



# Water Pollution Incidents and Enforcement 2006

Northern Ireland Environment Agency

Annual Report

(Incorporating Industrial Consents: Regulation of Industrial Discharges  
under the Water (Northern Ireland) Order 1999 from 2000 to 2006)

**NI EA** Northern Ireland  
Environment  
Agency  
[www.ni-environment.gov.uk](http://www.ni-environment.gov.uk)

From the 1st July 2008, Environment & Heritage Service became Northern Ireland Environment Agency.



Front Cover: Untreated Sewage Discharge Caused by Sewer Blockage

1. Discharge with High Suspended Solids Levels Impacting the Blackstaff River
2. Slurry Discharge Impacting on a Waterway
3. Significantly Impacted Urban Stream



## Water Pollution Incidents and Enforcement 2006

### Summary

This report presents statistics relating to water pollution incidents throughout Northern Ireland investigated by, or on behalf of, the Environment and Heritage Service (EHS) during 2006. EHS responded to 2081 reports of water pollution in 2006, a decrease of 4.7% from 2005. This equates to almost 6 investigations per day. EHS substantiated (confirmed) that 1133 incidents, 54.4% of those reported, had an impact on the water quality of the receiving watercourse.

Pollution incidents are classified by Source (where the pollution originates), Category (the type of pollution identified), Cause (why the incident occurred) and Severity (the environmental impact of the pollution).

By Source, *DRD Water Service* accounted for the largest number of substantiated incidents investigated by EHS (25.1%), followed by *Industry* (23.2%) and *Farming* (20.1%). This is illustrated in Figure A.

By Category, *Sewage* (37.2%), *Agriculture* (19.6%) and *Oil* (19.1%) continued the trend from 2005, accounting for the largest proportion of pollutant types (75.9%) in respect of substantiated incidents. This is also illustrated in Figure A.

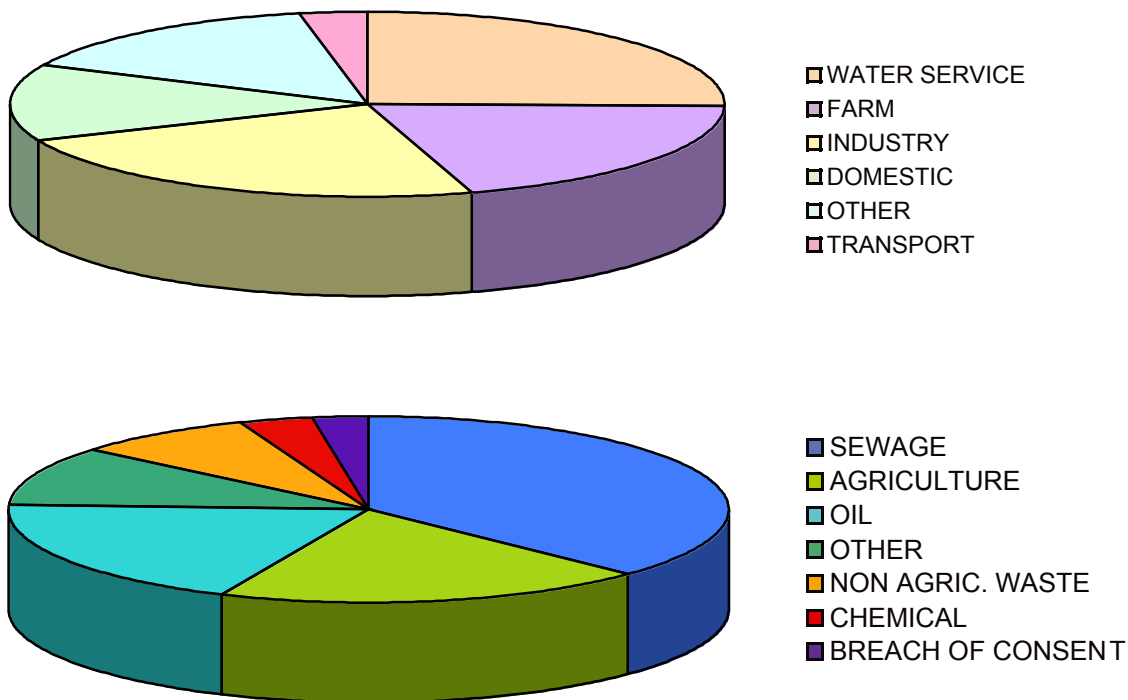


Figure A: Distribution of substantiated pollution incidents by Source and Category, 2006

The main Causes of substantiated water pollution incidents during 2006 were *Unknown Cause* (18.9%), *Equipment Failure* (18.6%) and *Poor Working Practice* (17.3%).

A total of 191 High and Medium severity incidents were investigated during 2006. This was a reduction of 13.2% compared with 2005 figures (220). *Industry* was responsible for the largest number of High and Medium severity incidents in 2006 accounting for 32.5% (62 incidents). In 2006, EHS responded to 98.4% of substantiated High and Medium Severity incidents within set time targets.

As of 10 March 2008, for the incidents that occurred during 2006, EHS has issued 158 warning letters and submitted 37 cases to the Public Prosecution Service (PPS) (formerly the Office of the Director of Public Prosecutions) with a recommendation for prosecution. To date, 20 of these cases have resulted in convictions.

For the incidents that occurred during 2005, 48 cases were submitted to the PPS with a recommendation for prosecution. To date, 43 cases have been heard in the Magistrate's Courts, with 91% resulting in convictions. Of the 39 convictions to date for pollution incidents and consent breaches detected during 2005, the total of fines so far imposed by the courts is £39,800.00. These fines ranged from £100 to £4,250, with an average fine of £1,021. Of the 48 cases taken by Environment and Heritage Service under Articles 7 and 9 of the Water (Northern Ireland) Order 1999, the *Agricultural discharges* Category accounted for 26 (54%), with the remaining 22 (46%) made up of *Breach of Consent, Chemical, Non Agricultural Waste, Oil, Sewage* and *Other* Categories.

The **Water Pollution Hotline (0800 80 70 60)**, continues to be promoted by EHS, and its use has steadily increased since its launch, with a 32% rise in calls received between 2001 and 2006. In 2006, 945 water pollution incidents were reported to the Hotline.

This years report incorporates information on industrial discharges made to the aquatic environment during the period 2000 to 2006 which are regulated under the Water (Northern Ireland) Order 1999. 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.

Section 5 of this report describes the system used to regulate 'industrial' or 'trade' discharges and summarises discharge consent compliance during the period 2000 to 2006.

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## 1. Introduction

This report presents statistical information relating to water pollution incidents throughout Northern Ireland investigated by, or on behalf of, Environment & Heritage Service (EHS), during 2006. Comparisons are made with data from earlier years to assess historical trends. The data have been classified by Source (where the pollution originates), Category (the type of pollution identified), Cause (why the incident occurred) and Severity (the environmental impact of the pollution (for impact assessment criteria see Annex A)). This report also includes details of enforcement action taken under the Water (Northern Ireland) Order 1999 (The Water Order) following pollution incidents that occurred during 2005 and 2006.

### 1.1 Background

EHS, an Agency within the Department of the Environment (DOE), takes the lead in advising on, and implementing, the Government's environmental policy and strategy in Northern Ireland. The overall aim of EHS is to protect and conserve the natural and built environment and to promote its appreciation for the benefit of present and future generations. Four directorates manage the work of EHS: Natural Heritage, Built Heritage, Environmental Protection and Corporate Services.

The Environmental Protection Directorate works to safeguard the quality of air, water and land. This involves the enforcement of legislation and a range of supporting activities; setting emission limits on discharges for consent licences and authorisations, monitoring and reporting of compliance with consents and establishing the impacts of pollution. Within the Environmental Protection Directorate, there are five discrete units:

- Water Management,
- Land and Resource Management,
- Strategy,
- Industrial pollution and Radiochemical Inspectorate, and
- Drinking Water Inspectorate.

Under the Water (Northern Ireland) Order 1999, the DOE has a duty to promote the conservation of the water resources of Northern Ireland and the cleanliness of water in waterways and underground strata. In exercising these functions, the Department is required to have regard to:

- The needs of industry and agriculture;
- The protection of fisheries;
- The protection of public health;
- The preservation of amenity;
- The conservation of flora and fauna; and
- The conservation of geological or physiological features of special interest, and any feature of archaeological, historical, architectural or traditional interest.

It is the role of the Water Management Unit (WMU) of EHS to conserve, protect and where possible improve the aquatic environment, both freshwater and marine, in Northern Ireland. The WMU consists of scientific and administrative staff located in Lisburn, and field staff based at a number of locations across Northern Ireland. The WMU protects the aquatic environment through a variety of activities including:

- Taking action to combat or minimise the effects of pollution;
- Monitoring water quality;
- Preparing river basin district management plans;
- Controlling effluent discharges;
- Supporting environmental research.

## 1.2 Water pollution incident management

In exercising its pollution control duties, EHS's strategic objectives are:

- To ensure the protection of water quality and abatement of pollution in the aquatic environment, and
- To control effluent discharges to waterways and underground strata by granting consents, and monitoring compliance, under Article 9 of the Water (Northern Ireland) Order 1999.

To achieve these objectives, Northern Ireland is divided into nine areas (see [figure 1](#)) for the purposes of water pollution incident management, each area being served by a number of field staff.

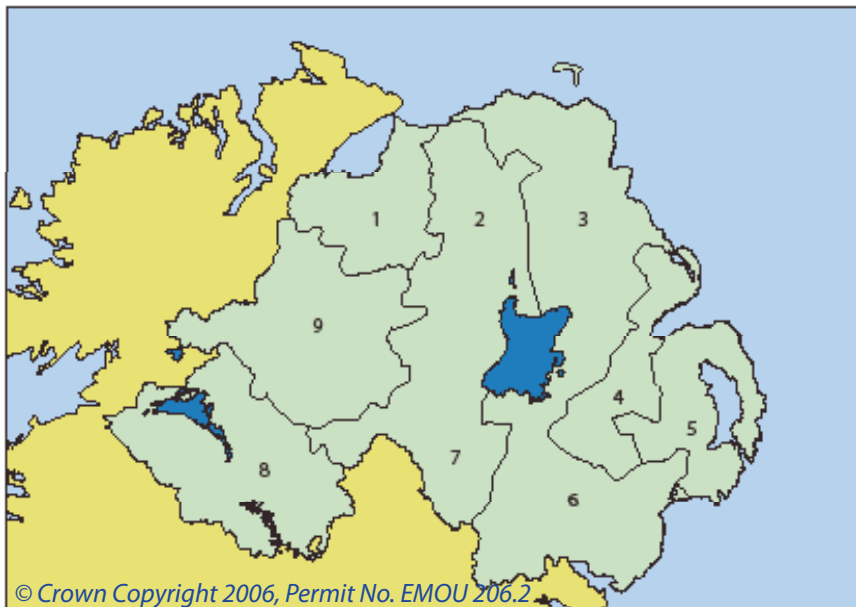


Figure 1: Areas for water pollution incident management

### 1.3 Structure of the WMU Regional Operations Group

Under the terms of the Water (Northern Ireland) Order 1999, the EHS WMU, Regional Operations Group is responsible for taking action to prevent or minimise the effects of polluting discharges to our waterways and for taking enforcement action against polluters where appropriate. The Group operates on a 24-hour, 365 days-a-year basis, to co-ordinate the Agency's response to incidents of water pollution affecting either the freshwater or marine environment in Northern Ireland. As indicated in Figure 2, the Group is divided into five distinct teams. The Operations Management, Pollution Prevention, Enforcement, and Resources teams are based in our headquarters in Lisburn, and the field staff are based at various offices around the Province in the nine areas shown in Figure 1.

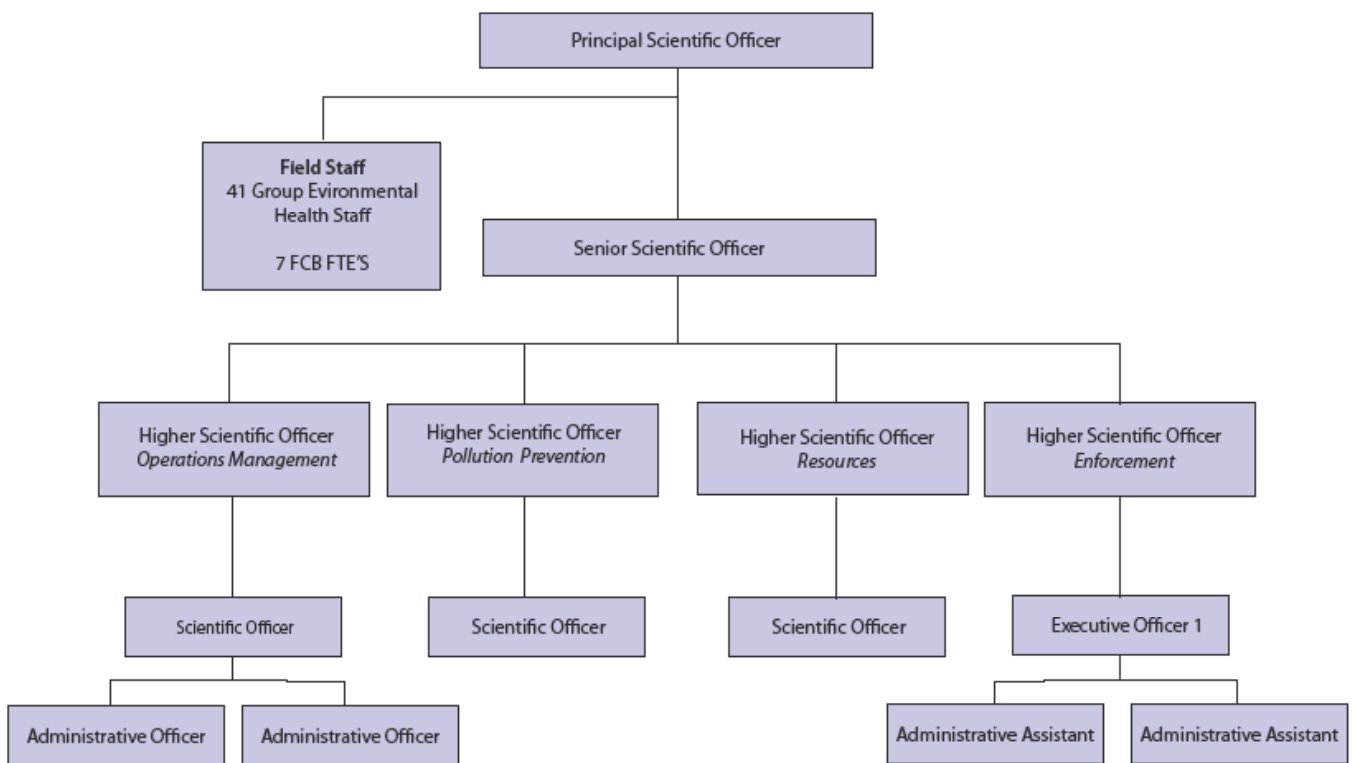


Figure 2: Structure of the WMU – Regional Operations Group

#### Operations Management

The Operations Management Team co-ordinates and manages the response to reports of water pollution received by EHS. Members of the team gather relevant information from complainants, assess the potential environmental impact of an incident and forward details to field staff. The management of incidents includes mobilising additional staff and resources, communicating with other Government Agencies and dealing with Press enquiries. All information relating to a pollution incident is logged according to its geographical position on the Pollution Incident Logging and Tracking Geographical Information System (PILoT\_GIS). This system records how the team progresses the investigation and any enforcement action to be taken for each pollution incident, and is regularly audited to ensure that information held is accurate.

Section 2 of this report provides information extracted from the PLoT\_GIS database relating to water pollution incidents that occurred during 2006.

## Pollution Prevention

The aim of the Pollution Prevention Team is to reduce the number of water pollution incidents occurring in Northern Ireland. The team carries out the following proactive initiatives to prevent incidents from occurring or to minimise the effects of pollution on the environment:

- Educating the public and industry about the effects and consequences of pollution;
- Distributing advisory publications to the public and industry;
- Offering advice at site meetings;
- Promoting good environmental practices in response to planning consultations;
- Initiating pollution prevention programmes; and
- Participating in relevant working parties.
- Promoting Sustainable Drainage Systems (SuDS);
- Visiting polluters responsible for High and Medium Severity incidents; and
- Conducting environmental audits.

Section 3 of this report expands on the work of the Pollution Prevention Team during 2006.

## Enforcement

When pollution occurs, it is the policy of the EHS to take formal enforcement action if this is warranted by the severity of the pollution and the circumstances which led to it occurring. Water pollution incidents are investigated and then submitted to the Enforcement Team for a decision on the appropriate course of action. Enforcement can range from the issuing of a warning letter or Water (NI) Order 1999 Notice to the initiation of prosecution proceedings. In cases where it is decided that prosecution is appropriate, EHS staff collect the necessary evidence and prepare a file which is submitted to the Public Prosecution Service with a recommendation for prosecution.

Section 4 of this report expands on the work of the Enforcement Team during 2006.

## Resources

The Resources Team maintains a stockpile of specialist equipment that can be deployed to carry out clean-up operations following water pollution incidents in the freshwater or marine environment. The team also co-ordinates training for all staff in the Regional Operations Group.

## Field Staff

For field activities, WMU relies at present on the purchase of external services to fulfil its statutory responsibilities under UK and EU legislation. In 2006, the field service consisted of approximately 50 field staff from five service providers (four Group Environmental Health Committees and the Fisheries Conservancy Board (FCB)). These staff undertake a wide range of duties ranging from pollution investigation to effluent sampling.

### Group Environmental Health Staff

Each of the nine water pollution incident management areas is staffed by an Environmental Health (Rivers) Officer (EHRO) or Senior Water Quality Inspector (SWQI) and a number of Water Quality Inspectors (WQIs) and Water Quality Samplers. These staff act as field agents on behalf of EHS. A number of additional sampling staff are also employed over the summer period to sample and monitor the bathing waters around Northern Ireland that are identified under the EC Bathing Water Directive.

There are approx 45 staff employed in this section of the field staff.

The main activities of Group Environmental Health Staff are:

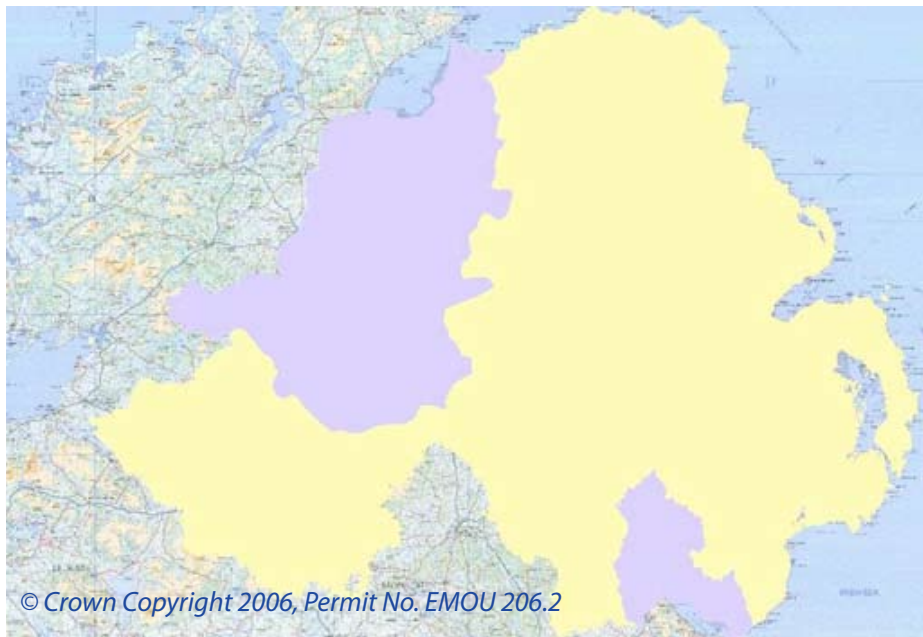
- Investigating pollution;
- Collating evidence of pollution offences and preparing prosecution files under the Water (Northern Ireland) Order 1999;
- Initiating and supervising clean-up work following certain pollution incidents where necessary;
- Carrying out pollution prevention advisory visits to industry;
- Sampling effluents from consented industrial sites; and
- Making recommendations on applications for discharge consents in respect of domestic and trade premises.

### Fisheries Conservancy Board (FCB)

In 2006, the Fisheries Conservancy Board (FCB) also undertook pollution investigations (mainly from agricultural sources) on behalf of EHS in the areas shown in Figure 3. FCB was established in 1966 as a Non-Departmental Public Body (NDPB) responsible for the application of the Fisheries Act (Northern Ireland) 1966. FCB's role is primarily the enforcement of statutory provisions in respect of salmon and inland fisheries, and also pollution control. FCB's parent Department, the Department of Culture, Arts and Leisure (DCAL), is responsible for fisheries policy and legislation.

FCB has a permanent staff of approximately 30 with about 7 full-time equivalents being involved in work on behalf of EHS. The main activities of FCB are:

- **River quality sampling on behalf of EHS;**
- **Pollution investigation and prevention on behalf of EHS;**
- **Preparation of prosecution files under the Water (Northern Ireland) Order 1999 on behalf of EHS;**
- Patrolling rivers and freshwater fisheries to enforce legislation, including angling and commercial fishing licensing provisions;
- Providing a bailiffing service on the DCAL public angling estate;
- Providing an assessment for planning authorities on developments, such as water abstraction or drainage schemes which may have an impact on fishery interests;
- Prosecuting persons in relation to offences under the Fisheries Act and subsequent amendments.



*Figure 3: Agricultural incident operational areas for Fisheries Conservancy Board (marked yellow) and Group Staff (marked blue) in 2006. Group Staff investigated incidents across all of NI from all other sources.*

Following recommendations by the Northern Ireland Audit Office and the NI Public Accounts Committee with respect to field staff, it was agreed that the service they provide should be brought in-house. As part of this process, it is expected that the current arrangement with FCB will have been terminated by the end of 2007, and additional staff will be recruited into the Group Environmental Health structure to undertake duties currently performed by FCB.

#### **1.4 Responding to water pollution reports**

Pollution incident investigations are initiated following a report of pollution, which may come from a number of sources. In most cases reports are either made by members of the public, or discovered by field staff working on behalf of EHS. During 2006, as in previous years, EHS used the pollution incident impact assessment criteria described in Annex A, where incidents are classified by Severity (High, Medium and Low). This assessment is used to standardise the classification, recording, and analysis of pollution incidents across Northern Ireland.

EHS WMU has set targets for responding to pollution incidents based on their assessed Severity, and these are routinely monitored as a performance measure. When a report of pollution is received, WMU staff aim to assess and estimate the incident Severity (based on the information in the pollution report) and forward the incident details to field staff for investigation within 30 mins. The field staff aim to respond to incidents initially assessed as:

- High or Medium Severity, within 2 hrs (reported during normal working hours)
- High or Medium Severity, within 4 hrs (reported outside normal working hours)
- Low Severity incidents, within 1 working day.

Table 16 and Figure 23 in section 2.10 detail the rate of response to High and Medium Severity incidents during 2006.

Once a pollution incident has been forwarded to field staff, they aim to:

- Confirm that pollution is occurring (substantiate);
- Determine the Source, Category, Severity and Cause of pollution;
- identify the polluter and, if appropriate, collect sufficient evidence to secure a prosecution;
- Secure from a polluter the necessary remedial action to stop the pollution and prevent any recurrence;
- Provide information for the recovery costs, where possible, from the polluter.

The rate of substantiation (confirmation that pollution has occurred) can be affected by delay in reporting by the public, by the quality of information contained in a report, by the diverse and intermittent nature of some discharges, and by the response time of our staff. Although each report of water pollution is investigated and every effort is made to substantiate an incident, in many cases reports remain unsubstantiated. To improve the effectiveness of an investigation, a number of points have been highlighted in Annex B, which should be referred to before making a report of pollution.

## 1.5 Legislation

As previously stated, EHS has a duty to conserve, protect and where possible improve both the freshwater and marine environment in Northern Ireland. Under the terms of the Water (Northern Ireland) Order 1999, it is an offence to cause pollution of a waterway or groundwater. In particular:

**Article 7 (1)** of the Order deals with the main pollution offence and states that:

‘a person commits an offence if, whether knowingly or otherwise, he discharges or deposits any poisonous, noxious or polluting matter so that it enters a waterway or water contained in any underground strata’.

**Article 9 (1)** states that:

‘no person shall, without the consent of the Department, make any discharge into a waterway or underground stratum: (a) of any trade or sewage effluent; or (b) of any poisonous, noxious or polluting matter’.

**Article 9 (4):**

Under this Article it is an offence for any person to contravene the conditions of any discharge consent.

Anyone who contravenes any of these Articles can, if convicted in a Magistrate’s Court, be imprisoned for up to 3 months and / or be fined up to £20,000.

[Note, following the period to which this report refers, the Water (NI) Order 1999 was, in part, amended through articles contained in the Water and Sewerage Services (NI) Order 2006]

## Enforcement Policy

When pollution occurs, it is the policy of EHS to take formal enforcement action if this is warranted by the severity of the pollution and the circumstances which led to it occurring. In deciding what, if any, enforcement action to take in each case, EHS aims to ensure that enforcement action is:

- **Consistent** with the enforcement action taken in other cases;
- **Proportionate** to the risks the incident has posed to the environment and the seriousness of the breach of the law; and
- **Transparent**, in that those being regulated know what is expected of them and the public have confidence in the enforcement process.

The formal enforcement options available to EHS in water pollution cases are:

- The issuing of an enforcement **warning letter**, and/or;
- The issuing of a **Water (NI) Order 1999 Notice**, or
- The initiation of **prosecution proceedings**.

## Enforcement Procedure

In cases where prosecution is deemed appropriate, EHS staff prepare a file of evidence which is submitted to the Public Prosecution Service (PPS) with a recommendation to prosecute. The PPS makes the final decision on whether to proceed with each prosecution, taking into account whether they believe there is sufficient evidence that an offence has been committed and whether a prosecution is in the public interest. Of the 48 draft prosecution files submitted to PPS for pollution incidents which occurred during 2005, PPS concurred with EHS's assessment and proceeded, or is proceeding, with prosecutions in 46 cases.

Where a prosecution results in a conviction in court, costs are normally awarded against the offender for the expenses incurred in serving the summons and in the taking and analysis of samples. A court may also order that compensation be paid if the pollution has caused a fish kill, or if other costs have been incurred in making good the environmental damage caused by the incident. In line with the "Polluter Pays" principle, it is EHS policy that, where possible, such costs will always be recovered from the polluter.

Section 4 of this report provides further details of the enforcement action carried out by EHS during 2005 and an update of action taken, to date, in 2006. **Annex D** sets out the results of prosecutions for pollution incidents that occurred during 2005.

## 1.6 Water Pollution Hotline

To encourage the reporting of incidents, EHS operates a freefone pollution response system that is available to the public at all times. During office hours, all calls made to the **WATER POLLUTION HOTLINE (0800 80 70 60)** are directed to an operations room in Lisburn, where the incident is assessed and passed to the relevant field staff for investigation. Outside office hours, all calls are directed to an Environment Agency (EA) Communications Centre in Reading, who task the On-Call Duty Pollution Officer (DPO) in Northern Ireland to respond.

In the past there were difficulties receiving calls to the hotline number from mobile phones, where in some cases the calls were diverted to the Scottish Environmental Protection Agency (SEPA), or EA offices other than Reading. EHS has resolved this problem by providing callers with the option of selecting where within the UK they wish to report a pollution incident. This solution has also been adopted by the other environmental regulators throughout the UK.

Table 1 details the number of reports of water pollution received by EHS during the period 2001 - 2006. There has been a steady increase in the number of reports made to the freefone Water Pollution Hotline (WPH) since its introduction in 1998. This is balanced by the decreased number of reports made directly to EHS, the regional field staff or FCB, and is likely to be due to the promotion of the freefone WPH.

Water pollution reports received by:							
Year	WPH (Normal Hours)	WPH (After Hours)	Total WPH	EHS direct (Normal Hours)	Regional Offices direct (Normal Hours)	FCB / LA direct (Normal Hours)	Total reports received by EHS
2001	436	279	715	333	1034	452	2534
2002	436	292	728	277	1039	419	2463
2003	476	292	768	358	977	396	2499
2004	552	284	836	324	787	260	2207
2005	641	301	942	265	789	187	2183
2006	651	294	945	237	726	173	2081

Table 1: Reports of water pollution received by EHS, 2001 - 2006

The Water Pollution Hotline is promoted through advertisements in telephone directories and websites, as well as by business cards, posters and key fobs that are distributed at public events. Figure 4 illustrates the Water Pollution Hotline business cards, posters and key fobs that are available on request from the Regional Operations Group who can be contacted at:

Tel: (028) 92623239

Fax: (028) 92623011

E-mail: [Emergency-Pollution@doeni.gov.uk](mailto:Emergency-Pollution@doeni.gov.uk)



Figure 4: Water Pollution Hotline promotional material

## 2. Analysis of Incidents

This report presents statistical information relating to water pollution incidents throughout Northern Ireland investigated by, or on behalf of, EHS during 2006. Comparisons are made with data from earlier years to assess historical trends. The data have been classified by Source (where the pollution originates), Category (the type of pollution identified), Severity (the environmental impact of the pollution, (see Annex A)) and Cause (why the incident occurred).

### 2.1 Reported Incidents

During 2006 a total of 2081 pollution incidents were reported to EHS, a decrease of 4.7% from 2005. Of these, 1133 (54.4%) were substantiated. [Table 2](#) details the breakdown of total, substantiated and unsubstantiated incidents from 2001 to 2006 ([Figure 5](#) illustrates this graphically).

**Unless otherwise stated the remainder of this report is based on substantiated incidents only.**

	2001	2002	2003	2004	2005	2006
Substantiated	1561	1517	1552	1227	1174	1133
Unsubstantiated	973	946	947	980	1009	948
Total	2534	2463	2499	2207	2183	2081

Table 2: Substantiated and Unsubstantiated water pollution incidents, 2001-2006

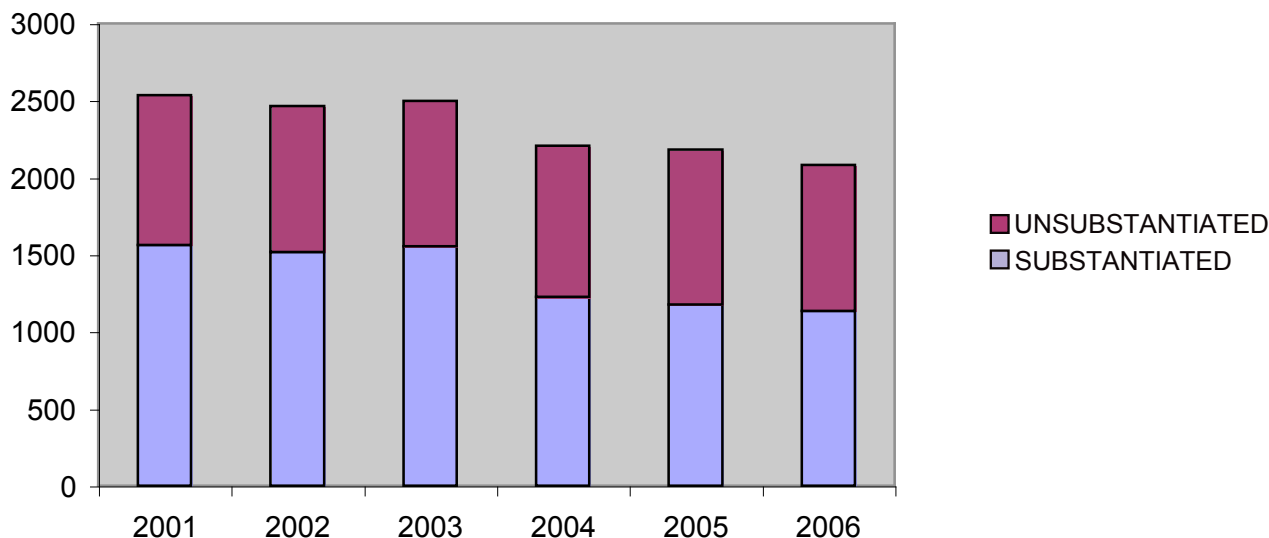


Figure 5: Total number of pollution incidents reported, 2001-2006

## 2.2 Regional Distribution

Northern Ireland is divided into nine areas for the purposes of water pollution incident management (Figure 1). Figure 6 illustrates the regional distribution of pollution incidents during 2006. The greatest number of substantiated pollution incidents in 2006 were recorded in Area 1 and lowest number in Area 7. The numbers of substantiated incidents recorded for each area from 2001 to 2006, are detailed in Annex C, Table 1.

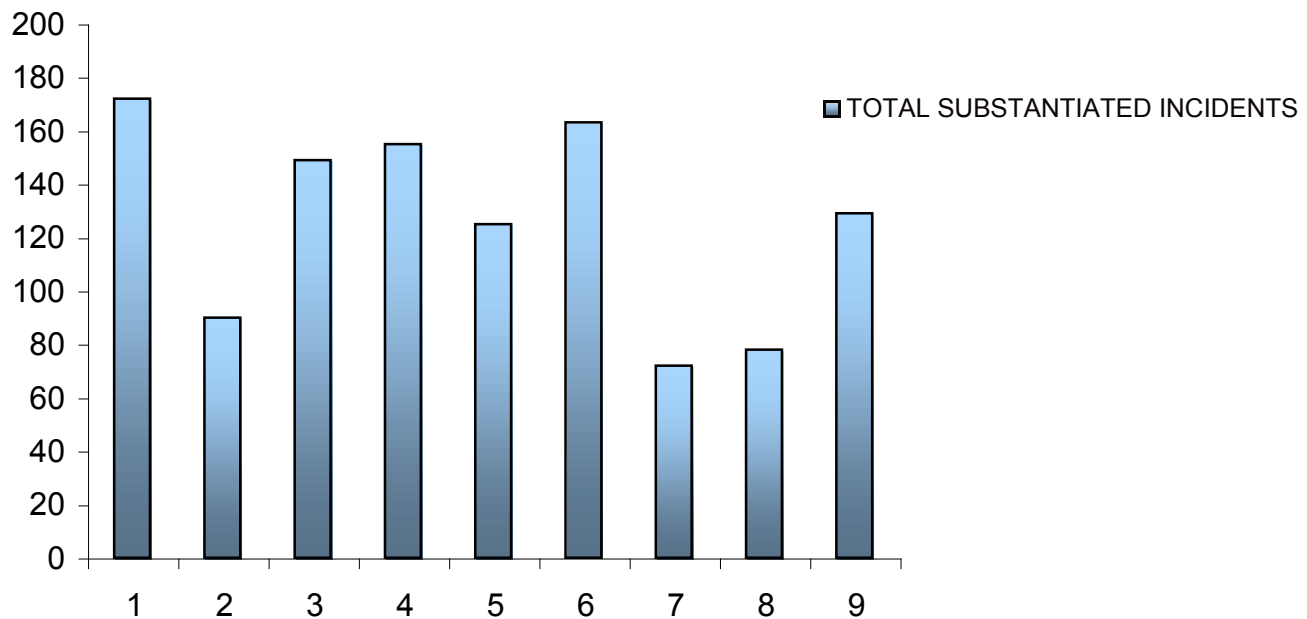


Figure 6: Regional distribution of substantiated pollution incidents, 2006

### 2.3 Distribution by pollution Source

EHS aims to identify the Source of any pollution reported. The Source of pollution is recorded using six descriptors: *Farm, Industry, DRD Water Service, Domestic, Transport and Other*. "Other" Sources include incidents where the Source was not determined. Table 3 details the distribution of pollution incidents by Source for 2006 and this is illustrated in Figure 7.

SOURCE	Total No. of Incidents	As a % of the total
WATER SERVICE	285	25.2%
FARM	228	20.1%
INDUSTRY	263	23.2%
DOMESTIC	153	13.5%
OTHER	170	15.0%
TRANSPORT	34	3.0%
	1133	100%

Table 3: Sources of Water pollution, 2006

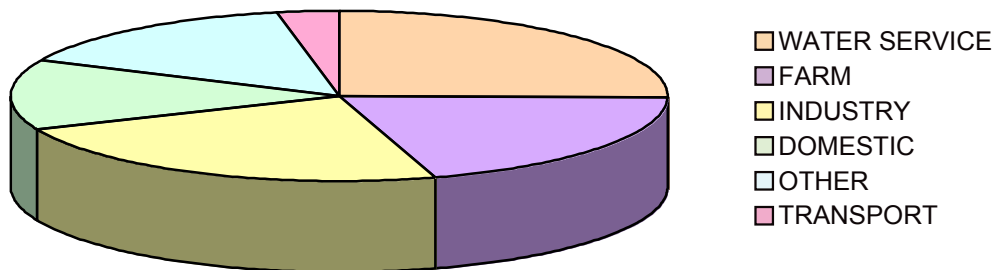


Figure 7: Sources of water pollution, 2006

By Source, *DRD Water Service* (25.2%) accounted for the largest number of substantiated incidents investigated by EHS during 2006, followed by *Industry* (23.2%) and *Farm* (20.1%).

Table 4 details the regional distribution of pollution incidents by Source for 2006 (see areas in Figure 1). Figure 8 illustrates how pollution Sources across NI broadly reflect population density and the type of industry present. In more highly populated regions (Areas 4, 5 and 6 (See Figure 1)), DRD Water Service tend to account for the largest number of incidents. In more rural areas there are a greater proportion of Farm incidents.

Source							
Area	Industry	Farm	Water Service	Domestic	Transport	Other	Total
1	46	38	42	14	7	25	172
2	20	22	10	18	3	17	90
3	49	32	25	11	10	22	149
4	35	13	51	30	3	23	155
5	14	12	62	16	2	19	125
6	45	23	47	25	1	22	163
7	14	27	7	11	3	10	72
8	16	16	21	8	3	14	78
9	24	45	20	20	2	18	129
<b>Total</b>	<b>263</b>	<b>228</b>	<b>285</b>	<b>153</b>	<b>34</b>	<b>170</b>	<b>1133</b>

Table 4: Regional distribution of pollution incidents by Source, 2006

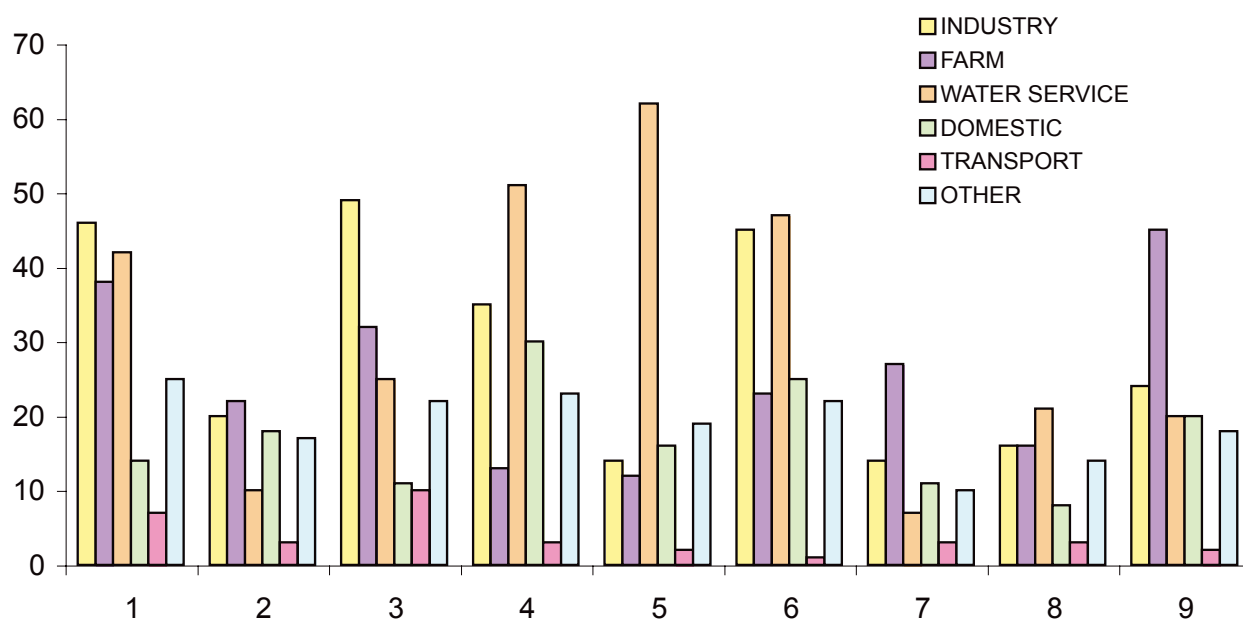


Figure 8: Regional distribution of pollution incidents by Source, 2006

## 2.4 Trend in pollution Source

Table 5 details the percentage change in pollution Source from 2005 to 2006 and this is illustrated graphically in Figure 9. It is encouraging to note a decrease in pollution from *Farm* sources during 2006 (-3.1%). However, *Water Service*, *Industry* and *Farm* remain major sources of pollution. Unfortunately, there has been a 3.8% increase in pollution attributed to *Industrial* Sources and a 1.6% increase in pollution from '*Other*' sources during 2006.

Reports of pollution attributable to *DRD Water Service* are initially assessed by EHS, and then forwarded to both DRD Water Service to take remedial action to stop or minimise the impact of the pollution, and to the EHS Water Service Regulation Team to monitor the situation and progress. This team also monitors and regulates DRD Water Service discharges by reporting non-compliance with registered standards and issuing advisory letters that formally identify unsatisfactory performance and request improvements.

Source	2005	2005	2006	2006	Overall % Change
Industry	228	19.42%	263	23.21%	3.79%
Transport	31	2.64%	34	3.00%	0.36%
Water Service	307	26.15%	285	25.15%	-1.00%
Other	157	13.37%	170	15.00%	1.63%
Farm	273	23.25%	228	20.12%	-3.13%
Domestic	178	15.16%	153	13.50%	-1.66%
<b>Total</b>	<b>1174</b>		<b>1133</b>		

Table 5: Percentage change in pollution Source, 2005-2006

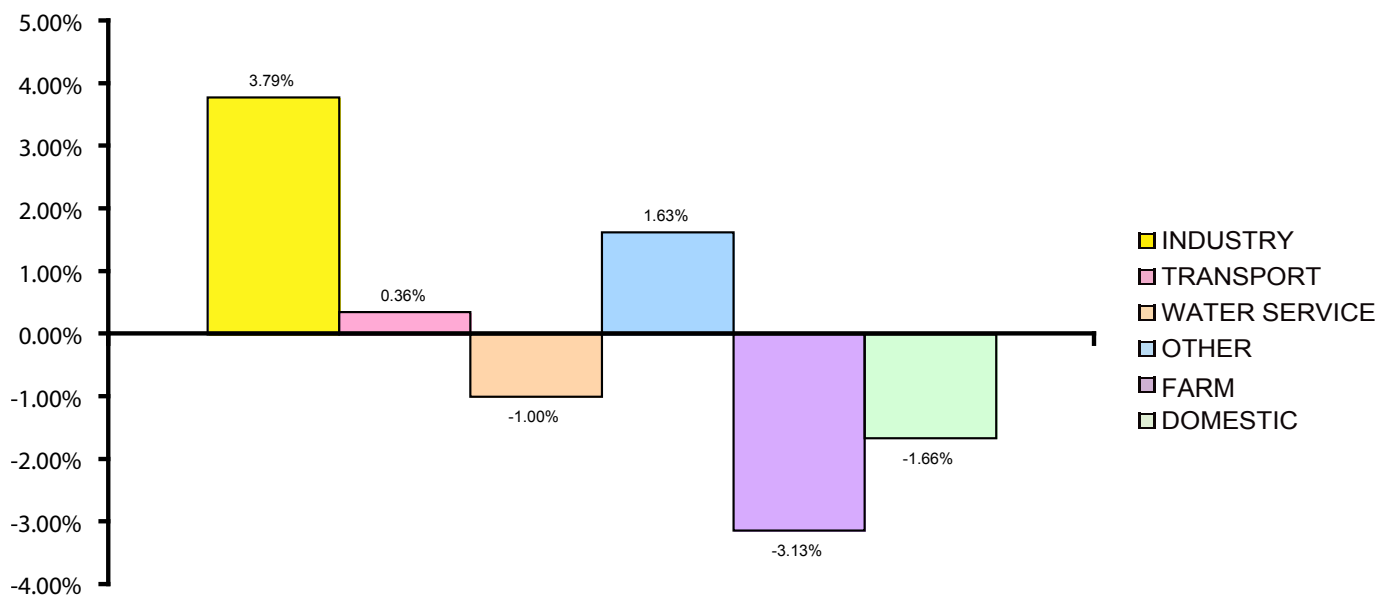


Figure 9: Percentage change in pollution Source, 2005 - 2006

The number of substantiated incidents attributed to each Source for the period 2001 - 2006, is shown in [Annex C, Table 2](#) and [Figure 10](#). *Industry*, *Farm* and *DRD Water Service* have continued to be the major Sources of pollution, though *Farm* incidents have reduced over the 6-year period.

In October 2004, a total territory approach to the implementation of the Nitrates Directive was adopted in Northern Ireland because of eutrophication of surface waters. The resultant Nitrates Action Programme Regulations (Northern Ireland) 2006 (the 'NAP Regulations') came into operation on 1 January 2007. These Regulations and the Phosphorus (Use in Agriculture) Regulations (Northern Ireland) 2006, which also became operational on 1 January 2007, meet Northern Ireland's legal and environmental obligations. The Regulations bring into operation measures to control the use of nutrients on farms and, as a result, should improve water quality throughout Northern Ireland. In order to further reduce pollution from agricultural sources, EHS will continue to work in partnership with the agricultural industry.

Incidents attributed to *DRD Water Service* have fluctuated over the six year period with a slight decrease between 2005 and 2006.

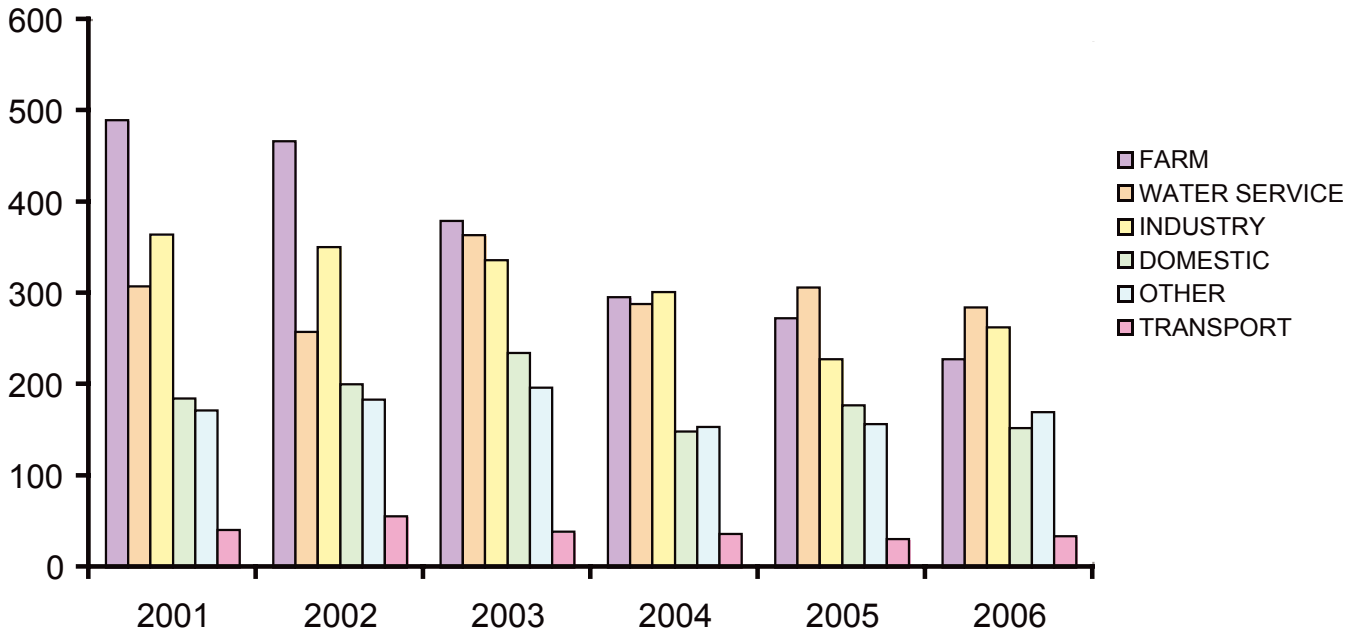


Figure 10: Trend in pollution Source, 2001 – 2006

### 2.5 Distribution by pollutant Category

EHS aims to identify the Category (type) of any pollution reported. Pollutant Categories are recorded using 7 descriptors: *Chemical, Agriculture, Sewage, Oil, Non-Agricultural Waste Discharge, Breach of Consent, and Other*. The “Other” category includes incidents where the Category was not determined. The distribution of pollution incidents by Category for 2006 is detailed in Table 6 and illustrated in Figure 11.

CATEGORY	Total No. of Incidents	As a % of the total
SEWAGE	422	37.2%
AGRICULTURE	222	19.6%
OIL	216	19.1%
OTHER	116	10.2%
NON AGRIC. WASTE	92	8.1%
CHEMICAL	37	3.3%
BREACH OF CONSENT	28	2.5%
<b>Total</b>	<b>1133</b>	<b>100</b>

Table 6: Categories of water pollution, 2006

During 2006, *Sewage* (37.2%), *Agriculture* (19.6%) and *Oil* (19.1%) continued the trend from 2005, accounting for the largest proportion of pollutant types, (75.9%).

It is expected that, through implementation of the Nitrates Directive, the Urban Waste Water Treatment Regulations (Northern Ireland) 1995 and the Control of Pollution (Silage, Slurry and Agricultural Fuel Oil) Regulations (NI) 2003, these figures will be reduced over coming years

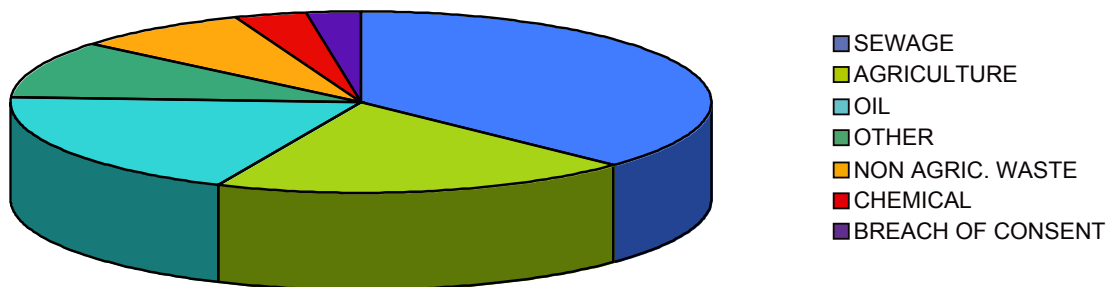


Figure 11: Categories of water pollution, 2006

Table 7 and Figure 12 detail the regional distribution of pollution incidents by Category for 2006. Population density and industry type are major factors influencing the pollutant Category, with Sewage being the predominant Category in all areas apart from the more rural regions, such as Areas 7 and 9, where there are a greater proportion of Agriculture Category incidents.

Category								
Area	CHEMICAL	AGRICULTURE	SEWAGE	OIL	NON AGRIC. WASTE DIS.	BREACH OF CONSENT	OTHER	Total
1	6	37	54	28	12	10	25	172
2	1	21	21	20	11	4	12	90
3	9	32	37	35	20	2	14	149
4	10	13	75	33	11	4	9	155
5	3	10	79	16	3	5	9	125
6	4	25	76	26	9	1	22	163
7	1	27	17	14	6	1	6	72
8	1	15	29	23	5	1	4	78
9	2	42	34	21	15	0	15	129
	<b>37</b>	<b>222</b>	<b>422</b>	<b>216</b>	<b>92</b>	<b>28</b>	<b>116</b>	<b>1133</b>

Table 7: Regional distribution of pollution incidents by Category, 2006

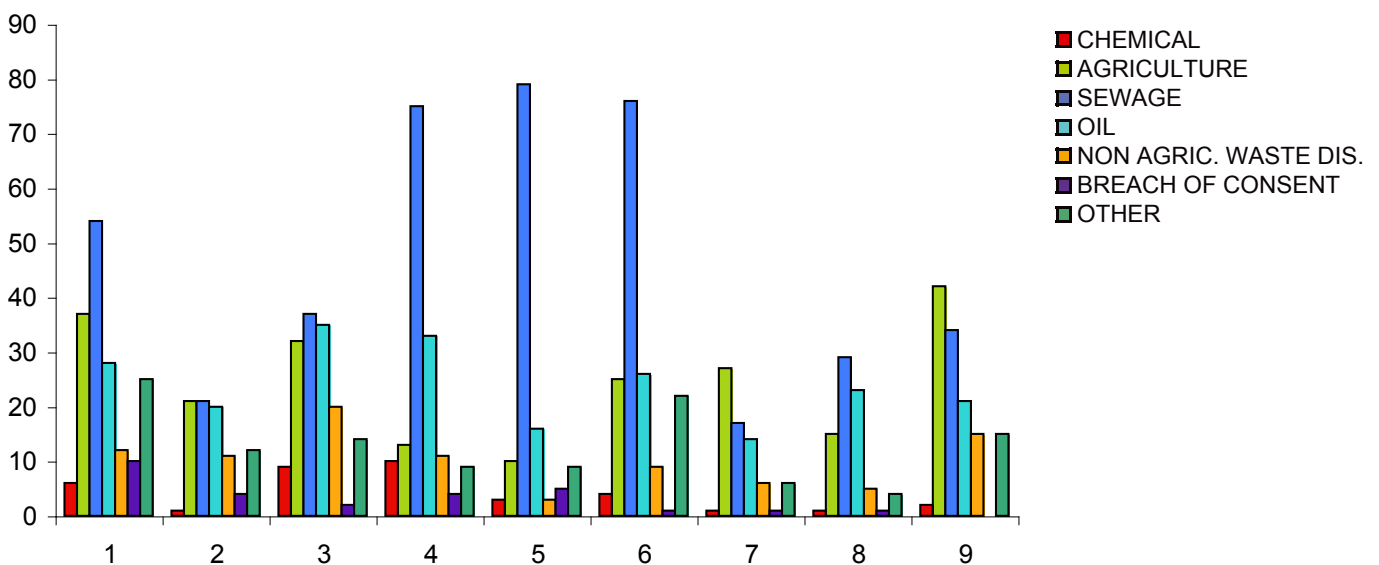


Figure 12: Regional distribution of pollution incidents by Category, 2006

## 2.6 Trend in Pollutant Category

Table 8 and Figure 13 detail the percentage change in pollutant Category between 2005 and 2006. These indicate a 2.5% increase from 2005 in the number of Non Agricultural Waste related incidents. It is encouraging that there has been a decrease in the number of Agriculture related and Sewage related incidents with decreases of 2.38% and 1.25% respectively. However, there were also slight increases in Chemical related and Breach of Consent related incidents from 2005, with increases of 0.97% and 0.43% respectively.

Category	2005	2005	2006	2006	Overall % Change
Other	123	10.48%	116	10.24%	-0.24%
Oil	224	19.08%	216	19.06%	-0.02%
Agriculture	258	21.98%	222	19.59%	-2.38%
Breach of Consent	24	2.04%	28	2.47%	0.43%
Non Agric Waste Disposal	66	5.62%	92	8.12%	2.50%
Chemical	27	2.30%	37	3.27%	0.97%
Sewage	452	38.50%	422	37.25%	-1.25%
<b>Total</b>	<b>1174</b>		<b>1133</b>		

Table 8: Percentage change in pollutant Category, 2005 - 2006

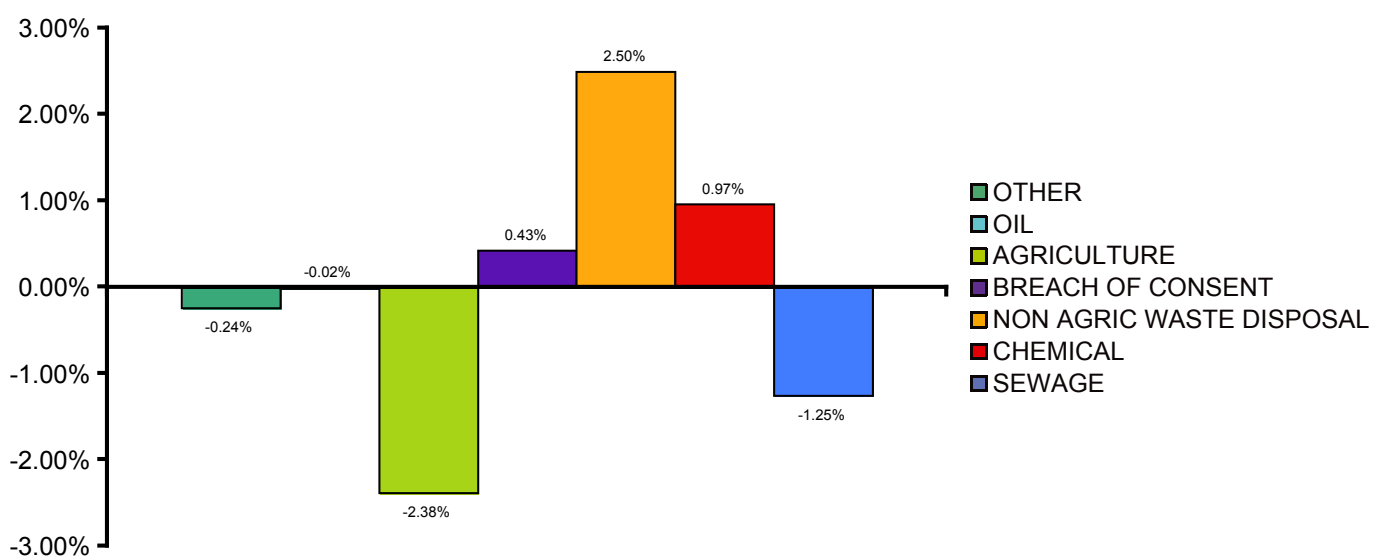


Figure 13: Percentage change in pollutant Category, 2005-2006

The numbers of substantiated incidents attributed to each Category for the period 2001 - 2006, are shown in Annex C, Table 3 and Figure 14. It is encouraging to note that EHS investigated 252 fewer Agriculture-related incidents in 2006 (222) compared with 2001 (474), a decrease of 53.2%.

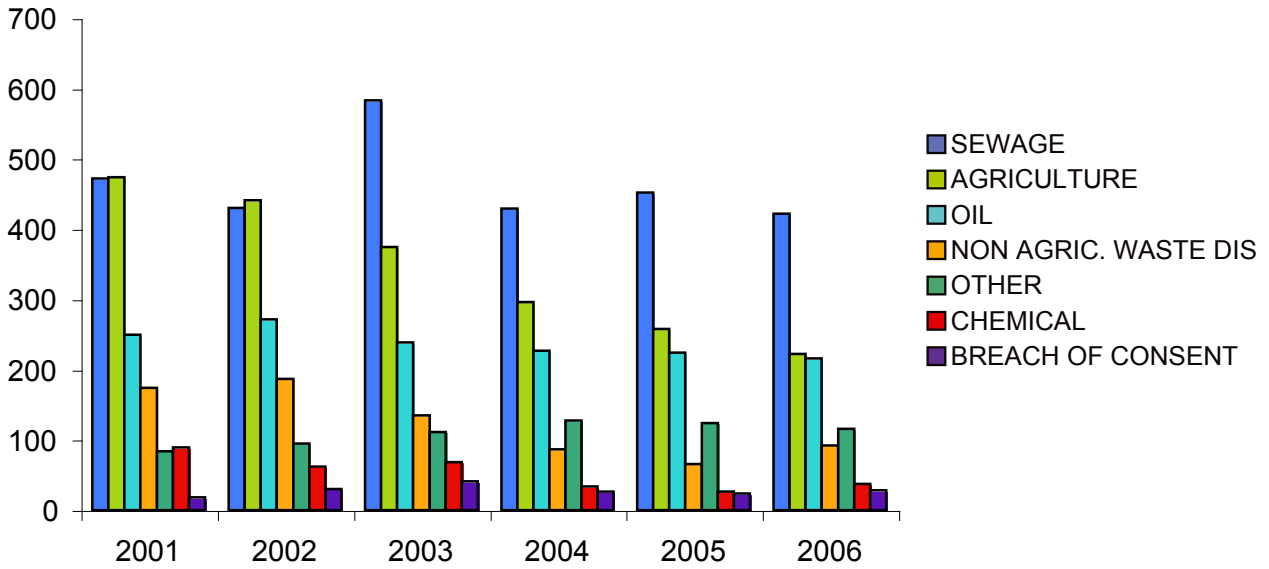


Figure 14: Trends in pollutant Category, 2001 - 2006

## 2.7 Cause of Incidents

EHS aims to identify the Cause of all reported pollution incidents. The Cause of pollution is recorded using ten descriptors; *Poor working practice, Equipment failure, Accident / Emergency, Inadequate equipment, Negligence, Deliberate dumping, Weather, Breach of Consent, Other* and *Unknown*. [Table 9](#) details the distribution of pollution incidents by Cause for 2006 and this is illustrated in [Figure 15](#).

In 2006, the main Causes of incidents were *Unknown* cause, *Equipment Failure* and *Poor Working Practice*. EHS provides pollution prevention advice, both as leaflets and during site visits, to help reduce the number of pollution incidents. Section 3 of this report details the specific pollution prevention advice service offered by EHS.

CAUSE	Total No. of Incidents	As a % of the total
Equipment Failure	211	18.6%
Unknown	214	18.9%
Poor Working Practice	196	17.3%
Accident/Emergency	122	10.8%
Inadequate Equipment	102	9.0%
Negligence	73	6.4%
Weather	58	5.1%
Deliberate Dumping	63	5.6%
Other	55	4.9%
Breach of Consent	39	3.4%
	<b>1133</b>	<b>100%</b>

*Table 9: Cause of pollution incidents in 2006*

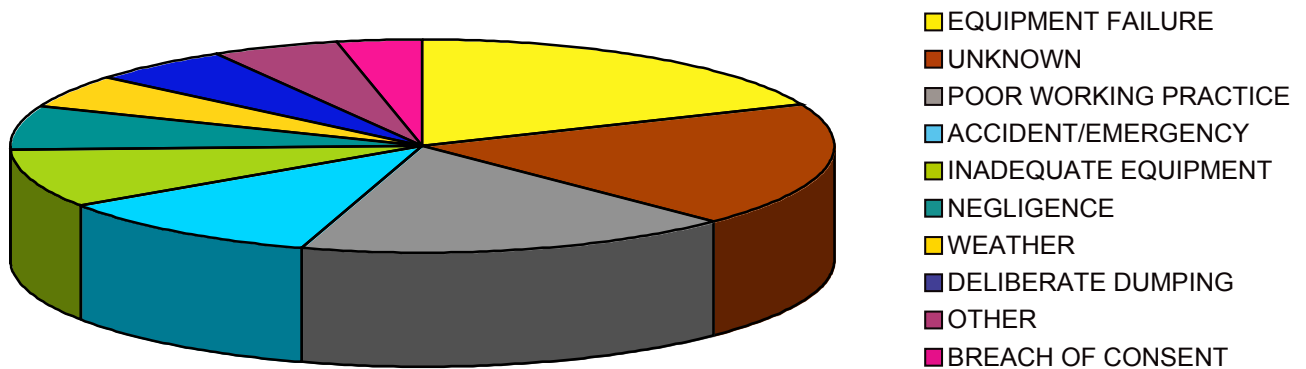


Figure 15: Cause of pollution incidents in 2006

Table 10 and Figure 16 detail the regional distribution of pollution incidents by Cause for 2006 (the regions are as shown in Figure 1).

	Deliberate Dumping	Breach of Consent	Accident / Emergency	Equipment Failure	Inadequate Equipment	Negligence	Poor Working Practice	Weather	Unknown	Other	Total
1	13	9	13	16	10	18	35	14	36	8	172
2	7	2	20	8	6	5	24	4	12	2	90
3	7	16	20	7	8	3	20	18	33	17	149
4	2	2	13	51	12	9	26	4	29	7	155
5	6	3	10	55	8	2	13	6	17	5	125
6	17	1	13	38	32	7	22	3	24	6	163
7	3	3	5	9	10	12	16	1	13	0	72
8	4	2	12	12	4	9	14	3	14	4	78
9	4	1	16	15	12	8	26	5	36	6	129
<b>Total</b>	<b>63</b>	<b>39</b>	<b>122</b>	<b>211</b>	<b>102</b>	<b>73</b>	<b>196</b>	<b>58</b>	<b>214</b>	<b>55</b>	<b>1133</b>

Table 10: Regional distribution of pollution incidents by Cause, 2006

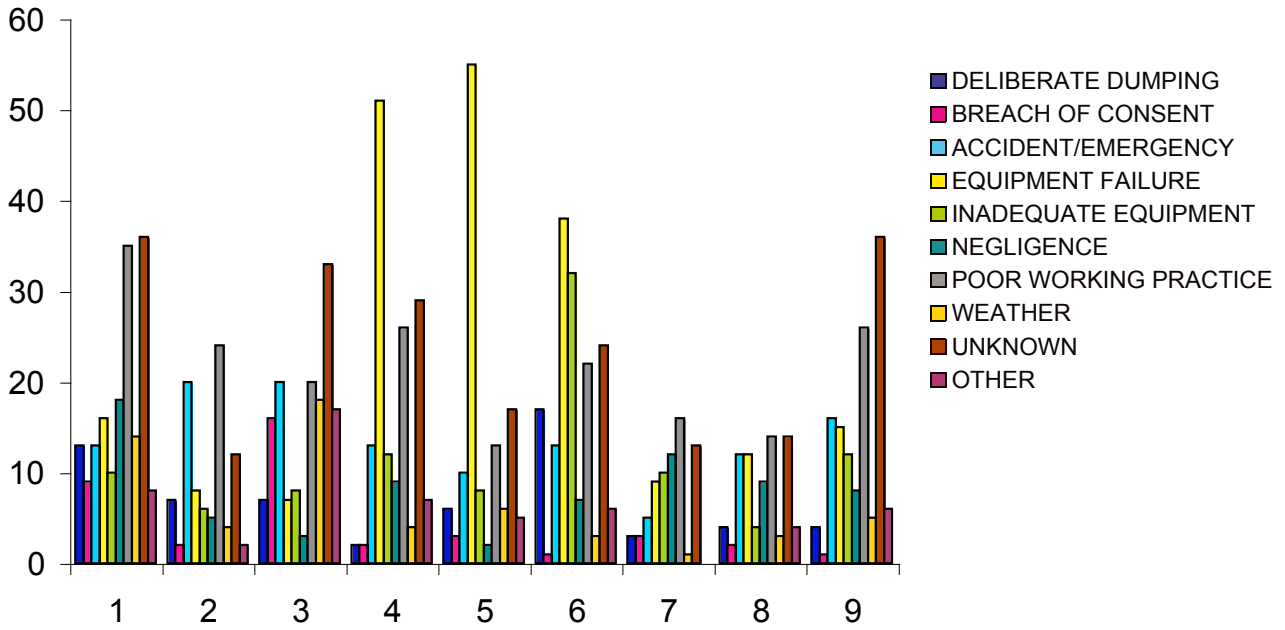


Figure 16: Regional distribution of pollution incidents by Cause, 2006

### 2.8 Trend in incident Cause

Annex C, Table 4 and Figure 17 illustrate the trend in incident Cause for the period 2001 – 2006. During the 6-year period *Poor Working Practice* (19.3%), *Equipment Failure* (17.8%) and *Unknown* cause (16.6%) were the main Causes of incidents. This pattern continued in 2006, with *Poor Working Practice*, *Equipment Failure* and *Unknown* cause causing 17.3%, 18.6% and 18.9% of substantiated incidents respectively.

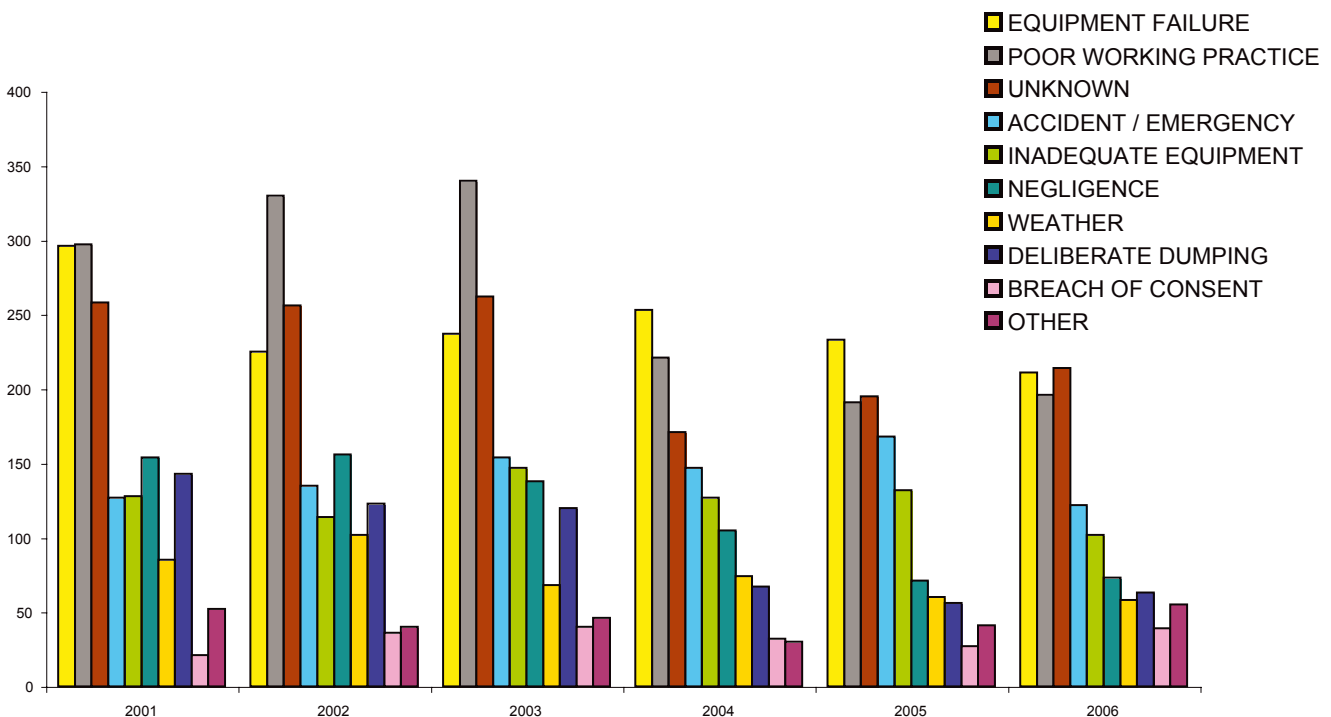


Figure 17: Cause of pollution incidents for the period 2001-2006

### 2.9 Analysis of Incidents by Severity

EHS estimates the environmental impact that a pollutant has on a watercourse using the pollution incident assessment criteria described in Annex A, with incidents classified by Severity (High, Medium and Low). This assessment is used to standardise the classification, recording, and analysis of pollution incidents across Northern Ireland. Table 11 details the number of incidents in each Severity class for 2006 and this is illustrated in Figure 18.

	No. of Incidents	As a % of the total
High	23	2.03%
Medium	168	14.83%
Low	942	83.14%
<b>Total</b>	<b>1133</b>	<b>100%</b>

Table 11: Severity of pollution incidents, 2006

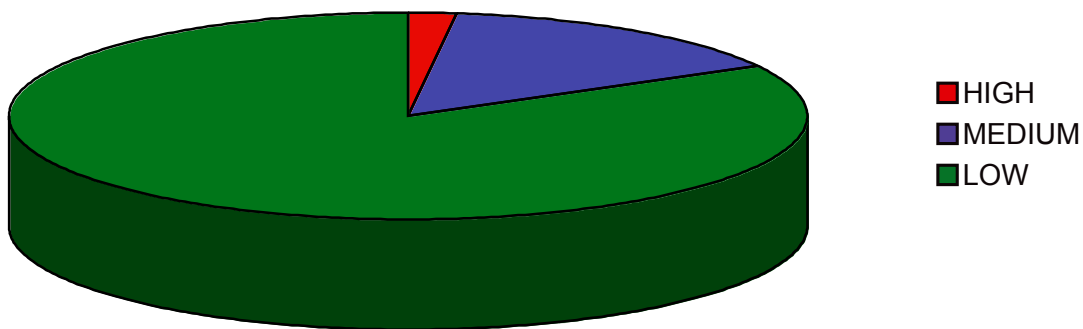


Figure 18: Severity of pollution incidents, 2006

Table 12 and Figure 19 detail the regional distribution and Severity of pollution incidents during 2006 (the regions are as shown in Figure 1).

Severity				
Area	Low	Medium	High	Total
1	155	15	2	172
2	71	15	4	90
3	117	28	4	149
4	134	20	1	155
5	112	11	2	125
6	125	36	2	163
7	44	23	5	72
8	71	4	3	78
9	113	16	0	129
Total	942	168	23	1133

Table 12: Regional distribution of pollution incidents by Severity, 2006

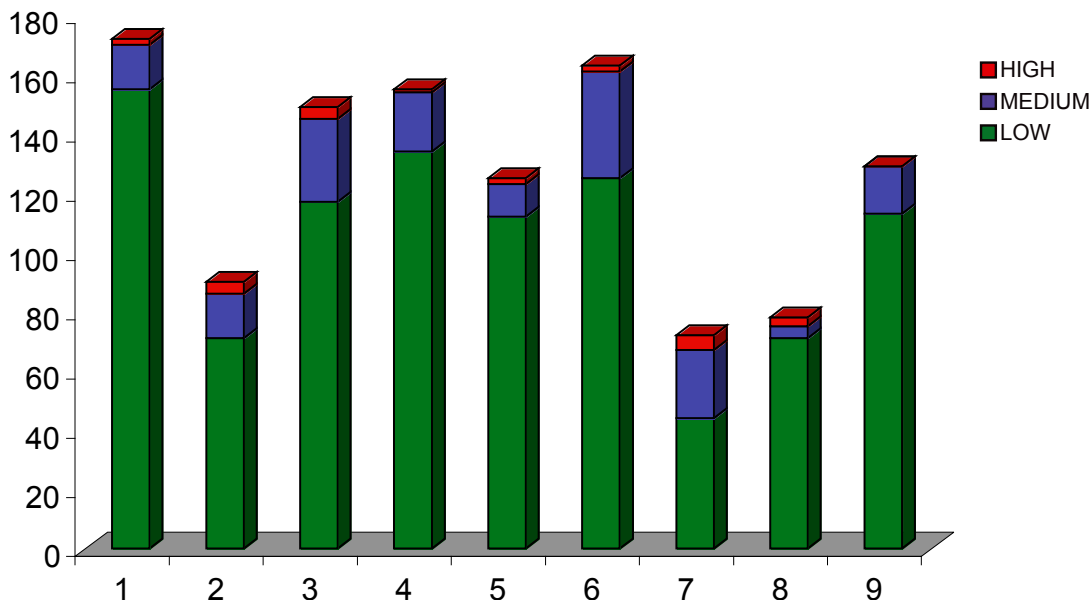


Figure 19: Regional distribution of pollution incidents by Severity, 2006 The

severity of incidents investigated by each region for the period 2001 to 2006 is detailed in Annex C, Tables 5.1 – 5.3

Table 13 and Figure 20 details the Severity of incidents by Source investigated by EHS during 2006. The table shows that the greatest number of High and Medium Severity incidents in 2006 arose from *Industry* (62 incidents) and *Farm* (56 incidents) Sources, whereas the greatest number of Low Severity incidents were attributable to *DRD Water Service* (243 incidents). DRD Water Service was responsible for 42 High and Medium Severity incidents in 2006.

SOURCE	Low	Medium	High	Total
WATER SERVICE	243	36	6	285
FARM	172	45	11	228
INDUSTRY	201	58	4	263
DOMESTIC	149	4	0	153
OTHER	146	22	2	170
TRANSPORT	31	3	0	34
<b>Total</b>	<b>942</b>	<b>168</b>	<b>23</b>	<b>1133</b>

Table 13: Severity of pollution incidents by Source, 2006

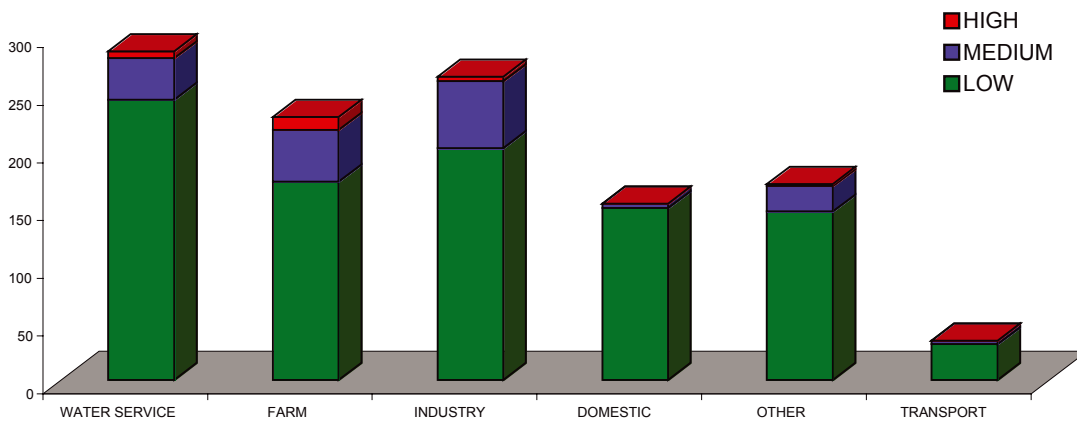


Figure 20: Severity of pollution incidents by Source, 2006

Table 14 and Figure 21 detail the Severity of incidents by Category investigated by EHS during 2006. These indicate that agricultural effluents, such as silage and slurry, were involved in the greatest number of High and Medium Severity incidents (57) by Category, whereas Sewage was the cause of the greatest number of the Low Severity incidents (375) by Category.

Category Name	High	Medium	Low	Total No. of Incidents
SEWAGE	6	41	375	422
AGRICULTURE	11	46	165	222
OIL	0	30	186	216
OTHER	1	15	100	116
NON AGRIC. WASTE DIS.	4	23	65	92
CHEMICAL	1	8	28	37
BREACH OF CONSENT	0	5	23	28
<b>Total</b>	<b>23</b>	<b>168</b>	<b>942</b>	<b>1133</b>

Table 14: Severity of pollution incidents by Category, 2006

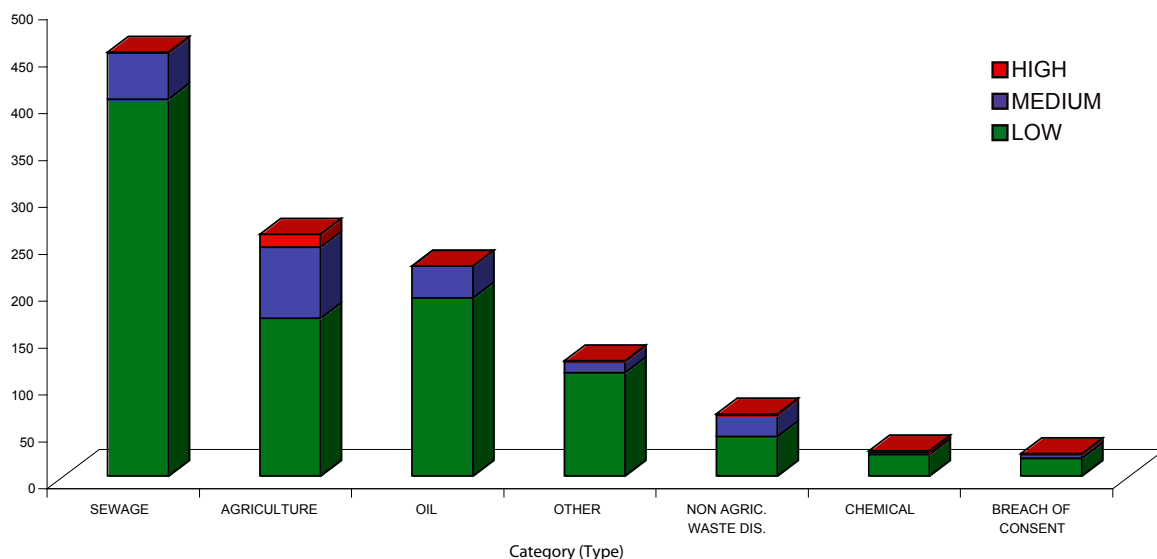


Figure 21: Severity of pollution incidents by Category, 2006

Table 15 and Figure 22 detail the Severity of incidents by Cause investigated by EHS during 2006. These indicate that, during 2006, *Poor Working Practice* was the single greatest Cause of both High and Medium Severity pollution incidents, causing 5 High Severity and 38 Medium Severity incidents respectively. The greatest number of Low Severity incidents were of *Unknown* cause (191 incidents). To address this issue, EHS has focused on Pollution Prevention initiatives and education. Further information on EHS Pollution Prevention initiatives can be found in Section 3.

Cause	Low	Medium	High	Total
Equipment Failure	180	28	3	208
Poor Working Practice	153	38	5	191
Unknown	191	20	3	211
Accident / Emergency	107	14	1	121
Inadequate Equipment	85	16	1	101
Negligence	54	16	3	70
Weather	52	6	0	58
Deliberate dumping	46	14	3	60
Breach of Consent	27	8	4	35
Other	47	8	0	55
<b>Total</b>	<b>942</b>	<b>168</b>	<b>23</b>	<b>1133</b>

Table 15: Severity of pollution incidents by Cause, 2006

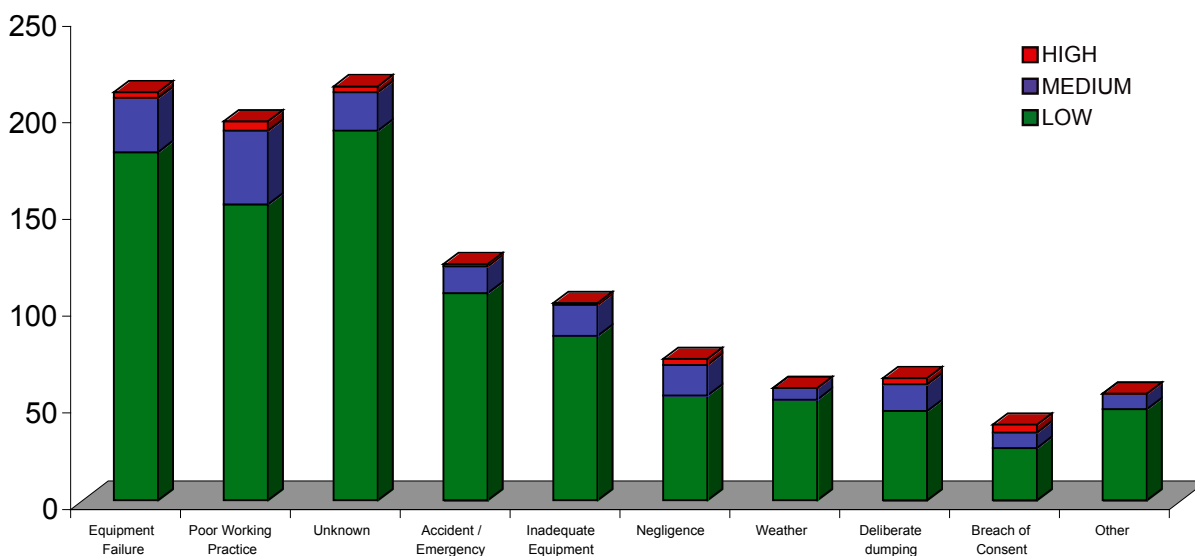


Figure 22: Severity of pollution incidents by Cause, 2006

## 2.10 Response to High, Medium and Low Severity incidents

EHS has set targets for responding to pollution incidents based on their assessed Severity, and these are routinely monitored as a performance measure. When a report of pollution is received, EHS aims to assess and estimate the incident Severity (based on the information in the pollution report) and forward the report to field staff within 30 minutes. EHS aims to respond to incidents within the target response times set out below.

To respond to 90% of:

- High Severity Incidents within 2 hours (Reported during Standard Working Hours);
- High Severity Incidents within 4 hours (Reported outside Standard Working Hours);
- Medium Severity Incidents within 2 hours (Reported during Standard Working Hours);
- Medium Severity Incidents within 4 hours (Reported outside Standard Working Hours);
- Low Severity Incidents within 1 Working Day (Reported at any time).

Table 16 and Figure 23 detail the rate of response to High and Medium Severity incidents during 2006. These indicate that during 2006, EHS complied with the set targets.

Time Period	No. High & Medium severity incidents received	No. High & Medium severity incidents responded to within Target	Response rate (%)
Q1, (1/1/06 - 31/3/06)	47	47	100%
Q2, (1/4/06 - 30/6/06)	46	45	98%
Q3, (1/7/06 - 30/9/06)	52	51	98%
Q4, (1/10/06 - 31/12/06)	46	45	98%
Total for 2006	191	188	98.4%

Table 16: Response rate to High and Medium Severity pollution incidents, 2006

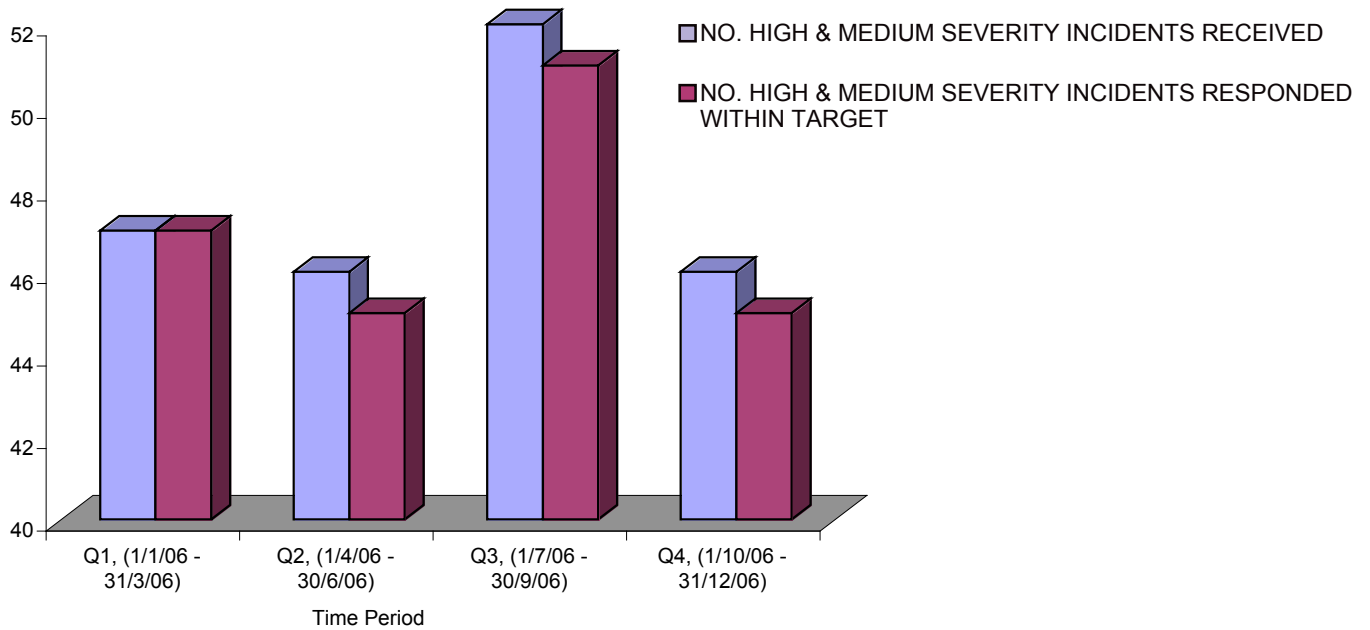


Figure 23: Response rate to High and Medium Severity pollution incidents, 2006

### 2.11 Trend in response to High and Medium Severity incidents

Table 17 and Figure 24 detail the response rate to High and Medium Severity incidents for the period 2001 - 2006 (Annex C, Tables 6.1 - 6.6). These indicate that the rate of response has improved over the 6-year period.

Prior to 2004, there was a single target of responding to 95% of High and Medium severity incidents within 4 hours regardless of whether the report was made inside or outside normal working hours. In the table and graph below, the compliance figure for 2006 represents the overall percentage of all High and Medium severity incidents complying with the individual targets.

	2001	2002	2003	2004	2005	2006
<b>No. High &amp; Medium severity incidents received</b>	321	264	339	310	220	191
<b>No. High &amp; Medium severity incidents responded to within target</b>	291	218	317	297	209	188
<b>Response rate (%)</b>	90.7%	82.6%	93.5%	95.8%	95.0%	98.4%

Table 17: Response rate to High and Medium Severity pollution incidents, 2001 - 2006

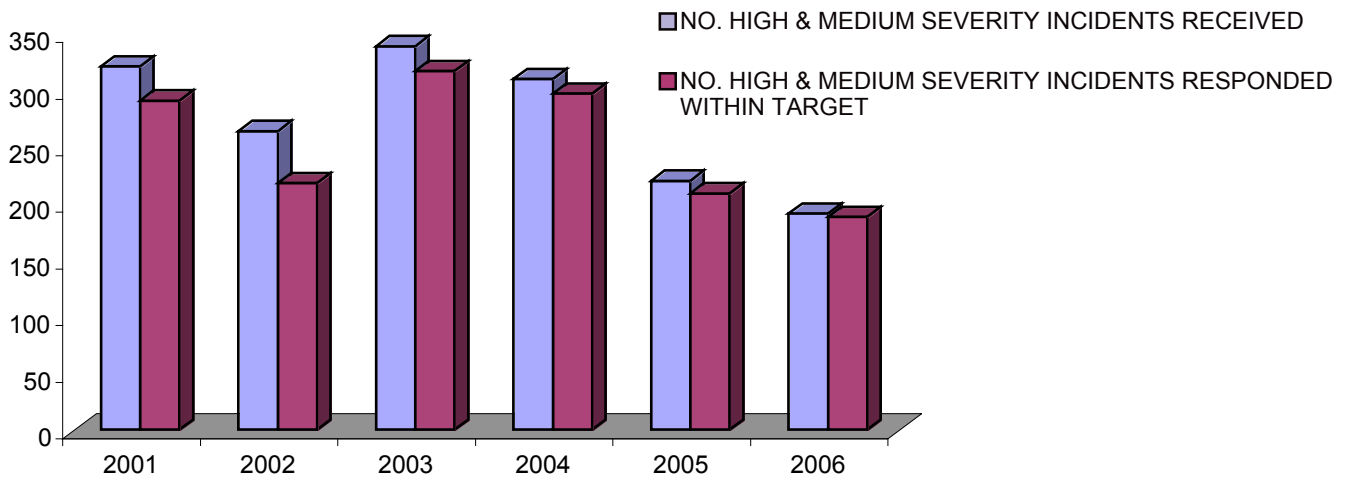


Figure 24: Response rate to High and Medium Severity pollution incidents, 2001 - 2006

## 2.12 'Fish Kills'

The majority of 'Fish Kills' occur when oxygen levels in a watercourse are depleted, suffocating the fish. Oxygen depletion can occur rapidly when organic materials enter a waterway and when water temperatures are high. Bacteria involved in the decomposition of these materials quickly consume the oxygen in the water reducing it to concentrations which are too low for fish to survive. Other factors that can be involved in 'Fish Kills' include suspended solids and ammonia, which can clog, irritate and damage fish gills preventing the fish from taking in oxygen.

Table 18 and Figure 25 describe the Sources of pollution that caused 'Fish Kills' during 2006. In 2006, the greatest single number of pollution incidents involving 'Fish Kills' were attributed to *DRD Water Service* (36.8%). This is largely due to the oxygen-depleting nature of untreated sewage pollutants discharged from wastewater infrastructure. Pollutants from *Other* sources caused 31.6% of the incidents that led to 'Fish Kills'.

Source	As a % of the total	2006
Farm	15.8%	3
Water Service	36.8%	7
Other	31.6%	6
Industry	10.5%	2
Transport	0.0%	0
Domestic	5.3%	1
<b>Total</b>	<b>100%</b>	<b>19</b>

Table 18: Sources of pollution causing Fish Kills, 2006

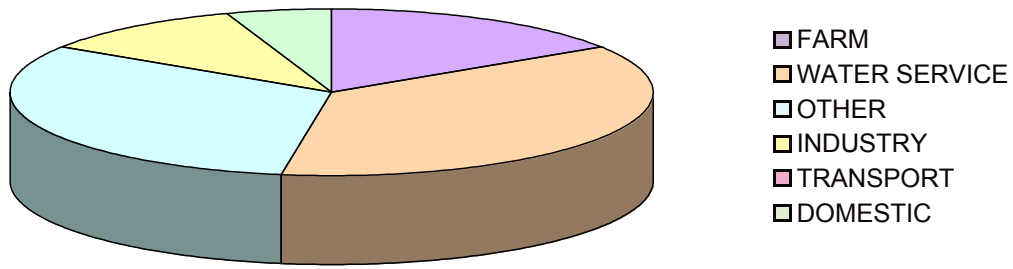


Figure 25: Sources of pollution causing 'Fish Kills', 2006

## 2.13 Significance of 'Fish Kills'

In 2006, investigations of 'Fish Kills' were undertaken by FCB and the Group Staff on behalf of EHS. These organisations assess the Significance of a 'Fish Kill' based on the number, type, age and size of fish killed, and the cost of re-instatement of the population. The Significance of a 'Fish Kill' depends largely on the type of watercourse affected, i.e. whether it is salmonid (supporting a population of game fish, e.g. salmon or trout), or cyprinid (supporting a population of coarse fish, e.g. pike or eel). The age and size of fish killed are assessed using the following criteria:

**Fry:** 0 – 10cms  
**Juvenile:** 10 – 20cms  
**Adult:** >20cms

EHS use the descriptors below to record the Significance of a Fish Kill:

**Slight:** <10 fish  
**Moderate:** 10 – 100 fish  
**Major:** >100 fish

Table 19 and Figure 26 set out the Significance of 'Fish Kills', caused by pollution incidents from the various sources, which occurred during 2006. As described in Section 2.12, 36.8% of 'Fish Kills' were caused by pollution from *Water Service*.

Source	Slight	Moderate	Major	Total
Farm	0	1	2	3
Water Service	1	0	6	7
Other	1	5	0	6
Industry	0	1	1	2
Transport	0	0	0	0
Domestic	1	0	0	1
<b>Total</b>	<b>3</b>	<b>7</b>	<b>9</b>	<b>19</b>

Table 19: Significance of 'Fish Kills' by pollutant Source, 2006

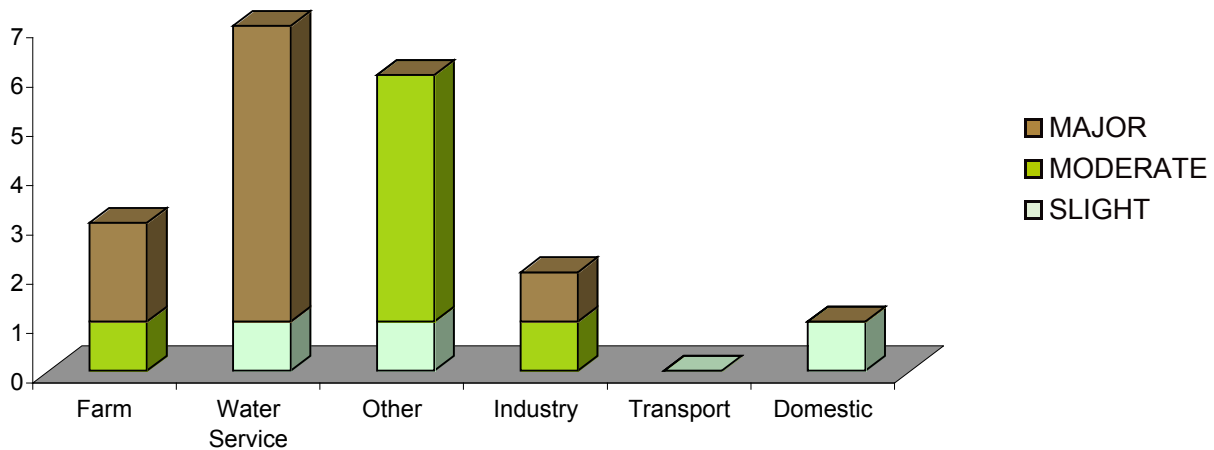


Figure 26: Significance of Fish Kills by pollutant Source, 2006

### 2.14 Trend in Cause of 'Fish Kills'

Annex C, Table 7 and Figure 27, illustrate the trends associated with Sources of pollution that caused 'Fish Kills' in the period 2001 - 2006. It is encouraging to note that there remains an underlying decreasing trend in the numbers of pollution incidents causing 'Fish Kills' since 2001, although between 2005 and 2006 an increase was observed.

Both National and European Legislation, such as the Water Framework Directive (2000/60/EC), are setting ever more demanding targets to minimise the impact of human activity on our natural assets. EHS Water Management Unit is dedicated to improving the quality of the aquatic environment in Northern Ireland. Through routine monitoring programmes and other investigative work, EHS identifies rivers that are non-compliant with their set Water Quality Objectives (WQOs). River catchments are prioritised taking account of their conservation status, fishery potential and other factors, so that limited resources can be applied to the best effect. This co-ordinated approach informs the establishment of action programmes for EHS, and improves communication and integration with other Departments and Agencies, thereby optimising efforts to improve water quality in a river basin district. As these initiatives are implemented, it is expected that the number of 'Fish Kills' occurring will drop in coming years.

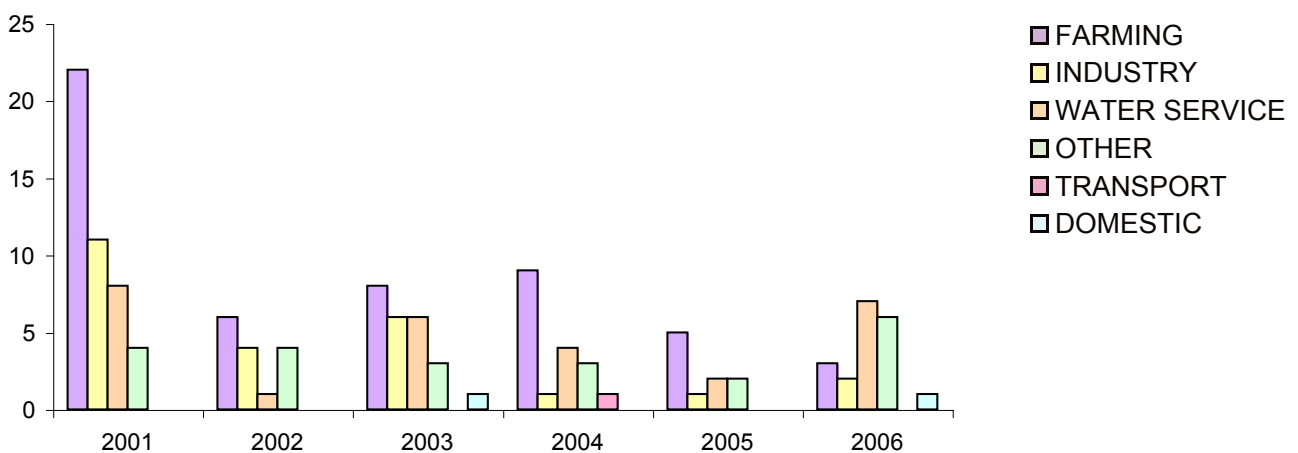


Figure 27: Trend in pollution Source causing Fish Kills, 2001-2006

## 2.15 Notable incidents, 2006

While this report has so far concentrated on facts and figures, it is important to get a feel for the type and variety of incidents Environment and Heritage Service officers deal with when investigating and resolving water pollution incidents. The examples below cover a wide spectrum of Sources of pollution and give a flavour of the range of work being undertaken;

- At Limavady Magistrates Court on 5 December 2007, a laundry plant operator pleaded guilty and was fined a total of £4,000 plus costs for making a polluting discharge into a waterway and for making a discharge without the consent of the Department. Effluent from the company's treatment plant was found to be discharging into an adjacent waterway from the site on two separate occasions in 2006. In both instances analysis of samples taken from the discharge point proved that the effluent was polluting in nature and contained matter which would have been potentially harmful to the fish life in the receiving waterway. The Court was told that the company had been fined on previous occasions for similar offences. In mitigation, the defence stated that the company was long established, providing employment for a significant number of local people, and added that the company planned to move to new premises, which should prevent such pollution from occurring in the future.
- Following a report of pollution received from a member of the public via the Water Pollution Hotline (0800 807060), a contractor responsible for the maintenance of a private sewage pumping station, serving a housing development in Co Down, pleaded guilty and was fined £2,500 at Bangor Magistrates Court on 30 May 2007 for a breach of consent conditions in 2006. The court was told that the telemetry alarm system had failed to alert the company, as required by the consent, and that the pumps were not working, resulting in untreated sewage being discharged to a waterway.
- On 9 August 2007 at Banbridge Magistrates Court, a developer pleaded guilty to making a discharge of untreated sewage to a waterway in 2006 from a housing development in Co Down. The Court was told that the developer had been given permission by EHS to construct a sewage pumping station to pass forward sewage to the public foul sewer from the new housing development, but that despite a number of the houses already being occupied, the necessary pumping station had not been constructed. As a result, the untreated sewage from the occupied houses was collected in a sump from where it was discharging to the adjacent waterway.
- On 24 October 2007 at Craigavon Magistrates Court, a poultry firm was fined a total of £6,000 for making polluting discharges to a waterway on two separate occasions in 2006. The offence first came to light when an officer from EHS observed scum and foam in a waterway and traced the pollution back to the poultry processing plant. Analysis of samples proved that the discharges were polluting in nature and potentially harmful to the fish life in a receiving waterway. The Court was told that the company had a previous conviction for similar pollution offences.



- On 19 October 2007, at Armagh Magistrates Court, a food processing company pleaded guilty and was fined a total of £3,000 for making a discharge of polluting effluent to a waterway and for making a discharge without the consent of the Department. The Court was told that during a routine inspection an Officer from EHS observed pollution in a waterway and traced the source of the pollution to the food processing factory, which was discharging vegetable washings. Analysis of a sample of the effluent proved that it was polluting in nature and potentially harmful to the fish life in a receiving waterway.



### 3 Pollution Prevention

It is EHS policy to maintain or improve the quality of surface waters and waters in underground strata as required by national policy, EC Directives and international agreements, and to generally manage river, estuarine and coastal waters to be at least 'Good' under the adopted classification schemes with no downward movement between classes.

EHS Water Management Unit protects the aquatic environment through a variety of activities, including monitoring water quality, preparing River Basin District Management Plans, regulating effluent discharges, supporting research and taking action to combat or minimise the effects of pollution. This is achieved in a number of ways, including enforcement of the Water (Northern Ireland) Order 1999 and the proactive management activities carried out by the pollution prevention team.

The number of substantiated pollution incidents in 1996 was 2087 and since then the number has gradually declined to 1133 in 2006. The Pollution Prevention Team has the objective of continuously reducing the number of water pollution incidents occurring in Northern Ireland.

#### 3.1 Pollution Prevention Team

To prevent incidents from occurring, or to minimise the effect of pollution on the environment, and to deliver an improved water environment, the team carries out the following proactive activities:

- Educating the public and industry about the effects and consequences of pollution;
- Distributing advisory publications to the public and industry;
- Inspecting key industrial sectors and carrying out pollution prevention visits;
- Offering specific advice at site meetings with representatives of industrial sectors operating in NI;
- Initiating pollution prevention programmes;
- Developing a Sustainable Drainage Systems (SuDS) strategy and promoting the use of SuDS;
- Providing guidance in respect of the new oil storage regulations;
- Promoting good environmental practices when responding to planning consultations;
- Responding to general queries from the public and industrial sectors ;
- Getting involved in relevant working parties and River Basin District groups.

## 3.2 Pollution Prevention Activities

As part of the Pollution Prevention strategy, during 2006, the team visited industrial estates, oil depots and construction sites. Those sites which had been the source of high or medium severity pollution incidents were also visited (in co-operation with field staff) with a view to providing advice on the necessary measures to prevent any recurrence.

### 3.2.1 Oil Depots

Oil can pollute rivers, lakes, groundwater and the marine environment, killing wildlife and removing vital oxygen from the water. Because of the way oil spreads, even a small quantity can do a lot of damage: just one litre of oil could make a million litres of fresh water undrinkable (remember most of the drinking water in Northern Ireland is abstracted from surface waters!). Oil can taint fish flesh making it unfit for human consumption. The most frequent polluting oil types are diesel, central heating oil, petrol and waste engine oil. The most common causes of oil pollution are spills, leaks, inadequate facilities and irresponsible disposal.

In 2004, the team identified, through desktop study, a list of 326 oil suppliers operating in NI. Of these, 241 sites were visited, with 164 confirmed as having oil storage tanks. Advisory letters detailing pollution prevention measures were sent to all of these sites. In 2006, 25 of the sites identified as a high pollution risk were visited and a full risk assessment was carried out. This identified the necessary measures required on site to minimise the risk of pollution. Where necessary, the required measures were enforced through the Water (NI) Order 1999.



When visiting such sites the following factors are taken into consideration:

- Safe tanker access;
- Containment if a tanker accidentally loses product;
- The state of the pipe work at the tanks and drip control measures;
- Overfill precautions associated with the tanks;
- The condition of the secondary containment systems (bunds);
- The environmental management systems on site.

Typical problems encountered on sites were as follows:

**No secondary containment** - this is a single skinned tank with no secondary containment system (bund) and inadequate support. If it were to leak, the oil would escape and it could find its way to a watercourse.



**Open drains in bunds** – if oil escapes from a tank into the secondary containment system (bund), an open drain, which is intended to allow rainwater to escape, will also allow oil to escape from the bund. Open drains render bunds unfit for purpose.



**Piercing the bund wall** – any pipes or services that pierce a bund wall will compromise its integrity. It is extremely difficult to seal a hole around a pipe, so if there is an oil spill, some may leak. Services should be taken over the bund wall.



**Cracks in the bund** – Again, it is very hard to join a bund to an existing wall. If there is an oil spill, oil will not be contained as it will leak out through the cracks.



**Poor tank support** – if this becomes unstable the tank may collapse. This may lead to the tank or feed pipes being damaged, allowing oil to escape.



## Oil Care Campaign

The EHS Oil Care Campaign exists to help people avoid causing oil pollution incidents and their expensive, persistent consequences. The Campaign aims to minimise the environmental impact of oil and fuels throughout their lifecycle, by promoting safe practices for handling, delivery and storage of oil and the proper collection of used oil.

The Environment Agency database, 'Oil Bank Line' identifies your nearest Oil Bank when it is supplied with your postcode. This service is now available to the NI public by contacting the freephone number or logging onto the website, [www.oilbankline.org.uk](http://www.oilbankline.org.uk).



## Proposed NI Oil Storage Regulations

To protect the aquatic environment against this type of pollutant, England and Scotland have introduced Oil Storage Regulations. These clearly set out the storage standards expected at all new commercial, industrial and institutional facilities, and set timescales within which existing facilities should comply. Northern Ireland is currently drafting similar regulations.

## Biodiesel

Biodiesel production has become more financially attractive with the increasing price of fuel. However, there are significant environmental problems associated with its production. EHS has been discussing these issues with the Department of Agriculture and Rural Development (DARD) and the Industrial Pollution and Radiochemical Inspectorate (IPRI), who share some of the responsibilities in this area.

### 3.2.2 Timber Treatment Plants

The chemicals used in timber treatment contain substances that can damage the ecology and quality of receiving waters. The Pollution Prevention Team has previously visited the known Timber Treatment Plants in Northern Ireland. All of the Plants were issued with advisory information and letters. In 2006, 5 sites were revisited.



### 3.2.3 Construction sites

Construction sites (including a number of gas and water pipeline construction sites, new roads and bridges) continued to be a source of pollution problems. HQ and field staff visited a wide range of problem sites in 2006, with some sites requiring repeat visits in order to resolve the problems identified.

Ignorance of pollution prevention measures is widespread in the industry and, with the high number of new developments in Northern Ireland, much more educational work is needed. A new advisory booklet "Be Site Wise" was produced by EHS in 2005.



### 3.2.4 Catchment Surveys and River Walking

One method for identifying pollution is river walking where water quality monitoring has detected a problem. In 2006, work was done on the Braid and Main river systems as well as on reaches of the Six Mile Water, Copies Burn and River Derg.

### 3.2.5 Pesticides

DRD Water Service reported a series of pesticide exceedences in a number of drinking water catchments in 2006. Pollution Prevention staff investigated six reports, identified the most likely causes of the problem and offered advice to the probable polluters.

### 3.2.6 BASIS

**BASIS** is a voluntary scheme for the promotion of good practice in respect of agro-chemical storage. The team continued to inspect 'Basis' sites in 2006 with the Northern Ireland Fire and Rescue Service. Ten sites were visited during 2006.

### 3.2.7 DRD Road Service Depots

In 2006, at the invitation of DRD Roads Service, the Pollution Prevention Team began the process of carrying out environmental audits of their depots.

## 3.3 Sustainable Drainage Systems (SuDS)

In an effort to reduce pollution from diffuse sources, EHS continues to promote the use of Sustainable Drainage Systems (SuDS). Copies of *SuDS – an Introduction* and the SuDS video (*Designs That Hold Water*) are available on request from the Pollution Prevention Team. In 2006, the NI SuDS Working Party continued to work on the draft SuDS strategy for Northern Ireland. This is expected to be a significant work area for the team in 2007.

A major series of SuDS projects have now been installed in NI. Examples can be seen along many of the new road schemes. There are particularly visible examples beside the Toome bypass in Antrim and the A8 road to Larne. Less visible are percolation features like permeable pavements and storage systems under carparks.



## 3.4 River Basin District Management

The Pollution Prevention Team aims to reduce pollution and improve water quality in targeted catchments or river basin districts (RBDs) where the water quality is known to be poor. The objectives of the Targeted RBD Surveys are;

- To maintain or improve the Water Quality in the RBD;
- To respond to public requests or respond to Water Management Unit priorities;
- To provide support for the production of the relevant RBD Management Plan;
- To identify the adverse impacts in the RBD;
- To deliver information to the River Basin Planning team;
- To exchange pollution information on the RBD with stakeholders;
- To share pollution issues with other EHS teams to enforce the Water Order.

Specific RBD areas will be targeted for pollution prevention or pollution investigation for the following reasons;

- Identification through RBD Planning in Pollution Prevention Plans;
- EC Directive Failures;
- Field Staff concern;
- History of Pollution Incidents;
- Public complaint;
- Stakeholder complaint.

### 3.5 Customers

#### 3.5.1 Planning Applications

Responding to planning applications is one area where proactive pollution prevention advice can be provided and put into the public domain. The Pollution Prevention Team responds to a wide range of applications each year. For large projects, there may also be a need to identify requirements for the Environmental Impact Assessment and agree the contractor's method statement.

Some examples of planning applications that the team responds to, include;

- Wind Farms;
- Gas and water pipelines;
- Leisure Complex facilities;
- Housing Developments;
- Road and bridge schemes.
- Quarries; and
- waste transfer stations.

#### 3.5.2 Pollution Prevention Guidelines (PPGs)

The team continued to contribute to and promote the Pollution Prevention Guidelines (PPGs).

Annex E contains a complete list of all available pollution prevention advisory publications. These publications can be requested from the Pollution Prevention Team or downloaded from the EHS website:

<http://www.ehsni.gov.uk/environment/waterManage/waterPollution/publications.shtml>



### 3.6 Pollution Incidents

The Pollution Prevention Team, alone or with the field staff, visit all those persons or parties responsible for causing a high or medium severity pollution incident. The purpose of the visit is to advise of pollution prevention techniques to prevent recurrence of such incidents.

### 3.7 Pollution Prevention Team Contact Details

Tel: (028) 92623234  
(028) 92623098

Fax: (028) 92623011

E-mail: [pollutionprevention@doeni.gov.uk](mailto:pollutionprevention@doeni.gov.uk)

Web: [http://www.ehsni.gov.uk/environment/waterManage/waterPollution/pol\\_prevent.shtml](http://www.ehsni.gov.uk/environment/waterManage/waterPollution/pol_prevent.shtml)

## 4 Enforcement Action

### 4.1 Introduction

This section reports on the enforcement action, following water pollution investigations, undertaken by EHS under the Water (Northern Ireland) Order 1999. In 2005, under the terms of the Water (Northern Ireland) Order 1999, it was an offence to cause pollution of a waterway or groundwater. In particular:

**Article 7 (1)** of the Order dealt with the main pollution offence and stated that:

‘a person commits an offence if, whether knowingly or otherwise, he discharges or deposits any poisonous, noxious or polluting matter so that it enters a waterway or water contained in any underground stratum.’

**Article 9 (1)** stated that:

‘no person shall, without the consent of the Department, make any discharge into a waterway or underground stratum: (a) of any trade or sewage effluent; or (b) of any poisonous, noxious or polluting matter’

**Article 9 (4):**

Under this Article it was an offence for any person to contravene the conditions of any discharge consent

Anyone who contravenes any of these Articles can, if convicted in a Magistrate’s Court, be imprisoned for up to 3 months and / or be fined up to £20,000.

[Note: following the period to which this report refers, the Water (NI) Order 1999 was, in part, amended through articles contained in the Water and Sewerage Services (NI) Order 2006]

### 4.2 Enforcement Policy

Where pollution occurs, it is EHS policy to take formal enforcement action if this is warranted by the severity of the pollution and the circumstances which led to it occurring. In deciding what, if any, enforcement action to take in each case, EHS aims to ensure that enforcement action is:

- **Consistent** with the enforcement action taken in other cases;
- **Proportionate** to the risks the incident has posed to the environment and the seriousness of the breach of the law; and
- **Transparent**, in that those being regulated know what is expected of them and the public have confidence in the enforcement process.

The formal enforcement options available to EHS in pollution cases are:

- the issuing of an enforcement **warning letter**, or;
- the initiation of **prosecution proceedings**, and / or;
- the issuing of a **Water Order Notice**.

### 4.3 Enforcement Procedure

In cases where prosecution is deemed to be appropriate, EHS staff prepare a file of evidence, which is submitted to the Public Prosecution Service (formerly the Office of the Director of Public Prosecutions) with a recommendation for prosecution. The Public Prosecution Service (PPS) makes the final decision on whether to proceed with each prosecution, taking into account whether they believe there is sufficient evidence that an offence has been committed and whether a prosecution is in the public interest. EHS has an excellent record with the PPS in that, of the 48 draft prosecution files submitted to PPS for pollution incidents which occurred during 2005, PPS concurred with EHS's assessment and has, to date, proceeded with prosecutions in 46 cases.

Once EHS sends a file to PPS and the prosecution process has been initiated, a range of outcomes to the case are possible. If, at any time before the case is heard by the Magistrate, additional evidence comes to light which indicates that prosecution is not an appropriate response, EHS or PPS may **Withdraw (WD)** the case. Where the case comes to court and a person is found guilty of a pollution offence, a range of penalties can be imposed by the court. These are:

- **Imprisonment** for a maximum of 3 months if convicted in a Magistrate's Court, or for a maximum of 2 years if convicted in a Crown Court.
- **Fine** of up to £20,000 if convicted in a Magistrate's Court, or an unlimited fine if convicted in a Crown Court.
- **Conditional Discharge (CD)**, where the convicted person is released without punishment but may be retrospectively sentenced at a later date if they commit a further offence within a set period.
- **Absolute Discharge (AD)**, where the convicted person is released without punishment.

(EHS cases are usually heard by a Magistrate but, if the case is considered to be particularly serious, an application can be made for the case to be heard before a Judge in Crown Court)

All of the above penalties count as Convictions, i.e. the person has been found guilty of an offence, and this may be referred to in the event of a further prosecution of the convicted person. However, once a defendant has been convicted they have the right to appeal the decision made by the Court and have the case heard by a different Court. It is not unknown for a substantial fine to be significantly reduced on appeal.

Where the court finds the accused not guilty, the case is **Dismissed (DM)** by the court.

[Annex D](#) details by Category, the outcome of enforcement action taken for incidents that occurred during the period 1 January 2005 to 31 December 2005.

Where a prosecution results in a successful conviction in court, the court will normally award costs against the offender for the expenses incurred in serving the summons, and in the taking and analysis of samples. A Magistrate's Court may also order that compensation (up to £5,000) be paid if the pollution has caused a fish kill, or if other costs have been incurred in making good the environmental damage caused by the incident. In line with the "polluter pays" principle, it is EHS policy that, where possible, such costs will always be recovered from the polluter.

It takes time to compile a Prosecution case as evidence has to be gathered, witnesses interviewed, scientific analysis of samples carried out and the file prepared for submission to the Public Prosecution Service. Typically, this process takes several months even for straightforward cases. The current legislation (Water (NI) Order 1999) does not specify that a case has to be submitted to PPS within a time limit. However, where possible, EHS will submit a file within 6 months of the date of an incident. Therefore, cases relating to incidents that occurred in 2005 will usually be dealt with by the Courts during 2006. In some cases where the evidence is disputed, the outcome may not be known until much later. As there are still some prosecution files relating to incidents that occurred during 2005 that are at various stages of the prosecution process and whose outcome cannot be predicted, EHS publishes detailed information relating only to prosecution cases that have been completed.

#### 4.4 Enforcement action taken during 2006

For the incidents that occurred during 2006, EHS issued 158 warning letters and referred 37 cases to PPS with a recommendation for prosecution. To date, 23 of these cases have been heard in the Magistrate's Courts with 20 resulting in convictions.

#### 4.5 Enforcement action taken during 2005

For the incidents that occurred during 2005, EHS issued 185 warning letters and referred 48 cases to PPS with a recommendation for prosecution. To date, 43 of these cases have been heard in the Magistrate's Courts with 39 resulting in convictions.

Table 20 details the number of cases by pollutant Category that were referred by EHS to PPS with a recommendation for prosecution. *Agriculture* accounts for the highest percentage by category (54.0%) of cases referred to PPS for prosecution during 2005. This is due to agriculture causing a greater number of High and Medium severity incidents, compared with other Categories of pollution.

Category	Cases referred to PPS for prosecution	% of the total
Agriculture	26	54
Non Agric. Waste Dis.	8	17
Breach Of Consent	3	6
Sewage	2	4
Chemical	1	2
Oil	5	11
Other	3	6
Total	48	100%

*Table 20: Summary of cases referred to PPS with a recommendation for prosecution, for incidents that occurred during 2005 (as of 10.03.08)*

Table 21 details the analysis costs, court costs and fines imposed for convictions relating to pollution offences that occurred during the period 1 January – 31 December 2005.

CATEGORY	Analysis Costs	Court Costs	Fines	Total
Agriculture	£132.74	£1,011.55	£19,450.00	£20,594.29
Breach of Consent	£871.49	£108.00	£4,300.00	£5,279.49
Chemical	£171.83	£0.00	£0.00	£171.83
Non Agricultural Waste Discharge	£0.00	£138.00	£6,750.00	£6,888.00
Oil	£0.00	£112.00	£2,150.00	£2,262.00
Other	£0.00	£272.61	£2,650.00	£2,922.61
Sewage	£118.46	£126.00	£4,500.00	£4,744.46
TOTAL	£1,294.52	£1,768.16	£39,800.00	£42,862.68

*Table 21: Costs and Fines imposed under the Water (Northern Ireland) Order 1999, for pollution incidents that occurred during the period 01/01/05 - 31/12/05 (as of 10.03.08)*

The fines imposed for pollution incidents, broken down by category, which occurred during the period 1 January – 31 December 2005 are detailed in Annex D.

### 4.6 Trend in Enforcement Action

Table 22 and Figure 28 summarise the number of cases referred to the PPS with a recommendation for prosecution and the number of warning letters issued for incidents that occurred during the period 2000 - 2005.

Year	Water Order* Prosecution Cases	Fisheries Legislation Prosecution Cases	Total Prosecution Cases	Warning Letters
2000	76	7	83	246
2001	104	5	109	230
2002	99	2	101	202
2003	122	1	123	176
2004	78	1	79	195
2005	48	0	48	185

Table 22: Water pollution prosecution cases and warning letters, 2000 – 2005

\*The Water Act (Northern Ireland) 1972 was replaced by the Water (Northern Ireland) Order 1999 on 24 August 2001.

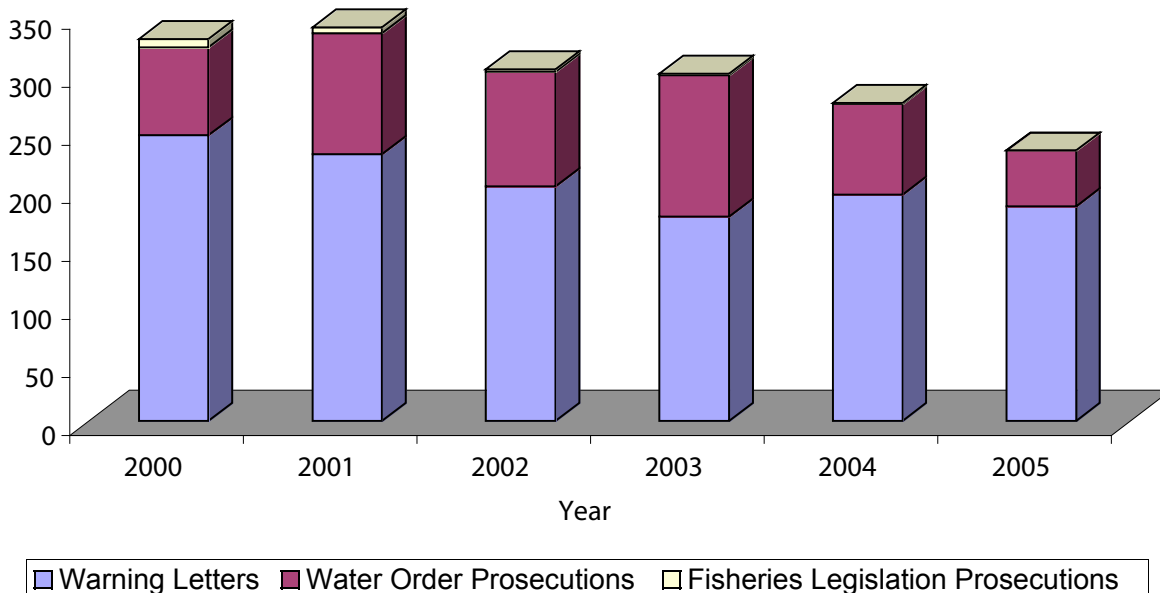


Figure 28: Water pollution prosecution cases and warning letters, 2000 - 2005

## 4.7 Warning Letters

As an alternative to initiating court action against polluters, EHS can issue warning letters. Warning letters are used where a pollution offence has occurred but the incident has been relatively minor, or where there are exceptional mitigating circumstances which render prosecution of the offender inappropriate. The purpose of a warning letter is to formally warn the offender that a low-level pollution offence has been committed, to advise on how to prevent further pollution, and to warn the offender of the consequences of not taking remedial action. There is no penalty attached to a warning letter, though it may be produced in court in the event of a further offence. [Table 22](#) details the number of warning letters issued by EHS for the period 2000 to 2005.

## 4.8 Notices issued under the Water (Northern Ireland) Order 1999

The Water (Northern Ireland) Order 1999 gives EHS the power to issue legally binding 'Notices' which can be used where an offender is required to take prompt action to stop pollution, to mitigate against its effects or to remove a serious risk of pollution. EHS generally finds that an explanation of the problem and its remedy to the offender, or the initiation of other formal enforcement action (prosecution or warning letter), is sufficient to prompt an offender to take immediate steps to remedy pollution or a pollution threat. However, in those rare instances where an offender will not voluntarily take the necessary remedial action, Water Order Notices are a very powerful instrument to remedy pollution or pollution threats.

The Notices that can be issued are briefly summarised below:

- An **Article 8 Prevention Notice** may be used where the priority is to stop or contain pollution (or a threat of pollution) at its source, and where a clean-up of pollution is either unnecessary or of secondary importance.
- An **Article 12 Enforcement Notice** may be used where the conditions of a discharge consent issued by the Department are being breached or are likely to be breached.
- An **Article 15 Pollution Emergency Prohibition Notice** may be used where the consequences of pollution or the potential consequences of a pollution threat are so serious that immediate action is judged to be essential.
- An **Article 17 Anti-Pollution Works Notice** will normally be used where the primary requirement is to clean up pollution or to make good the damage caused by pollution.

The normal format of Notices is that they specify the pollution problem or threat, and the steps which must be taken to remedy it, while giving the offender a strict, but realistic, timetable in which to take those remedial steps. The exception is an Article 15 Notice, which takes immediate effect, and which is used where the effect (or potential effect) of pollution is of such significance that immediate action must be taken.

The Department issued 4 enforcement notices during 2006.

## 4.9 Recovery of Costs

The cost of pollution clean-up can, in certain cases, be considerable. In line with the “polluter pays” principle, it is EHS policy that, where possible, such costs will always be recovered from the polluter. If the polluter is unidentified, EHS will normally meet the costs.

## 5 Industrial Consents: Regulation of Industrial Discharges under the Water (Northern Ireland) Order 1999 from 2000 to 2006

### 5.1 Introduction

Under the Water Order, it is an offence to discharge trade or sewage effluent to waterways or to water in underground strata without the consent of the Department of the Environment (DOE).

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.

This section describes the system used to regulate 'industrial' or 'trade' discharges to the aquatic environment in NI and summarises discharge consent compliance during the period 2000 to 2006. This section does not cover discharges from;

- 'Part A installations' permitted under the Pollution Prevention and Control Regulations (NI) 2003, which are subject to regulation by the Chief Industrial Pollution Inspector (EHS);
- Single domestic dwellings; or
- Installations owned by Northern Ireland Water Ltd.

Information on these discharges can be found on the EHS Website [www.ehsni.gov.uk](http://www.ehsni.gov.uk) or can be obtained from EHS directly.

### 5.2 Setting Discharge Consents

As described above, under the Water Order, it is an offence to discharge trade or sewage effluent to waterways or groundwater without the consent of EHS. Discharge consents lay down conditions relating to the quality and quantity of effluent that may be discharged. The conditions are formulated using scientific protocols which ensure that the discharge can be sustained by the receiving waterway without damage to the aquatic environment and without breaching national or EU Directive standards.

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; and
- relevant EU Directive requirements, or international agreements.

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 normally 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. [Table 23](#) illustrates some typical discharge consent conditions.

Condition	Details
<i>Specific discharge point</i>	<i>The effluent discharged to the waterway at IGR XX shall not:</i>
<i>Chemical limits - numerical</i>	<i>- contain XX in excess of XX milligrams per litre;</i>
<i>Chemical limits - observational</i>	<i>- contain any visible oil or grease;</i>
<i>Temperature limit (if appropriate)</i>	<i>- have a temperature in the final discharge exceeding XX degrees Celsius;</i>
<i>Flow limit (if appropriate)</i>	<i>- have a total flow exceeding XX cubic metres per day</i> <i>- have a maximum flow exceeding XX litres per second;</i>
<i>Environmental safeguard</i>	<i>- contain any substance (other than as defined above) which will cause the waterway or water in an underground stratum to be toxic or injurious to fish or other aquatic organisms.</i>
<i>Access</i>	<i>Authorised officers of the Department shall at all times be allowed to readily and safely obtain a sample of the effluent, a measurement of flow and images of the discharge or other data relative to the discharge.</i>
<i>Requirement for sampling</i>	<i>The sample point for this discharge shall be maintained so that it is freely available and accessible to authorised officers of the Department at all times. The sampling point shall be at IGR XX as illustrated in the site plan.</i>
<i>Pollution prevention informative</i>	<i>Bunds shall be provided around any oil or chemical storage tanks on the premises to reduce the risk of pollution of neighbouring watercourses and groundwater from accidental spillage or leakage.</i>

*Table 23: Example of Typical Discharge Consent Conditions*

Anyone wishing to make a discharge to the aquatic environment in NI must submit a discharge consent application form to EHS with the appropriate fee. The stages of the consent setting process are as follows:

1. Application received and checked;
2. Consultation with statutory consultees, including district councils and Natural Heritage of EHS;
3. Advertisement in local press (paid for by the applicant);
4. Public consultation;
5. Objections considered;
6. Draft consent conditions (DCCs) drawn up;
7. Consultation on DCCs with statutory bodies (Fisheries Conservancy Board, Loughs Agency, Fisheries Division of Department of Culture, Arts and Leisure);
8. DCCs issued to the applicant; and
9. Final Water (Northern Ireland) Order 1999 consent issued.

The time allowed for the above process is a maximum of 4 months from receipt of a completed application, but time extensions may be sought if necessary.

Under the Water Order, it is also a legal requirement to notify EHS of any significant changes relating to the discharge consent. These could include changes to the effluent volume or composition, to the discharge point location, to the name or address of the consent holder, and any other relevant details, such as an updated postal address. These changes may also incur a fee.

EHS may also review or revoke a discharge consent. However, this would not normally happen within 4 years of the date of issue.

The applicant has the right to appeal to the Water Appeals Commission against:

- any condition(s) contained in the consent granted which the applicant finds unacceptable;
- the Department's decision to refuse an application for consent; or
- the Department's decision to revoke an existing consent.

Registers of discharge consents are held by EHS and are open to public inspection. The results of compliance monitoring and any actions taken by EHS, as described later in this section, are also recorded in the public register. It should also be noted that charging for applications for discharge consents has applied since 29 October 2001, and annual charges for monitoring discharge consents were introduced with effect from 1 January 2003.

### 5.3 Discharge Consent Monitoring and Assessment

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 in a cost effective way at those discharges which, because of their volume or composition, have the greatest pollution potential.

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.

Compliance monitoring normally includes the routine collection of samples, or visual inspections, or both. All consent holders are obliged to ensure that:

- the sample point for their discharge is maintained so that it is freely available and accessible to authorised officers of the Department at all times; and
- authorised officers of the Department are at all times allowed to readily and safely obtain a sample of the effluent, a measurement of the flow and images of the discharge or other data relative to the discharge.

These conditions are fundamental to the sampling and inspection programme as consent holders are not told in advance when sampling will take place.

Failure to provide a sampling point, or safe access to the sampling point, constitutes failure to comply with the provisions of the consent and can lead to enforcement action. This requirement covers the use of manhole covers or access points that sampling staff might not reasonably be expected to handle.

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.

EHS takes enforcement action only where the absolute standard is grossly exceeded or where the 95-percentile compliance is exceeded. The following "look-up" table (Table 24) is used to assess 95-percentile compliance based on sampling frequency.

Number of Samples	Permitted Number of Failed Samples
4 - 7	1
8 - 16	2
17 - 28	3
29 - 40	4
41 - 53	5
54 - 67	6

*Table 24: Look-up Table for Assessing 95-Percentile Compliance*

Using this Table, when a discharge is sampled from 4 to 7 times per year, it is permitted to exceed the consented limit on 1 of these sampling occasions and still be within the 95-percentile compliance limit. Similarly, a discharge sampled from 8 to 16 times is permitted to exceed the consented limit twice and still be within the 95-percentile compliance limit.

The use of a 95-percentile compliance assessment means that a discharge must be within its consent conditions 95% of the time. This gives EHS statistical confidence that enforcement action will not be taken as the result of a discharge being wrongly declared non-compliant.

There are a range of reasons why discharges may not be sampled by a sampling officer, including:

1. No discharge at time of sampling visit;
2. No sample point provided;
3. No access to sample point;
4. Green field site/premises not developed;
5. Health and safety problems (including adverse weather);
6. Correct equipment/sample bottle not available;
7. Statutory consent sample taken;
8. Time constraints; and
9. Other than above (an explanation must be given by the sampling officer).

EHS excludes sites that are not sampled when assessing overall compliance. The Environment Agency for England and Wales (EA), however, treats discharges that are not sampled as passes, except where there is no sample point provided (2 above) or statutory samples have been taken with a view to prosecution (7 above), in which case the EA treats them as failures.

EA also assesses compliance using both absolute and 95-percentile methods. Results of the EHS monitoring programme are presented later in this Report using EHS and EA assessment methods to allow comparison between all common assessment methods. In future, EHS intends to assess consent compliance in accordance with EA methodology.

#### 5.4 Actions Taken in Relation to Compliance

If the results of monitoring and/or inspections show that a discharge is compliant with its consent conditions, the results are recorded and only issued to consent holders in the following calendar year as an annual summary.

The action taken in the event of non-compliance depends on the circumstances of each individual case and takes account of a number of factors, including severity, extent, duration, and repetition of the non-compliance.

EHS seeks to work co-operatively with industry to secure improved practice, but acknowledges that enforcement action will need to be taken in some cases to ensure compliance. Any enforcement action taken is in accordance with the EHS *Enforcement and Prosecution Policy for Environmental Protection* which can be found on the EHS Website [www.ehsni.gov.uk](http://www.ehsni.gov.uk) or obtained from EHS directly.

Under this policy, EHS endeavours to be;

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

If there is a sample failure, but the 95-percentile is not exceeded and the failure is not excessive, EHS may issue an advisory letter.

In more serious cases, such as where the 95-percentile is exceeded, EHS may issue a warning letter detailing any areas of concern/non-compliance and the remedial action required within a specified timescale. Follow-up site visits may be undertaken.

In some cases a statutory enforcement notice may be served under Article 12 of the Water Order. This notice will detail action which must be taken within a specified period. EHS may at any time withdraw the notice, extend the period for compliance, or modify the requirements of the notice following consultation.

EHS may also initiate prosecution procedures. This action is usually taken only where compliance is consistently poor or there is an associated pollution incident.

Consent holders can appeal to the Water Appeals Commission within 28 days from the date on which any notice is served. The appeal should contain, or be accompanied by, a statement of the grounds of the appeal. The Water Appeals Commission has powers that include being able to:

- Require withdrawal of the notice;
- Modify any of its requirements; or
- Dismiss the appeal.

Failure to comply with the conditions of a consent or a notice served under Article 12 is an offence under the Water Order which can on summary conviction lead to a maximum fine of £20,000 or a maximum prison sentence of three months (two years on conviction on indictment), or both. It is also an offence to obstruct an authorised officer in carrying out their duties under the Water Order or to make a false or misleading statement for the purpose of obtaining any discharge consent or variation of consent.

### 5.5 Compliance with Water (Northern Ireland) Order 1999 Discharge Consents 2000 to 2006

In 2000, there were 1009 active Water Order discharge consents of which 533 were on the EHS monitoring programme (Table 25). The number of active discharge consents has increased each year and by 2006 had reached 2336. The number of discharges monitored by EHS has also generally increased over this period, and in 2006 there were 759 sites in the EHS monitoring programme.

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

Table 25: Active and Monitored Discharges 2000-2006

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.

Table 26 shows the percentage of monitored discharges which complied with consent conditions each year over the period 2000 to 2006. Results are presented using the EA absolute assessment, and compliance with the 95-percentile using both the EHS and EA assessment methods.

The EA absolute assessment is included because it was the basis for reporting compliance in the EHS report '*Managing the Water Environment in Northern Ireland 2000*', the last document in which industrial discharge consent compliance was published.

Year	% Compliance (EA Absolute Limits)	% Compliance (EHS 95-Percentile)	% Compliance (EA 95-Percentile)
2000	52	48	71
2001	61	57	79
2002	60	61	81
2003	61	58	79
2004	65	60	83
2005	65	62	84
2006	70	64	87

Table 26: Annual Industrial Discharge Consent Compliance 2000 to 2006

Over the period 2000 to 2006, all three assessment methods show a similar increase of approximately 16-18% in the compliance of consented discharges.

Under all three assessment methods, the greatest improvement in consent compliance occurred between 2000 and 2001. From 2001 there is some variability year on year between the assessment methods, but the general trend has been an improvement in compliance up to 2006.

## 5.6 Compliance by Sector

The overall compliance figures can be broken down by the following key industrial sectors;

- Aggregates and Concrete;
- Private Sewage;
- Fuel Depots;
- Site Drainage;
- Fish Farms, and
- Food Processing.

Table 27 presents discharge consent compliance for these key industrial sectors for the years 2000 and 2006.

Industrial Sector	Number of Monitored Discharges	% Compliance		
		EHS 95 - Percentile	EHS 95 - Percentile	
	2000		2006	
Aggregates and Concrete	133	48	89	75
Private Sewage	93	47	120	51
Fuel Depots	37	46	36	67
Site Drainage	25	52	120	68
Fish Farms	17	88	9	78
Food Processing	26	23	13	46

*Table 27: Annual Industrial Discharge Consent Compliance by Sector in 2000 and 2006 using the EHS 95-Percentile*

The aggregates and concrete sector has shown an increase in compliance of 27% over the period 2000 to 2006. Certain industries within this sector, such as sand and gravel and quarry operations, have generally demonstrated a greater improvement in compliance over this period. However, compliance problems, especially with regard to the pH value of effluents, are still occurring in some concrete and cement manufacturing plants. 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 Scheme.

Compliance by the private sewage sector has shown a slight improvement of 4% over the reporting period. Most consent failures in this sector relate to standards for Biochemical Oxygen Demand (BOD), which is generally a reflection of poor maintenance of package sewage treatment plants in the private sector. EHS has been involved at a national level through the forum of British Water in the development of a variety of standards for the design and maintenance of sewage treatment plants in partnership with EA, the Scottish Environment Protection Agency (SEPA) and the companies which manufacture and supply sewage treatment plants. It is hoped that this work will lead to improved performance in this sector in the future.

Fuel depots and site drainage have shown modest improvements in discharge consent compliance, rising to 67% and 68% respectively, over the reporting period. As the discharges from both of these sectors are highly dependent on rainfall, they are difficult to control in extreme weather conditions and require careful on-site management. EHS intends to improve liaison with these sectors to address future compliance.

The aquaculture industry (fish farming) has shown a slight reduction of 10% in compliance over the reporting period. This reduction was due not to the quality of effluent discharges but rather to the failure to provide safe sampling facilities on site, especially in 2004 and 2005. Nevertheless, this sector shows the best compliance with discharge consent conditions. EHS has been working with the Aquaculture Initiative, and in 2007 launched an agreed environmental improvement scheme.

The food processing industry has consistently shown very poor compliance, rising from 23 % in 2000 to 46% compliance in 2006. This has resulted in EHS having to take frequent enforcement action against a number of consent holders in this sector. A number of these discharges transferred to control under IPPC licence during 2004 and 2005.

## 5.7 Future Compliance

EHS has committed to delivering the following strategic target:  
"To achieve 90% compliance with Water (NI) Order 1999 consent standards by 2016."

To help to achieve this target, EHS has undertaken a range of activities working with industry. For example, EHS has completed a programme of 287 industrial site visits during 2007. During these visits, EHS staff can discuss issues relating to discharge consents with consent holders as well as providing wider pollution prevention guidance. A series of Pollution Prevention Guidelines produced jointly by agencies across the UK provide information on best practice for a wide range of potentially polluting activities and operations (Annex E). The Guidelines can be downloaded from <http://www.ehsni.gov.uk/environment/watermanage/waterpollution/publications> or obtained directly from EHS.

In addition, EHS has established a number of industrial sector working groups aimed at improving compliance with Water Order discharge consents. These groups include quarry operators, sand and gravel extractors, fish farm and hatchery owners, peat bog extractors and suppliers of small sewage treatment plants. The groups provide a forum for debate within these sectors and ensure uniformity of regulation. EHS also works in partnership with Invest NI (INI) and various industrial sectors to raise awareness of consent compliance and wider environmental protection issues through workshops, seminars and publications. EHS is keen to extend this industrial liaison.

## 5.8 Water Framework Directive

The EU Water Framework Directive (WFD) was adopted in December 2000. The WFD established a new system for protecting the water environment as a whole, integrating water quality, quantity and morphology with ecological indicators. Current water quality classification systems used in NI, and indeed throughout the UK, rely on a limited range of chemical and biological indicators. The health of the animal and plant groups that live in surface waters, and the underlying chemical and morphological conditions which would support these ecological communities, will now be the main factors defining the status of those waters. Existing water quality standards must therefore be reviewed to ensure that the waters are capable of supporting all aquatic systems in 'good' status. This may, in turn, lead to EHS having to amend the conditions of existing Water Order discharge consents.

EHS is a member of the UK Technical Advisory Group (UKTAG), which is responsible for developing UK approaches to WFD implementation. Under the guidance of the UKTAG, the environment and conservation agencies in the UK have been working together to develop the best technical understanding of the standards and conditions needed to support healthy aquatic plant and animal communities. New classification systems, environmental standards and conditions are being developed for use in assessing and classifying water bodies.

Many of the proposed UK environmental standards are now available on the UKTAG website at [www.wfduk.org](http://www.wfduk.org).

The WFD requires that programmes of measures be prepared by 2009 to ensure that the objectives of the Directive are achieved and that these measures be operational by 2012. In order to achieve the requirements of the WFD, EHS may have to review discharge consent conditions against new WFD-compliant standards where these differ from previously adopted standards.

## Annex A

### Pollution incident impact assessment criteria

#### **High**

A major incident involving one or more of the following:

- a. potential or actual persistent effect on water quality or aquatic life;
- b. closure of potable water, industrial or agricultural abstraction if necessary;
- c. extensive fish kill;
- d. excessive breaches of consent conditions;
- e. extensive remedial measures necessary;
- f. major effect on amenity value.

#### **Medium**

A significant pollution incident involving one or more of the following:

- a. notification to abstractors necessary;
- b. significant fish kill;
- c. measurable effect on invertebrate life;
- d. water unfit for stock;
- e. bed of watercourse contaminated;
- f. amenity value to the public, owners or users reduced by odour or appearance.

#### **Low**

A minor incident resulting in localised environmental impact only. Some of the following may apply:

- a. notification to abstractors not necessary;
- b. fish kill of fewer than 10 fish (species of no particular importance to the affected water);
- c. no readily observable effect on invertebrate life;
- d. water unfit for stock;
- e. bed of watercourse only locally contaminated;
- f. minimal environmental impact and amenity only marginally affected.

#### **Unsubstantiated**

A reported pollution incident which, on investigation, proves to be unsubstantiated, i.e. no evidence can be found of a pollution incident having occurred.

## Annex B


### Reporting water pollution incidents to EHS – Freephone 0800 807060

When reporting water pollution, the following information enables EHS to assess, prioritise and investigate the incident, thus greatly increasing the rate of substantiation:

- **Name, address and telephone number** of person reporting the incident (this remains confidential);
- **Where pollution is occurring?** (e.g. name of river, town land, road, nearest town);
- **When was the pollution first seen?** (e.g. is it occurring at present? Has it previously occurred?);
- **What is the pollution?** (e.g. appearance, smell, effect on surrounding environment, amount of pollution);
- **Who is suspected to have caused the pollution?** (name / address etc);
- **Has the incident been reported to anyone else?**

EHS Water Management deals with Water Pollution affecting watercourses (or in storm drains that discharge to a watercourse). However **Northern Ireland Water, DARD Rivers Agency** or **DRD Roads Service** should be contacted under the following circumstances :


#### Northern Ireland Water (formerly DRD Water Service)

Blocked sewers, problems with water mains	08457 44 00 88	 24 hr Service
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#### DARD Rivers Agency

Flooding rivers and blocked watercourses	Eastern Region (028)	92606100	 24 hr Service
	Western Region (028)	82254900	

#### DRD Roads Service

Blocked road gullies, road drains	Northern Division	(028) 70363202	 24 hr Service
	Southern Division	(028) 37529500	
	Eastern Division	(028) 90253000	
	Western Division	(028) 82241999	

## Annex C

### Pollution incident statistics tables

Area	2001	2002	2003	2004	2005	2006
1	323	392	297	185	180	172
2	116	119	117	100	73	90
3	164	155	157	154	139	149
4	153	129	159	163	176	155
5	214	179	207	158	103	125
6	204	160	225	218	197	163
7	95	81	96	80	90	72
8	82	57	89	68	83	78
9	210	245	205	101	133	129
<b>Total</b>	<b>1561</b>	<b>1517</b>	<b>1552</b>	<b>1227</b>	<b>1174</b>	<b>1133</b>

Table 1: Regional Distribution of Incidents, 2001 – 2006.

Source	2001	2002	2003	2004	2005	2006
Farm	490	467	380	296	273	228
Water Service	308	258	364	289	307	285
Industry	365	351	337	302	228	263
Domestic	185	201	235	149	178	153
Other	172	184	197	154	157	170
Transport	41	56	39	37	31	34
<b>Total</b>	<b>1561</b>	<b>1517</b>	<b>1552</b>	<b>1227</b>	<b>1174</b>	<b>1133</b>

Table 2: Substantiated pollution incidents by Source, 2001 – 2006.

Category	2001	2002	2003	2004	2005	2006
Sewage	472	430	583	429	452	422
Agriculture	474	441	375	296	258	222
Oil	250	272	239	227	224	216
Non Agric Waste Dis.	174	187	135	87	66	92
Other	84	95	111	128	123	116
Chemical	89	62	68	34	27	37
Breach Of Consent	18	30	41	26	24	28
<b>Total</b>	<b>1561</b>	<b>1517</b>	<b>1552</b>	<b>1227</b>	<b>1174</b>	<b>1133</b>

Table 3: Substantiated pollution incidents by Category, 2001 – 2006.

**Annex C**

<b>Cause</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>
<b>Equipment Failure</b>	296	225	237	253	233	211
<b>Poor Working Practice</b>	297	330	340	221	192	196
<b>Unknown</b>	258	256	262	171	195	214
<b>Accident / Emergency</b>	127	135	154	147	167	122
<b>Inadequate Equipment</b>	128	114	147	127	132	102
<b>Negligence</b>	154	156	138	105	71	73
<b>Weather</b>	85	102	68	74	60	58
<b>Deliberate dumping</b>	143	123	120	67	56	63
<b>Breach of Consent</b>	21	36	40	32	27	39
<b>Other</b>	52	40	46	30	41	55

Table 4: Cause of Pollution Incidents, 2001 – 2006

## Annex C

High						
Region	2001	2002	2003	2004	2005	2006
1	4	1	3	1	2	2
2	6	3	5	5	2	4
3	6	3	5	4	1	4
4	7	10	7	0	2	1
5	1	1	3	3	0	2
6	11	5	9	3	7	2
7	6	0	6	5	3	5
8	5	0	2	1	2	3
9	3	1	2	1	1	0
<b>Total</b>	<b>49</b>	<b>24</b>	<b>42</b>	<b>23</b>	<b>20</b>	<b>23</b>

Table 5.1: Regional distribution of High severity pollution incidents, 2001 – 2006

Medium						
Region	2001	2002	2003	2004	2005	2006
1	21	33	26	30	11	15
2	44	35	38	44	19	15
3	35	41	30	33	14	28
4	43	34	52	43	22	20
5	24	16	26	9	10	11
6	52	38	50	52	51	36
7	32	30	35	29	35	23
8	24	7	7	19	9	4
9	31	22	33	27	29	16
<b>Total</b>	<b>306</b>	<b>256</b>	<b>297</b>	<b>286</b>	<b>200</b>	<b>168</b>

Table 5.2: Regional distribution of Medium severity pollution incidents, 2001 – 2006

**Annex C**

Low						
Region	2001	2002	2003	2004	2005	2006
1	298	358	268	154	167	155
2	66	81	74	51	52	71
3	123	111	122	117	124	117
4	103	85	100	120	152	134
5	189	162	178	146	93	112
6	141	117	166	163	139	125
7	57	51	55	46	52	44
8	53	50	80	48	72	71
9	176	222	170	73	103	113
<b>Total</b>	<b>1206</b>	<b>1237</b>	<b>1213</b>	<b>918</b>	<b>954</b>	<b>942</b>

Table 5.3: Regional distribution of Low severity pollution incidents, 2001 – 2006

## Annex C

Time period	No. High & Medium severity incidents received	No. High & Medium severity incidents responded to within 4 hrs	Response rate
Q1, (1/1/01 - 31/3/01)	60	59	98.33%
Q2, (1/4/01 - 30/6/01)	90	81	90.00%
Q3, (1/7/01 - 30/9/01)	130	112	86.15%
Q4, (1/10/01 - 31/12/01)	41	39	95.12%
<b>Total for 2001</b>	<b>321</b>	<b>291</b>	
		<b>Overall response rate for 2001</b>	<b>90.65%</b>

Table 6.1 : Response rate to High and Medium Severity incidents, 2001

Time period	No. High & Medium severity incidents received	No. High & Medium severity incidents responded to within 4 hrs	Response rate
Q1, (1/1/02 - 31/3/02)	55	46	83.64%
Q2, (1/4/02 - 30/6/02)	75	61	81.33%
Q3, (1/7/02 - 30/9/02)	80	64	80.00%
Q4, (1/10/02 - 31/12/02)	54	47	87.04%
<b>Total for 2002</b>	<b>264</b>	<b>218</b>	
		<b>Overall response rate for 2002</b>	<b>82.58%</b>

Table 6.2 : Response rate to High and Medium Severity incidents, 2002

Time period	No. High & Medium severity incidents received	No. High & Medium severity incidents responded to within 4 hrs	Response rate
Q1, (1/1/03 - 31/3/03)	87	84	96.6%
Q2, (1/4/03 - 30/6/03)	110	103	93.6%
Q3, (1/7/03 - 30/9/03)	100	94	94.0%
Q4, (1/10/03 - 31/12/03)	42	36	85.7%
<b>Total for 2003</b>	<b>339</b>	<b>317</b>	
		<b>Overall response rate for 2003</b>	<b>93.5%</b>

Table 6.3 : Response rate to High and Medium Severity incidents, 2003

## Annex C

Time period	No. High & Medium severity incidents received	No. High & Medium severity incidents responded to within 4 hrs	Response rate
Q1, (1/1/04 - 31/3/04)	70	67	95.7%
Q2, (1/4/04 - 30/6/04)	76	75	98.7%
Q3, (1/7/04 - 30/9/04)	101	94	93.1%
Q4, (1/10/04 - 31/12/04)	63	61	96.8%
<b>Total for 2004</b>	<b>310</b>	<b>297</b>	
		<b>Overall response rate for 2004</b>	<b>95.8%</b>

Table 6.4 : Response rate to High and Medium Severity incidents, 2004

Time period	No. High & Medium severity incidents received	No. High & Medium severity incidents responded to within Target	Response rate
Q1, (1/1/05 - 31/3/05)	56	52	93%
Q2, (1/4/05 - 30/6/05)	69	66	96%
Q3, (1/7/05 - 30/9/05)	58	56	97%
Q4, (1/10/05 - 31/12/05)	37	35	95%
<b>Total for 2005</b>	<b>220</b>	<b>209</b>	
		<b>Overall response rate for 2005</b>	<b>95.0%</b>

\* The Incident Response Targets Changed in 2005. (The Targets are detailed in Section 2.10).

Table 6.5 : Response rate to High and Medium Severity incidents, 2005

Time period	No. High & Medium severity incidents received	No. High & Medium severity incidents responded to within Target	Response rate
Q1, (1/1/06 - 31/3/06)	47	47	100%
Q2, (1/4/06 - 30/6/06)	46	45	98%
Q3, (1/7/06 - 30/9/06)	52	51	98%
Q4, (1/10/06 - 31/12/06)	46	45	98%
<b>Total for 2006</b>	<b>191</b>	<b>188</b>	
		<b>Overall response rate for 2006</b>	<b>98.4%</b>

\* The Incident Response Targets Changed in 2005. (The Targets are detailed in Section 2.10).

Table 6.6 : Response rate to High and Medium Severity incidents, 2006

**Annex C**

Source	2001	2002	2003	2004	2005	2006	Total
Farm	22	6	8	9	5	3	53
Water Service	8	1	6	4	2	7	28
Industry	11	4	6	1	1	2	25
Domestic	0	0	1	0	0	1	2
Other	4	4	3	3	2	6	22
Transport	0	0	0	1	0	0	1
<b>Total</b>	<b>45</b>	<b>15</b>	<b>24</b>	<b>18</b>	<b>10</b>	<b>19</b>	<b>131</b>

Table 7: Trend in pollution Sources Causing Fish Kills, 2001 - 2006

## Annex D

### Fines imposed under the Water (Northern Ireland) Order 1999 for pollution incidents that occurred during the period 1/1/05 - 31/12/05 (as of 10/03/08).

CATEGORY	NO. OF CASES TO DPP	NO. OF OUTCOMES	FINES (£)	CASES PENDING
Agriculture	26	26	£19,450.00 £100.00 (1) £200.00 (1) £300.00 (4) £350.00 (1) £400.00 (2) £500.00 (4) £600.00 (1) £1,000.00 (3) £1,200.00 (1) £1,250.00 (1) £1,500.00 (1) £3,000.00 (1) £4,250.00 (1) CD (1) WD (3)	0
Breach of Consent	3	3	£4,300.00 £200.00 (1) £500.00 (1) £3,600.00 (1)	0
Chemical	1	0	£0.00	1
Non Agricultural Waste Discharge	8	7	£6,750.00 £500.00 (1) £750.00 (1) £1,500.00 (1) £4,000.00 (1) DM (1) WD (2)	1
Oil	5	4	£2,150.00 £300.00 (1) £350.00 (1) £500.00 (1) £1,000.00 (1)	1
Other	3	3	£2,650.00 £250.00 (1) £400.00 (1) £2,000.00 (1)	0
Sewage	2	2	£4,500.00 £1,500.00 (1) £3,000.00 (1)	0
<b>TOTALS</b>	<b>48</b>	<b>45</b>	<b>£39,800.00</b>	<b>3</b>

**AD** – Absolute Discharge

**CD** – Conditional Discharge

**DM** – Dismissed

**WD** – Withdrawn

**Sen** – Sentence(Custodial)

( ) – Figure in brackets indicates the no. of individual cases

**ANNEX E: The Joint Environment Agencies' Pollution Prevention Guidelines and Advice Leaflets.**

Quantity	PPG	Contents of Guideline
	1	General guide to the prevention of pollution of controlled waters
	2	Above ground oil storage tanks
	3	The use and design of oil separators in surface water drainage systems
	4	Disposal of sewage where no mains drainage is available
	5	Works in, near or liable to affect watercourses
	6	Working at demolition & construction sites
	7	Fuelling stations: construction & operation
	8	Safe storage & disposal of used oils
	10	Highway depots
	13	The use of high pressure water & steam cleaners
	14	Boats and marinas
	17	Dairies and other milk handling operations
	18	Managing firewater and major spillages
	19	Garages and vehicle service centres
	20	Dewatering underground ducts and chambers
	21	Pollution Incident Response Planning
	22	Spillages on Highways
	24	Stables, Kennels and Catteries
	25	Hospitals and Health Care Establishments
	26	Storage and handling of Drums & Intermediate Bulk Containers
	27	Techniques for the installation, decommissioning and removal of underground storage tanks
	28	Controlled Burn

Quantity	Oil Care Campaign Publications
	Oil Care Code
	Oil Care at Work
	Oil Care at Home
	Oil Care - Domestic Oil Storage
	Oil Care on your Boat
	Oil Can Spoil - Use an Oil Bank (Poster)
	Changing your Oil? (Poster)
	Industrial Oil Tank (Sticker)
	Domestic Oil Tank (Sticker)
	Oil Bank (Sticker)
	Use Your Brain, Not The Drain (Sticker)

Quantity	Other Pollution Prevention Publications
	Masonry Bunds for oil storage tanks
	Concrete Bunds for oil storage tanks
	Timber Treatment Plants Code of Practice
	An Introduction to Sustainable Drainage Systems
	Designs That Hold Water – SUDS (video)
	Pollution Prevention Pays
	Pollution Prevention Pays (Poster 1)
	Pollution Prevention Pays (Poster 2)
	Pollution Prevention Pays (video application)
	Pollution Prevention Pays (Video)

**Contact Details**

Contact Name ..... Job Title: .....

Company:Address: .....

Postcode: .....

Tel: ..... Fax: .....

E-mail: .....

**Request publications by:**

Post: [Pollution Prevention](#) 17 Antrim Road Lisburn BT28 3AL  
 Telephone: 028 92623234/ 028 92623098, Fax: 028 92623011 ,  
 E-mail: [pollutionprevention@doeni.gov.uk](mailto:pollutionprevention@doeni.gov.uk)

## Annex F

### CONTACT NUMBERS

Department of the Environment

#### Environment and Heritage Service

Internet - [www.ehsni.gov.uk](http://www.ehsni.gov.uk)

#### Water Management Unit

17 Antrim Road  
Lisburn BT28 3AL

<b>General Enquiries -</b>	(028) 9262 3100
<b>Nitrates Regulations -</b>	(028) 9262 3184
<b>SSAFO Regulations -</b>	(028) 9262 3102
<b>Groundwater Authorisations -</b>	(028) 9263 3445
<b>Sewage Sludge to Land -</b>	(028) 9263 3445
<b>Discharge Consent for single domestic dwellings -</b>	(028) 9262 0014
<b>All other Discharge Consents -</b>	(028) 9262 3034
<b>Abstraction Licensing -</b>	(028) 9263 3482

**Water Pollution Hotline -** (0800) 807060  
(A 24-hour hotline for reporting pollution incidents. This is a confidential service)

**Fax Number -** (028) 9267 6054

#### Land and Resource Management

Klondyke Building  
Gasworks Business Park  
Lower Ormeau Road  
Belfast

<b>General Enquiries</b>	(028) 9056 9353
<b>Waste Management Exemptions Queries</b>	(028) 9056 9360
<b>Registration of Carrier's Queries</b>	(028) 9056 9389
<b>Hazardous Waste Section</b>	(028) 9056 9311

#### Industrial Pollution and Radiochemical Inspectorate

Klondyke Building  
Gasworks Business Park  
Lower Ormeau Road  
Belfast

**Industrial Pollution Prevention and Control Queries (IPPC)** (028) 9025 4773

**Natural Heritage**

Klondyke Building  
Gasworks Business Park  
Lower Ormeau Road  
Belfast

**Conservation, Designations and Protection**

(028) 9056 9538

**Conservation Science**

(028) 9056 9604

**Biodiversity Queries**

(028) 9056 9605

**Historic Buildings and Monuments**

Klondyke Building  
Gasworks Business Park  
Lower Ormeau Road  
Belfast

**Historic Buildings General Queries**

(028) 9054 3095

**Historic Monument General Queries**

(028) 9054 3037





1. Impact on Dock Due to a Significant Oil Spill

2. Heavy Sewage Fungus Caused by Sewage Overflows in Wet Weather

3. Silage Discharge Impacting on a Waterway

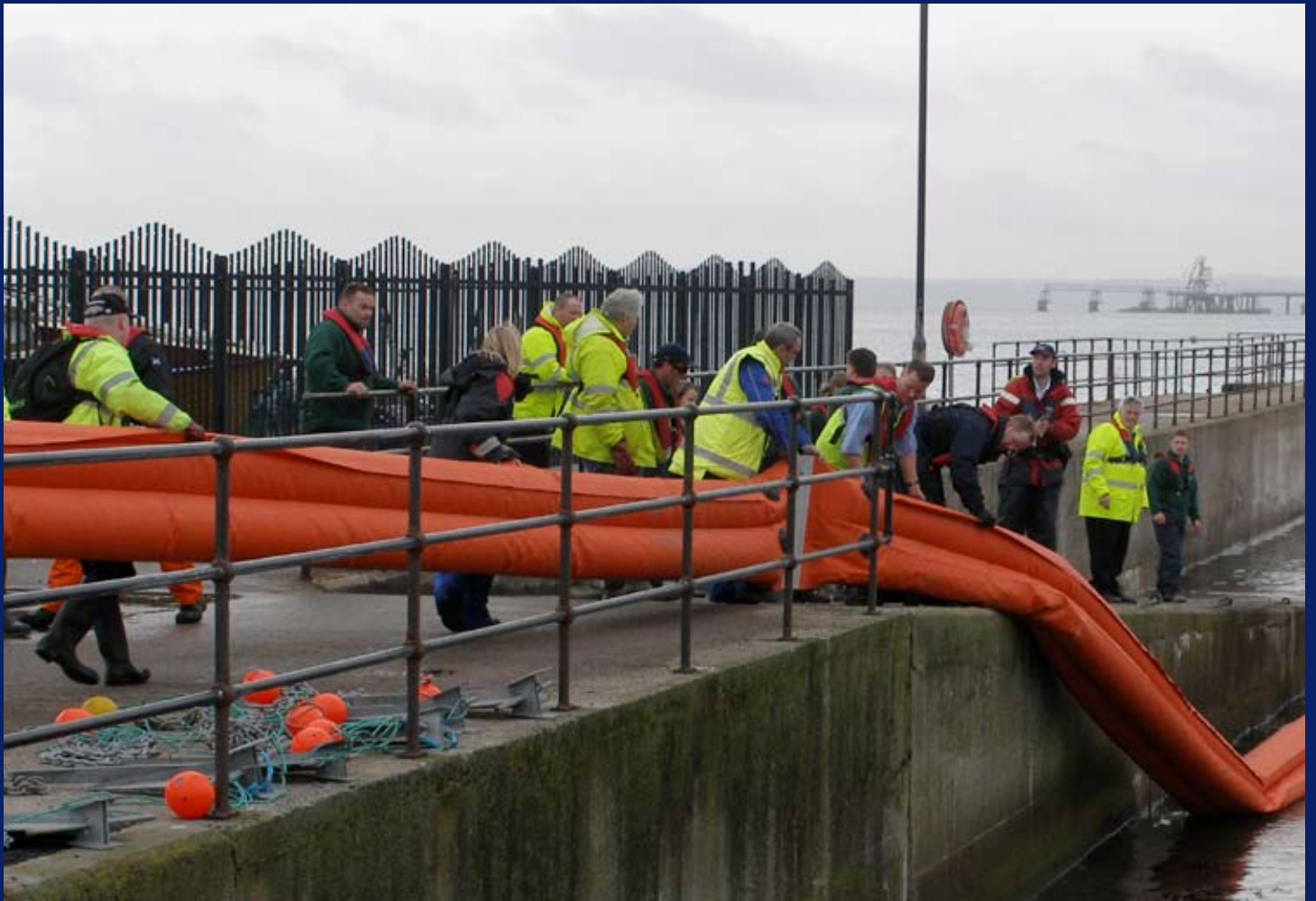
Back Cover: EHS Pollution Prevention Booming Exercise at Whitehead



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

