

Water Pollution Incident and Prosecution Statistics 2003



An Agency within the Department of the

Environment

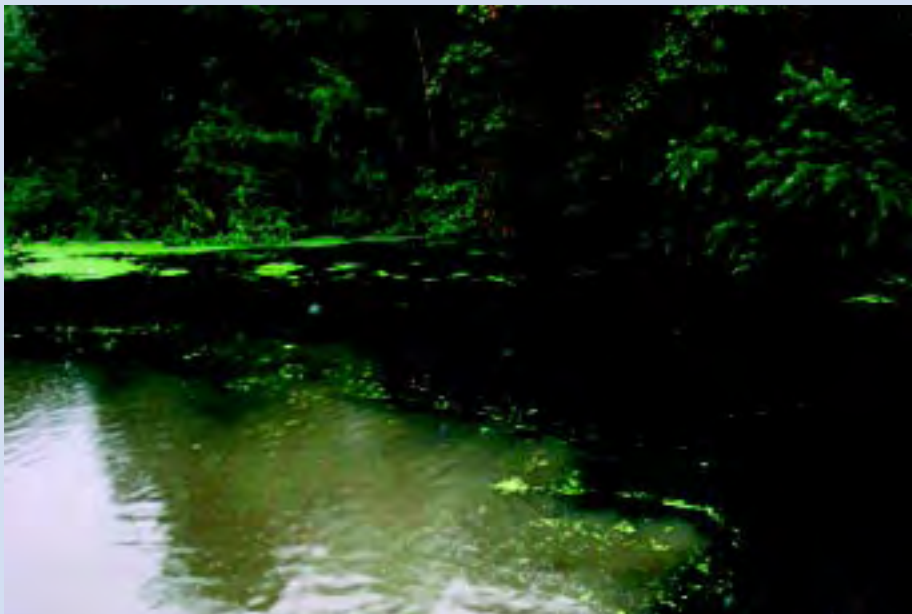
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ENVIRONMENT
AND HERITAGE
SERVICE



Suspended solids in a watercourse



Sewage discharge into a watercourse



Milk discharging into a stream

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The banner features a dark blue header with the Environment and Heritage Service logo and text. The main title 'Water Pollution Hotline' is in large white font, with the freephone number 'FREEFONE 0800 807060' below it. The lower section is white with black text describing the hotline's purpose and the EHS logo.

An Agency within the Department of the
Environment
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Water Pollution Hotline

FREEFONE 0800 807060

The 24 hour hotline for reporting all
environmental incidents relating to water
pollution in Northern Ireland

**ENVIRONMENT
AND HERITAGE
SERVICE**

Water Pollution Incident Statistics

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) in 2003. EHS responded to 2499 reports of water pollution in 2003, an increase of 2.6% from 2002. This equates to almost 7 investigations per day. EHS substantiated (confirmed) 62% (1551) of the incidents received as having an impact on water.

Pollution incidents are classified by Source (where the pollution originates) and Category (the type of pollution identified).

By Source, Farming continues to account for the largest number of incidents investigated by EHS (24.4%), followed by DRD Water Service (23%) and Industry (22%). This is illustrated in Figure A.

By Category, Sewage (37.6%), Agriculture (24.1%) and Oil (15.4%) continued the trend from 2002, accounting for the largest proportion of pollutant types, (77.1%). This is illustrated in Figure A.

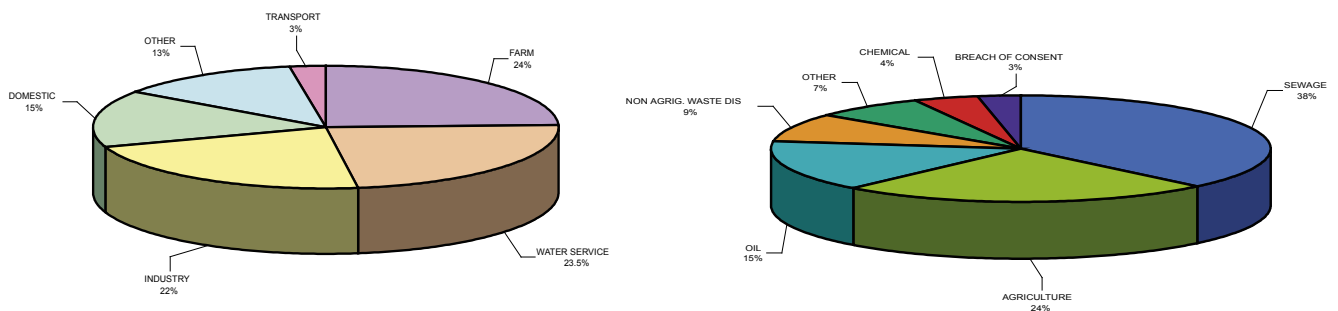


Figure A: *Distribution of substantiated pollution incidents by Source and Category, 2003*

A total of 339 High and Medium severity incidents were investigated during 2003. This was a reduction of 27.9% compared to 1996 figures. Although this continued the positive downward trend in the number of these incidents occurring, this figure represented a rise of 12.1% compared to 2002. Farming was responsible for the largest proportion of High and Medium severity incidents, (35.7%), which is an increase of 0.2% compared to last year's figure.

For the incidents that occurred in 2002, 99 cases were referred to the Office of the Director of Public Prosecutions (DPP) with a recommendation for prosecution. All of these cases have now been heard in the Magistrate's Courts, with 95 (94%) successful outcomes. Of the total fines imposed by the courts in respect of pollution incidents and consent breaches detected during 2002 (£72,380.20), the average fine was £851.53 - in a range from £100 at the lowest, to £10,000 at the highest.

For the incidents that occurred in 2003, 123 cases have been referred to DPP with a recommendation for prosecution. To date, 92 cases have been heard in the Magistrate's Courts, with 91 (99%) successful outcomes. This represents a 20% increase in the number of cases referred to DDP, for incidents that occurred in 2003.

The **Water Pollution Hotline Number, 0800 80 70 60**, continues to be promoted by EHS. The number of incidents reported after hours during 2003 was 290 compared to 62 during 1996.

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1. Introduction

This report presents statistics relating to water pollution incidents throughout Northern Ireland investigated by, or on behalf of, Environment & Heritage Service (EHS), during 2003. Comparisons are made with data from earlier years to allow the description of historical trends. The data has been analysed by Source (where the pollution originates), Category (the type of pollution identified), Severity (the environmental effect of the pollution) and incident Cause. This report also includes details of prosecution statistics for 2002/2003, brought under the Water (Northern Ireland) Order 1999.

1.1 Background

The Environment & Heritage Service (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 accomplish the work of EHS: Natural Heritage, Built Heritage, Environmental Protection and Corporate Services.

Environmental Protection seeks to safeguard the quality of air, water and land. This involves the enforcement of legislation and a range of supporting activities to monitor and report on discharges and emissions, to establish the impacts of pollution, to set standards, and issue consent licences and authorisations. Within Environmental Protection there are five discrete units dealing with:

- Water management,
- Air quality and noise,
- Waste management,
- Industrial pollution, and
- Drinking water for public and private supplies.

Under the Water (Northern Ireland) Order 1999, 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.

Most of the action taken to conserve our water resources and to protect the quality of our surface water and groundwater is carried out by the Water Management Unit (WMU) of EHS. WMU consists of scientific and administrative staff located in Belfast and Lisburn, and field staff based at a number of locations across Northern Ireland. WMU protects the aquatic environment through a variety of activities including:

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

1.2 Water pollution incident management

In exercising its duties in relation to pollution control, the EHS's strategic objectives are as follows:

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

To achieve these objectives, Northern Ireland is divided into nine areas for the purposes of water pollution incident management, each area being served by regionalised field staff, as shown in Figure 1.

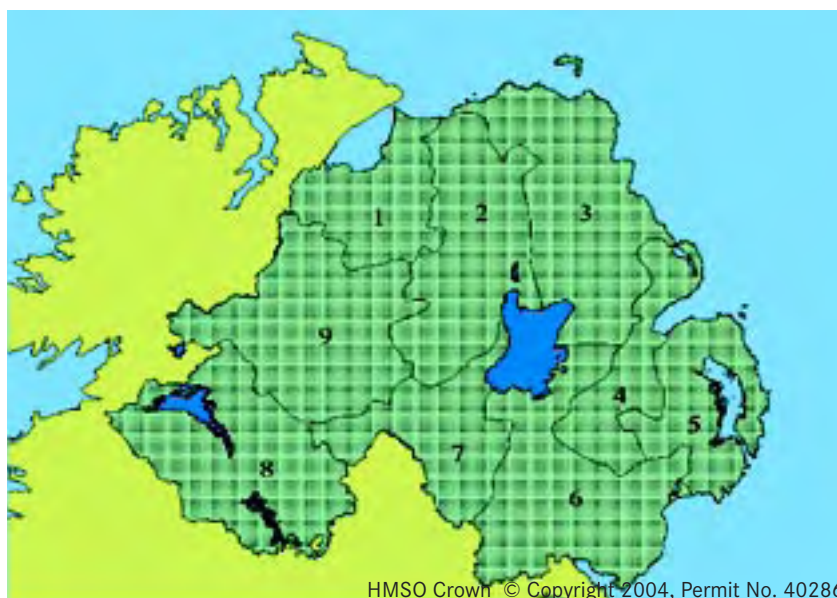


Figure 1: Areas for water pollution incident management

1.3 Field Staff

At present EHS relies on the purchase of external services to fulfil its statutory responsibilities under UK and EU legislation. The field service is composed of approximately 44 field staff from six service providers (4 Environmental Health Group Committees, Fisheries Conservancy Board and Loughs Agency) who undertake a wide range of duties ranging from pollution investigation to sampling.

Environmental Health Group Staff

Each of the nine water pollution management areas has an Environmental Health (Rivers) Officer (EHRO) or Senior Water Quality Inspector (SWQI) and a number of Water Quality Inspectors (WQIs). The EHROs, SWQIs and WQIs act as field agents on behalf of EHS. A number of sampling staff are also employed over the summer period to sample and monitor the bathing waters around Northern Ireland.

There are currently 32 staff employed in this section of the field staff.

The main activities of Group Staff are:

Pollution investigation;

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

The Fisheries Conservancy Board (FCB) and the Loughs Agency (LA) also undertake pollution operations (mainly from agricultural sources) on behalf of EHS, in the areas shown in [Figure 2](#).

Fisheries Conservancy Board (FCB)

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 29 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;** and
- **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 authorities on developments, such as water abstraction, drainage schemes, etc, which may have an impact on fishery interests;
- Prosecuting persons in relation to offences under the Fisheries Act and subsequent amendments;

Loughs Agency (LA)

LA is part of the Foyle, Carlingford and Irish Lights Commission (FCILC) which was set up in 1999 with the enactment of the North/South Co-operation (Implementation Bodies) (Northern Ireland) Order 1999. The Agency's predecessor, the Foyle Fisheries Commission (FFC), was established in 1952 with the enactment of the Foyle Fisheries Act (Northern Ireland) 1952. FCILC has cross border jurisdiction made possible by parallel legislation in the Republic of Ireland (ROI). As a result, FCILC has two parent Departments, DARD and the Department of the Marine (ROI). Each Department is required under its respective Act to appoint Commissioners from within the parent Department to jointly oversee the management of FCILC.

LA has a staff of approximately 43 with around 5 full time equivalents undertaking work on behalf of EHS.

The main activities of LA are:

- **River quality sampling on behalf of EHS;**
- **Pollution investigation and prevention on behalf of EHS;** and
- **Preparation of prosecution files under the Water (Northern Ireland) Order 1999 on behalf of EHS;**

- Patrolling rivers, Lough Foyle and sea areas of the Foyle system to enforce fishery regulations and to prevent illegal or unlicensed fishing. (Under the new administration these powers have been extended to the Carlingford Lough system);
- Monitoring salmon numbers and regulating fishing to generate the maximum sustainable yield;
- Issuing licences for angling and commercial fishing, receiving catch returns and monitoring salmon purchases;
- Providing an assessment for authorities on developments, such as water abstraction, drainage schemes, etc, which may have an impact on the Foyle and Carlingford Lough fisheries;
- Prosecuting persons in relation to offences under the Foyle Fisheries Act of 1952 and subsequent amendments;



Figure 2: Operational areas for Fisheries Conservancy Board (FCB) and Loughs Agency (LA)

1.4 Assessment of incident severity

Pollution incident investigations are initiated following a report of pollution, which may come from a number of sources. Although each report of water pollution is investigated and every effort is made to substantiate the incident (identify the Source, type and Cause of pollution), in many cases reports remain unsubstantiated.

In most cases reports are either made by members of the public or are discovered by field staff working on behalf of EHS. During 2003, as in previous years, EHS used the pollution incident assessment criteria as described in [Annex A](#), where incidents are classified by Severity (High, Medium and Low). This assessment is used in order to standardise the classification, recording, and analysis of pollution incidents across Northern Ireland.

1.5 Response to pollution 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 contained within the pollution report) and forward the incident to field staff within 30 mins. The Field staff aim to respond to 95% of incidents assessed as High or Medium severity within 4 hrs and Low severity incidents within 1 working day. [Table 15](#) and [Figure 21](#) detail the rate of response to High and Medium Severity incidents during 2003.

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

- Confirm that pollution is occurring (substantiate)
- Locate the pollution Source, identify the polluter and, if appropriate, collect sufficient evidence to secure a prosecution;
- Secure from a polluter the necessary action to prevent the continuation or the repetition of pollution;
- Recover costs, where possible, from the polluter.

The rate of substantiation can be affected by any delay in reporting by the public, the quality of information contained in a report, the diverse and intermittent nature of some discharges, and the response time by our staff. In order to increase the rate of substantiation, a number of points have been highlighted in [Annex B](#), which should be referred to before making a report of pollution.

1.6 Legislation

As previously stated, EHS has a duty to promote the conservation of the water resources of Northern Ireland and the cleanliness of water in waterways and underground strata.

Under the terms of the Water (Northern Ireland) Order 1999, it is an offence to cause pollution of a waterway or groundwater. Where the source of pollution can be traced, it is the policy of the EHS, where appropriate, to take enforcement action.

Article 7 (1) of the Order deals with the main pollution offence, which is;

‘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 an underground strata’.

A person guilty of an offence under this Article is liable on conviction to imprisonment for a term not exceeding 3 months or to a fine not exceeding £20,000, or to both.

Pollution incidents are investigated and then submitted to the Enforcement Team for a decision on the appropriate course of action to take. This can be:

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

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 Office of the Director of Public Prosecutions (DPP).

Section 4 and Annex D of this report provide further details of the Enforcement Action carried out by EHS during 2003.

1.7 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** number, **(0800 80 70 60)** are directed to an operations room in Belfast, where the incident is assessed and passed to the relevant field staff. Out of office hours, all calls are directed to an Environment Agency (EA) Communications Centre, who then task the On-Call Duty Emergency Pollution Officer (DEPO) in Northern Ireland to respond.

There have been difficulties receiving calls to the Hotline number made from mobile phones, where in some cases the calls have been diverted to the Scottish Environmental Protection Agency (SEPA) or to different regions of EA. This is an issue that cannot be dealt with by EHS, as it is a mobile network problem. EHS suggest that a landline is always used to call the Water Pollution Hotline, as it is free and will ensure calls are received by the DEPO.

2. Analysis of Incidents

This report presents statistics relating to water pollution incidents throughout Northern Ireland investigated by, or on behalf of, EHS, during 2003. Comparisons are made with data from earlier years to allow the description of historical trends. The data has been analysed by Source (where the pollution originates), Category (the type of pollution identified), Severity (the environmental effect of the pollution) and incident Cause. This report also includes details of prosecution statistics for 2002/2003, brought under the Water (Northern Ireland) Order 1999.

2.1 Reported Incidents

During 2003 a total of 2499 pollution incidents were reported to EHS, an increase of 2.6% from 2002. Of these, 1551 (62.0 %) were substantiated. Table 1 details the breakdown of total, substantiated and unsubstantiated incidents from 1996 to 2003 (Figure 3. illustrates this graphically).

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

	1996	1997	1998	1999	2000	2001	2002	2003
Substantiated	2087	1826	1644	1507	1705	1546	1510	1551
Unsubstantiated	797	850	864	906	882	998	924	948
Total	2884	2676	2508	2413	2587	2544	2434	2499

Table 1: Substantiated and Unsubstantiated water pollution incidents, 1996-2003

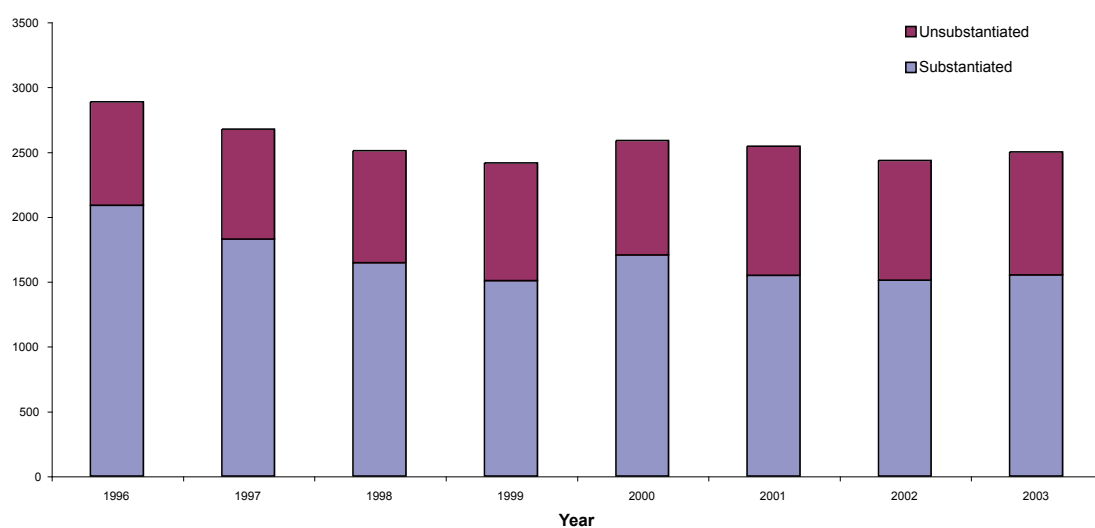


Figure 3: Total number of incidents reported, 1996-2003

2.2 Regional Distribution

Northern Ireland is divided into nine areas for the purposes of water pollution incident management (Figure 1). Figure 4 illustrates the regional distribution of pollution incidents during 2003. The highest number of pollution incidents were recorded in Area 1 (North-West region) and lowest number in Area 8 (South-West region). This follows the trend observed in previous years. The number of substantiated incidents recorded for each region from 1996 to 2003, are detailed in Annex C, Table 1.

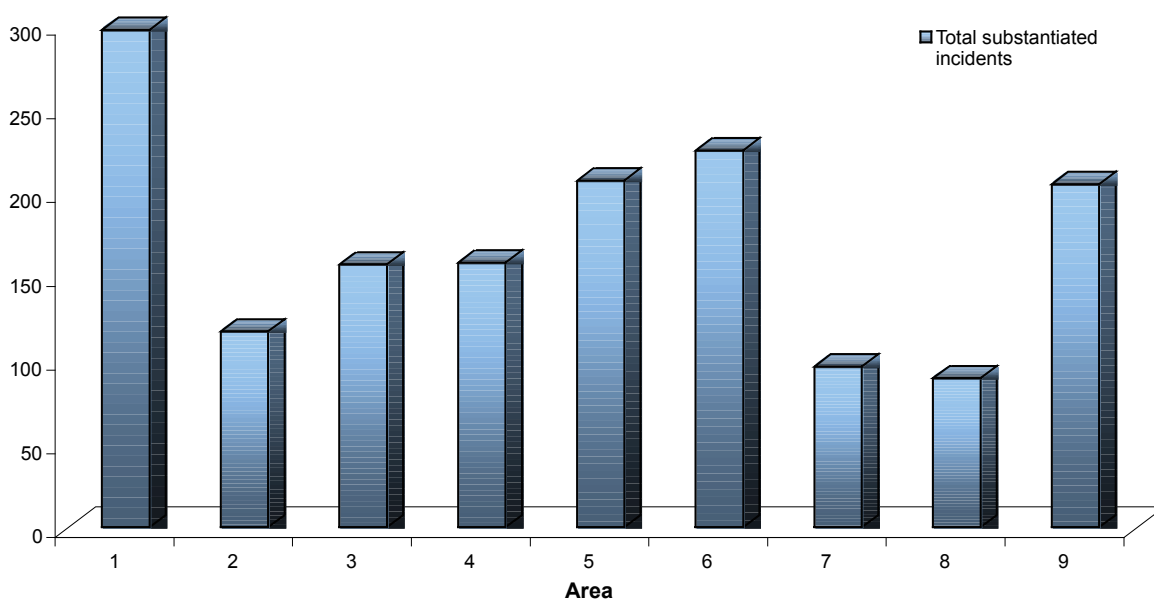


Figure 4: Regional distribution of incidents, 2003

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, Water Service, Domestic, Transport and Other. “Other” sources include incidents where the Source was not determined. Table 2 details the distribution of pollution incidents by Source for 2003 and this is illustrated in Figure 5.

Source	Substantiated Incidents	%
Farm	379	24.4%
Water Service	364	23.5%
Industry	337	21.7%
Domestic	235	15.2%
Other	197	12.7%
Transport	39	2.5%
Total	1551	100%

Table 2: Water pollution Sources, 2003

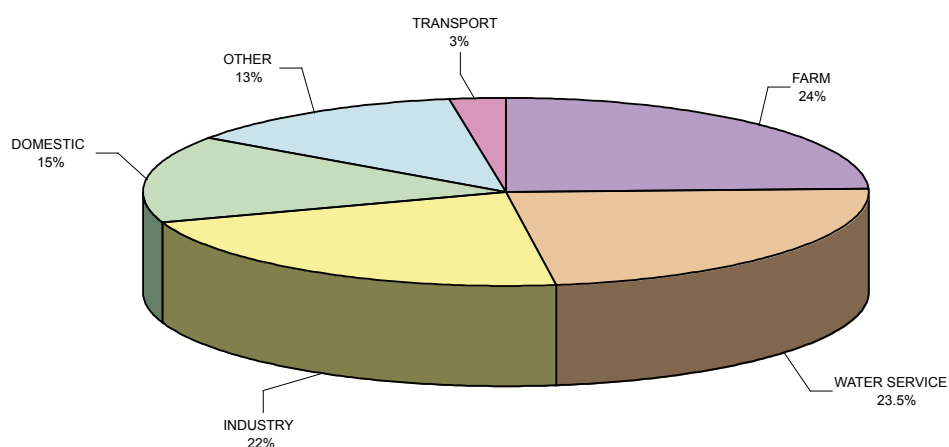


Figure 5: Sources of water pollution, 2003

By Source, Farming (24.4%) continued to account for the largest number of substantiated incidents investigated by EHS during 2003, followed by DRD Water Service (23%) and Industry (22%).

Table 3 details the regional distribution of pollution incidents by Source for 2003. Figure 6 illustrates how pollution Sources vary across NI due to population density and the type of industry present. In highly populated regions, ie, Areas 5 and 4 (North Down and Belfast), Industry and DRD Water Service account for the largest proportion of incidents, however in more rural regions, ie, Areas 1 and 9 (Londonderry and Omagh) there are a greater proportion of Farming and Domestic incidents.

Area	Source						Total
	Industry	Farm	Water Service	Domestic	Transport	Other	
1	74	81	67	40	10	25	297
2	35	35	20	13	2	12	117
3	39	38	32	20	7	21	157
4	28	24	47	28	1	30	158
5	29	34	83	50	3	8	207
6	40	51	48	29	9	48	225
7	36	23	6	17	2	12	96
8	17	19	23	3	4	23	89
9	39	74	38	35	1	18	205
Total	337	379	364	235	39	197	1551

Table 3: Regional distribution of incidents by Source, 2003

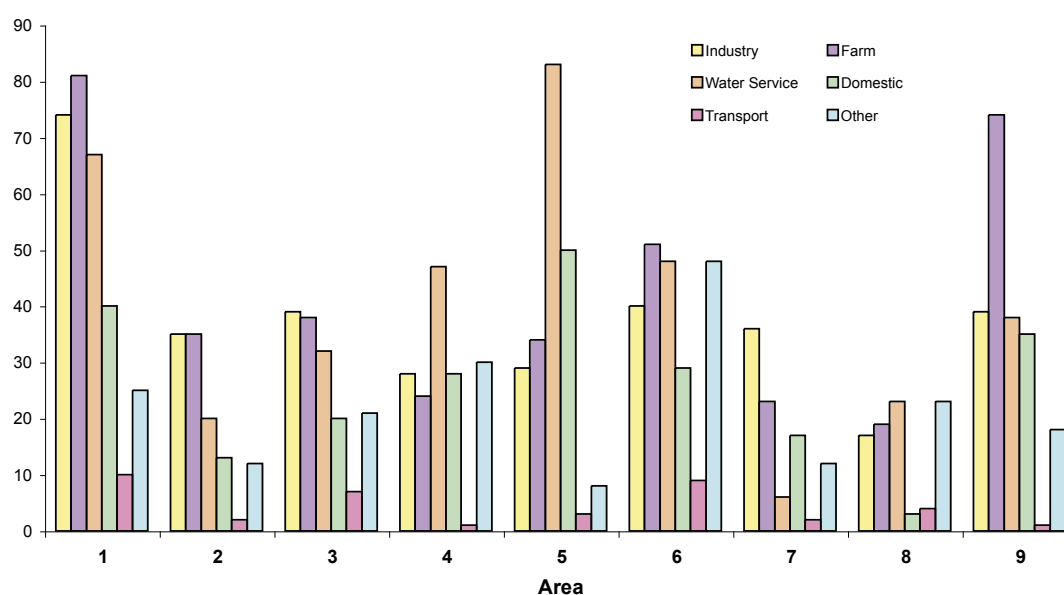


Figure 6: Regional distribution of incidents by Source, 2003

2.4 Trend in pollution Source

Table 4 details the percentage change in pollution Source from 2002 – 2003 and this is illustrated graphically in Figure 7. It is encouraging to note that pollution from farm sources has decreased slightly in 2003, however Farming remains the major source of pollution. Unfortunately DRD Water Service has been responsible for an increased number of incidents in 2003.

Reports of pollution attributable to DRD Water Service are initially assessed by EHS and then forwarded to DRD Water Service for action and to the EHS Water Service Regulation Team who monitor the situation and progress. This team also monitors and regulates DRD Water Service discharges by reporting compliance with registered standards and employing advisory letters that formally identify unsatisfactory performance and request improvements.

Source	2002 (%)	2003 (%)	Change (%)
Farm	30.5%	24.5%	-6.1%
Water Service	17.2%	23.5%	6.3%
Industry	23.4%	21.7%	-1.7%
Domestic	13.2%	15.2%	2.0%
Other	12.0%	12.7%	0.7%
Transport	3.7%	2.5%	-1.2%

Table 4: *Percentage change in pollution Source, 2002 - 2003*

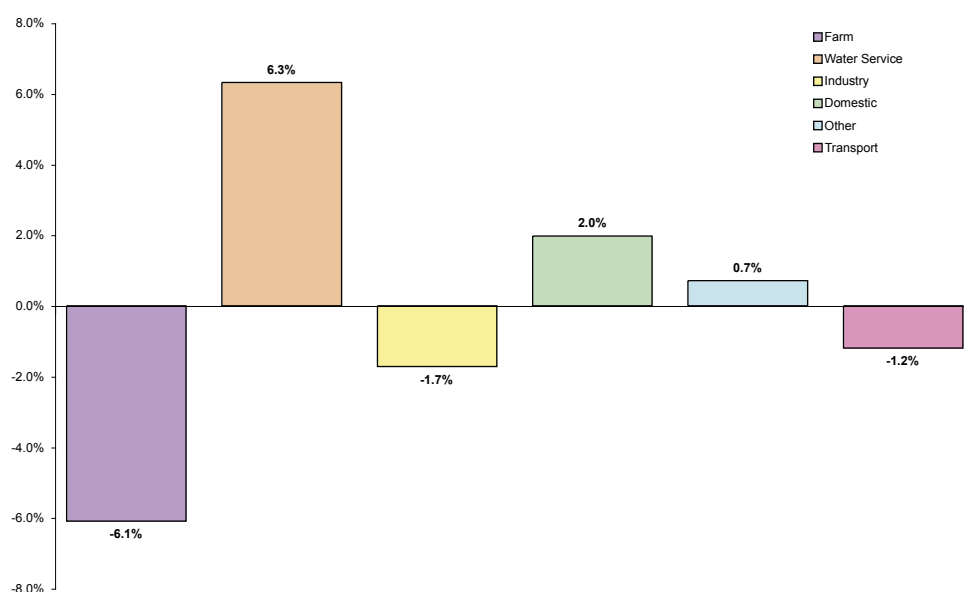


Figure 7: *Percentage change in pollution Source, 2002 - 2003*

The number of substantiated incidents attributed to each Source for the period 1996 - 2003, is shown in Figure 8 (Annex C, Table 2). Farming continues to be the major source of pollution, however incidents have reduced over the 8 year period. EHS will work constructively with farmers to implement the SSAFO (Silage, Slurry and Agricultural Fuel Oil) Regulations, in order to further reduce pollution from farm sources. In addition to this, the whole of Northern Ireland will be listed as a Nitrate Vulnerable Zone as from January 2005. It is envisaged that EHS, DARD and relevant agricultural organisations will work together to develop a Nutrient Management Action Plan which will control the amount of nutrients that are discharged into the aquatic environment.

The number of water pollution incidents attributable to DRD Water Service have declined steadily over the 8 year period, with the exception of 1998 where a large drop is noted. Incidents reported for Domestic Sources is variable, whilst those from Transport remain the lowest. Incidents identified from Other Sources have remained relatively constant over the past 4 years.

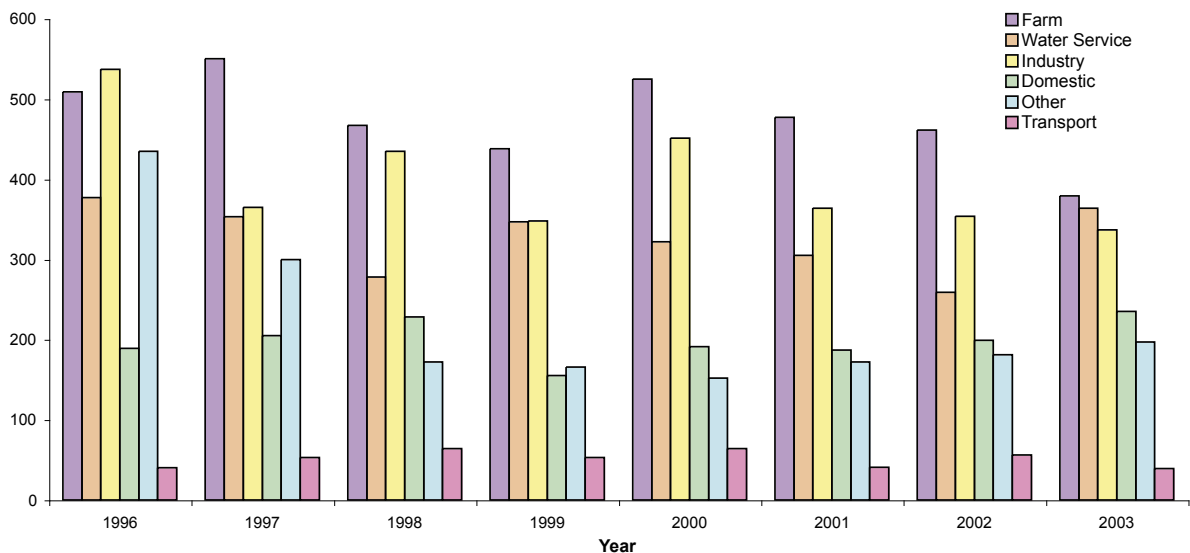


Figure 8: Trend in pollution Source, 1996 – 2003

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. “Other” categories include incidents where the Category was not determined. The distribution of pollution incidents by Category for 2003 is detailed in Table 5 and illustrated in Figure 9.

Category	Substantiated Incidents	%
Sewage	583	37.6%
Agriculture	374	24.1%
Oil	239	15.4%
Non Agric. Waste Discharge	135	8.7%
Other	111	7.2%
Chemical	68	4.4%
Breach Of Consent	41	2.6%
Total	1551	100%

Table 5: Categories of water pollution, 2003

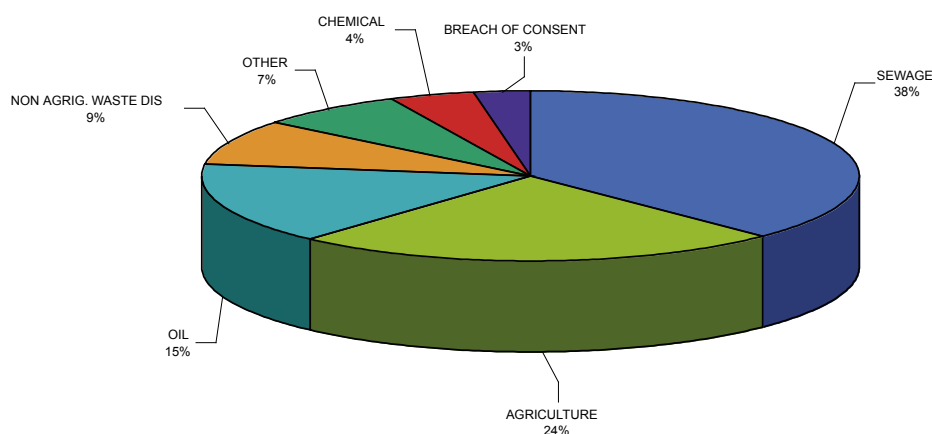


Figure 9: Categories of water pollution, 2003

During 2003, Sewage (37.6%), Agriculture (24.1%) and Oil (15.4%) continued the trend from 2002, accounting for the largest proportion of pollutant types, (77.1%).

It is envisaged that through implementation of the Nitrates Directive and Urban Waste Water Treatment Regulations (Northern Ireland) 1995 that these figures will be reduced over coming years.

Table 6 details the regional distribution of pollution incidents by Category for 2003. Figure 10 illustrates the variation of pollutant Categories across NI. This is likely to be due to population density and the type of industry present. In highly populated regions, ie, Areas 5 and 4 (North Down and Belfast), Sewage accounts for the largest proportion of incidents however in more rural regions, ie,. Areas 1 and 9 (Londonderry and Omagh) there are a greater proportion of agricultural incidents.

Area	Category							Total
	Chemical	Agriculture	Sewage	Oil	Non Agric. Waste Discharge	Breach Of Consent	Other	
1	17	77	100	28	51	10	14	297
2	1	34	29	28	11	4	10	117
3	8	37	52	34	12	0	14	157
4	13	24	71	26	5	5	14	158
5	6	32	133	21	9	2	4	207
6	15	52	75	44	16	6	17	225
7	5	23	24	20	15	5	4	96
8	1	19	32	18	3	1	15	89
9	2	76	67	20	13	8	19	205
Total	68	374	583	239	135	41	111	1551

Table 6: Regional distribution of incidents by Category, 2003

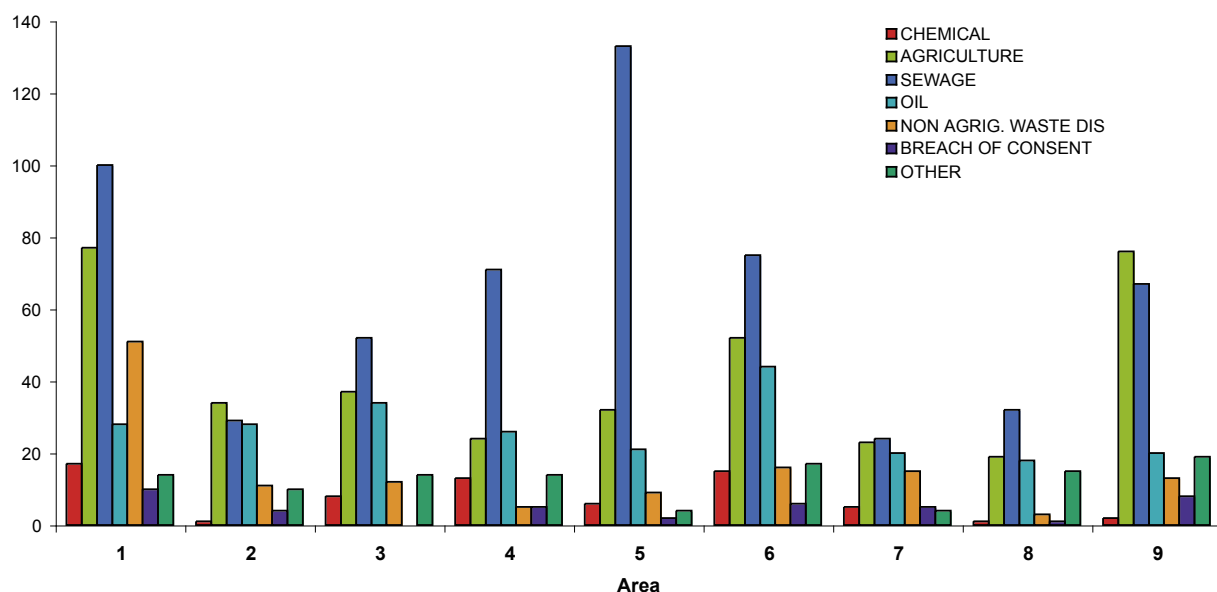


Figure 10: Regional distribution of incidents by Category, 2003

2.6 Trend in pollutant Category

Table 7 details the percentage change in pollutant Category from 2002 – 2003 and this is illustrated graphically in Figure 11.

There has been a substantial increase in Sewage related incidents (8.9%) from 2002 and slight increases in Breach of Consent (1.2%) and Other (0.7%) incidents. However it is encouraging to note a substantial decrease in the number of Agricultural (-4.8%), Oil (-2.5%) and Non Agricultural Waste (-3.5%) incidents.

Category	2002 (%)	2003 (%)	Change (%)
Sewage	28.7%	37.6%	8.9%
Agriculture	28.9%	24.1%	-4.8%
Oil	17.9%	15.4%	-2.5%
Non Agric. Waste Dis.	12.2%	8.7%	-3.5%
Other	6.4%	7.2%	0.7%
Chemical	4.5%	4.4%	-0.1%
Breach of Consent	1.5%	2.6%	1.2%

Table 7: Percentage change in Category of pollution, 2002 - 2003

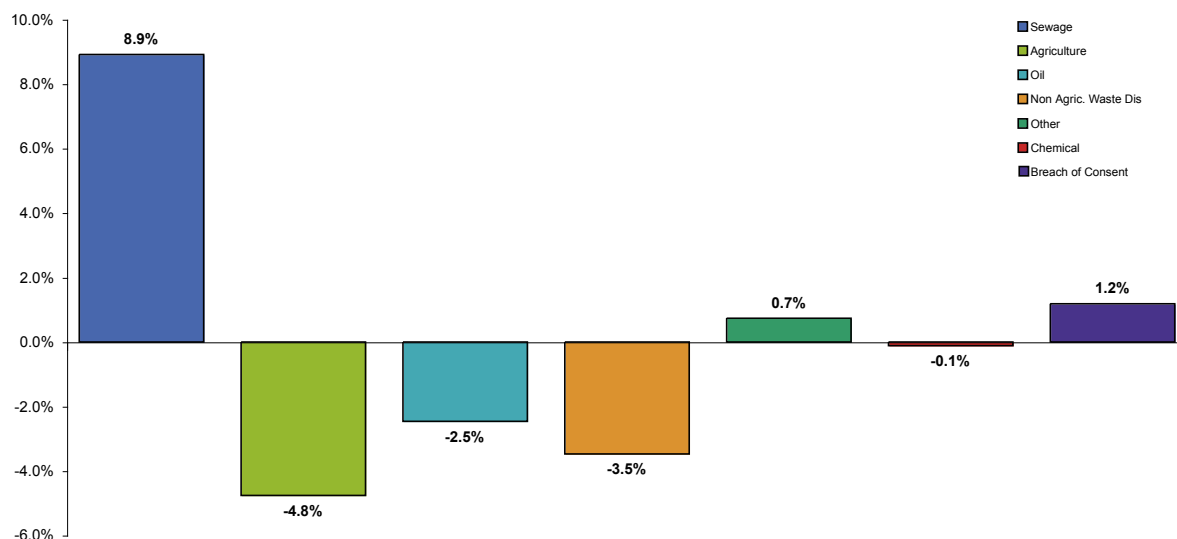


Figure 11: Percentage change in pollutant Category, 2002-2003

The number of substantiated incidents attributed to each Category for the period 1996 - 2003, is shown in Figure 12 (Annex C, Table 3). During the 8 year period there has been little change in the Category of pollution incident, however it was discouraging to note an 8.9% increase in Sewage related incidents from 2002.

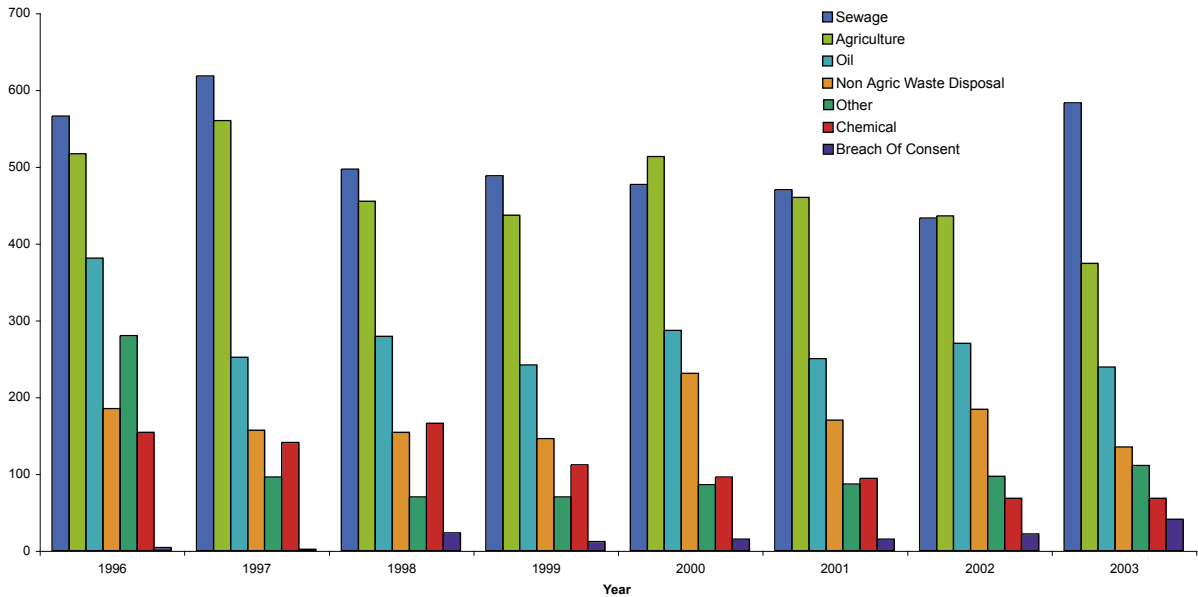


Figure 12: Trends in pollutant Category, 1996 - 2003

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, Beach of Consent, Other and Unknown. Table 8 details the distribution of pollution incidents by Cause for 2003 and this is illustrated in Figure 13.

In 2003 the main Cause of incidents was Poor working practice. The most effective and practical means of reducing these incidents is by adhering to pollution prevention advice. EHS can offer specific Pollution Prevention advice - see Section 3.

Cause	Substantiated Incidents	%
Poor Working Practice	339	21.9%
Unknown	262	16.9%
Equipment Failure	237	15.3%
Accident/Emergency	154	9.9%
Inadequate Equipment	147	9.5%
Negligence	138	8.9%
Deliberate Dumping	120	7.7%
Weather	68	4.4%
Other	46	3.0%
Breach of Consent	40	2.6%
Total	1551	100%

Table 8: Cause of pollution incidents, 2003

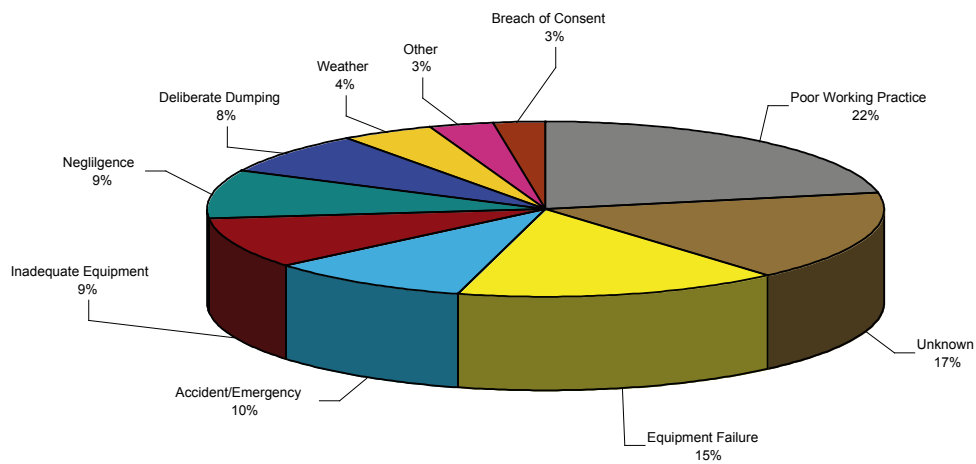


Figure 13: Cause of pollution incidents during 2003

Table 9 details the regional distribution of pollution incidents by Cause for 2003. Figure 14 illustrates the variation of pollution Causes across NI.

Area	Cause										Total
	Deliberate Dumping	Breach of Consent	Accident/Emergency	Equipment Failure	Inadequate Equipment	Negligence	Poor Working Practice	Weather	Unknown	Other	
1	30	6	23	20	12	18	107	11	66	4	297
2	12	3	24	17	13	6	20	3	16	3	117
3	8	4	30	19	7	10	28	12	34	5	157
4	7	6	14	27	18	19	14	7	34	12	158
5	13	1	10	87	27	18	28	7	16	0	207
6	26	3	19	33	33	26	31	10	39	5	225
7	10	6	8	10	11	16	17	3	15	0	96
8	3	2	18	8	6	3	24	6	15	4	89
9	11	9	8	16	20	22	70	9	27	13	205
Total	120	40	154	237	147	138	339	68	262	46	1551

Table 9: Regional distribution of incidents by Cause, 2003

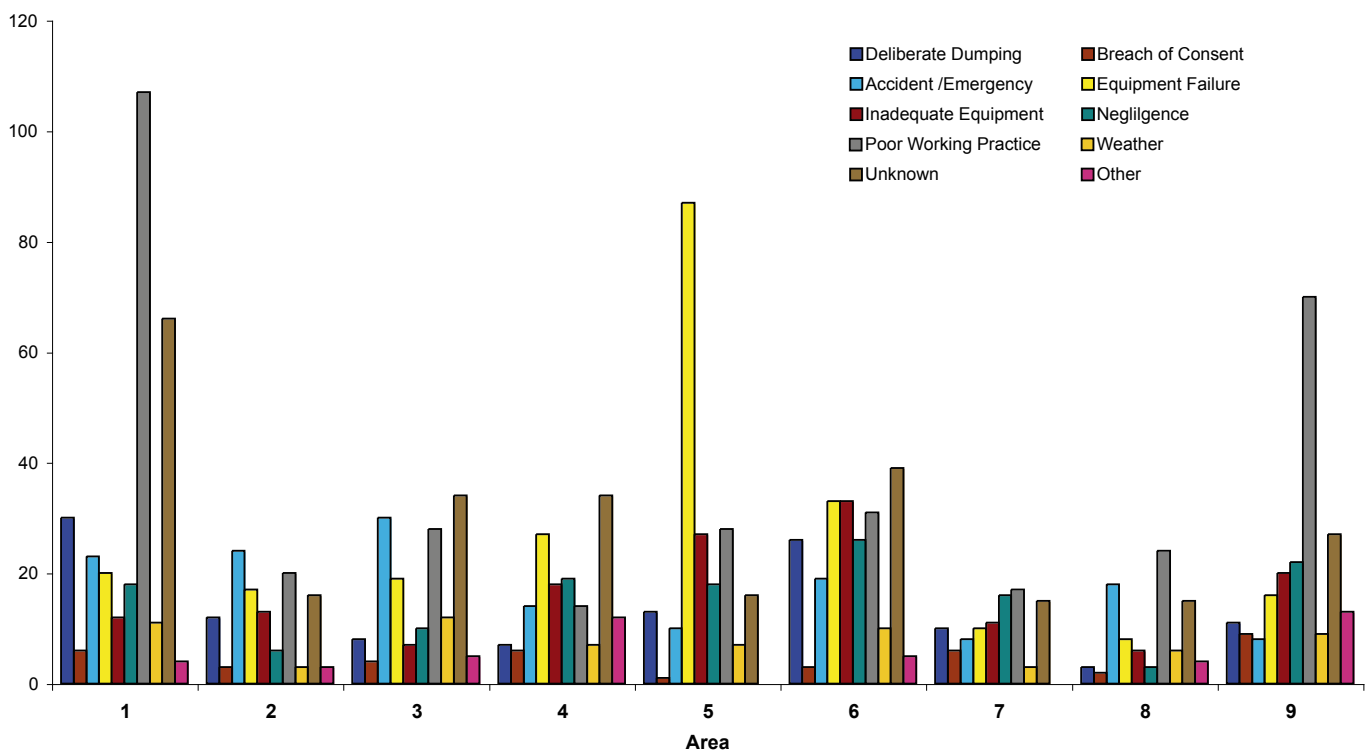


Figure 14: Regional distribution of incidents by Cause, 2003

2.8 Trend in incident Cause

Figure 15 (Annex C, Table 4), illustrates the trend in incident Cause for the period 1996 – 2003. During the 8 year period there has been little change in the Cause of incidents, with Poor Working practice remaining the main cause in 2003 (21.9%).

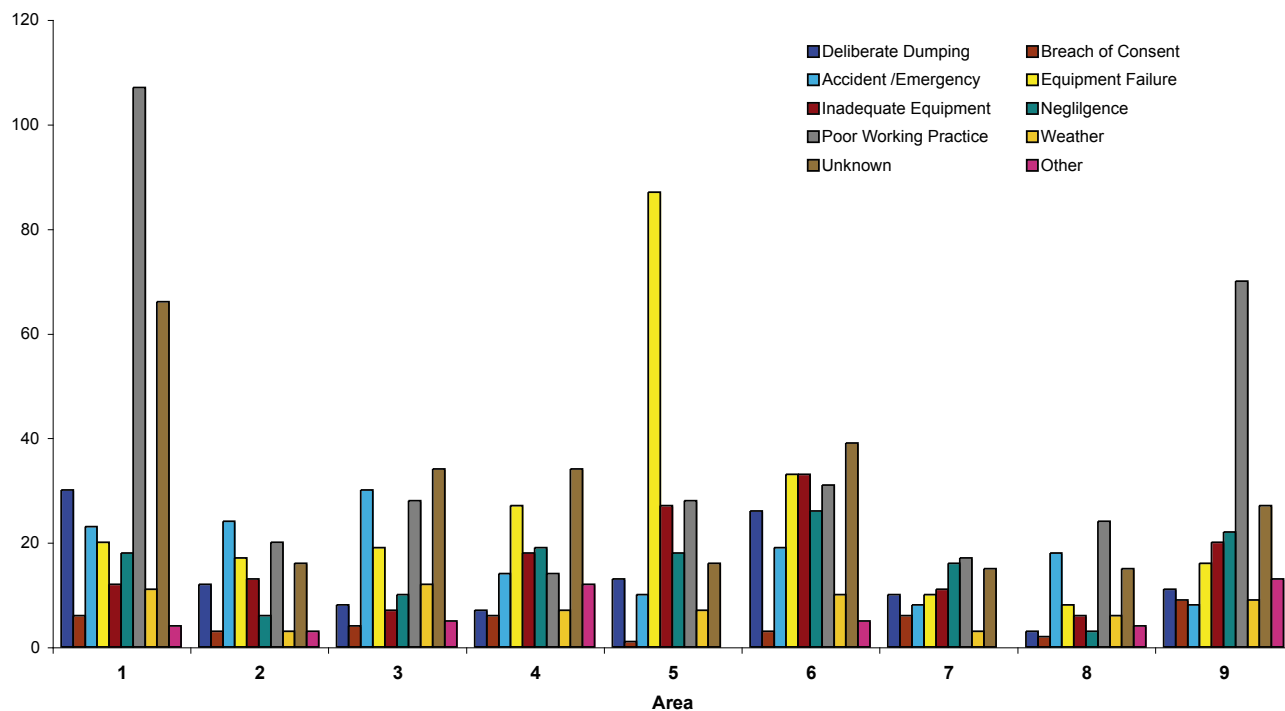


Figure 15: Cause of pollution incidents for the period 1996 to 2003.

2.9 Analysis of Incidents by Severity

EHS estimates the environmental impact that a pollutant has on a watercourse using pollution incident assessment criteria as described in [Annex A](#), where incidents are classified by Severity (High, Medium and Low). This assessment is used in order to standardise the classification, recording, and analysis of pollution incidents across Northern Ireland. [Table 10](#) details the number of incidents in each Severity class for 2003 and this is illustrated in [Figure 16](#).

Severity	Substantiated Incidents	%
High	42	2.7%
Medium	297	19.1%
Low	1212	78.1%
Total	1551	100%

Table 10: Severity of pollution incidents, 2003

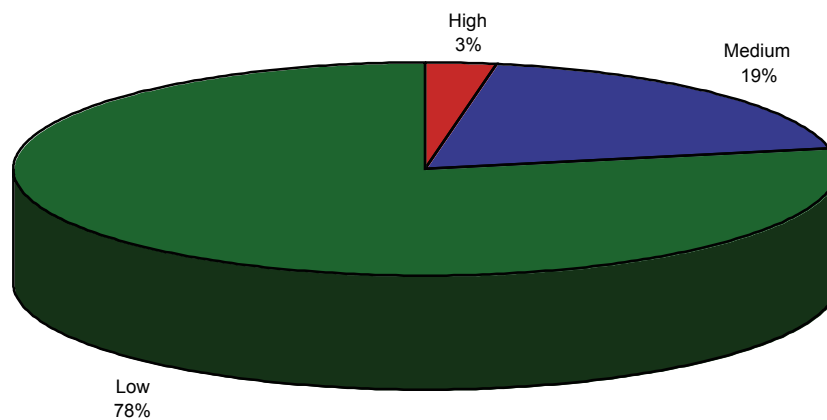


Figure 16: Severity of pollution incidents, 2003

Table 11 details the regional distribution and Severity of pollution incidents during 2003. This is illustrated in Figure 17.

Area	Severity			Total
	High	Medium	Low	
1	3	26	268	297
2	5	38	74	117
3	5	30	122	157
4	7	52	99	158
5	3	26	178	207
6	9	50	166	225
7	6	35	55	96
8	2	7	80	89
9	2	33	170	205
Total	42	297	1212	1551

Table 11: Regional distribution of incidents by Severity, 2003

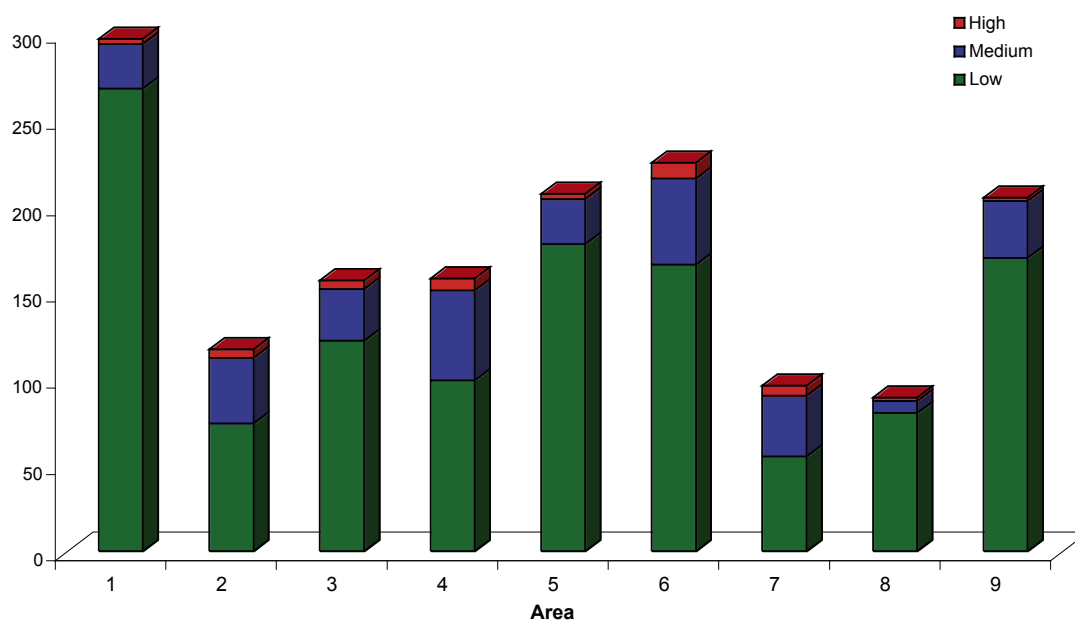


Figure 17: Regional distribution and Severity of incidents, 2003

The severity of incidents investigated by each region for the period 1996 to 2003 is detailed in Annex C, Tables 5.1 – 5.3

Table 12 details the Source and Severity of incidents investigated by EHS during 2003. Figure 18 illustrates that the majority of High and Medium Severity incidents occurring during 2003 arose from Farm (121) and Industrial (108) Sources, whereas the majority of Low severity incidents were attributable to DRD Water Service (300).

Source	Severity			Total
	High	Medium	Low	
Farm	27	94	258	379
Water Service	7	57	300	364
Industry	8	100	229	337
Domestic	0	21	214	235
Other	0	23	174	197
Transport	0	2	37	39
Total	42	297	1212	1551

Table 12: Source and Severity of incidents, 2003

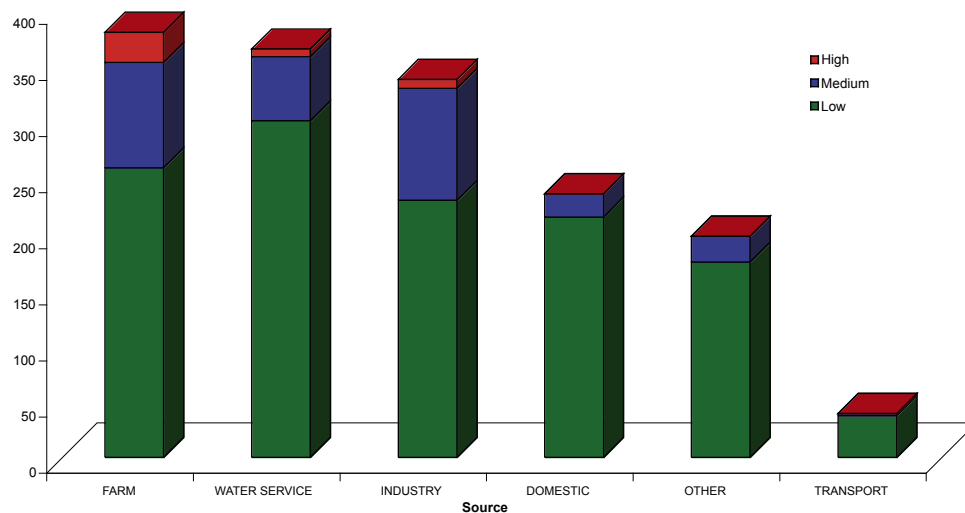


Figure 18: Source and Severity of incidents, 2003

Table 13 details the Category and Severity of incidents investigated by EHS during 2003. Figure 19 illustrates the distribution of incidents by Category and Severity. During 2003 Agricultural effluents, such as silage and slurry were involved in the majority of High and Medium Severity incidents (123), whereas Sewage was responsible for the majority of Low Severity incidents (492).

Category	Severity			Total
	High	Medium	Low	
Sewage	7	84	492	583
Agriculture	27	96	251	374
Oil	1	40	198	239
Non Agric. Waste Dis.	2	31	102	135
Other	0	7	104	111
Chemical	3	23	42	68
Breach Of Consent	2	16	23	41
Total	42	297	1212	1551

Table 13: Category and Severity of incidents, 2003

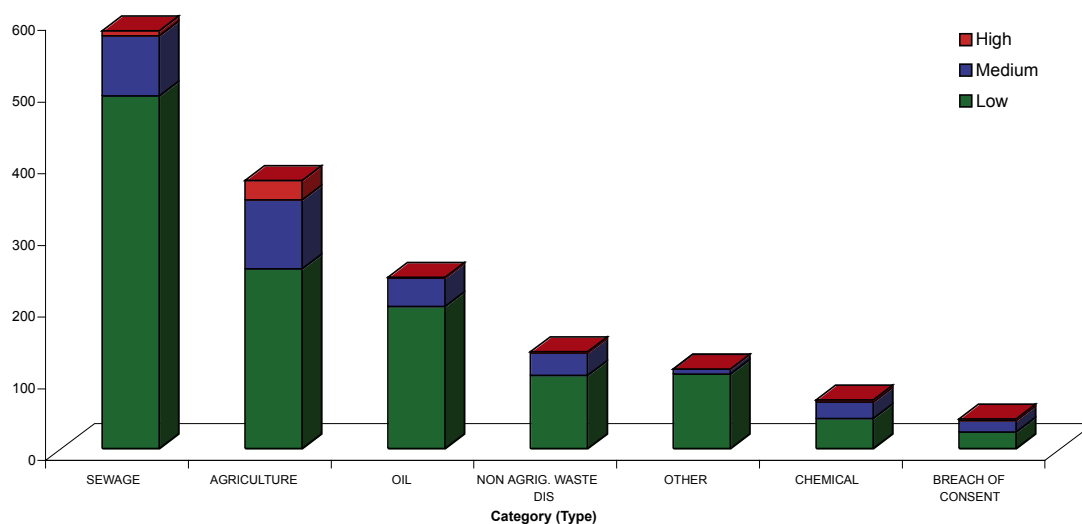


Figure 19: Category and Severity of incidents, 2003

Table 14 details the Cause and Severity of incidents investigated by EHS during 2003. This distribution of incidents by Cause and Severity is depicted in Figure 20. This shows that during 2003, the main Cause of High and Medium Severity water pollution incidents was Poor Working Practice (61) followed by Negligence (59). The majority of Low Severity incidents were also Caused by Poor Working Practice (278). To address this issue EHS has focused on Pollution Prevention initiatives and education. Further information on Pollution Prevention can be found in Section 3.

Cause	Severity			Total
	High	Medium	Low	
Poor Working Practice	8	53	278	339
Unknown	5	35	222	262
Equipment Failure	6	51	180	237
Accident/Emergency	4	27	123	154
Inadequate Equipment	4	30	113	147
Negligence	8	51	79	138
Deliberate dumping	5	25	90	120
Weather	1	9	58	68
Other	0	6	40	46
Breach of Consent	1	10	29	40
Total	42	297	1212	1551

Table 14: Cause and Severity of incidents, 2003

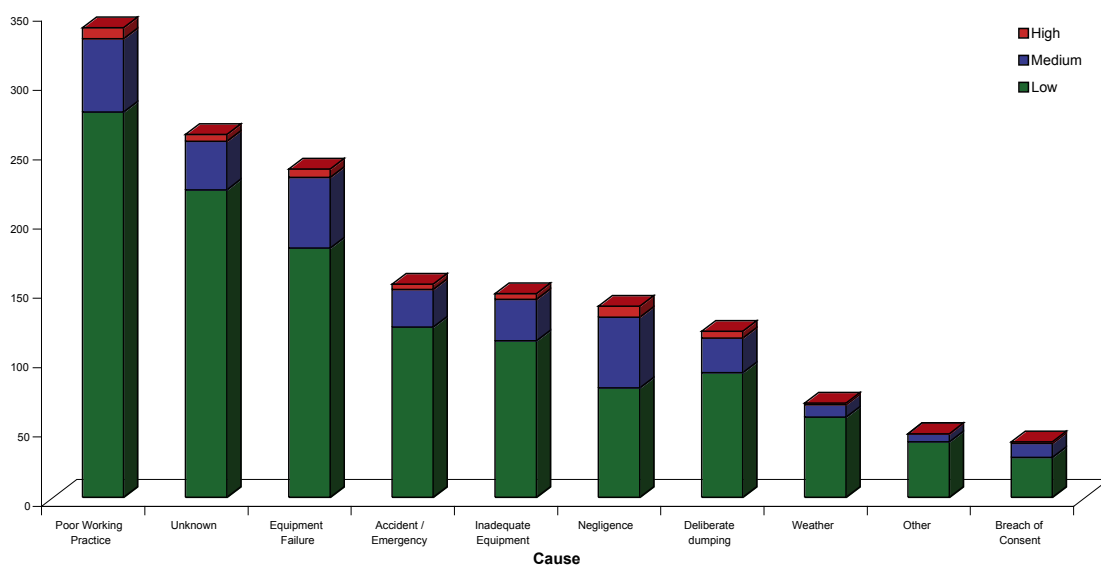


Figure 20: Cause and Severity of incidents, 2003

2.10 Response to High and Medium 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 contained within the pollution report) and forward the incident to field staff within 30 mins. The Field staff aim to respond to 95% of incidents assessed as High or Medium severity within 4 hrs and Low severity incidents within 1 working day. Table 15 and Figure 21 detail the rate of response to High and Medium Severity incidents during 2003.

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)	85	74	87.06%
Q2, (1/4/03 - 30/6/03)	111	94	84.68%
Q3, (1/7/03 - 30/9/03)	92	86	93.48%
Q4, (1/10/03 - 31/12/03)	37	32	86.49%
Total for 2003	325	286	
		Average response rate for 2003	88.00%

Table 15: Response rate to High and Medium Severity incidents, 2003

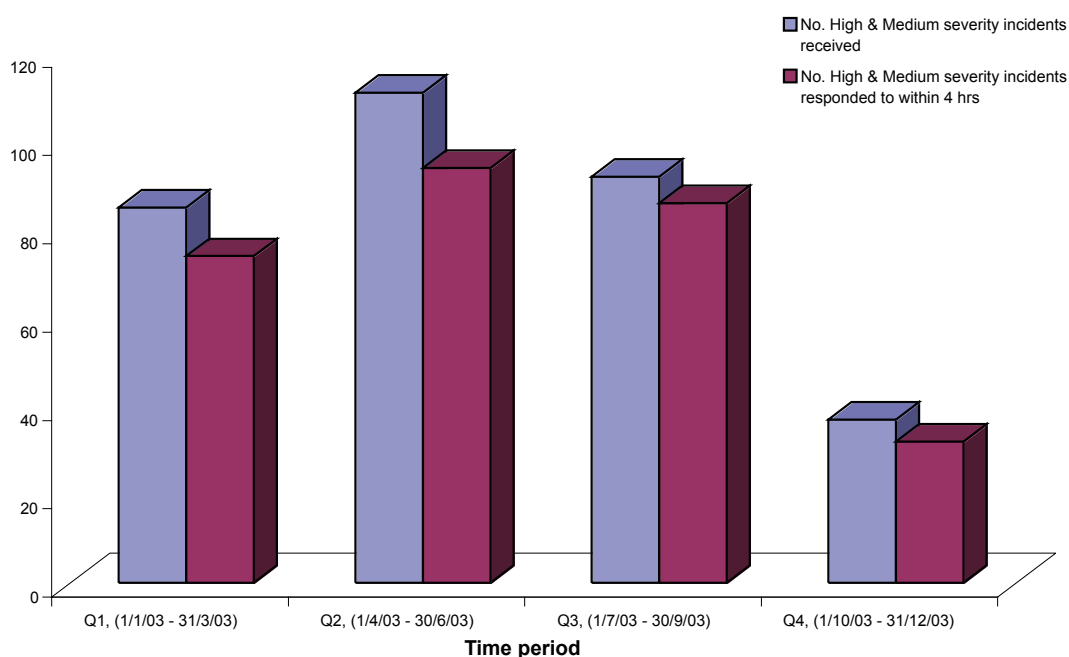


Figure 21: Response rate to High and Medium Severity incidents, 2003

2.11 Trend in response to High and Medium Severity incidents

Table 16 and Figure 22 detail the response rate to High and Medium Severity incidents for the period 2000 - 2003 (Annex C, Tables 6.1 - 6.3). These indicate that the rate of response has increased steadily over the period however the target of responding to 95% of High and Medium Severity incidents within 4 hrs has rarely been achieved.

Investigations into why this target has not been achieved have revealed that the target is based on knowledge that is not always available when field staff are being tasked to an incident, i.e. it is based on the assessment of severity that is carried out by field staff at the time of their investigation, not on the initial assessment carried out by staff who receive the initial report of pollution and task field staff to investigate.

To address this, future targets will be based on the assessment of severity carried out by staff who receive the initial report of pollution.

	Year			
	2000	2001	2002	2003
No. High & Medium severity incidents received	377	321	264	325
No. High & Medium severity incidents responded to within 4 hrs	291	291	218	286
Response rate (%)	77.19%	90.65%	82.58%	88.00%

Table 16: Response rate to High and Medium Severity incidents, 2000 - 2003

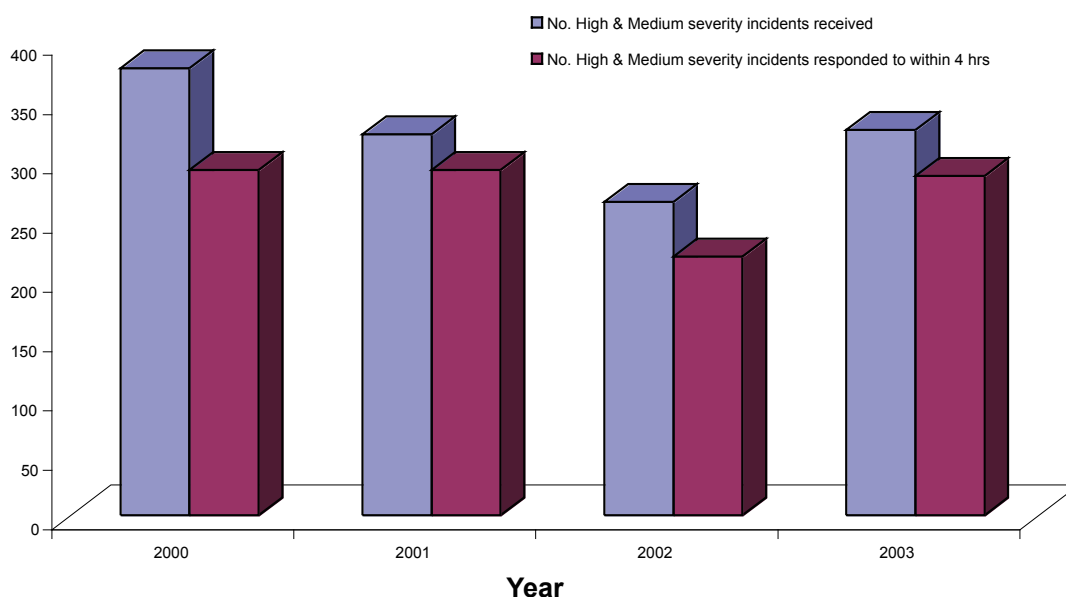


Figure 22: Response rate to High and Medium Severity incidents, 2000-2003

2.12 Fish Kills

The majority of Fish kills occur when oxygen levels in the aqueous environment are depleted, causing suffocation of fish. Oxygen depletion can occur rapidly when organic materials enter a waterway. Bacteria involved in the decomposition of these materials quickly consume the oxygen within the water column leaving levels which are too low for fish to survive. Other factors that can be involved in a Fish Kill include, suspended solids and ammonia which can clog, irritate and damage fish gills therefore preventing fish from taking in oxygen and leading to their death.

Table 17 and Figure 23 describe the Sources of pollution that caused Fish Kills during 2003. These indicate that in 2003, the majority of Fish Kills occurred following pollution incidents from Farm Sources (33.3%). This is largely due to the oxygen depleting nature of agricultural pollutants such as silage and slurry.

Source	2003	%
Farming	8	33.3%
Industry	6	25.0%
Water Service	6	25.0%
Domestic	0	0.0%
Transport	0	0.0%
Other	4	16.7%
Total	24	100%

Table 17: Sources of pollution causing Fish Kills, 2003

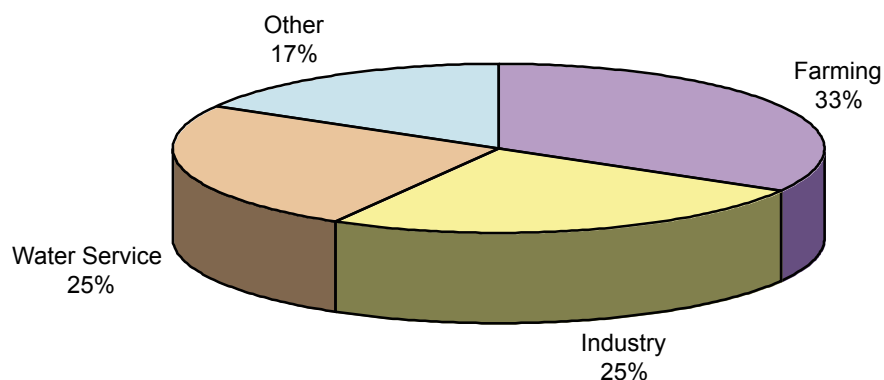


Figure 23: Sources of pollution causing Fish Kills, 2003

2.13 Significance of Fish Kills

Investigations into Fish Kills are undertaken by FCB and LA on behalf of EHS. These organisations make an assessment of the significance of a Fish Kill based on the number and age/size of fish killed, and the cost of re-instatement of the population. The significance of a Fish Kill is largely dependant on the type of watercourse affected, ie, whether it is a Salmonid (supporting a population of game fish, eg, salmon or trout), or Cyprinid (supporting a population of coarse fish, eg, pike or eel). The age/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 18 and Figure 24 describe the significance of Fish Kills occurring in 2003. These indicate that in 2003, the majority of Major Fish Kills occurred following pollution incidents from Farm Sources (33.3%).

Source	Fish Kill significance			Total
	Major	Moderate	Slight	
Farm	6	0	2	8
Industry	1	1	4	6
Water Service	2	2	2	6
Domestic	0	0	1	1
Other	1	0	2	3
Transport	0	0	0	0
Total	10	3	11	24

Table 18: Significance of Fish Kills, 2003

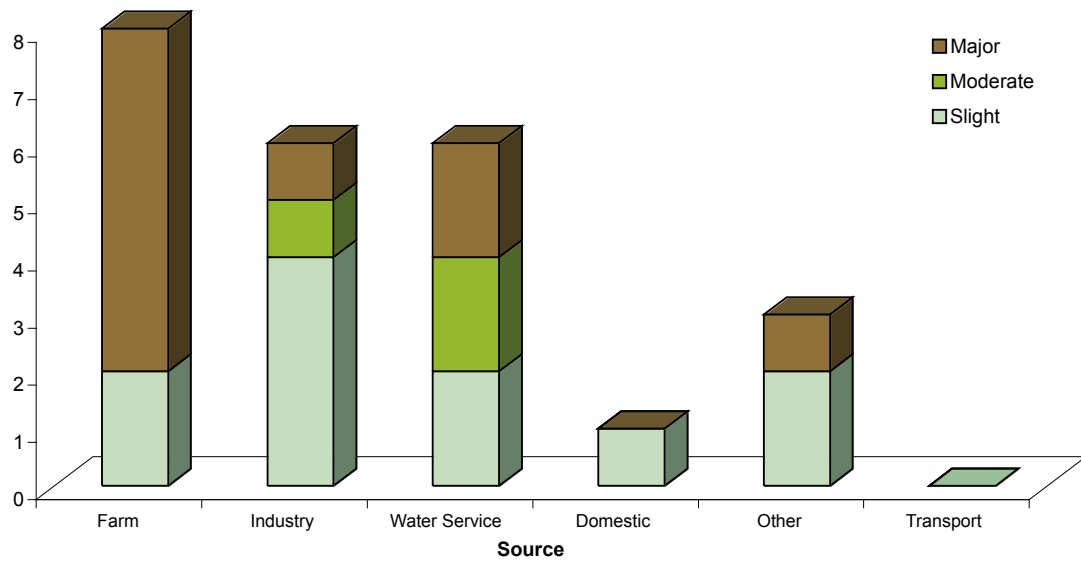


Figure 24: Significance of Fish Kills, 2003

2.14 Trend in Fish Kills

Figure 25 (Annex C, Table 7), illustrates the trend associated with Sources of pollution that caused Fish Kills for the period 1996 - 2003. There has been a substantial reduction in the number of Fish Kills occurring, however Farming (8) remains the main Source attributable for kills.

It is disappointing to note a slight rise in the number of Fish Kills occurring in 2003, compared to 2002.

Both National and European Legislation such as the Water Framework Directive (2000/60/EC), are setting evermore demanding targets to minimise the impact of human activity on our natural assets. EHS Water Management Unit is dedicated to improve the quality of the aquatic environment in Northern Ireland. Through routine monitoring programmes and other investigative work, EHS identifies rivers that are failing to come up to the expected standard. River catchments are prioritised with regard to conservation status, fishery potential and other factors, so that limited resources can be applied to best effect. This co-ordinated approach sets out actions for EHS and establishes communication and integration with other Departments and Agencies, culminating in the most effective means of improving the water quality in a catchment.

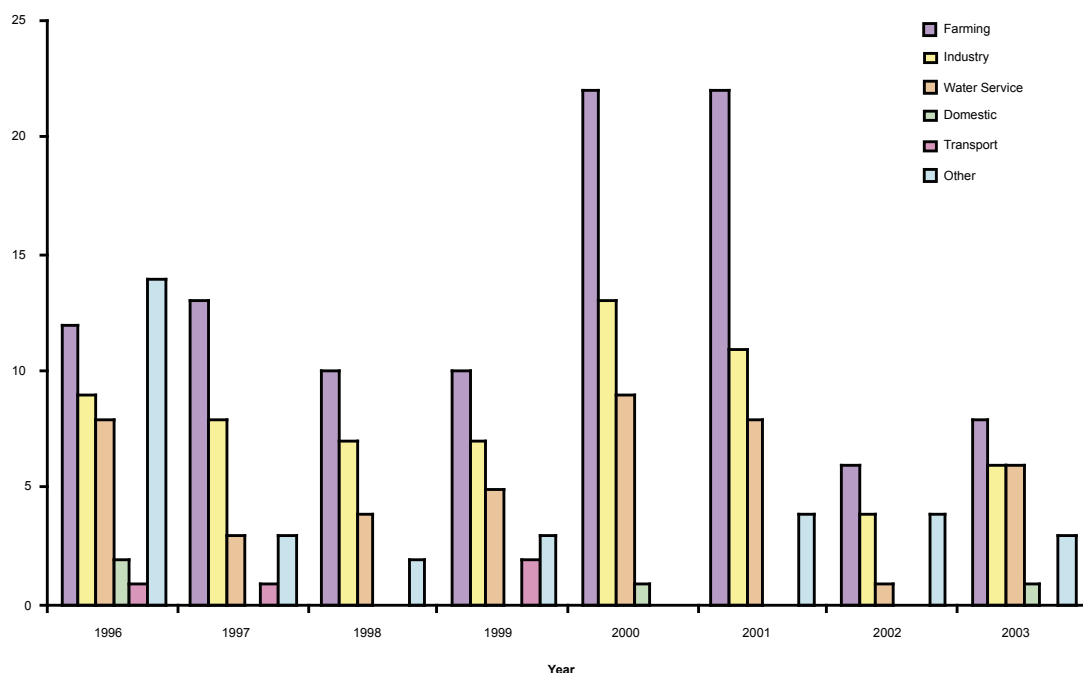
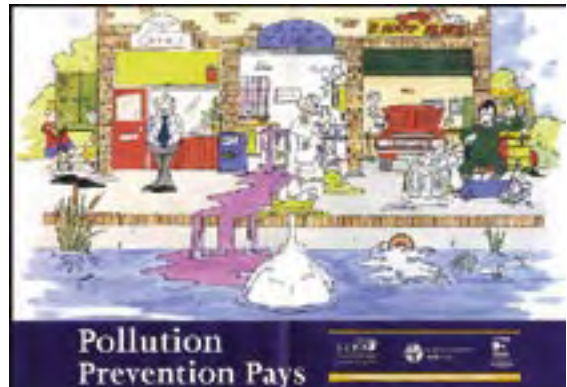


Figure 25: Trend in pollution Source causing Fish Kills, 1996 - 2003

3. Pollution Prevention

The EC Water Framework Directive has placed an onus on member states to ensure that their waterways achieve at least 'Good' under the adopted classification schemes with no downward movement between classes. Some of the ways in which this will be achieved in Northern Ireland is through enforcing environmental legislation such as the Water (Northern Ireland) Order 1999 and through the provision of pollution prevention advice.



3.1 Performance Target

The aim of the Pollution Prevention Team is to help achieve a 20% reduction in the number of high and medium severity, water pollution incidents, by March 2004, based on 1996 figures.

To prevent incidents from occurring or minimise the effect of pollution on the environment, the team carries out the following proactive initiatives;

- Education of the public and industry about the effects and consequences of pollution
- Distribution of advisory publications to the public and industry
- Offering advice at site meetings
- Promotion of good environmental practices in response to planning consultations
- Initiating pollution prevention programmes
- Involvement in relevant working parties.

Examination of previous point source pollution incidents, has shown that after Sewage and Agriculture, Oil is the next most common type of pollutant. Upon further analysis, industry appears to be the highest Source of Oil related incidents. During 2003, in Northern Ireland there were 239 confirmed water pollution incidents involving Oil (approximately 15.4% of all confirmed incidents).

Oil can pollute rivers, lakes and the sea, 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.



3.2 Oil Storage Regulations

In order 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 state timescales for which existing facilities should comply. Northern Ireland is in the process of drafting similar regulations.

Once these Regulations come into force the Pollution Prevention Team will target facilities to enforce compliance. During 2003, the main focus of work was to start gathering information on the current standards of infrastructure at oil storage facilities throughout Northern Ireland.

3.3 Oil Depots

As a starting point, the team proposed to survey the oil suppliers as these businesses have the most potential to pollute owing to the sheer volume of product they store.



Perusal of the Yellow Pages and some other publications revealed the existence of around 326 listed oil suppliers. After an extensive telephone survey, 241 were visited (we did not survey call centres as they do not store oil). Of the 241 sites that were visited, 164 had oil storage tanks. Advisory letters were sent to all of these sites.

Each site was assessed under several criteria, including:

- If there was safe tanker access
- Was there containment if a tanker accidentally lost product
- What was the state of the pipe work at the tanks and were there drip control measures

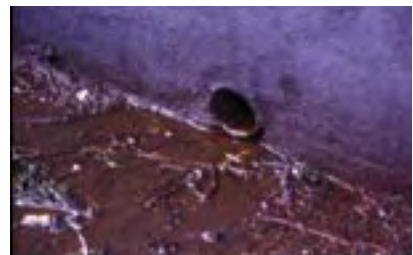
- Were there overfill precautions associated with the tanks
- The condition of the secondary containment systems (bunds)
- The environmental management systems on site

The main problems discovered were inadequate secondary containment systems (or complete lack of), ie:

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



Open drains in bunds - if oil escapes from the tank into the secondary containment system (bund), an open drain, while allowing rainwater to escape, it will also allow oil to escape from the secondary containment system. Open drains render bunds ineffectual.



Piercing the bund wall - any pipes or services that pierce a bund wall will compromise its integrity. It is often extremely difficult to seal a hole, meaning if there is an oil spill, some may leak.



Cracks in the bund - Again, it is very hard to join a bund to an existing wall. Bund walls are often easily damaged by vehicles if not protected against this. If there is an oil spill, oil will not be contained as it will leak out through the cracks.



Poor tank support - This may lead to the tank moving, being damaged and oil escaping.



Other features noticed which will be required under the new Oil Storage Regulation are:

- Provision of drip trays under fill pipes
- Any valves, filter, sight gauges, vent pipes or other equipment ancillary to the container must be situated within its own secure containment system (damage of these is a common cause of oil leaks)

Full details of all requirements under the proposed regulations will be available in the Consultation document which will be issued late 2004/early 2005.

3.4 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.

The Pollution Prevention Team continues to promote the Oil Care Campaign in local MOT and DVTA centres. A number of centres throughout Northern Ireland now hold information leaflets on site. These are freely available to all visitors.



3.5 Sustainable Drainage Systems (SuDS)

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.



3.6 Pollution from Construction sites

Advisory visits were made to many sites and suggestions given on pollution prevention precautions. While awareness has been raised, others still need to be made aware of their responsibilities. Educating the Construction Industry, possibly by seminar, will be explored in 2004



3.7 Pollution Prevention Guidelines (PPGs)

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

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



3.8 Pollution Prevention Team Contact Details

Tel: (028) 902 54752
(028) 902 54879

Fax: (028) 90254777

E-mail: pollutionprevention@doeni.gov.uk

Web: http://www.ehsni.gov.uk/environment/waterManage/waterPollution/pol_prevent.shtml

4. Enforcement Action

4.1 Introduction

This section reports on the enforcement action, as the result of water pollution investigations, undertaken by EHS under the Water (Northern Ireland) Order 1999. It also includes legal action relating to water pollution incidents taken under Fisheries Legislation.

Under the terms of the Water (Northern Ireland) Order 1999, it is an offence to cause pollution of a waterway or groundwater. Where the source of pollution can be traced, it is the policy of the EHS, where appropriate, to take enforcement action.

Article 7 (1) of the Order deals with the main pollution offence, which is;

‘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 an underground strata’.

It is also an offence to make a discharge without the consent of the Department. A person guilty of either of these offences shall be liable on summary conviction, to imprisonment for a term not exceeding 3 months, or to a fine not exceeding £20,000, or to both.

Pollution incidents are investigated and then submitted to the Enforcement Team for a decision on the appropriate course of action to take. This can be:

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

In cases where it is decided that prosecution is appropriate, EHS staff prepare a file which is submitted to the Office of the Director of Public Prosecutions (DPP), with a recommendation for prosecution. Courts award costs against the offender for the expenses incurred in serving the summons, and in the taking and analysis of the samples. A court may also order that compensation be paid if the pollution has caused a fish kill.

4.2 Prosecution Cases

Table 19 presents details of the enforcement action taken for incidents that occurred during the period 1/1/03 - 31/12/03.

Warning letters issued	172
Incidents recommended for prosecution	132
Cases pending with EHS	-
Cases pending with FCB	-
Other action taken	9
Cases referred to DPP for prosecution	123
Cases pending with DPP	31
Cases withdrawn	5
Court Result – Conviction	83
Court Result – Conditional Discharge	2
Court Result – Absolute Discharge	1
Court Result – Dismissed	1

Table 19: Summary of enforcement action taken for incidents that occurred during the period 1/1/03 - 31/12/03 (as at 1/3/05)

Table 20 details the number of cases, relating to incidents that occurred during the period 1/1/03 - 31/12/03 that have been referred to DPP for prosecution. Agriculture clearly accounts for the highest percentage of cases occurring in 2003 referred to DPP for prosecution (47.9%).

Category	Cases referred to DPP for prosecution	%
Sewage	12	9.8%
Agriculture	59	47.9%
Oil	6	4.9%
Non Agric. Waste Dis	17	13.8%
Other	0	0.0%
Chemical	12	9.8%
Breach Of Consent	17	13.8%
Total	123	100%

Table 20: Summary of cases referred to DPP for prosecution, for incidents that occurred during the period 1/1/03 - 31/12/03 (as at 1/3/05)

4.3 Trend in Enforcement Action

Table 21 and Figure 26 describe the distribution of prosecutions and warning letters for the period 1998 - 2002.

Year	Water Act* / Order Prosecutions	Fisheries Legislation Prosecutions	Total number of Prosecutions	Warning Letters
1998	92	3	95	304
1999	69	3	72	225
2000	80	0	80	243
2001	106	1	107	230
2002	95	0	95	202

Table 21: Water pollution prosecutions and warning letters, 1998 - 2002

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

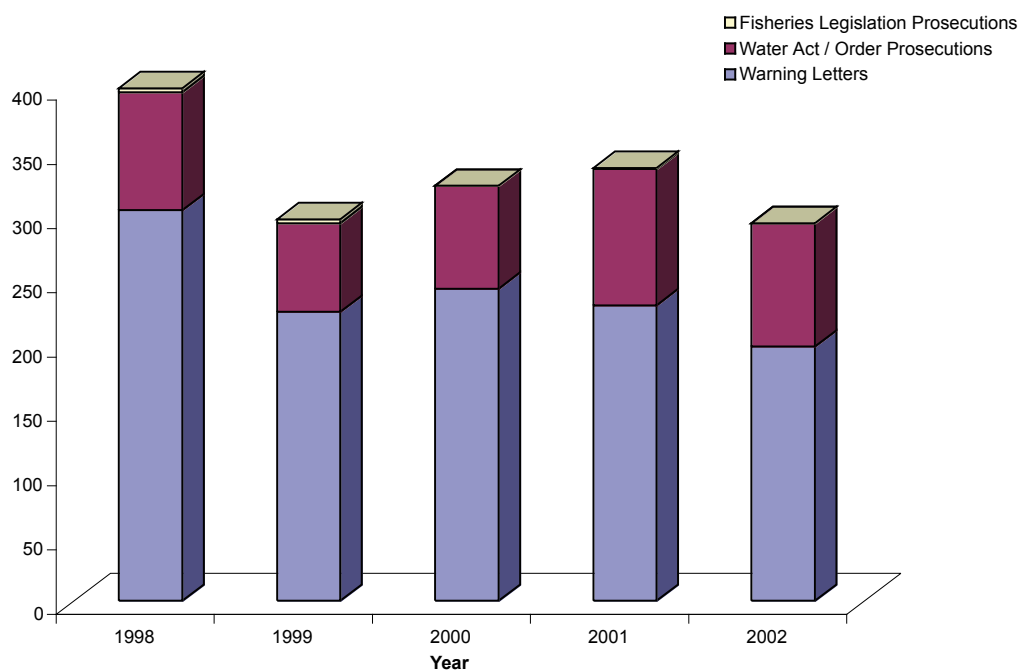


Figure 26: Water pollution prosecutions and warning letters, 1998 - 2002

4.4 Warning Letters

In addition to instigating court action against polluters, the EHS can also issue warning letters. The purpose of a warning letter is to deal efficiently with less severe incidents, giving advice to prevent further pollution and warning them of the consequences of not doing so. There is no penalty attached to a warning letter, but it might be produced in court in the event of a further offence. The number of warning letters issued during 2003 was 172, compared to 202 in 2002 (as described in Tables 19 and 21). The warning letters listed only relate to those associated with prosecution files.

4.5 Notices issued under the Water (Northern Ireland) Order 1999

The Notices that can be issued under the Water (Northern Ireland) Order 1999 are briefly summarised below:

- **An Article 8 Prevention Notice** may be served by the Department where it appears that there may be a contravention of Article 7 (1), whether this is a new contravention or a repetition or a continuation of one already occurring. A Prevention Notice may be served by the Department on the owner of land or the persons using or proposing so to use a waterway, land, vessel or vehicle:
 - (a) prohibiting the use complained of, or;
 - (b) permitting it only subject to conditions designed to remove the grounds of complaint, or;
 - (c) requiring it to be stopped within such period as may be specified in the notice.
- **An Article 12 Enforcement Notice** may be served by the Department on the holder of a discharge consent, who in the Department's opinion is contravening or is likely to contravene consent conditions. It also sets out the penalties for failing to comply with a notice.
- **An Article 15 Prohibition Notice** may be served by the Department in an emergency situation, on a person, including the holder of a discharge consent, prohibiting him from depositing or discharging any matter onto any land, waterway or underground stratum so specified.
- **An Article 17 Anti-Pollution Works Notice** may be served by the Department requiring a person to carry out pollution prevention works and operations. These are used where it appears that any poisonous, noxious or polluting matter is likely to enter, or to be present in, any waterway or water contained in an underground stratum.

Table 22 details the number of Notices issued under the Water (Northern Ireland) Order 1999 during 2003.

Notice	2003
Article 8, Prevention Notices	0
Article 12, Enforcement Notices	0
Article 15, Prohibition Notices	2
Article 17, Anti-Pollution Works Notice	0
Total	2

Table 22: Notices issued under the Water (Northern Ireland) Order, 2003

4.6 Penalties

Table 23 details analysis costs, court costs and fines obtained for convictions relating to pollution offences that occurred during the period 1/1/02 - 31/12/02 (as at 1/3/05).

Category	Analysis Costs £	Court Costs £	Fines £	Total £
Sewage	£423.16	£44.00	£700.00	£1,167.16
Agriculture	£7,229.66	£1,160.00	£18,130.20	£26,519.86
Oil	£824.75	£93.00	£2,650.00	£3,567.75
Non Agricultural Waste Discharge	£2,678.88	£703.00	£27,150.00	£30,531.88
Chemical	£1,182.84	£976.00	£5,150.00	£7,308.84
Breach of Consent	£2,542.02	£352.00	£18,600.00	£21,494.02
Total	£14,881.31	£3,328.00	£72,380.20	£90,589.51

Table 23: Costs and Fines imposed under the Water (Northern Ireland) Order 1999, for pollution incidents that occurred during the period 01/01/02 - 31/12/02 (as at 1/3/05)

A breakdown of the fines imposed for pollution incidents that occurred during the period 1/1/02 - 31/12/02, are detailed by Category in Annex D.

4.7 Recovery of Costs

The cost of pollution clean up can at times is considerable. Where the polluter can be identified they will be responsible for all clean up costs associated with the incident. If the polluter is unidentified then EHS meet the costs.

Pollution incident 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 environment impact only. Some of the following may apply:

- a. notification of abstractors not necessary;
- b. fish kill of less 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 watering;
- e. bed of watercourse only locally contaminated;
- f. minimal environmental impact and amenity only marginally affected.

Unsubstantiated

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

Reporting water pollution incidents to EHS

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?** (eg, name of river, town land, road, nearest town);
- **When was the pollution first seen?** (eg, is it occurring at present? Has it previously occurred?);
- **What is the pollution?** (eg, 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 Unit deals with Water Pollution affecting watercourses (or in storm drains that discharge to a watercourse), however **DRD Water Service, DARD Rivers Agency** or **DRD Roads Service** should be contacted under the following circumstances :

Blocked sewers, problems with water mains

DRD Water Service



(24 hr service)
08457 44 00 88

Overflowing rivers and blocked watercourses

DARD Rivers Agency



(24 hr service)

Eastern Division (028) 92606100
Western Division (028) 82254900

Blocked road gullies, road drains

DRD Roads Service



(24 hr service)

Northern Division (028) 70363202
Southern Division (028) 37529500
Eastern Division (028) 90253000
Western Division (028) 82241999

Pollution incident statistics tables

Region	1996	1997	1998	1999	2000	2001	2002	2003
1	443	529	320	305	452	320	391	297
2	119	116	143	98	135	120	118	117
3	203	141	180	195	200	163	158	157
4	282	109	126	115	148	154	127	158
5	210	219	187	148	185	214	179	207
6	246	227	255	235	207	199	155	225
7	183	169	164	124	95	94	82	96
8	225	131	81	74	80	82	57	89
9	176	185	188	213	203	200	243	205
Total	2087	1826	1644	1507	1705	1546	1510	1551

Table 1: *Regional Distribution of Incidents, 1996 – 2003*

Source	1996	1997	1998	1999	2000	2001	2002	2003
Industry	537	365	435	348	451	364	354	337
Farm	509	550	467	438	525	477	461	379
Water Service	377	353	278	347	322	305	259	364
Domestic	189	205	228	155	191	187	199	235
Transport	40	53	64	53	64	41	56	39
Other	435	300	172	166	152	172	181	197
Total	2087	1826	1644	1507	1705	1546	1510	1551

Table 2: *Substantiated pollution incidents by Source, 1996 – 2003*

Category	1996	1997	1998	1999	2000	2001	2002	2003
Sewage	566	618	497	488	477	470	433	583
Agriculture	517	560	455	437	513	460	436	374
Oil	381	252	279	242	287	250	270	239
Non Agric Waste Dis.	185	157	154	146	231	170	184	135
Other	280	96	70	70	86	87	97	111
Chemical	154	141	166	112	96	94	68	68
Breach Of Consent	4	2	23	12	15	15	22	41
Total	2087	1826	1644	1507	1705	1546	1510	1551

Table 3: *Substantiated pollution incidents by Category, 1996 - 2003*

Annex C

Cause	1996	1997	1998	1999	2000	2001	2002	2003
Deliberate dumping	161	155	115	96	175	142	122	120
Breach of Consent	19	58	70	36	23	21	36	40
Accident/Emergency	130	133	149	158	140	127	136	154
Equipment Failure	272	252	255	254	295	294	225	237
Inadequate Equipment	157	215	193	189	158	126	114	147
Negligence	138	120	160	105	138	151	156	138
Poor Working Practice	254	327	290	265	297	293	324	339
Weather	57	103	127	138	174	82	102	68
Unknown	494	278	241	227	272	257	255	262
Other	405	185	44	39	33	53	40	46
Total	2087	1826	1644	1507	1705	1546	1510	1551

Table 4: Cause of Pollution Incidents, 1996 – 2003

Annex C

	Low							
Region	1996	1997	1998	1999	2000	2001	2002	2003
1	422	491	283	289	421	295	357	268
2	88	85	93	55	78	68	81	74
3	162	110	136	151	152	123	111	122
4	213	71	85	81	112	104	84	99
5	148	93	112	117	155	189	162	178
6	176	145	181	151	157	135	111	166
7	103	84	70	68	54	57	52	55
8	152	101	52	49	53	53	50	80
9	153	171	165	180	146	168	220	170
Total	1617	1351	1177	1141	1328	1192	1228	1212

Table 5.1: Regional distribution of Low severity incidents, 1996 – 2003

	Medium							
Region	1996	1997	1998	1999	2000	2001	2002	2003
1	14	32	34	16	23	21	33	26
2	29	28	42	35	53	45	34	38
3	33	27	38	42	42	34	43	30
4	54	32	38	29	32	44	34	52
5	53	107	70	29	29	23	16	26
6	59	63	61	72	40	53	38	50
7	64	76	81	50	33	32	30	35
8	69	28	26	24	22	24	7	7
9	21	9	23	31	52	29	22	33
Total	396	402	413	328	326	305	257	297

Table 5.2: Regional distribution of Medium severity incidents, 1996 – 2003

	High							
Region	1996	1997	1998	1999	2000	2001	2002	2003
1	7	6	3	0	8	4	1	3
2	2	3	8	8	4	7	3	5
3	8	4	6	2	6	6	4	5
4	15	6	3	5	4	6	9	7
5	9	19	5	2	1	2	1	3
6	11	19	13	12	10	11	6	9
7	16	9	13	6	8	5	0	6
8	4	2	3	1	5	5	0	2
9	2	5	0	2	5	3	1	2
Total	74	73	54	38	51	49	25	42

Table 5.3: Regional distribution of High severity incidents, 1996 – 2003

Annex C

Time period	No. High & Medium severity incidents received	No. High & Medium severity incidents responded to within 4 hrs	Response rate (%)
Q1, (1/1/00 - 31/3/00)	118	93	78.81%
Q2, (1/4/00 - 30/6/00)	89	73	82.02%
Q3, (1/7/00 - 30/9/00)	120	93	77.50%
Q4, (1/10/00 - 31/12/00)	50	32	64.00%
Total for 2000	377	291	
		Average response rate for 2000	77.19%

Table 6.1 : Response rate to High and Medium Severity incidents, 2000

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%
Total for 2001	321	291	
		Average response rate for 2001	90.65%

Table 6.2 : 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%
Total for 2002	264	218	
		Average response rate for 2002	82.58%

Table 6.3 : Response rate to High and Medium Severity incidents, 2002

Annex C

Source	1996	1997	1998	1999	2000	2001	2002	2003	Total
Farming	12	13	10	10	22	22	6	8	103
Industry	9	8	7	7	13	11	4	6	65
Water Service	8	3	4	5	9	8	1	6	44
Domestic	2	0	0	0	1	0	0	1	4
Transport	1	1	0	2	0	0	0	0	4
Other	14	3	2	3	0	4	4	3	33
Total	46	28	23	27	45	45	15	24	253

Table 7: Trend in pollution Sources causing Fish Kills, 1996 - 2003

Annex D

Fines imposed under the Water (Northern Ireland) Order 1999, for pollution incidents that occurred during the period 1/1/02 - 31/12/02 (as at 1/3/05).

Category	No. of cases to DPP	No. of outcomes	Fines	Cases Pending
Sewage (Domestic)	3	3	£700.00 £250.00 (1) £450.00 (1) ⁴ WD (1)	0
Agriculture	52	52	£18,130.20 £100.00 (3) £150.00 (4) £200.00 (3) £250.00 (6) £300.00 (5) £350.00 (3) £400.00 (4) £480.20 (1) £500.00 (9) £600.00 (1) £700.00 (1) £1,000.00 (1) £1,200.00 (1) £2,500.00 (1) ² CD (4) ¹ AD (3) ³ DM (1) ⁴ WD (1)	0
Oil	5	5	£2,650.00 £400.00 (1) £500.00 (2) £1,250.00 (1) ³ DM (1)	0
Non Agricultural Waste Discharge	21	21	£27,150.00 £100.00 (1) £150.00 (1) £200.00 (3) £250.00 (2) £300.00 (3) £400.00 (1) £500.00 (1) £2,000.00 (3) £2,500.00 (2) £3,000.00 (1) £10,000.00 (1) ² CD (1)	0
Chemical	5	5	£5,150.00 £150.00 (1) £2,500.00 (2) ² CD (2)	0
Breach of Consent	13	13	£18,600.00 £250.00 (2) £300.00 (2) £500.00 (1) £1,000.00 (4) £1,500.00 (1) £3,000.00 (1) £3,500.00 (1) £5,000.00 (1)	0
Totals	99	99	£72,380.20	0

¹AD – Absolute Discharge

²CD – Conditional Discharge

³DM – Dismissed

⁴WD – Withdrawn

⁵() – Figure in brackets indicates the no. of individual cases



Annex E

The Joint Environment Agencies' Pollution Prevention Guidelines and Advice Leaflets.

Contact Details

Contact Name: _____
 Job Title: _____
 Company: _____
 Address: _____
 Postcode: _____
 Tel: _____
 Fax: _____
 E-mail: _____

Request publications by:

Telephone: 028 90254879/
 028 90254752
 Post: Pollution Prevention
 Calvert House
 23 Castle Place
 Belfast
 BT1 1FY
 Fax: 028 90254777
 E-mail: pollutionprevention@doeni.gov.uk

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
	11	Industrial sites
	13	The use of high pressure water & steam cleaners
	14	Boats and marinas
	15	Retail premises
	16	Schools and other educational establishments
	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
	23	Maintenance of structures over water
	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

For information on the Prevention of Pollution of Controlled Waters By Pesticides (PPG 9) and Sheep Dipping (PPG 12) please contact DARD Countryside Management Division (Annexe D, Dundonald House).

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)



Discharge of Leachate from illegal landfill



Chemical discharge into a watercourse



Slurry discharging into a watercourse



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