Existing controls on the use of pesticides aim to give complete protection and meet all statutory requirements. There is a legal requirement for pesticide treatments to be carried out by certified operators or directly supervised by certified operators. Forest Service has a strategy for the minimisation in use of synthetic chemicals. This covers all forest operations and establishes the principles and practical methods associated with minimising use. Examples include specific planting methods to negate the use of pesticides required for weevil control. Forest Service woodlands meet very strict standards in terms of environmental objectives. Independent auditors commissioned by the Forest Stewardship Council have assessed the management systems of the Forest Service and certified them as meeting the requirements of well-managed forests.
Has the practice of fertilizing from helicopters been stopped?	Anonymous, Facilitators report, CSG Lough Erne Meeting		
Is there any phosphate run off from mature forests?	Anonymous, Facilitators report, CSG Lough Erne Meeting		
If a helicopter is used how do we avoid phosphate going into the lakes?	Anonymous, Facilitators report, CSG Lough Erne Meeting		
Are FS regulated under the Nitrates Directive?	Anonymous		
Spraying of forests by air still happens and with strong winds there is no control and it gets into the waterways.	Anonymous, Facilitators report, CSG Newry Meeting		
What is the phosphorus run-off from mature forests?	Anonymous, Facilitators report, CSG Lough Erne Meeting		
What precautions are taken to stop aerial spraying in lakes within forests?	Anonymous		
The same stringent standards applied to farming need applied to forestry.	Anonymous		
The strict standards that now apply to farmers should apply to forest	Anonymous		

The 2007-2013 Rural Development Programme will be encouraging afforestation and there is a need to ensure siting, drainage, fertilisation, felling all meet tight standards for water protection.	NIEL FWTF WWF	DARD	The comments relating to Planning and Expansion have been responded to as follows: Many of the current problems associated with afforestation are a legacy of old practices, which have been subsequently amended. Recent policy developments are anchored in the UK Government's international commitments on sustainable forest management, biodiversity and climate change. The UK Forestry Standard[3] sets out the criteria for sustainable forest management as the basis for forest monitoring. Protection and enhancement of the water environment is a key principle. The Forests and Water guidelines provide guidance to forest mangers on how forests should be designed and operations planned. They also give clarity to practitioners on how field operations should be carried out. These guidelines apply equally to both state and private forests. The guidelines were substantially revised in 2003 taking account of the latest research and advice from a wide spectrum of water regulatory authorities and conservation agencies. Forest policy in Northern Ireland is summarised as the sustainable management of existing woods and forest and the steady expansion of
New methods of forestry addressing drainage patterns, fertilization, pesticide spraying and felling must be adopted and the legacy of past bad practice, especially damage to laminar flows, remediated. Standards that apply to agriculture to protect water from fertilisers and pesticides must be as rigorous for forestry as they now are for agriculture.	CNCC		
Forestry is not generally a problem now. Are there plans for lots more forests in the area?	Anonymous		

			tree cover to increase the many diverse benefits that forests provide with an aim to double the area of forest over the next 50 years.
What type of hydrological changes occur as a result of forestry? Impact of forestry plantations, particularly in the Roe, Deele and Derg catchments. Would advocate the chemical and biological sampling of watercourses in forested areas exceeding an area of 2 hectares. Would also like to see a programme of evapotranspiration monitoring.	Anonymous Loughs Agency	DARD EHS	The comments relating to Hydrology have been responded to as follows: Forestry can have a range of effects, depending on the scale and type of forest. Conifer forests have been found to have a small effect on peak flows, particularly in large catchments. The main risk is posed by poor cultivation or drainage systems, a legacy of old practices which have been subsequently been amended. Current practice and ongoing redesign of first rotation forests demonstrate a significant positive outcome to water management. Forest establishment and growth appear to have a small effect on peak flows, with the impact of clearfelling often being difficult to detect. Overall, research suggests that the contrasting effects of the different stages of the forest cycle will even out on a large catchment scale. After clearfelling opportunities exist to correct problems caused by pre-existing deficiencies in the drainage system. For instance, the blocking or by-passing of existing drains that is on an unacceptable gradient or lead directly into watercourses to create an effective buffer area. by EHS.

			The monitoring of watercourses is carried out by EHS. Adverse impacts of forestry on invertebrates is generally relatively minor and hence programmes dedicated to assessing impacts in small areas of forestry are not justifiable in terms of costs and human resources unless they have been clearly shown to be impacting on the wider catchments through the operational monitoring programmes implemented by EHS. If wider impacts are detected then consideration will be given to implementing investigative surveys
Also there could be an issue with private woodlands- landowners spreading slurry over tree crop – is this regulated?	Anonymous, "Post its", CSG Bush Meeting	DARD	The pollution control aspect and monitoring of compliance with the NAP regulations is carried out by EHS. Where EHS find a landowner to be in breach of the NAP Regs it is reported to DARD and becomes a cross-compliance issue through breach of Statutory Management Requirements.
Is DRD FS considering willow for energy crop?	Anonymous, "Post its", CSG Belfast Meeting	DARD	Forest Service has managed challenge funds to grant aid short rotation willow crops for energy crops. Forestry grant schemes are designed to encourage the expansion of woodlands in line with the UK Forestry Standard and Forests and Water Guidelines which are the published standards of environmental protection and practice for forestry in the UK.

4.1.23 Agriculture

Comment	Correspondent/Source	Respondent	Response
If we increase the dry matter of silage then we decrease the volume of effluent - should we be looking at using a drying system before ensiling?	Anonymous	EHS	A comprehensive response to this issue should be referred to in Appendix 1 Note 9 - Silage
The treatment of agricultural waste is a time bomb. In the South waste is used for energy production but Agencies in the north don't seem willing to help on this issue. Research is being done in Hillsborough but we need it now not in two years. We need to work together.	Anonymous, Facilitators report, CSG Omagh Meeting	EHS	A comprehensive response to this issue should be referred to in Appendix 1 Note 1 - Alternative Uses of Manures (Waste)
Anaerobic digesters have been shown to work well elsewhere in Europe but so far there is only one in operation in Northern Ireland. This is something that should be promoted for use here.	Anonymous	EHS	Refer Appendix 1 Note 1 - Alternative Uses of Manures (Waste)
The sheep dip that kills fish has not been on the market for 3 years and is now away? Can it kill for certain days after being disposed of? The dipping is closely located to burns and then let off very quickly. How many days is it active. it is not legal to let it into the watercourse. Is it being monitored?	Anonymous, Facilitators report, CSG Bush and Glens Meeting	EHS	The comprehensive response to this issue should be referred to in Appendix 1 Note 2 - Sheep Dip A good summary which includes environmental toxicity is given in: www.hse.gov.uk/research/hsl_pdf/2002/hsl02-26.pdf Various sheep dip components are monitored. The scope of the monitoring increased in scale considerably during 2007 however results are not yet available.

How are portable sheep dippers regulated? Who has responsibility for these and are they monitored? Where do the operators of these portable devices dispose of waste dip?	Newry & District Anglers Association	EHS	See notes above and refer Appendix 1 Note 2 - Sheep Dip
Is sheep dip monitored? There are a number of sheep dippers located close to small rivers. How long does used sheep dip need to be stored for?	Anonymous	EHS	See notes above and refer Appendix 1 Note 2 - Sheep Dip
The old sheep dip was harmful to people, doesn't kill the fish but kills invertebrates and we cannot find the damage.	Anonymous, Facilitators report, CSG Bush and Glens Meeting	EHS	See notes above and refer Appendix 1 Note 2 - Sheep Dip Sheep dip damage is clearly detectable in biological surveys, which is detected intermittently during the biological monitoring programme. In severe instances additional survey will be undertaken to identify and remove the source.
In addition to local legislation, under cross-compliance aspect of the single Farm Payment Scheme all farmers are required to respect various environmental Statutory Management Requirements set down in European Legislation and follow the measures to maintain the land in Good Agricultural and Environmental Condition (GAEC)	UFU	EHS	Comment agreed

Do not condone farmers who deliberately pollute waterways. Agricultural pollution incidents have decreased over the last number of years. Statistical reporting of agricultural pollution should reflect the degree and the size of the incident and the risk to waterways e.g. many small pollution spills from agriculture may not cause the same damage as a leak from an industrial facility yet statistically reflect the agriculture sector as being a major problem	UFU	EHS	The annual report on water pollution and enforcement published by EHS[26] breaks down all the pollution incidents into various sectors and gives the severity of incidents. A further response to this issue should be referred to in Appendix 1 Note 3 - Eutrophication
A total ban on the application of all fertilizer, both artificial and organic, should be applied to all land within 100 meters of any watercourse, however small. Soil tests required for all other land and buffer zones of nitrogen fixing plants sandwiched between agricultural land and natural vegetation riparian zones. These are drastic measures I fully realise, but the problem of nitrate/phosphate eutropication of Irish waters is a very serious one and the greatest threat of all to our rivers and lakes and it is only by very drastic solutions will we be able to eliminate it – eliminate not merely control!	D Harding	EHS	Please refer to Appendix 1 Note 3 - Eutrophication The comprehensive response dealing with this issue should be referred to in Appendix 1 Note 6 - NAP and P Regulations

Common sense versus regulation especially about slurry, could EHS look at weather patterns regarding spreading of slurry. Claim that EHS isn't working properly in response to specific incidents being reported.	Anonymous, Facilitators Report, CSG Armagh Meeting	EHS	Please refer to Appendix 1 Note 6 - NAP and P Regulations All water pollution incidents reported to EHS are investigated with a view to stopping the pollution and taking suitable enforcement action in accordance with our enforcement policy.
How will the Nitrates Directive / WFD address those farmers who continue to spread slurry outside the regulations?	Anonymous	EHS	Please refer to Appendix 1 Note 6 - NAP and P Regulations
We are in a transition period DARD is under scrutiny. Farmers have to respond and comply with the slurry restrictions. Agriculture is responsible for 20% of the yearly phosphates, 80% comes from other areas. Will know the effectiveness of these issues n a couple of years. Not all the farmers have money. There should be some scheme to encourage farmers to protect rivers and their banks Countryside management scheme is not enough we need other schemes.	Anonymous, Facilitators report, CSG Lower Foyle Meeting	EHS	EHS cannot comment on the particular percentages quoted as the specific area of reference is unclear. EHS do have nutrient budgets for many areas and the relative proportions between diffuse and point sources varies – for example the point source contribution will likely be higher if a catchment contains large waste water treatment works A response dealing with this issue should also be referred to at Appendix 1 Note 4 - Funding Schemes

The Department of Agriculture should promote compulsory set aside along river corridors. This would create a network of linear parks which would promote local biodiversity. Don't point the finger farmers have streams through land in this area small % have streams and are grazed to nearby water. DARD could do more, as could Countryside management. Fence off streams and use drinkers as we need to keep water courses protected. Agri-environment schemes are helping improve water quality but is there any guarantee for future funding?	Anonymous Anonymous, Facilitators report, CSG Omagh Meeting Rivers Agency	DARD (CMB)	Approximately 13,000 farmers are currently participating in agri-environment schemes. Effective pollution control and farm waste management are requirements of these schemes. Farmers have also been provided with the opportunity to carry out measures such as the creation of ungrazed grass margins along the edge of watercourses to reduce the possibility of nutrient run-off. Under the new agri-environment scheme (NICMS), being developed as part of the NIRDP 2007 – 2013, new measures are being introduced which will incorporate existing pollution control requirements, and further encourage farmers to enhance farm waterways in keeping with the objectives of the WFD.
We need buffer zones, need water for stock if water is cut off. Chemical spraying needs a buffer zone 5-6 metres from the river banks. 13000 farmers already in scheme, new scheme will embrace another 7 -10000 farmers.	Anonymous, Facilitators report, CSG Lower Foyle Meeting	EHS DARD	A comprehensive response dealing with this issue should be referred to in Appendix 1 Note 5 - Spraying Chemicals Please also refer to Note 4 - Funding Schemes

Slurry stores, farmers have a close spreading season and slurry has to beheld until the spring, some farmers don't have the facility will all farmers get this grant? Response- scheme is open to all farmers and by end of Dec 2008 all farmers must have tanks for slurry. As the slurry has to be kept to spring and a short period in the summer a lot of slurry has to spread in a short space of time.	Anonymous, Facilitators report, CSG Bush and Glens Meeting	DARD	Please refer to Note 4 - Funding Schemes
Contractors using umbilical slurry spreading systems have no idea what rate they are spreading at- resulting in heavy loads and pollution	Anonymous	EHS	Umbilical systems can be advantageous in avoiding damage to soil structure, often associated with the use of heavy machinery. The main problem has been the use of such equipment to apply slurry in unsuitable conditions which is now banned irrespective of the spreading technique. The umbilical system is fed from the same tanker and therefore the farmer should be equally aware of loading.
The deliberate dumping of effluent has not been mentioned in the booklet. It is commonplace for slurry to be dumped in a river and it disperses very quickly before EHS can respond.	Anonymous, Facilitators report, CSG Ballymena Meeting	EHS	No Comment

Dispute statement "common practice of farmers to discharge slurry into rivers" – Farmers are an easy target – farmers can have farm subsidy grant with – held if there is a suspicion of pollution. Farmers are not to blame for river pollution	Anonymous, Facilitators report, CSG Ballymena Meeting	EHS	No Comment
If we have a black out we don't have to worry. It is claimed 99.9% are responsible but some are still polluting on a daily basis. Some have been to court and fined but still pollute, what are we to do with them? EHS in charge this should not happen, 18 years one farmer is still polluting. The penalties are not enough. Farmers want him dealt with properly. Polluters should be made known to the farming community and the FQAS logo removed if in breach and time given to get back on track.	Anonymous, Facilitators report, CSG Omagh Meeting	EHS	EHS are putting some additional staffing resource into following up polluters who have been through the courts. Given that court is seen as the ultimate deterrent we look to the judiciary to impose suitable sentences on repeat offenders
Statements have been asked for by EHS to prosecute farmers who pollute rivers but these are never pursued	Anonymous, Facilitators report, CSG Ballymena Meeting	EHS	This is something which EHS has not done in the past but more recently has done so. A number of cases are in the pipeline awaiting hearings. If the use of these statements is seen to enhance these cases then there use will become more widespread.

The closed spreading season will just result in farmers spreading heavier slurry loads in the open season	Anonymous	EHS	The NAP Regulations include a restriction on the maximum amount of organic manures and dirty water that can be applied in any single application and periods between applications. The Regulations also restrict spreading to suitable weather and soil conditions outside the closed periods.
How are EHS staff going to be able to tell the difference between dirty water and slurry in the field?	Anonymous	EHS	Where a farmer claims that he has applied dirty water rather an organic manure not being dirty water to a field he will be required to demonstrate the source of the dirty water which can be sampled and tested to ensure that it complies with the definition. To make this claim a farmer will have to have separate storage for his dirty water.
In private woodlands landowners spread slurry over the tree crop is this regulated?	Anonymous, CSG Facilitators notes	EHS	Where private woodland meets the definition of agricultural land within the meaning of the Agricultural Act (NI) 1949 then this activity would fall under the NAP Regulations and any slurry would have to be applied close to the ground. The application of other organic wastes will require a Waste Management Licensing authorisation and must also comply with the NAP Regulations.

Aware that fallen animals continue to contaminate waterways. Whilst it is accepted this can happen accidentally it is essential that there is clarity on whose responsibility it is to remove such carcasses so that they are not left to decompose where they lodge in the water. Note however that the frequent lack of identification on dead animals in waterways suggests there is deliberate action on many occasions. This must be clamped down on, not only to protect waterways, but to retain consumer confidence in Northern Ireland's animal traceability system.	NIEL FWTF WWF	EHS DARD	The comprehensive response dealing with this issue should be referred to in Appendix 1 Note 7 - Fallen Animals
Do parlour washings have to go through the slurry system?	Anonymous	EHS	No - but they cannot be discharged to a waterway or groundwater. They could be collected if sufficiently dilute as with dirty water.
How does EHS prosecute farmers?	Anonymous	EHS	A comprehensive response dealing with this issue should be referred to in Appendix 1 Note 8 - Enforcement

The two main problems associated with the peat extraction industry are those of siltation and acidification. Some 10 or 15 years ago those problems were put to Bord na Mona who agreed to excavate settling ponds on their bogs and I understand this was done and alleviated the problem of silting considerably in following years. Whether this is still their practice and whether these ponds are regularly monitored for effectiveness I don't know, but this should be followed up. This policy of settling ponds should also be applied to the smaller private operators. Acidification could be addressed by feeding the outfalls of the settling ponds through beds of limestone gravel chippings. This is a very effective means of restoring pH values. The pH of Lough Derg has declined considerably over the last 30 years from a high of pH 8.4 to a present average value of around 7.5 or a little over. The financial cost of restoring this would not be great.	D Harding	EHS	EHS set consents on all discharges from peat extraction operations, and would set limits on pH and suspended solids.

4.1.24 Weed Control

Comment	Correspondent/Source	Respondent	Response
Concerned about pesticides etc in parks. More education is needed on local flora and fauna. Some areas have Biodiversity officers who are trying to tackle this issue.	Anonymous, Facilitators report, CSG Ballymena meeting	EHS	Pesticides are used on all managed land: farms, playing fields, forestry, parks, gardens and roads. EHS investigates pesticide exceedance in drinking water and is working with biodiversity officers.
Complaint about reported growth in river up stream of Garrison reported 5/6 years ago now the vegetation is back.	Anonymous, Facilitators report, CSG Omagh Meeting	EHS DARD	Not a pollution matter. RA will remove material from watercourses which is causing impedance to flow.
There needs to be much greater recognition within local councils of the impact they can have on waterways during weed control and maintenance of municipal amenity spaces. Adequate training for staff in product selection and application and maintenance of equipment is essential. There needs to be particular attention paid to weed control on hard areas and roads where the run-off goes directly in to storm drains. There also needs to be much more attention paid to areas where high levels of fertilizer are applied to intensively managed areas like golf courses and summer flower displays.	NIEL FWTF WWF CNCC	DARD EHS	RA in undertaking works employs standard good working practices in locations where vegetation of an environmental value is known to exist. Clearance of vegetation is unlikely to address water quality issues and indeed the value of emergent vegetation in improving water quality should be recognised. EHS recognises that diffuse pollution arising from both agricultural and non-agricultural use of pesticides is a pressure on the aquatic environment in NI and will seek to address these activities through the development of programme of measures under the RBPs. EHS also recognises that whilst significant action has been undertaken to deal with nutrient inputs from agriculture and waste water treatment other sectors may have a role in improving practice and reducing their inputs again through programmes of measures.

The Upper Bush is afflicted with an introduced weed to provide an environment for salmon. Weed is now growing out of control and must be controlled. It covers the spawning areas for the salmon, you will need machetes to get rid of the weed. It is prolific and needs an annual cropping for the salmon. The weed slows down the water; silt covers the weed and prevents spawning.	Anonymous, Facilitators report, CSG Bush and Glens Meeting	EHS	EHS recognises the need for effective weed control in certain circumstances and is developing regulatory policy in consultation with other departments to ensure that such management is carried out in the most environmentally sound manner.

4.1.25 Nutrient Budgets

Comment	Correspondent/Source	Respondent	Response
In the Erne catchment area stocks of brown trout are being badly affected but how much of the phosphates are coming from Eire?	Anonymous, Facilitators report, CSG Lough Erne Meeting	EHS	At the moment we do not know precisely how much of the phosphate load in the Erne catchment originates in the Republic of Ireland. We are working with the Agri-food Bioscience Institute (AFBI)[31] to estimate nutrient budgets for catchments throughout NI and this should include liaison with our counterparts in the Republic of Ireland. There has been cross-border work on Lough Melvin since 1990. The work apportioned nutrient inputs to rivers and streams both North and South but did not specifically apportion between the two jurisdictions – it may be possible to do this from the data but not without looking in detail at the areas of the catchments on each side of the border, their soil type, land use and slope characteristics.

How much phosphate comes from across the border and who is doing what to control and monitor this? Anonymous	Anonymous	EHS	There have been Phosphorus Regulations to help protect water quality in ROI for several years and since 1998 there have been water quality standards for phosphorus. These standards are presently being reviewed to reflect the even higher expectations of the EC Water Framework Directive. County Councils deliver and report on an extensive monitoring programme. The EPA reviews and reports on achievement of the standards. Monitoring programmes in ROI and NI are not directly comparable, although this is being addressed. However, it is clear from the reports that many rivers in ROI already achieve Class A or Class B for phosphorus, although a few are still at Class C or D. As a general conclusion, it is clear that the amount of phosphorus being lost to water is similar in ROI and NI and that there is no water quality monitoring evidence to suggest that unusually high quantities of phosphorus are entering the Upper Lough Erne from Co Cavan. It is recognised that agriculture is not the sole source of Nitrogen and Phosphorous which contribute to the nutrient budgets of our waterways. Controls are placed on WWTW with standards set and monitored

			All European countries had to have chemical and biological WFD monitoring programmes in place by December 2006. WMU monitors to enable classification and appropriate management. Similarly in the Republic of Ireland WFD biological monitoring is carried out by the EPA[32] and chemistry monitoring by the councils. We liaise with colleagues in the Republic of Ireland on WFD compliance in cross border water bodies. The RBMP will include a web-based tools which the public can use to view up to date monitoring for the North and Southern portions of the IRBDs.
2000 survey showed excess phosphates in Upper Erne but the results were never published. Farmers surveyed did not have overload of phosphates is it coming from Cavan? Last 10 years showed a 25-30% drop in phosphates use mainly because of cost factors. Remember it is not possible to run agriculture without phosphates, animals need phosphates. Where do we start? Slurry held in tanks along the Analee River came back through Butler's Bridge. Are there figures coming from Ballyshannon and is there any monitoring of pollution from the republic?	Anonymous	EHS	As the survey referred to in the comment was not published we will need further information to source the commissioning body and the document and can make no further comment.

4.1.26 Monitoring Points

Comment	Correspondent/Source	Respondent	Response
Area's rivers pass through the forests, is there any monitoring being done on invertebrates?	Anonymous, Facilitators report, CSG Bush and Glens Meeting	EHS	WMU river monitoring network includes over 600 monitoring stations that are sampled for invertebrates but not specifically in forestry.
Where are EHS sampling points located? Points should be upstream and downstream of the holding tanks/ outfall. Every river is monitored once per month but this is not regular enough. Monitoring needs to be carried out independently.	Newry & District Anglers Association	EHS	Maps showing the locations of the monitoring points are available on our website www.ehsni.gov.uk along with details and compliance for the existing classification systems. The existing classification systems will be phased out with the introduction of WFD classification systems this year but the monitoring network remains largely unchanged at present. Monitoring for classification is focused away from immediately around discharges as the intention is to gauge the overall quality of the river. However, there has been an ongoing programme for many years of monitoring above and below specific discharge points which is used for purposes such as consent setting. The monthly sampling referred to will be the chemical classification sampling. This frequency is standard across UK environment agencies. It must be pointed out that, with a network of around 550 chemical monitoring stations, increasing this frequency would be prohibitive in terms of resources.

			EHS offer no comment on 'independent monitoring' as it is not a technical issue other than to say that both the actual sampling and subsequent analysis for invertebrates and chemistry have official UKAS quality accreditation.

4.1.27 Policy

Comment	Correspondent/Source	Respondent	Response
Is opposed to the creation of an independent Environmental Protection Agency in Northern Ireland. Significant parts of funding of Environmental Protection Agencies in all parts of the UK and the ROI comes from levying charges on the different parts of industry which they a purporting to regulate. This can be up to 40% of total funding from charges for licenses etc – this is unacceptable and penalises local businesses and farmers. Believes there is need for better environmental regulation but the focus should be improving the work of the Environment and Heritage Service (EHS) rather than changing the structure needed to deliver this.	UFU	EHS	The establishment of an independent Environmental Protection Agency is under consideration by the Minister for Environment.
We need an independent EPA	Anonymous	EHS	As comment above
Is an independent EPA needed?	Anonymous	EHS	As comment above
An independent Environmental Protection Agency is needed so that enforcement of environmental pollution from Government sources can be more effectively carried out.	Anonymous	EHS	As comment above
An independent monitoring agency would resolve a variety of multiple agency and self policing issues.	Belfast Hills Partnership;	EHS	As comment above

Would like to note its concern that there is no specific commitment to WFD delivery in the Programme for Government and would like to be reassured by the Department that the necessary resources for full and effective implementation of the directive will be available throughout the lifetime of this government.	NIEL FWTF WWF CNCC	EHS	There is a target in Public Service Agreement Target No.22 which is an Annex to the Programme for Government[33] that makes specific reference to meeting the status objectives set out in the Directive. A number of areas funded under the Programme for Government such as ongoing investment in sewage infrastructure will contribute to improving water quality and as a result also contribute to meeting WFD objectives.
We want commitment from our government department responsible for our waterways.	Strangford Guiding Company	EHS	As comment above

4.1.28 River Basin Management Plans

Comment	Correspondent/Source	Respondent	Response
Concerned that many of the actions proposed relate to classifying, monitoring and reporting. Whilst essential parts of the process, these do not constitute action that will restore rivers to good ecological status.	CNCC		The draft RBPs will identify the actions that are required.
Due to the differential structures for delivering WFD in Northern Ireland and the Republic, the co-ordination of management and standards on shared rivers, lakes and water catchments shared between Northern Ireland and the Republic needs to be addressed.	CNCC		There is ongoing liaison between Northern Ireland and Republic of Ireland at both a policy and technical level. Consideration is being given to what further coordination may be required when implementing the RBPs within shared catchments.
The co-ordination of management and standards on shared rivers, lakes and water catchments shared between Northern Ireland and the Republic needs to be addressed.	FWTF		Please refer to the response given above.
It is vital that these initial scoping and consultation exercises undertaken by EHS are only the start of an ongoing process of inclusive informed public debate that continues beyond the deadline of 22 December 2007 set for this consultation. We would encourage EHS, along with the Department for Agriculture and Rural Development, Department for Regional Development and the Department of Culture, Arts and Leisure, to continue and widen this process.	Consumer Council		Nine CSGs have been established to help facilitate and encourage public debate. The next stage in the implementation process for the WFD is the publication of draft RBPs by Dec 2008. The SWMI consultation exercise and the responses will contribute to the preparation of the draft plans.

Increasing public participation in an informed, open and transparent debate is vital to gain public confidence and buy-in.	Consumer Council		Please refer to the response given above.
Key to fostering public trust and to ensure a fully informed debate is possible is to provide full details of the costs and finance of all measures outlined in each River Basin Management Plan.	Consumer Council		The costs and benefits of measures will be included in the RBPs.
17 years ago a meeting was held in Dungannon to discuss water quality and the issues raised then are the same issues raised today - nothing much was done then so will this be any different? - Is this just another talking shop?	Anonymous		Nine CSGs have been established to help facilitate and encourage public debate. It is envisaged that these groups will remain in place for a number of years and will play an active role in highlighting local water issues and working collectively with a range of agencies and stakeholders to effect solutions.

Do EHS have the resources to take all the measures they are planning? What role do they play in the water directives? – they are poorly funded and poorly motivated. They have crown immunity from prosecution and should not have. There should be an independent agency.	Anonymous, Facilitators report, CSG Newry Meeting		EHS is the main regulatory body in Northern Ireland for the delivery and implementation of water protection legislation, including the "water directives". EHS has received additional funding in recent years to meet new demands such as the implementation of the WFD. The planned target staffing level for EHS WMU is 241, which is an increase of 55 against a baseline of 186 in 2005. This 30% increase in staffing levels is recognition of the need for additional resources to take forward new work areas including the ongoing implementation of the WFD. The staff within the Agency are highly motivated and committed to the protection and enhancement of the natural environment A number of Agencies and Departments and their associated work and investment programmes will contribute to the programme of measures required under the WFD. From 1st April 2007 NIW became a government owned company - crown immunity was removed at that time.

Pleased that its awareness raising activities in conjunction with the Sustainable Water Network, Ireland at the start of 2007 has been recognised in the SWMI reports. However it would have liked to see public participation in general given a much higher profile. In particular there is a need to examine the time and resources being allocated to the public participation process in Northern Ireland and to ensure that they are sufficient to encourage and engage the public in taking part in the river basin management planning process so that they feel ownership of them and take responsibility for their delivery.	FWTF		Nine CSG have been established to help facilitate and encourage public debate.
Given that the draft plan is due for public consultation at the end of 2008, is EHS not running out of time?	LNLBAC		Whilst the deadlines are challenging EHS is on target to meet the December 2008 publication date.
Would like confirmation that all issues identified during this consultation process will be noted in a publicly accessible format and addressed during the draft river basin management planning process in an open and transparent manner.	NIEL FWTF WWF		A consultation response document has been made available. The SWMI consultation exercise and the responses to it will contribute to the preparation of the draft plans.
More work is needed to prevent confusion arising between existing groups and those being formed specifically to look at WFD in sub-catchments	NIEL FWTF WWF CNCC		Agreed. Where possible EHS is seeking to establish the CSGs through existing groups.

Comment there is a vital chain of agencies involved in planning, monitoring, enforcement and finally the role of judiciary. All must work effectively to achieve the level of management our water resources require. The issue of the judiciary's view of pollution and polluters is a good example of this which must be changed to make the efforts of those monitoring and enforcing proper management worth the effort. Are RBD plans one mechanism by which the judiciary can be so influenced?	Belfast Hills Partnership		The RBPs will provide a clear means of taking an integrated approach to dealing with pollution problems. Please also refer to response given in Section 4.1.15 Judicial at comment 1.
Concerns at how areas are judged 'probably not at risk' in various sections, in particular that this might be a result of lack of data and monitoring rather than actual ground conditions.	Belfast Hills Partnership		In some cases this may be true. This labels the site as a priority for gathering better information for the future. It also labels the site as likely to achieve Good status by 2015.

Concerned that as a result of recent negotiations, there is a smaller buffer zone requirement around protected sites in the Republic of Ireland than in Northern Ireland. Not only will this be an area of potential confusion, it could have particular impact on cross border lakes like Lough Melvin.	CNCC		In order to avoid confusion buffer zones are being addressed in the proposed NICMS. Buffer zones are covered by The NAP Regulations (Northern Ireland) 2006. The RoI Regulations (S.I. 788/2005) state that organic fertiliser (livestock manure, dungstead manure, farmyard manure, soiled water, non-farm organic substances such as sewage sludge, and residues from fish farms) cannot be spread within 20m of a lake shoreline. In the NI Regulations organic manures (livestock manure, nitrogen fertiliser derived from organic matter e.g. sewage sludge, residues from fish farms and other organic wastes have the same spreading distances from lakes – i.e. 20m. The Land Application Restrictions specified in the NI Regulations are as follows: Organic manures including dirty water must not be applied within: • 20m of lakes; • 10m of a waterway other than lakes; this distance may be reduced to 3m where slope is less than 10% towards the waterway and where organic manures are spread by bandspreaders, trailing shoe, trailing hose or soil injection or where the adjoining area is less than 1 hectare in size or not more than 50m in width;

			• 50m of a borehole, spring or well; • 250m of a borehole used for a public water supply; • 15m of exposed cavernous or karstified limestone features.
Where there are significant policy differences between jurisdictions, such as controlling the use of chemical phosphate on land, it will be difficult, if not impossible to attribute the cause of problems in cross-border waters like Loughs Foyle, Swilly, Melvin and Carlingford.	CNCC		It is accepted that in order to address particular problems specific cross border monitoring projects may be required. An example of this would be the Lough Melvin INTERREG funded project. However, detailed sub-catchment level monitoring is also used in other urban and rural situations to help create detailed nutrient budgets which are of particular value when targeting intermittent sources. A rural example is the INTERREG funded Blackwater Trace project while urban examples include sewer network analysis and area drainage scheme projects.
Referred to the report 'Our special areas' highlights water requiring special protection. There is no mention of Lough Neagh, Lough Beg, Bann Estuary etc. if this is referring to areas where attention should be paid to bacteria, viruses and parasites only, then this should be clarified.	LNLBAC		Both the Lough Neagh & Lough Beg SPA and the Bann Estuary SAC are listed in the Register of Protected Areas, as are all other eligible sites identified in Annex IV of the Directive.

'What is meant by the term 'floodplain demand'?'	LNLBAC	RA	Floodplain is usually considered to be that area of land beside watercourses which will be subject to flooding in a 1 in 100 year return period. PPS 15 policy FLD1 states "within floodplains Planning Service will not permit development unless it falls within one of a number of exceptions (which includes brown field site redevelopment) or it can be demonstrated by the applicant that the proposal is of overriding regional importance. To inform the consideration of proposals that are deemed exceptional any such applications need to be accompanied by an assessment of the flood risk that may affect the development, or result elsewhere because of it. Where appropriate, this assessment shall include details of measures to mitigate any increase in flood risk." "Floodplain Demand" is usually taken to mean the request for land to be considered for development which falls within the floodplain. In this case a Flood Risk Assessment would be required.

The consultations for all three river basin district were remarkably similar. Believe it would have been more constructive for local stakeholders if greater detail had been provided for each river basin district. For example, each RBD SWMI document indicates that Northern Ireland has 279 waste water treatment plants serving populations of more than 250, 3 of them serve populations over 100,000 and 35 of them serve populations over 10,000. However in the section giving individual information for each of the RBDs there is no indication how many of these plants are in a particular region, if any are non-compliant or due for an upgrade etc. Similarly each booklet indicates that Northern Ireland has an average stocking density of 1.3 animals per hectare but there is no comparable figure to enable the reader to compare the average stocking rate in an actual RBD. NIEL accepts that there was a fine balance to be drawn between detail and readability but localised information enabling stakeholders to compare the situation in their own river basin district with that nationally would have improved the consultation.	NIEL FWTF WWF	EHS	Comment Noted. Information presentation is a particular challenge. It is anticipated that more comprehensive access to detailed information will be accessible through the draft RBMPs.
Does the definition of abstraction include peat extraction sites?	LNLBAC		Drainage is not included in the definition of an abstraction.

Planning/flooding - Too much building occurs on floodplains. e.g. 27ha of floodplain in the area has been set aside for 197 houses. What are EHS doing to stop this?	Anonymous	RA	PPS15 restricts development in the floodplain. PPS 15 policy applies - only by exception will floodplain development be permitted and where a flood risk assessment has been produced with mitigation as appropriate. RA in consultations with Planning Service advises against development in the floodplain.

Section 5 What happens Next?

The Significant Water Management Issues (SWMI) consultation process yielded over 1200 comments taken from written submissions or comments made at the "Water Matters – Have Your Say" Catchment Stakeholder Group (CSG) public meetings. The comments were grouped into similar themes, reviewed by government Departments/Agencies and responses provided in the SWMI Digest.

The DOE and the other government Departments/Agencies who share responsibility for River Basin Management Planning are committed to considering the comments received on the SWMI consultation during the River Basin Plan drafting process. The comments received will be considered as we set objectives, identify measures currently in place or those that may be needed in the future to maintain/ improve the quality of our water bodies. The benefit to the aquatic environment of work undertaken by environmental groups and individuals will be included in the assessment of additional measures.

As a result of the SWMI consultation EHS has been able to refine its ideas on the content of the draft River Basin Management Plans (RBMPs). While the "Water Matters – Have Your Say" consultation sought and provided responses to comments on a range of significant "signpost" issues, the draft RBMPs will present information on measures in a different format by referring to pressure types which are recognised as exerting a negative impact upon the aquatic environment. These pressures are:

- Point source pollution;
- Diffuse source pollution – Rural;
- Diffuse source pollution – Urban;
- Abstraction and flow changes;
- Physical modifications;
- Other Threats and future Pressures
  - Alien species;
  - Protected Areas;
  - Development Pressures;
  - Climate Change;
- Local problems.

The significant issues recorded in the SWMI consultation will be associated with each of the pressure types listed above.

Comments identifying local problems have been passed to EHS staff and other government Agencies to affect a resolution where possible. Progress with these issues will be included in the Agenda of forthcoming Catchment Stakeholder Group meetings.

The Interdepartmental Water Framework Directive Implementation Board will be asked to consider if there are any opportunities to further enhance the integration of working practices and policies in the implementation of river basin planning.

The Draft River Basin Management Plans will be published for public consultation by 22 December 2008. The consultation will run until 22 June 2009. We would therefore encourage all those with an interest in the protection and enhancement of the aquatic environment to fully participate in the consultation. Where possible we would welcome early input as it will assist us in the development of the final plan throughout 2009. We will be carrying out the first review of responses received by 22 March 2009, midway through the consultation period. However all consultation responses will be considered.

Section 6 Other Useful Links and Documents

1. http://www.doeni.gov.uk
2. http://www.dardni.gov.uk/
3. http://www.forestserviceni.gov.uk/index/publications/policy-and-standards.htm
4. http://www.riversagencyni.gov.uk
5. http://www.planningni.gov.uk/AreaPlans_Policy/PPS/PPS.htm
6. http://www.northernireland.gov.uk/news/news-doe
7. http://www.assetsrecovery.gov.uk/MediaCentre/PressReleases/2007/
8. http://www.ehsni.gov.uk/ehs_better_regulation_programme_-_web_version.pdf
9. http://www.ehsni.gov.uk
10. http://www.ehsni.gov.uk/water/quality/groundwater
11. http://www.ehsni.gov.uk/water/drinkwater
12. http://www.ehsni.gov.uk/pollution.htm
13. http://www.ehsni.gov.uk/water.htm
14. http://www.ehsni.gov.uk/biodiversity.htm
15. http://www.ehsni.gov.uk/waste/regulation-and-legislation/regulations_license.htm
16. http://www.doeni.gov.uk/index/epd_about_us.htm
17. http://www.nsshare.com
18. http://www.ehsni.gov.uk/water/roles/fcb.htm
19. http://www.invasivespeciesireland.com
20. http://www.bgs.ac.uk/gsni/
21. http://www.dardni.gov.uk/index/publications/pubs-dard-rural-development/nirdp-2007-13-approved-programme.htm
22. http://www.dardni.gov.uk/index/faq/questions-on-agri-environment.htm
23. http://www.dcalni.gov.uk/
24. http://www.waterwaysireland.org/
25. http://www.loughs-agency.org/site/
26. http://www.ehsni.gov.uk/water-pollution-incidents-and-enforcement-2005-report.pdf
27. http://www.sei.ie/
28. http://ec.europa.eu/environment/water/water-framework/index_en.html
29. http://www.drdni.gov.uk/iwrp_strand_1_report.pdf
30. http://www.forestry.gov.uk/PDF/fcgl002.pdf/$FILE/fcgl002.pdf
31. http://www.afbini.gov.uk/
32. http://www.epa.ie/whatwedo/monitoring/
33. http://www.pfgbudgetni.gov.uk/index.htm
34. http://www.niwater.com/siteFiles/resources/12962%20NIW%20Septic%20Tank%20Leaflet%208.pdf
35. http://www.ehsni.gov.uk/waste/environmentalcrime.htm

Section 7 List of Written Submission Respondents

1. Consumer Council (CC)
2. Strangford Guiding Company
3. Belfast Hills Partnership
4. Newry & District Anglers Association
5. Armagh City & District Council
6. Lough Neagh & Lower Bann Advisory Committee (LNLBAC)
7. Loughs Agency
8. Rivers Agency (RA)
9. Ulster Farmers' Union (UFU)
10. Northern Ireland Environment Link (NIEL)
11. Council for Nature Conservation and The Countryside (CNCC)
12. Northern Ireland Freshwater Task Force (FWTF)
13. World Wildlife Fund Northern Ireland (WWF)
14. Mr. P. Archdale
15. Mr. D. Harding
16. Mr. M. Clarke
17. Mr. G.Berry

The following submissions will be referred to in the formal publication by NS SHARE in relation to the cross border basins and issues relating to the Republic of Ireland.
18. ESB Power Generation
19. Aquaculture Initiative
20. Fáilte Ireland
21. The Department of Agriculture, Fisheries and Food

The Shannon IRBD Project will be coordinating responses for the Shannon basin.
22. Westfields Wetlands Committee
23. Mr. Tomas Cooney

Appendix 1 Appendix of Response Notes

Note 1 Alternative Uses of Manures (Waste)

The Nitrates Action Programme Regulations (Northern Ireland) 2006 which became operational on 1 January 2007 require all farmers in Northern Ireland to adhere to a range of measures including controls on the application and storage of livestock manures. The Department of the Environment (DOE) and the Department of Agriculture and Rural Development (DARD) have joint responsibility for the implementation of the Nitrates Directive and therefore officials from both Departments have worked closely on implementation of the Regulations. In addition, during the implementation process there has been regular liaison with the major stakeholders including representatives of the farming industry.

As part of this process an Expert Group for Alternative Uses of Manure (EGAUM) was established in March 2005. This was chaired by the then Chief Scientist of DARD and included representatives from DOE, The Department of Enterprise, Trade and Investment (DETI), the agri-food industries, farming and environmental Non-Governmental Organisations. The Group examined proven technologies being used in other countries and reported their conclusions in March 2006.

The Group concluded that there was an urgent need for business plans to be brought forward by industry or associated private sector Renewable Energy developers for the application of anaerobic digester/combined heat and power (AD/CHP) plants for the intensive dairy and pig industries, and a litter fired generator for the poultry sector. Government Departments will continue to work with stakeholders on any projects that are brought forward.

Note 2 Sheep Dip

Under the Water (NI) Order 1999 it is an offence to knowingly or otherwise discharge any poisonous, noxious or polluting matter including sheep dip in any waterway or groundwater. EHS can also consent direct discharges to waterways and groundwater under the Water Order but would not permit the discharge of List I substances which include sheep dips. Therefore any direct discharges would be treated as a pollution incident.

The Groundwater Regulations (NI) 1998 seek to prevent the direct or indirect discharge of List I substances to groundwater and to control pollution resulting from the direct or indirect discharge of List II substances to groundwater. An authorisation is therefore required from EHS before disposing of various substances including sheep dip to land. The EC Groundwater Directive (80/68 /EEC) is one of the Statutory Management Requirements under Cross-Compliance and EHS will inspect compliance with both groundwater authorisation and the location and integrity of any sheep dippers. Used sheep dip should be removed from the dipper as soon as practicable so that the dipper will not overflow for example due to rainfall.

There have been concerns over the use of organochlorine sheep dip products since the 1970s. They were slowly phased out until 1985 when they were finally banned. Organophosphate sheep dips were the replacement for such products. Cypermethrin sheep dip products were developed as an alternative to the organophosphorus products and were first introduced in 1995. However, more recently a number of serious pollution incidents have occurred in GB following the routine use of cypermethrin dip products. To address this concern, the DEFRA Veterinary Medicines Directorate initially developed a Pollution Reduction Programme (PRP) for sheep dip. On 22 February 2006 however the marketing authorisations for the three cypermethrin products were suspended.

Note 3 Eutrophication

Not all pollution is detected as a distinct pollution incident. Eutrophication is considered to be the most widespread threat to water quality in Northern Ireland and in many other European countries. Eutrophication is the enrichment of waterways (both freshwater and marine) with nutrients, especially compounds of phosphorus and/or nitrogen. This leads to an accelerated growth of algae and higher forms of plant life, producing an undesirable disturbance to the balance of organisms present in the water and to the quality of the water concerned.
Freshwater eutrophication, caused primarily by high phosphorus inputs, is widespread across Northern Ireland. Both Lough Neagh and Lough Erne are highly eutrophic as are many smaller lakes. Phosphorus concentrations in lakes and rivers have been rising since the 1960s and 1970s, despite reduced inputs of phosphorus from major sewage treatment works and detergents. Since the 1990s increased phosphorus inputs through diffuse inputs from agriculture are still being identified as the main cause of eutrophication in Northern Ireland. In addition, high nitrogen concentrations are the main driver for similar problems in the marine environment with problems evident for example in inner Belfast Lough and the northern end of Strangford Lough. Fertilisers, slurry, manure and other farm effluents contain high concentrations of nutrients and even small quantities can have severe consequences if allowed to enter waterways. Many soils in Northern Ireland have excessive nutrient levels due to the over-application of these materials over many years. Nutrients from agriculture can reach surface waters in a number of ways, including surface run-off, flow from land drains and erosion of soil particles. They can also leach from soils into groundwater.

Note 4 Funding Schemes

The Farm Nutrient Management Scheme (FNMS) was introduced by DARD in 2005 to enable farmers to comply with the EU Nitrates Directive and reduce water pollution by improved storage and use of livestock manures. Increased storage facilities will enable farmers to spread manures when weather, soil conditions and crop uptake of nutrients are optimum. This will minimise the risk of water pollution and ensure that farmers can comply with the closed period for manure spreading required by the Nitrates Action Programme Regulations.
The FNMS provides 60% capital grant support towards the cost of building slurry and manure storage facilities, up to a maximum grant limit of £51k. The FNMS closed to applications on 31 March 2006 and some 4500 applications are being progressed. The average investment per project is approximately £50k. The original budget of £45m was increased to £144m in 2007 to ensure that all applicants could be funded.
By March 2008, 3100 approvals to commence work had issued and over 4000 farmers had received a pre approval inspection visit. DARD intends to have all pre-approval inspections completed by April 2008. These inspections are required before farmers are issued with approval to commence work on their project.
Facilities are built to standards set by the Control of Pollution (Silage, Slurry and Agricultural Fuel Oil) (Northern Ireland) Regulations 2003 (SSAFO Regulations) and have a minimum 20 year design life. The investment of some £200 million to improve farm infrastructure through the FNMS is fundamental to reducing agricultural pollution and protecting the water quality of our rivers and lakes.

Note 5 Spraying Chemicals

In addition to measures under agri-environment schemes guidance on the spraying of chemicals such as pesticides is provided in the DARD Code of Good Agricultural Practice for the Prevention of Pollution of Water, Air and Soil.

Also, the Voluntary Initiative (VI) has led to improved practices in relation to the use of pesticides on farms in Northern Ireland through a range of activities including road shows, information transfer workshops, quality assured schemes and the development of crop protection management plans. The VI is a programme of measures as an alternative to a proposed tax, agreed between Government and seven signatory organisations led by the Crop Protection Association. The NI Implementation Group oversees implementation of the VI in Northern Ireland. It comprises membership from the UFU, DARD, DOE, RSPB, the Northern Ireland agricultural contractor organisation and the Northern Ireland Grain Traders Association. The Group deals with a wide range of subjects that include sprayer testing, crop protection management plans (CPMPs), indicator farms, disposal of empty pesticide containers, bio-beds and water quality issues.

Note 6 NAP and P Regulations

On 1 January 2007 the Nitrates Action Programme Regulations (Northern Ireland) 2006 (the NAP Regulations) and the Phosphorus (Use in Agriculture) Regulations (Northern Ireland) 2006 (Phosphorus Regulations) came into operation. Both sets of Regulations apply to all farmers across Northern Ireland from that date apart from some transitional arrangements on closed spreading periods and manure storage requirements.

As previously discussed eutrophication, arising from too much nitrate and phosphorus entering the water, is the most widespread pollution problem facing Northern Ireland's water environment. The introduction of the NAP Regulations met Northern Ireland's legal and environmental obligations under the EC Nitrates Directive. The Phosphorus Regulations were introduced in support of these obligations.

The NAP Regulations contain a range measures including: a closed period for the spreading of organic and inorganic fertilisers; a minimum livestock manure storage requirement; a limit on the amount of nitrogen that can be applied to land from livestock manures per year; nitrogen efficiency measures; land application restrictions including distances from waterways; land management and livestock manure storage requirements. The Phosphorus Regulations control the application of chemical fertilisers containing phosphorus and in particular require the testing of phosphorus levels in soils.

The Departments of the Environment (DOE) and Agriculture and Rural Development (DARD) worked closely with stakeholders including UFU and environmental NGOs throughout the development and the implementation of this legislation. Scientific evidence and a range of options were considered during consultation and development of the legislation. The two Departments published a guidance leaflet in December 2006 and detailed guidance was sent to every farmer in March 2007.

Northern Ireland along with the rest of the UK/other Member States will have to report to the European Commission on the effectiveness of the Action Programme on a 4-year cycle and where necessary review the NAP Regulations.

The implementation of the Nitrates Directive is also a basic measure under the EC Water Framework Directive (WFD). The NAP and Phosphorus Regulations are seen as a major part of the

agricultural contribution towards meeting WFD requirements. As part of the overall action plan to control nutrient inputs from agriculture there are a range of other measures. In addition to all the measures discussed above there is a voluntary agreement with the feed manufacturers to reduce the level of phosphorus in animal feedstuffs and a commitment to review the need for further on-farm controls on phosphorus. In addition, the intensive pig and poultry sectors are subject to regulation under the Pollution Prevention and Control Regulations (NI) 2003 implementing the EC Integrated Pollution Prevention and Control Directive. As part of the river basin planning process the effectiveness of this range of measures will be reviewed and were necessary further measures considered.

Note 7 Fallen Animals

Since 3 December 2003, routine on-farm burial of animal carcasses or carcase parts is prohibited under the Animal By-Products Regulations (NI) 2003.

To summarise animals which die on the farm should normally be disposed of by:

- The National Fallen Stock Scheme
- An independent rendering plant
- Free collection service for bovine animals over 24 months
- Approved kennels
- Approved incineration

The National Fallen Stock Company Scheme was established on 22 November 2004. The National Fallen Stock Company is owned by the four UK Agriculture Departments and was created to offer a legal, bio-secure and subsidised Scheme for the collection and disposal of fallen animals after their burial was prohibited. Other legal disposal options include independent collection or through approved hunt kennels.

There will always be some unscrupulous operators who will illegally dump carcases. Where illegal dumping occurs the land owner becomes responsible for disposal as do riparian owners whose land marches waterways. Where there is a risk to public health and particularly where the land owner cannot be identified the Environment Health Department of the local District Council has a role.

Note 8 Enforcement

EHS will seek to work co-operatively with farmers to secure improved practice on farms. EHS acknowledges, however, that unfortunately enforcement action will need to be taken in some cases to ensure compliance. Any enforcement action will be in accordance with the EHS Enforcement and Prosecution Policy for Environmental Protection which can be found on the EHS Website12. Under this policy EHS will endeavour to be;

- consistent and impartial;
- proportionate in its actions; and
- transparent in its activities.

The action taken in relation to non-compliance will depend on the circumstances of each individual case and a number of factors including severity, extent, permanence, and repetition of the non-compliance. Breaches of any legislation which is a Statutory Management Requirement under Cross-Compliance will also be reported to DARD who will be responsible for applying any reductions in the farmer's Single Farm Payment.

In minor cases EHS may issue a warning letter which will confirm any areas of concern/non-compliance and the remedial action required within a given timescale.

In some cases a statutory notice may be served on the farmer. This notice will detail the action required within a stated timescale of no less than 28 days. EHS may at any time withdraw the notice, extend the period for compliance, or modify the requirements of the notice with the consent of the farmer.

EHS may also initiate prosecution procedures. A farmer may be prosecuted if they:

- fail to implement the requirements of any of the legislation;
- cause pollution;
- obstruct staff in carrying out their duties; or
- fail to comply with a statutory notice as described above.

The penalties to be applied are a matter for the Court in accordance with the relevant legislation.

Note 9 Silage

Silage effluent is one of the most potent sources of pollution and can be 200 times more polluting than untreated sewage. Guidance on minimising the amount of silage effluent is provided in the DARD Code of Good Agricultural Practice for the Prevention of Pollution of Water, Air and Soil. It is correct that the volume of effluent produced depends mainly on the moisture content of the grass being ensiled. Wilting grass before ensiling will reduce effluent production but the success of wilting is dependent on weather conditions at the time. However it may not be cost-effective nor overall environmentally sound to use drying systems. Silage effluent can corrode concrete and steel and poorly designed, constructed and maintained silos or effluent collection facilities can lead to serious pollution incidents. Such silos are regulated under the Control of Pollution (Silage, Slurry and Agricultural Fuel Oil) Regulations (NI) 2003.

Note 10 Regulation of Industrial Discharges under the Water (Northern Ireland) Order 1999

Under the Water (Northern Ireland) Order 1999 (the Water Order) it is an offence to discharge trade or sewage effluent to waterways or water in underground strata without the consent of the Department of the Environment. Under the Water Order trade effluent includes effluent from agricultural or horticultural premises.

EHS administers a system of discharge consents which lay down conditions relating to the quality and quantity of effluent that may be discharged. Failure to comply with the conditions of a discharge consent is an offence under the Water Order, and, if a discharge is non-compliant, appropriate action is taken by EHS, depending on compliance history and/or the severity of the breach of consent and its effect on the environment.

Under the Water Order EHS applies charges for applications to discharge and annual subsistence charges to cover regulatory costs.

Setting Consent Conditions

When consent conditions are being drawn up, account is taken of:

- the composition and volume of the proposed discharge;
- the water quality target for the receiving water;
- the existing quality of the receiving water;
- available dilution (based on low flow conditions ie the Q95 flow (the flow in the river that is exceeded for 95% of the time); and
- relevant EU Directive emission standards.

Most industrial discharge consents include numerical conditions for certain parameters of the effluent, which enables a quantitative assessment of compliance to be made. Formulation of numeric consent conditions for industrial discharges usually requires mathematical modelling and they are usually set as absolute limits, i.e., maximum figures that must not be exceeded at any time. A number of non-numeric conditions may also be stipulated, such as safe access to the sampling point.

EHS use the modelling software applied by all UK environment regulators (Environment Agency for England and Wales and the Scottish Environmental Protection Agency) when setting consent conditions. Consent conditions are set based on allowing a certain limited amount deterioration of existing water quality, where water quality data is available. If no data is available, then consent conditions are based on the maintenance of good water quality in the receiving waterway. No individual discharge will be allowed to use up all of the available capacity in a waterway in terms of pollutant load, thus allowing for future discharges to be consented to the waterway without adversely affecting water quality targets. EHS is continuing to test and develop further models for individual river systems with a view to continuous improvement of the system for setting consent conditions.

Industrial Consent Compliance Monitoring

Once a discharge consent has been issued, compliance assessment monitoring is normally carried out where the consent permits a maximum daily discharge of 5 cubic metres or more, or where the consent relates to significant site drainage discharges, such as those for quarries. This approach to sampling has been adopted to target resources cost effectively at those discharges which, because of their volume or composition, have the greatest pollution potential.

The key industrial sectors routinely monitored by EHS in 2006 can be broken down as follows;

- aggregates and concrete (12%);
- private sewage (16%);
- fuel depots (5%);
- site drainage (16%); and
- others include for example, fish farms, food processing, waste transfer stations, recycling sites, vehicle washes and commercial premises.

In 2000 there were 1009 active Water Order discharge consents of which 533 were on the EHS monitoring programme (Table 1). The number of active discharge consents has increased each year and by 2007 had reached 2664. The number of discharges monitored by EHS has also generally increased over this period and in 2007 there were 789 sites in the EHS monitoring programme.

Table 1: Active and Monitored Industrial Discharges 2000-2006

Year	Number of Active Discharges	Number of Discharges Monitored
2000	1009	533
2001	1083	592
2002	1218	609
2003	1385	590
2004	1609	626
2005	1930	655
2006	2336	759
2007	2664	789

However, the increase in monitored sites is not proportional to the greater increase in active discharge consents. This is a reflection of both the nature of the majority of new discharge consents over the period and the EHS approach of targeting resources at the discharges most likely to have a significant impact on the environment. It should also be noted that, with the introduction of the Pollution Prevention and Control (NI) Regulations 2003, a number of consented discharges from certain scheduled industries have transferred to regulation under an Integrated Pollution Prevention Control (IPPC) permit.

Sampling frequency depends on the nature and volume of the discharge, but is usually 4 or 12 times per year at unspecified times and on unspecified dates. Samples are analysed for a range of parameters listed in the discharge consent, and results are compared with the absolute standard. To assess compliance, each parameter is considered separately on a rolling 12-month basis. When assessing overall annual compliance, account is taken of compliance with the individual requirements of the consent. If the discharge is found to be non-compliant, the severity of the non-compliance is determined by the most serious breach of an individual requirement of the consent.

For those discharges not routinely monitored, a supplementary inspection/sampling programme is in place. Where these discharges are found to be non-compliant, or where through other fieldwork a problem is detected, appropriate action is taken by EHS.

In general EHS will take enforcement action where the absolute standard is grossly exceeded or where the 95-percentile compliance is exceeded.

Industrial Consent Compliance

Table 2 shows the percentage of monitored discharges which complied with numeric consent conditions each year over the period 2000 to 2006. Compliance is shown based on a 95-percentile assessment method.

Year	% Compliance (EA 95-Percentile)
2000	71
2001	79
2002	81
2003	79
2004	83
2005	84
2006	87

Over the period 2000 to 2006, industrial consent compliance increased by 16% under this assessment. The greatest improvement in consent compliance occurred between 2000 and 2001. From 2001 there is some variability year on year, but the general trend has been a slight improvement in compliance up to 2006.

Note 11 Road Run-Off

It would not be practical or cost effective to control every discharge from road drains through the Water Order consenting process. It is recognised however that road run-off is a potentially significant source of pollution. EHS will continue to develop in partnership with other agencies/ department strategies to reduce the impact of such pollution through the development and application of measures such as Sustainable Drainage Systems. For example DRD Roads Service are implementing SuDS to control run-off from new and significant highways.

Note 12 Holding Tanks

Holding or containment tanks are a possible solution to prevent effluent discharge and would not require Water Order consent as long as there are no overflow pipes. Holding tanks however are not a form of treatment and either the effluent can be discharged directly or not. Holding tanks need to have sufficient capacity including meeting all contingencies in relation for example to weather conditions and the availability of off-site treatment. If the capacity of a holding tank is breached, there is potential for discharge of completely untreated effluent to reach a waterway, rather than partially treated. Such discharges would be treated as pollution incidents. They can also be a very expensive option in terms of tankering costs. EHS would not generally recommend such tanks as long-term solutions for effluent treatment but they may be useful in the short-term where work must be carried out to upgrade existing treatment system.

Note 13 Quarry Sector

Compliance against consents from quarrying activities are assessed on a 95%ile basis, as for all industrial discharges, and where breaches occur, enforcement action is taken in the normal way. The aggregates and concrete sector has shown a small increase in compliance with consent conditions over recent years. Table 3 shows the compliance for the quarry sector over the period 2004 to 2006.

Table 3: Annual Quarry Consent Compliance 2004 to 2006

Year	% Compliance (EA 95-Percentile)
2004	62
2005	63
2006	63

Certain industries within this sector, such as sand and gravel and quarry operations, have generally demonstrated a greater improvement in compliance over this period. In 2003, EHS set up a working group in liaison with the Quarry Products Association, and through this group significant progress has been made to improve the compliance of this sector, particularly in relation to the Aggregates Levy Waiver Scheme. In order to avail of the Scheme, a quarry operator must have in place and comply with all relevant environmental consents/licenses. Regular audits are carried out by Planning and Environmental Policy Group of DOE to assess compliance with the Scheme.

Note 14 Illegal Waste Removal

The responsibility for removing the waste from the land remains with the defendant. The powers of EHS to direct the removal of waste are limited. Under the Waste and Contaminated Land Order (NI) 1997 Article 27 only allows EHS to direct a keeper of waste (if identifiable) to remove the waste on lands to a licensed facility. The cost of removal and disposal of the waste is far in excess of the penalty for breach of such a direction. Where EHS investigates and identifies no responsible person then the incident is referred to the district council for consideration of an Article 28 Notice under the Waste and Contaminated Land (Northern Ireland) Order 2003 as amended by the Waste (Amendment) (Northern Ireland) Order 2007. It should be noted that Article 28 gives a district council powers to enter a site and remove the waste.

EHS has issued requests by virtue of Article 24(2) of the Council Regulation (EC) No. 1013/2006 on Shipment of Waste Regulations to the relevant Council, requiring them to ensure that the waste on the land is removed and taken back to the Republic of Ireland for disposal. To date EHS have received no formal response to this request.

On 1st February 2008 the Environment Minister, Arlene Foster, spoke with the Irish Minister for Environment, Heritage and Local Government about the need to return the illegal waste that had been dumped in Northern Ireland. Referring to several successful prosecutions taken by the Environment and Heritage Service recently, material in illegal landfill sites had been identified as originating from The Republic of Ireland. The Environment Minister said she had a constructive conversation with Minister Gormley and had used the opportunity to propose a way forward on the issue.

The Republic of Ireland has now agreed to take back waste from two illegal sites and it is EHS intention to pursue repatriation of the remainder.

EHS is determined to ensure that the proceeds of illegal activities which harm the environment are recovered. This new enforcement method is likely to act as a deterrent to other potential offenders. Working closely with the Assets Recovery Agency (ARA) there has been successful criminal prosecution, demonstrating that there is no hiding place for those who breach waste laws. The Assets Recovery Agency are working in partnership with the Environment and Heritage Service, and Public Prosecution Service of Northern Ireland (PPS) has successfully concluded a number of criminal confiscation investigations resulting in the granting Confiscation Orders in respect of persons convicted on counts of keeping and disposing of illegal waste.

EHS acknowledges that the illegal deposit of waste in Northern Ireland is extremely profitable to those involved due to the costs of legal disposal. In particular the disparity in the cost of disposal of waste to Landfill in the Republic of Ireland, (averaging €220-€350 per tonne), and landfill charges in Northern Ireland which were typically £30-£50 per tonne, has apparently acted as an economic driver encouraging the illegal transport of waste from the Republic of Ireland into Northern Ireland, and into other parts of the United Kingdom. It is indicated that hauliers engaged in this illegal transport charge waste facilities in the Republic of Ireland €120 per tonne to take this type of waste away. The waste facility therefore benefits in the region of between €100-€230 per tonne of waste, and the haulier splits the €120 per tonne he has charged with the landowner whose land is used for illegal landfill. EHS further understands that trade sources indicate the landowner receives between £5 and £10 (i.e. €7.50 to €15), per tonne of waste [6,7].

Note 15 Groundwater Monitoring

The Environmental Protection Directorate of EHS has two functional units that have an interest in water issues:

- The Water Management Unit (EHS) – responsible for the protection of the aquatic environment.
- The Drinking Water Inspectorate (DWI) - responsible for regulating the drinking water quality in Northern Ireland.

EHS – Groundwater Monitoring

EHS policy is to maintain or improve the quality of surface waters and waters in underground strata (groundwater) in Northern Ireland as required by EC Directives, national policy and international agreements.

The Northern Ireland groundwater quality monitoring network was established in 2000, to allow systematic collection of groundwater data on a region-wide scale. Groundwater quality is routinely sampled and tested from a network of approximately 90 boreholes, wells and springs across Northern Ireland by EHS.

Data collected from this network is used to report against compliance with European legislation. For example monitoring is carried out against the requirements of the EC Nitrates (91/676/EEC) and Groundwater (80/68/EEC) Directives. The monitoring is also used to establish the natural chemistry of groundwater, to determine if it has been impacted by pollution and if action is required to prevent pollution.

In addition, Article 8 of the EC Water Framework Directive (WFD) (2000/60/EC) requires the establishment of a groundwater monitoring programme to determine over time the qualitative and quantitative status of groundwater. This required a review of the EHS monitoring network to meet the principle requirements for a WFD-compliant monitoring programme which are:

- to allow good or poor status classification for each groundwater body to be carried out;
- to assist determination of the risk of failing to achieve good status by 2015;
- to detect sustained and significant upward trends in pollutants; and
- to monitor the effectiveness of programmes of measures where they are introduced.

Groundwater monitoring using the reviewed and redesigned network will commence in Spring 2008. Further information on the groundwater monitoring and results can be found on the EHS website[10].

In addition to the monitoring carried out by EHS, the DWI also carries out monitoring of private water supplies. Private water supplies are defined as any supplies of water provided otherwise than by the public supplier, Northern Ireland Water. In Northern Ireland, less than 1% of water comes from private water supplies.

DWI-Groundwater Monitoring

The DWI is responsible for the implementation of the Private Water Supplies Regulations (NI) 1994. The Regulations apply to private supplies which serve more than one household for purely domestic purposes, or are used in commercial food production, that is, the making, processing, preserving, preparing, or marketing of food or drink (including water) for sale for human consumption. This will include monitoring of groundwater sources.

The Department of Agriculture and Rural Development and the 26 District Councils in Northern Ireland, also have interests in these private water supplies.

The Inspectorate carries out an annual survey to identify the private water supplies falling within the Private Water Supplies Regulations:

- 1,269 private water supplies have been identified to date and categorized into one of 10 classes according to size, nature and use of the private water supply;
- of these 1,269 private water supplies, 1,152 are used by dairy farms; and
- a monitoring programme, for private water supplies based on these classifications, is in place.
- Further Information on the monitoring carried out by DWI can be found on the EHS website[11].

Note 16 Water Levels

Rivers Agency are responsible for regulation of water levels in Lough Neagh and the Lower Bann under the Lough Neagh and Lower Bann Drainage and Navigation Act (Northern Ireland) 1955 and the Lough Neagh Drainage (Amendment) Act (Northern Ireland) 1970. In pursuance of these Acts the Department has confirmed the Lough Neagh (Levels) Scheme 1995 which requires that the sluice gates on the Lower Bann are operated in such a manner as will 'so far as conditions of rainfall, wind and other natural causes permit, regulate and control the waters of the Lough within the levels of 12.60 metres above Ordnance Datum (Mean Sea Level Belfast) and 12.45 metres above Ordnance Datum (Mean Sea level Belfast).

Daily decisions in respect of sluice gate openings for the control structures at Toome, Portna and the Cutts are taken by the Rivers Agency's Area Engineer for its Coleraine Office. The decisions are based on a number of factors including water levels information received from water level gauges located within the Lough at Oxford Island and Toome, preceding weather conditions and hydro-meteorological forecasts. A single set of gate openings is used for each 24hr period. The adjustment of gates (if necessary) commences at around 9.00am. The first gates to open are at Toome followed by those at Portna and the Cutts and the procedure typically takes around 4 hours to complete.

Although Rivers Agency's has a good record in managing the water level in Lough Neagh within the prescribed 150mm control range there are frequently occurring climatic conditions which make this impossible. For example, following extreme heavy rainfall the inflows to the Lough can exceed the maximum possible outflow through the Toome sluice structure by a factor of 5. In this circumstance water levels in the Lough will continue to rise, even with all of the sluice gates open, and will only begin to fall when the inflows reduce to a magnitude that is less than the maximum possible discharge through the gates. Likewise during extended dry weather periods when all of the gates at Toome are closed, the outflow through the fish pass at the structure, coupled with losses due to surface evaporation often exceeds the total inflows. In this circumstance the Lough water level will continue to fall until there is sufficient rainfall to redress the balance. The lowest recorded water level of 12.09m AoD Belfast occurred in September 1995 and the highest at 13.30m AoD Belfast in September 1999.

In addition to the management of the Lough Neagh water levels, Rivers Agency also has a responsibility to manage the sluices to maintain water levels in the River Bann for the purposes of maintaining a navigational depth of 1.5m throughout the length of the river. The gates at Portna are trimmed to maintain water levels upstream of the barrier within the range 11.55m to 11.65m AoD Belfast. Rivers Agency has an excellent record of maintaining water levels within this range, particularly during periods of medium to low river flows. This has the advantage of creating, as far as reasonably practicable, relatively stable water levels within Lough Beg.

Minimum flows within the Lower Bann River are secured by the continuous discharge from Lough Neagh through the fish pass that is located within the Toome Sluice Structure. This minimum flow is in the order of 1300 to 1800 million litres per day and is dependant on the Lough water level.

Note 17 Ecoregion 17 Species List

Please Note that the Provisional Invasive Alien List for Ecoregion 17, Ireland and Northern Ireland, does not include invasive that have not been recorded in the Ecoregion and the list will need to be updated if additional species arrive.

Table 4: Provisional Invasive Alien List for Ecoregion 17

	Species	Common Name
Aquatic Plants	*Lagarosiphon major*	Curly Waterweed
	Elodea nuttallii	Nuttall's waterweed
	Myriophyllum aquaticum	Parrots Feather
	Crassuala helmsii	New zealand pigmyweed
	Azolla filiculoides	Water fern
	Lemna minuta	Least duckweed
	Nymphoides peltata	Fringed waterlily
	Hydrocotyle ranunculoides	Floating pennywort
Riparian species	*Heracleum mantegazzianum*	Giant hogweed
	Impatiens glandulifera	Indian balsam
	Fallopia japonica	Japanese knotweed
Invertebrate	*Dreissena polymorpha*	Zebra mussel
	Crangonyx pseudogracilis	Crustacean
Fish	*Leuciscus cephalus*	Chub
	Leuciscus leuciscus	Dace
Fish parasite	*Anguillicola crassus*	Swim Bladder Nematode
Marine Species	*Didemnum spp.*	Ascidian species
	Spartina anglica	smooth cord-grass
	Sargassum muticum	Wire weed
	Eriocheir sinensis	Chinese mitten crab

Note 18 Dangerous Substances

The Water Framework Directive deals with Dangerous Substances under Annex's VIII, IX and X. Annex X refers to 33 substances which have been identified at EU level. These substances have either been proposed as Priority Substances or Priority Hazardous Substances. Annex IX refers to a number of substances listed under the previous Dangerous Substances Directive which have not been included under Annex X. Annex VIII is concerned with pollutants of concern to individual Member States, referred to under the Directive as Specific Pollutants.

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